



APPENDIX



CONTRIBUTIONS OF RILEM MEMBERS



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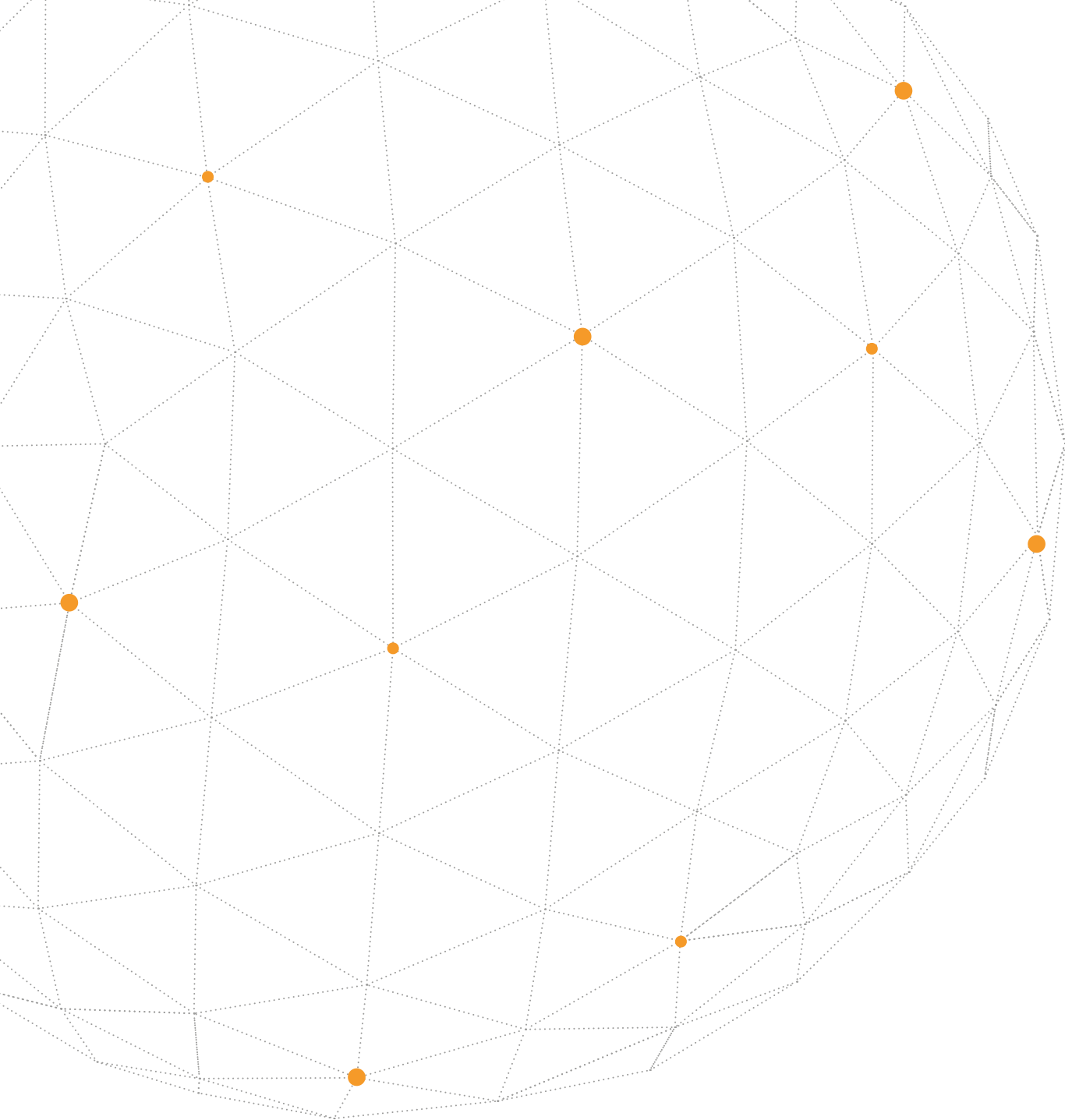
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The following pages contain all the personal contributions from Rilem members with details about positions held and awards received.

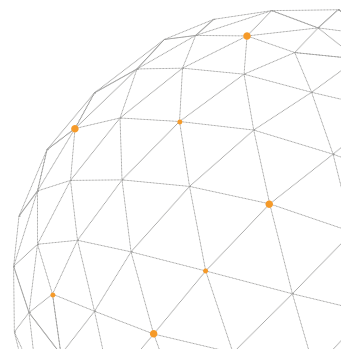
Some extracts have appeared in PART III of the History Book, as anecdotes.

Only contributions specific to positions held or awards received have been placed under the relevant category.





1 | PRESIDENTS



1 | PRESIDENTS

PROF. MARK ALEXANDER University of Cape Town, South Africa

RILEM President 2012-2015
Hon President 2012
RILEM Fellow 2009; Honorary Member 2016



Below, I briefly capture my response to the questionnaire about my experiences in RILEM as President.

Undoubtedly the highlight for me was the privilege to lead and interact with such a diverse, truly excellent, remarkable, and wide range of people, within this dynamic organisation. There were no major lowlights except the constant pressure to stay up to date with administrative matters.

The challenges always related to getting the best out of people, and also governance issues. A further challenge was keeping up with developments in order to ensure that RILEM remained relevant and dynamic.

I think that the key progress during my presidency relates to the strategic workshop we held in 2014 (with the help of Geert de Schutter and Johan Vyncke, amongst others), which helped set RILEM's course for the next period; also putting in place a number of key governance provisions, such as the new Vice-President election procedures thus ensuring greater transparency and democracy in RILEM; and lastly being able to retain a highly motivated and excellent set of people in leadership positions.

To develop successfully, RILEM must constantly give attention to latest developments scientifically and organisationally, and must always ensure that "structures" support the vision and not the other way around, thus remaining flexible and able to react rapidly.

Advice to future office bearers would be to treat RILEM in such a way as to claim no special privileges, but rather grasp the opportunities to take RILEM further down the road.

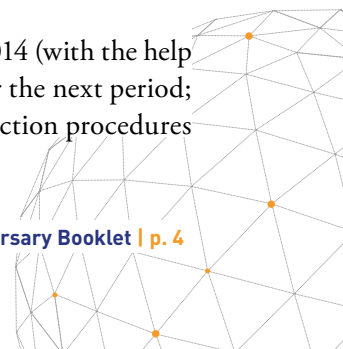
YouTube link: www.youtube.com/watch?v=2qM5o9BC1-M
Mark Alexander

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1 | PRESIDENTS

PROF. ARNON BENTUR

Technion, Haifa, Israel

*RILEM President 2006-2009, RILEM Vice President, 2003-2006
Chair, Technical Activity Committee, 2000-2003,
Chair of several technical committees,
RILEM Fellow 1998, Honorary Member 2009*



My presidency period was marked as being one of the last stages of a long term effort of turning RILEM from an organization with national emphasis, led largely by national building research institutes, into one based on participation and activities of scientists and engineers representing various areas of technical activities, organizations and countries. This transition echoed the changes which had been taking place over the years, whereby technical activities when RILEM was founded, after the Second World War, were largely centered in National Building Research Institutes. These were gradually transformed into widespread research and technical activities being carried out in many and diverse organizations and places: universities, research centers and industrial laboratories.

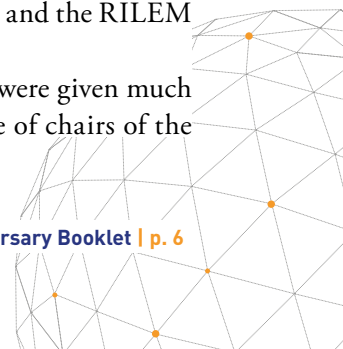
The challenge in this transition was adopting new modes of technical activities and organization, reflecting a cultural change, of an organization which needed to be focused on serving its technical members, rather than looking mainly to the organization itself, with the conviction that the strength of the organization depends on its added value to its members. The need for such changes eventually led to restructuring of the mode of operation of the RILEM secretariat, including personal changes, which were difficult and painful.

To enable such a cultural and administrative transformation, we set a new function of Director for Development, with a strong technical and scientific profile, which we believed was needed at least for a transition period in order to mobilize the change. The Director for Development was required to be proactive with the RILEM Bureau and Secretariat to achieve several strategic goals: develop outreach activities, expand the membership of RILEM beyond the core of Europe, recruit new members, especially young emerging scientists and engineers, develop new services for members and finding ways to leverage and make use of the value of the knowledge existing in RILEM to potential users, especially industry, to strengthen its ties with RILEM and provide it with additional support.

In order to enable this transition without overburdening the RILEM Secretariat, and even making it leaner and more efficient, we embarked on steps to outsource activities requiring administrative effort which are difficult to perform efficiently in a small organization with about 1300 members. Most notably was the outsourcing of RILEM Publications, including publishing of proceedings, state-of-the-art reports and the RILEM journal, Materials and Structures. This was carried out within the framework of agreements with a reputable publishing house, whereby RILEM would maintain the technical control while all administrative and business activities would be carried out by the publishing house.

To enhance the professional visibility and the technical impact of the organization, we took additional steps to develop the RILEM website, and established a new far reaching policy where the publication on the web would be made largely free to RILEM members. This included the proceedings, state of the art reports and the RILEM journal.

To make RILEM more attractive and more attentive to its members, the members of RILEM were given much more responsibility in running and managing of the organization, expanding the official role of chairs of the



Technical Committees within the organization, and reducing the impact of national representatives. The role of national representatives was focused mainly on the development of activities within their own country.

An underlying lesson learned during the presidency period is the need to be as flexible as possible in order to provide a platform for new initiatives coming from active members, as this is the strength of the organization and the most efficient way for it to develop in a sustainable mode in a dynamic world.

1 | PRESIDENTS

DR. RAVINDRA GETTU

Indian Institute of Technology Madras

President 2018-2021, Fellow 2012,
TAC Chair, Bureau Expert



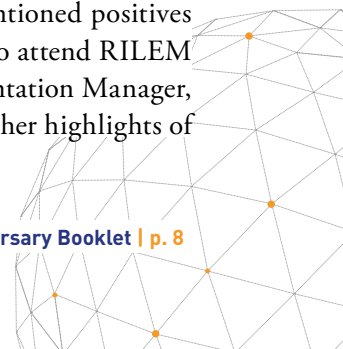
Pride, Enthusiasm, and Inclusivity – three words to describe my feelings about RILEM as its President. I wish very much that these continue as attributes of our spirit in the years, if not decades, to come.

The pride comes with the recognition of our heritage and how we have evolved as an organization. I realise that *we stand on the shoulders of giants*, echoing the words of Bernard of Chartres, Isaac Newton, Google Scholar, and many others in between. The giants who have led RILEM are numerous including Colonnetti, who urged scientists to construct a better world, together; L’Hermite, known for his mentoring and research philosophy; Torroja, who showed that elegant long-lasting structures could be built with the right combination of material and system; Lea, whose cement chemistry book has inspired generations; Rüschi, whose landmark loading rate studies led to the current understanding of the creep of concrete; Lyse, whose work relating workability and concrete composition is still used; Shalon, a pioneering structural engineer who became the first woman president; all of whom were presidents during the formative years of RILEM. Among the 46 presidents that we have had, there are many such illustrious names. Equally important are the Secretaries-General, who have held the organization on course - Robert L’Hermite, Maurice Fickelson (1972-94), Michel Brusin (1994-2007), Pascale Ducornet (2009-19) and now Judith Hardy. There have been, are and will be many more giants in RILEM, thanks to whom we will continue to see further and reach higher.

The enthusiasm we have in RILEM is reflected by the new ideas that constantly emerge, be it as a TC proposal, conference or seminar on an emerging topic, ways to encourage youngsters and means to disseminate the knowledge. Such ideas, more blue-sky, the better, lead to change, and without change, we will not progress. A big advantage of being a relatively small organization (i.e., of about 1500 members, all active in research), is that the enthusiasm can translate to actions soon enough. However, to keep the ideas flowing through the *innovation funnel*, we need to broaden and extend our outreach to involve more and different people.

When one looks back at the history of RILEM, the origins were strongly French, and France continues to be the country with most members, though the Association became more pan-European in a few decades. Over the past decade, there is a conscious effort to have a larger footprint in Asia and South America. *Increasing the presence* in Africa will have to be a thrust area, sooner or later. Lower subscription fees encourage membership from emerging countries, and this has been done over a long time at RILEM. Yet another unique service that RILEM offers is to provide its recommendations, and many reports and conference proceedings for free, to increase the dissemination of knowledge and to motivate new researchers to join the fold. Such inclusivity is essential to improve the international character of RILEM even further.

Many new initiatives implemented over the past decade stand out in terms of the above-mentioned positives of RILEM. The Gustavo Colonnetti medals for young researchers, funding of PhD students to attend RILEM Week conferences, having a mission-minded Director of Development, hiring of the Implementation Manager, the Annual Reports, etc. are all examples of ideas that have helped us progress in our goals. Other highlights of



the past few years include the RILEM Convention (in March/April) becoming a regular feature, launching of RILEM Technical Letters, and the seamless onboarding of new staff towards a forward-looking headquarters.

As we introspect, one also identifies aspects that need improvement, such as our website, which has been updated but still has a long way to go. I also feel that RILEM documents deserve wider usage given the efforts and quality of the researchers who work on them. We need to implement approaches that are more internet-savvy to make this happen. The challenges posed in 2020 by the Covid pandemic have further emphasized the power of online dissemination and communication, and I am glad that RILEM adapted quickly and efficiently.

South America had a strong representation among the founders of RILEM. However, language, economics and distance have not favoured a prominent role for Latin American researchers. I have tried to bridge the gap by participating in meetings and conferences in Brazil, Cuba, Colombia, Paraguay, Mexico, and Argentina. I have met both young and experienced researchers eager to interact with RILEM whom we should empower further. Also, with the Lat-RILEM Group, the doors have opened wider but more needs to be done.

The President of RILEM is a cog in the wheel, or more generously stated - the current face, of a vibrant and progressive organization that depends on committees, conference/meeting organizers, officers, and staff. I have been most fortunate, to work with many amazing people who have contributed tremendously to the organization. Carmen Andrade, a former president told me, just after I took over, to make sure that I enjoyed the presidency because it passes very quickly. That is quite true, as there is a lot that can be done, many events to participate in and so many people to chat with. The opportunity has, nevertheless, been humbling, challenging, stimulating and thoroughly enjoyable.

1 | PRESIDENTS



PROF. VANDERLAY JOHN

Hon President 2014

As an honorary president the highlight was organizing RILEM week simultaneously with the 14 Durability of Building Materials and Components Conference in São Paulo, in collaboration with a local construction association. This made possible meeting most of the best researchers in our field. Making the knowledge of RILEM community available to the Brazilian professional engineers and architects was also very important, since only a few Brazilians had a chance to connect with the international research community. The only lowlight was that retrospectively I wish I had been able to do it better.

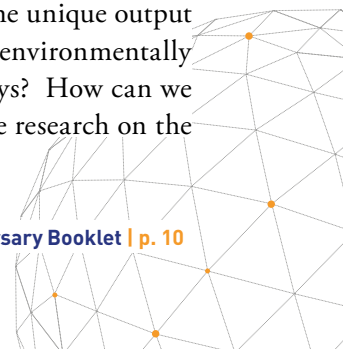
The most difficult challenge was to merge the interests of the Brazilian professionals with the trending topics, in international research. This is essential to research and the RILEM contribution is to be appreciated by the society at large. I like to think we succeeded in doing that.

My key progress made by RILEM while Honorary President, was that at that time RILEM leadership was making a conscious effort to strengthen the organization's presence in the developing world, Brazil, and Latin America in particular. Of course, it will take a long time to reach the same level or participation as from the developed world. Research agendas, participation costs in meetings around the world, lack of culture of internationalization are still important barriers. RILEM was also for the first time, making an effort to increase its on-line presence. As honorary president, my role was to support the leadership.

We are on the verge of another industrial revolution. Digitalization is leaving the office-related work, and already invading our personal lives. Next it will invade industry. Universities are already adapting to this world of innovation which requires alliances with private companies and promoting startups, etc. Information is becoming cheaper and ubiquitous. Culture is changing and this is affecting how people collaborate and interact to produce new knowledge. The new generation of researchers is arriving with this new zeitgeist. They want to be part of a community that is building a more sustainable, digital, future.

This time construction technology and our business models will be deeply affected. Some people think that mass customization will make construction become a product-based industry (as any other) and not a project-based one as it is. Meanwhile we still rely on technologies, standards, and tests methods that are developed for an analogic world. Some of cement standardized tests are more than 200 years old. Seems to me we have been too slow to adapt, especially considering that the speed of transformation is accelerating exponentially.

The operational model of RILEM and other scientific associations will have to change. How can we adapt the RILEM working model to the digital world, to make it attractive to the young generation and more inclusive for scientists from the developing world and also to women? Is text reports and proceedings the unique output from our work? Is our working model, based on face-to-face meetings, affordable to all? Is it environmentally sustainable? Is this model compatible with delivering results with the speed required nowadays? How can we attract companies and innovators, for mutual benefit? How can RILEM leadership encourage research on the



implications of the digital world in the various dimensions of RILEM work? I am sorry to have only questions, and no answers.

The one opportunity I missed was recording the entire conference and sharing it on-line for free. My advice to future office-bearers, is: Be brave, take the risks of changing. Try to be inclusive, attracting the young generation, researchers from developing world and women. Develop a strategy to promote a merger between academy and innovators. Actively promote research activities that are aligned with society megatrends.

I will try to make available on YouTube part of the RILEM conference in Brazil.

1 | PRESIDENTS



DR. PETER RICHNER Empa, Switzerland

President 2009-2012, Treasurer 2002-2007, Fellow 2007

Clearly the highlights of my Presidency were the three RILEM Weeks in Aachen, Hong Kong, and Cape Town. The preparation of the events was a stressful time for the organizers, the Secretariat and the Bureau but the effort was rewarding. For the RILEM family, the weeks were full of joy to meet again, plenty of stories to be told, including also controversial discussions about the way things happened over the year and what should be improved for the future.

Personally, I felt that this was the time where RILEM had the opportunity to open-up and expand its outreach. This was possible because we had resolved the organizational issues that plagued the Secretariat and the organization for many years and because we reached a solid financial basis. All of this was achieved under the leadership of my predecessor Arnon Bentur.

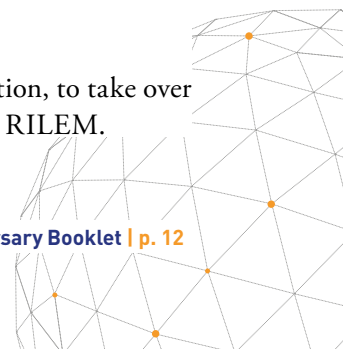
The overarching goal was to make RILEM an open organization. The technical committees of RILEM always had the approach that everybody who was interested in a specific topic was welcome to join. However, in other areas RILEM was more of a closed circle and overall RILEM was seen very much as a European organization. Only few people were formally allowed to join the General Council, the RILEM publications were not easy to access and many colleagues around the world could not afford the membership fee.

Thanks to the support of the whole organization, we were able to start moving in a new direction. The most challenging part was clearly the issue of becoming more global. We had repeatedly intense discussions in the Bureau what the best way forward could look like. Finally, we decided in a very pragmatic way to test out different strategies which were very much based on the specific situation in the different areas of the world. The key for success was in all cases the firm commitment of a small number of RILEM members to make things happen.

Being President of RILEM, I had the privilege to get to know numerous people and organizations around the world and to learn how they act, based on their specific culture and boundary conditions. Especially interesting were the numerous meetings with representatives from ACI, an organization much larger than RILEM. ACI is a very professional and large organization which allows them to do many things in a much more professional way than RILEM does. I always admired their website and was somewhat frustrated with our own page where we struggled to make it more state-of-the-art, something which has clearly changed in the meantime! On the other hand, RILEM was (and is) much more agile than ACI and that gives it a clear edge in many aspects. While it was easy to declare most of the RILEM publications for open access, this was something that our colleagues from ACI for a long time just did not believe in.

If I could go back in time, there would be one thing I would try to do differently: We should have invested more money in strengthening the Secretariat and supporting the work of G. de Schutter in his role as Director of Development. As a result, we could have moved much faster in many areas. However, back then we were not completely sure about the financial future of RILEM. Luckily, it turned out that the financial basis of RILEM became very solid.

In conclusion, I can only recommend to every member of RILEM to get active in the organization, to take over as many duties as one can bear and profit from the network of interesting people who compose RILEM.



1 | PRESIDENTS

DR. NICOLAS ROUSSEL

Senior researcher at IFSTTAR, France

Vice-President 2018-2021

TAC Chair 2015-2018, RILEM Fellow 2012

Robert L'Hermite Medallist 2007

Honorary President 2013



I was RILEM Honorary President when the RILEM Road Map “Strategic plan for the development of RILEM towards a major international stakeholder” was signed in 2013. As indicated by the name, being honorary president does not involve any responsibilities apart from organizing the RILEM week. I therefore had the pleasure of witnessing from a rather external position all the passionate discussions that occurred in Brussel that year. I was amazed by the number of famous (and very busy) researchers from our field who travelled from all around the world to the Belgian capital to discuss for one full day about the future of our association.

I had the pleasure to become RILEM Vice-president in 2018 at the end of my mandate as TAC chair, the most strategic position, to my opinion, within RILEM as the beating heart of RILEM, i.e. the Technical Committees, are all approved and managed by TAC. I am deeply convinced that being a RILEM officer is a role of service, not of power, as RILEM is a bottom-up structure following democratic and transparent procedures that I thank my predecessors for and that we try to always keep as simple as possible.

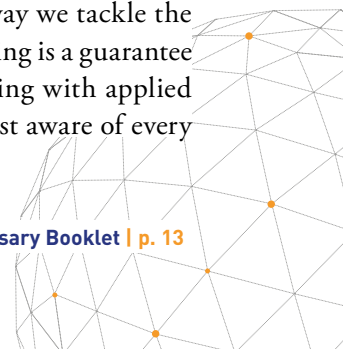
Since 2013, I believe RILEM has made gigantic steps forwards on the front of communication, both internal and external.

By recruiting the right persons at the right time, RILEM has somehow adapted to the new communication technologies and to the unavoidable role of social media while, at the same time, remaining the same “old” comfortable frame, within which collaboration on the most advanced scientific topics often means sharing drinks and meals with good friends in the most welcoming cities of this planet.

RILEM has moreover moved fast and far on the topic of open access knowledge. I am not aware of any other scientific association, that distributes for free and for all, the vast majority of technical documents, produced by its Technical Committees.

I am proud to have been the funder and implementer of a new project that started in 2015 and that today is a successful reality, i.e. the open access journal “RILEM Technical Letters”. With the permanent support of Mateusz Wyrzykowski from EMPA, this journal became indexed in the Directory of Open Access Journals (DOAJ) in September 2018 and was included in Scopus database in August 2020. I left my role of Editor-in-Chief of this journal to the careful hands of Alexandra Bertron in 2019, but I immensely miss it! Maybe at the end of my mandate as RILEM outgoing president in 6 years I will have the chance to go back to that role... who knows?

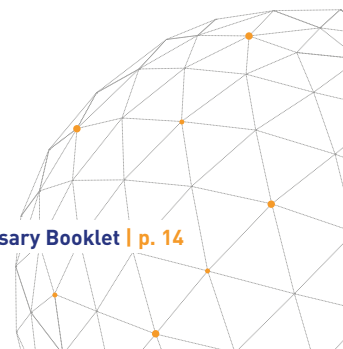
I believe there are still some unresolved issues regarding the collaboration and interaction of RILEM with the industry sector. On one hand, our members are proud of RILEM independency in the way we tackle the scientific topics of our choice. Moreover, being an association that do not rely on industrial funding is a guarantee of the neutrality of our technical and scientific reports. On the other hand, RILEM is dealing with applied sciences. Among RILEM members, our colleagues from industry are the ones who are the most aware of every



day industrial practice issues, opened questions and need for new testing recommendations. Even if long-term progress in technology does not always come from the study of the limits of the existing technologies, I believe RILEM must find a way to balance the short-term needs of the industry our community is expected to support and the long term more fundamental research that many of our academic fellows (including myself) are aspiring to tackle within the association. I imagine both TAC and DAC will play a key role in discussing these issues (already identified in the Road Map in 2013) and turn them into opportunities for RILEM and its academic and industrial members.

I moreover think that RILEM had, has, and will still (unfortunately) have a role to play, to ensure that progress and knowledge is fully and equally shared. I am not referring here to our open access policy. I am referring to questions relating to gender equality and the advancement of women, the promotion of fundamental freedoms through the elimination of racism and racial discrimination along with the respect for each other's rights and freedoms. Our association was founded only two years after the United Nations and many concepts from the initial text at the origin of the association sound very similar to the ones found in the United Nations founding charter. I therefore do not think that RILEM is "only" about science and technology. When TAC validates the composition of a scientific committee of a RILEM international conference, when DAC appoints a new regional convener for the association, that should not only be based on technical expertise. If faced with two experts with equivalent skills, I consider it is RILEM's duty to support the ones who need to fight against global or local discrimination, to carry out their research and promote their results. I strongly believe that RILEM should use its influence and power to ensure that all, no matter their gender, age, culture, or religion can equally contribute or access to the technical and scientific knowledge of our association. Both Winston Churchill and Spiderman/Peter Parker agreed that "With great power comes great responsibilities".

Personally, I love science and was happy to collaborate with some fellow researchers in any scientific association. For all the above reasons, I chose RILEM and, all these years, it has made me feel more useful. Happy Birthday RILEM!



1 | PRESIDENTS

MR. IR. JOHAN VYNCKE

General Advisor & Former Director Research and Innovation, BBRI, Belgium

RILEM Technical Secretary TC 121-DRG Demolition & Recycling Guidance

Honorary Member 2020, RILEM Fellow 2007

President 2015-2018



My highlight is to see how the newly recruited staff Judith, Fanta as well as the free-lance hired implementation manager Daniela get along well with Anne and seem to be forming a strong base for the future. It appears as if, finally, we are going to have a strong and efficient secretariat base in Paris.

I never dreamed when starting as a secretary for a RILEM TC back in 1987, that I would get in the upper RILEM circles. I enjoyed very much being invited by Carmen Andrade to join the bureau meeting back in 1998 in Melbourne.

As a personal achievement in RILEM work I have had great satisfaction to put a RILEM recommendation into practice as a IzG (Engineers without Borders) volunteer, in the context of the 2005 Kashmir earthquake relief action in Pakistan.

Rolling out collaboration with SIC Russia and fib in continuation of the work of Mark Alexander, I also consider a highlight. I feel it is a strong point in RILEM that presidents continue the work on the foundations of their predecessors and build further on past achievements.

Thanks are due to the tremendous and untiring input from many individual RILEM members who served as highly active volunteers, while we managed, successfully, the transition to the Secretariat's new structure, as put into place at the Strategic Workshop held in Brussels in 2014.

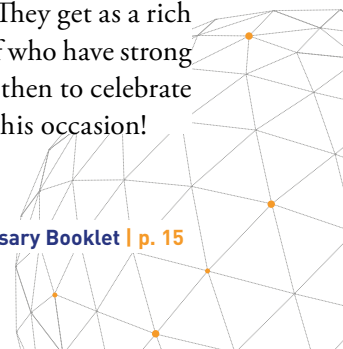
It was a pleasure to work with so many motivated members, who did their utmost to go forward. The collective approach was strongly present and helped to implement the development of the association. As my predecessor and mentor for the RILEM presidency, Mark Alexander was saying according to a wise South African proverb: "Alone you can go fast, together you can go further".

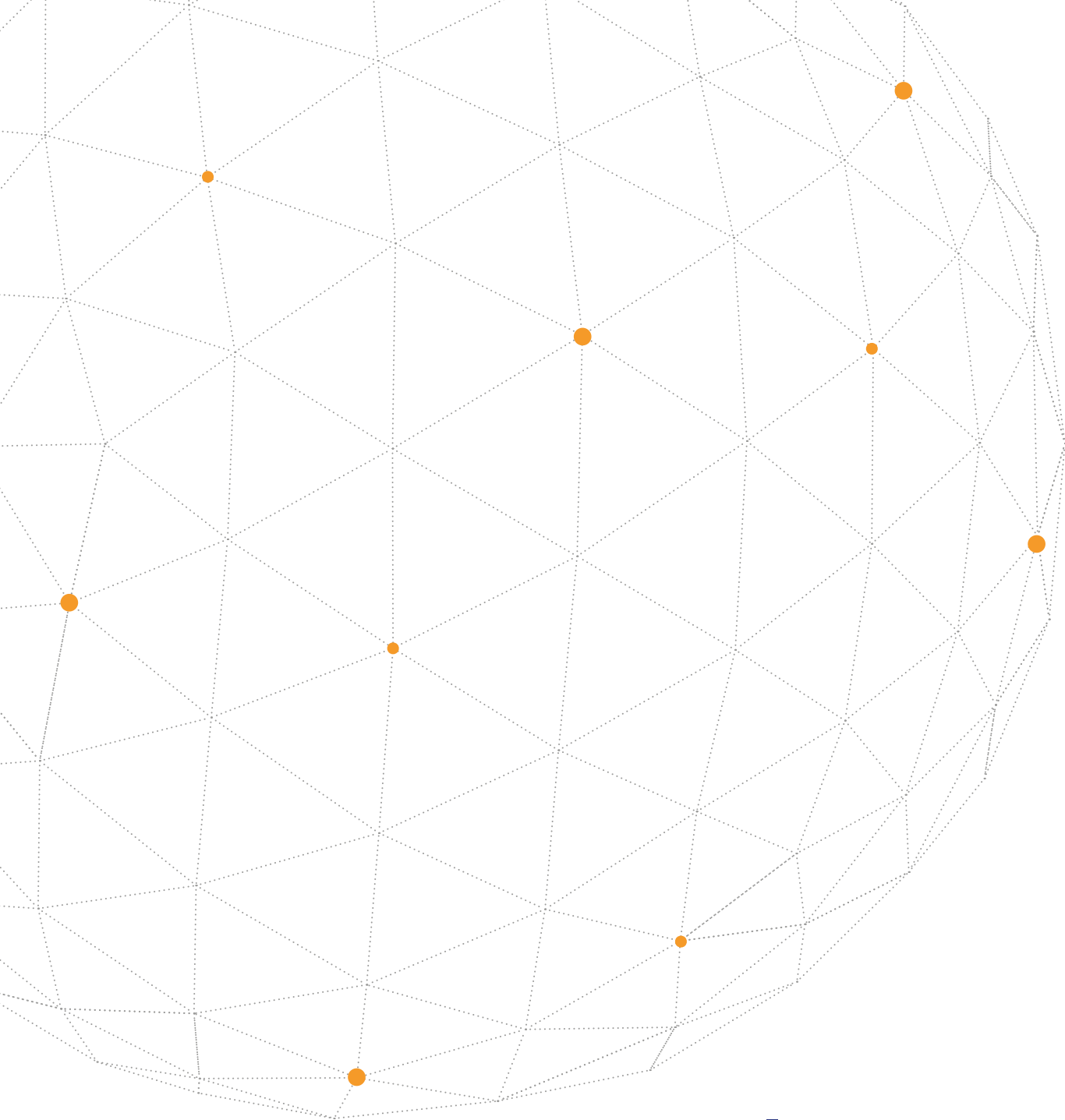
I felt it rewarding to be able to start and implement the initiative of producing a RILEM Annual Report for the General Council and being able to start the procedure for the retirement of Pascale and hiring extra support in the person of an Implementation manager. Possibly the most rewarding result was to be able to introduce, with the tremendous help of Erik Schlangen, as Honorary President, the RILEM grants for PhD students to allow them to participate in the Annual Week in Delft in 2018. The feedback and motivation of the students was really touching.

I think RILEM is on the right track, regarding its development, in that it is most important to collaborate and render services to the members. We should do our utmost to make this service clear and improve it constantly.

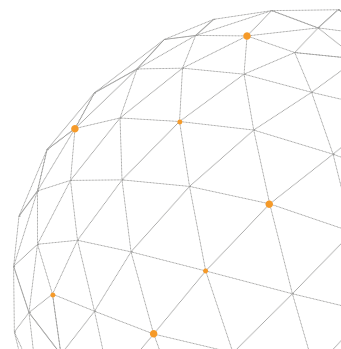
I believe everyone in service has done their utmost during my period as president. I was especially proud of the support and actions of Pietro Lura and Nicolas Roussel as editors in chief, for starting up the new journal, RILEM Technical Letters, which was a leap forward. Maybe implementation of proposals could have moved faster, but I do not really think that we had missed opportunities.

I think future office-bearers should learn from the past and should continue the tracks set out. They get as a rich heritage, a very strong association, financially sound, motivated people involved and a strong staff who have strong elements in hand to make RILEM grow to its 100th year anniversary. I hope to still be around then to celebrate this and meet old friends who are also still in good shape. Looking forward to meeting you at this occasion!

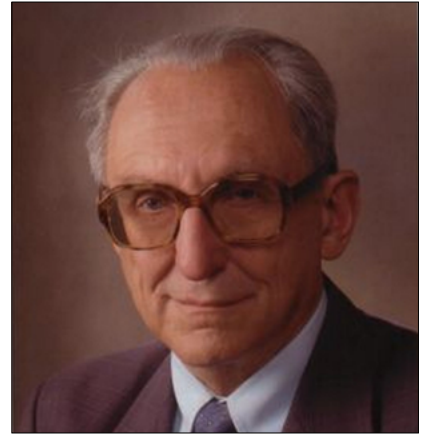




2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS



PROF. ANDRZEJ M. BRANDT
IPPT PAN, Warszawa, Poland

RILEM CCC Chair 1990, RILEM Fellow 2006, TC Chair

I had the honour of chairing the RILEM Technical Committee CCC - Coordinating Committee for Concrete Technology (3C)

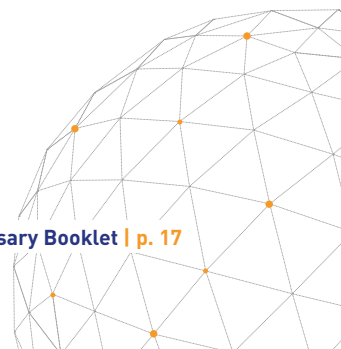
Here is a short list of the main meetings:

- 20-26 May 1990, Meeting of CCC RILEM, Helsinki, Finland, Chair Prof. Heikki POIJARVI
- 19-30 April 1992, Casablanca, Morocco, Chair: Prof. Andrzej M. BRANDT, Deputy Chair: M. Michel BRUSIN
- 12-16 September 1992, Espoo, Finland, RILEM TC-3C and Workshop “Concrete Technology in the Future”, Hotel Dipoli.
- 12-17 February 1994, Austria, Vienna, 14-15 Seminar RILEM 3C organized by Beton Verein “Durability of HPC”, organizer Dr. H. Sommer.
- 27 September - 1 October 1994, Trento, Italy. Meeting of RILEM 3C.
- 22-24 May 2000, Helsinki Congress ILCDES 2000 “Integrated Life Cycle Design of Materials and Structures”, Meeting of RILEM 3C.

I took over the chair in 1990 from Professor Heikki POIJARVI, and in 2000 the CCC was closed in the frame of general reorganisation of RILEM Committees.

According to my files, which may be incomplete, our work was not registered in detail. The discussions were related to the progress of work in that area.

Of course, I always try to follow the development of RILEM, and I wish excellent development of RILEM in the future. I do not think that I am in any position to formulate any comments relating to RILEM activity.



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS

PROF. RAOUL FRANCOIS
INSA, Toulouse, France

Treasurer 2007-2019, Fellow 2012



My highlight would be that I always got a positive financial result at the end of the 12 years while I was treasurer. My lowlight is probably the fact that despite 12 years as treasurer, I continue to think that accounting is really difficult to understand as a scientist. It does not have the same logic as science: .

The main challenge was that RILEM has two different entities: one non-profit association and one private company, and both entities share the same staff and office, which is a quite complex situation. Possible troubles with French tax administration could be expected in the future.

When I was treasurer, it was clear that all income and expenses of RILEM were totally transparent and only for RILEM's benefit.

I think that RILEM need to develop (again), the way to publish technical recommendations for practitioners and engineers (in all field - we need to be present everywhere) and that these recommendations must be upgraded after a period of five years.

My advice to future office-bearers is to try to be close with the staff of SG in Paris, because it is important to try to understand the job of all staff members, which is very different to the job of RILEM members. 😊



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS

PROF. KEI-ICHI IMAMOTO Tokyo University of Science, Japan

TAC Expert, TC member



I became a member of RILEM on 2003 as secretary of TC 192-ECM “Environment-Conscious Construction Materials and Systems”. After that, I joined as a member of TC 194-TDP “Application of Titanium Dioxide Photocatalysis to Construction Materials”, TC CCD “Concrete Cracking and Its Relation to Durability” and TC 230-PSC “Performance-based Specification and Control of Concrete Durability” and as a secretary of TC 255-FRS “Fire Resistance of Concrete Structures Repaired with Polymer Cement Mortar” and TC 270-CIM “Benchmarking Chloride Ingress Models on Real-life Case Studies: Theory and Practice”.

The key personality I met through RILEM and who contributed to my development, is Dr. Roberto Torrent. He gave me a chance to attend TC 230-PSC and provided me with advanced knowledge on air permeability of cover concrete.

Highlights of your association with RILEM were:

- The RILEM International Symposium on Environment-Conscious Materials and Systems for Sustainable Development (ECM2004) during RILEM week in Japan was my first association as symposium secretary.
- After that, I joined as head secretary of the International Symposium on Deterioration and Conservation of Concrete Structures (RCCS2015) under auspicious of RILEM, which was an event for the 50th Anniversary of the Japan Concrete Institute.

RILEM should create a partnership with ACF “The Asian Concrete Federation” which has a strong partnership with the Japan Concrete Institute.



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS



PROF. CHRISTOPHER LEUNG

The Hong Kong University of Science and Technology

Hon President 2011, Fellow 2011, TAC, TC Chair, Board of Editors

I first learned about RILEM when I was a PhD student looking for proper testing methods for my research project. Like many others, my work has benefitted greatly from the reports developed by RILEM Technical Committees.

In 2003, I was invited by Prof. Arnon Bentur to start and chair a Technical Committee on Optical Fiber Sensing for RILEM, and this started my official affiliation with this wonderful organization. Since then, I have served on the Technical Activities Committee of RILEM, the Editorial Board of Materials and Structures (which is RILEM's flagship journal) as well as Honorary President of RILEM in 2011.

Through the various RILEM activities, I was able to meet and/or work with many leading experts with common interests. The network developed has been extremely helpful to my own research as I can always consult a highly knowledgeable friend when there are problems I cannot solve. Moreover, the opportunities to take up major roles in RILEM have greatly enhanced my own visibility in the field. I was fortunate to be invited as keynote speaker at several major international conferences, and I am sure the positions I have held at RILEM have been one of the factors.

Among my various RILEM activities, the most memorable one was the organization of the RILEM week in Hong Kong in 2011. I had the pleasure to host a large group of international experts, including many from Mainland China. I believe this event has served as an effective introduction of RILEM to China and facilitated the formation of the RILEM China National Group in 2014. In recent years, I have seen more and more RILEM activities in China and increasing involvement of Chinese researchers and engineers in RILEM Committees. This will be helpful with the transfer of State-of-the-Art technologies developed by RILEM to real applications in the mega infrastructure projects in China. After the technologies have been tested on the applications, they can be further improved, especially in practical implementation aspects, and applied in other parts of world. The internalization effort of RILEM has certainly been fruitful in China.

In the future, I hope RILEM will continue to reach out to various parts of the world, especially the developing countries. The ability to promote sustainable development around the world through technological means will benefit our future generations. This will further elevate the global impact of RILEM and make it a great organization for many years to come.



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS

PROF. TAKAFUMI NOGUCHI University of Tokyo, Japan

*National Convener Japan, Fellow 2019,
Bureau member 2020, EAC, TAC*

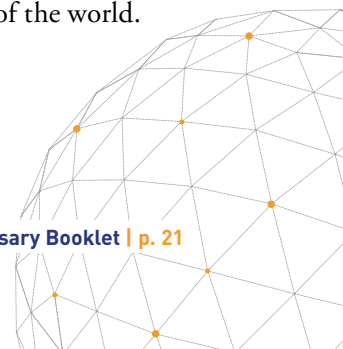


On the occasion of RILEM's 75th anniversary, I would like to express my heartfelt congratulations, as National Convener for Japan.

My first encounter with RILEM was at the departmental library 35 years ago, when I was a Master's student at the University of Tokyo. At that time, there was a respected PhD student studying application of fracture mechanics to concrete. I was strongly influenced by him, and I wished to develop a model for the process of concrete fracture in compression. I often thought that there should be some rules regarding the occurrence and progress of compressive failure in concrete and found helpful references in *Materials & Structures*. Although I studied fracture mechanics, it turned out that modeling of the compressive fracture process of concrete was beyond my performance after a few years. The theme of my Master's thesis was on the occurrence of cracks in the cover concrete due to the corrosion of rebar, and in the PhD dissertation, the theme was changed again to the mechanical characteristics and test method of high strength concrete. However, the knowledge gained from the papers published in *Materials & Structures* was useful for both theses. I became a faculty member at the University of Tokyo after graduation, and *Materials & Structures* has always been a signpost of my research for the 35 years since I started researching concrete.

At RILEM Week held in Varenna, Italy in September 2008, I took over the position of a TAC member as JCI representative from Professor Hirozo Mihashi of Tohoku University, and since then I have been deeply involved in RILEM's activities. Exchanging information and discussions on research activities at TAC meetings with prominent professors who one would only see as the author's name of the papers, and young researchers who are publishing cutting-edge papers was very meaningful not only for myself but also for Japan. In addition, at EAC meetings, I was inspired by the important role of RILEM and its high contribution to the education of PhD students, and I realized that it was important to introduce the same system to Japan. And then, I was appointed as a cluster convener, as well as a Bureau member. I have been working for the development of RILEM, for strengthening the relationship between RILEM and Japan, and the advancement of construction materials to the best of my poor ability. These experiences have become an irreplaceable asset for me. Thanks to RILEM activities, I made many friends all over the world and plenty of international students entered the University of Tokyo from all over the world.

I have the pleasure of organizing RILEM Week in Kyoto, Japan in 2022. Hopefully COVID-19 will have subsided by then. I would like to discuss the regeneration and conservation of structures in the future with participants from all over the world in an atmosphere of the historical city of Kyoto and Japanese traditional culture. I hope that this event, as well as various Japanese continual research activities on construction materials, systems and structures contribute to the development of RILEM, and thus to the sustainable development of the world.



2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS

PROF. DR. MANFRED N. PARTL Empa, Switzerland and KTH, Sweden

*Hon Member 2017, Fellow 2003, TC Chair, TAC, Cluster E Convener,
Assoc Ed 2020, DAC Expert*



As DAC expert for non-cementitious materials it was rewarding to strengthen the interest within DAC particularly on asphaltic materials and to emphasize the need of writing RILEM recommendations as practical support for industry and decision makers. Moreover, it was a very positive experience that DAC appears more transparent towards RILEM members than TAC, since it favors guest participation from TC chairs during its meetings. This fosters the communication and link to the active RILEM community as a practical measure to strengthen the democratic understanding of RILEM's administrative framework and strategy.

However there is still room for improvement within DAC as far as everyday collaboration and communication between the different members (e.g. regional conveners) and DAC experts, in particular with respect to non-cementitious materials, since most regional conveners have a concrete background and network.

Moreover, DAC meetings are only scheduled on a half-yearly basis, requiring personal attendance of the members. This makes DAC slow and clumsy. Unfortunately, electronic conference tools are still poorly developed within RILEM. This raises the question of travel costs which are a problem if you are forced to pay for travel without support of a company.

During the last years, RILEM managed to strengthen its focus in non-cementitious materials, by introducing new clusters in TAC and, in a more modest way, by introducing experts in DAC. The difference between both advisory committees lies in the fact that TAC is topic oriented and science driven whereas DAC is geographically oriented and application driven. The problem is the link between both approaches and committee cultures, which is negative for one of the traditionally central outcomes of RILEM: the RILEM recommendations with pre-standardization character. Many RILEM recommendations nowadays read like scientific papers and are not written in an application-friendly way.

Given that situation, RILEM probably needs to revise its advisory committee system in order to manage a better balance between scientific needs (including scientific ambitions of its members) and needs of society and industry. The committees should really represent, equally weighted, all four major elements of RILEM, i.e.

- 1) science development,
- 2) pre-standardization (recommendations),
- 3) regional exchange,
- 4) education.

It appears that RILEM has somehow lost focus on recommendations with pre-standardization character, risking becoming a purely scientific association without enough practical input from industry, thus losing professional visibility. In future, RILEM must find a way that scientific output is not promoted at the cost of industrial and social needs. Today, the existing committee system appears somehow over-challenged in reviewing the actuality of all recommendations and not appropriately composed with a balanced mix of experts for producing new recommendations such that they are useful for application.

2 | BUREAU AND WORKING GROUP, EXCLUDING TC CHAIRS

PROF. ENRICO SASSONI University of Bologna, Italy

*Colonnetti Medalist 2017,
Ed RTL, TAC, Convener Cluster E*



I have been a member of the Technical Activities Committee (TAC) of RILEM since September 2018, when I joined TAC as the Convener of Cluster E, coordinating the activities of the Technical Committees (TCs) dealing with “Masonry, Timber and Cultural Heritage”.

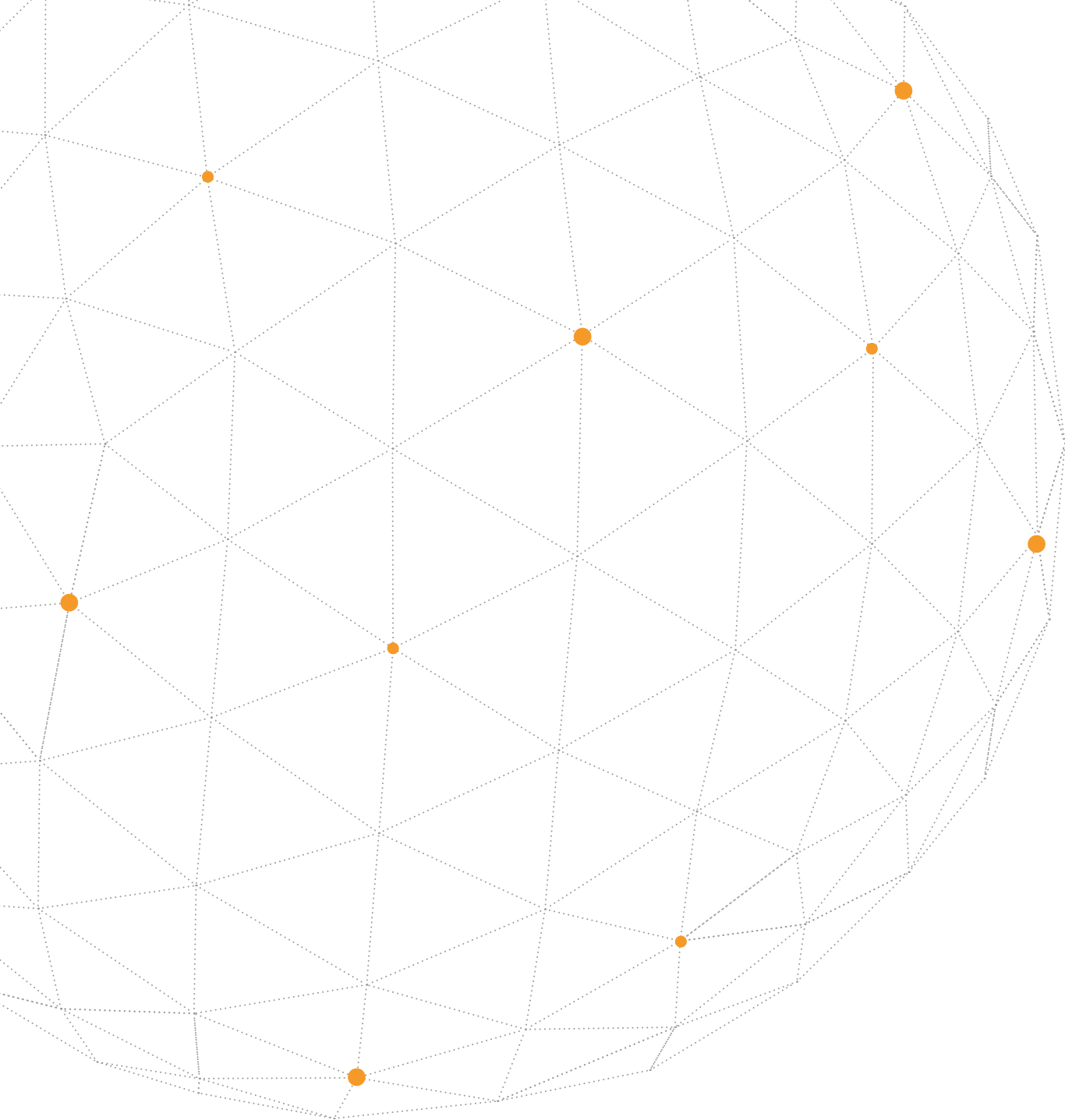
Even though I have served in this role for a relatively short time (and attending all the TAC meetings in person is not always easy), this experience has already proved very significant to me.

First, considering that RILEM is based on voluntary activity of its members, the work of TAC has showed me how important it is to incentivize active participation of existing members and to attract new motivated ones. This is essential for the development of RILEM, but also for the scientific community in general, which receives a strong input from the activity of the RILEM TCs.

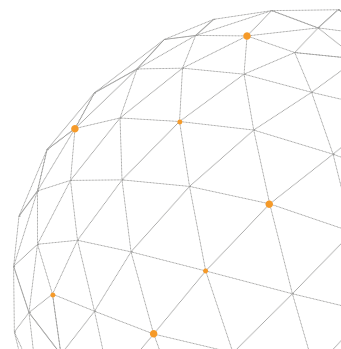
Moreover, a large part of the work of TAC has proved to touch “diplomatic issues”, ranging from how to deal with outdated recommendations by past TCs to the relationship with other scientific organizations. On all occasions, TAC was able to solve these and other issues in an effective, but still tactful way, which was possible also thanks to the ability of the former and the present TAC Chairs. To be personally involved in such high-level decision-making, was most definitely an instructive experience for me, which I will take advantage of in my future academic activity (and in life in general).

Combining the experience of senior members, who have a deep knowledge of RILEM affairs and a strong dedication to the organization, with the energy of motivated junior members, who can contribute with their enthusiasm and fresh point of view, is in my opinion one of the keys of the future development of RILEM, for which I will work during my activity as a TAC member





3 | TC CHAIRS



3 | TC CHAIRS

DR. CARMEN ANDRADE

CIMNE UCP, Spain

*Robert L'Hermite Medalist 1986, RILEM President 2000-2003
RILEM Hon President 2002, Fellow 1995,
Hon Member LAT-RILEM 2014
RILEM Hon Member 2015, MAC, TAC, TC Chair*



I have been chairman of the TC's listed at the end of these short memories.

In my first experience when I was young, the first feeling was to be afraid of not being able to fulfill the goal with enough quality and rapidity (only 3 years plus the editorial time). It was really impressive for me to meet all the best specialists in the area and the demand at each meeting of agreeing on the tasks and presenting data in the frontier of knowledge.

The other two TC's were very demanding for me, as there was controversy among members on the chloride modelling. I learned to listen and be patient but firm, by asking always for experimental verification of the several theories.

RILEM TC's have always been for me a source of learning in the scientific and in the human aspects. I have found numerous collaborators and even friends, who did not stop the discrepancy or the discussion in the scientific aspects, stimulating the need to go always deeper and deeper in the fundamentals of the practical application.

TC-154 EMC "Electrochemical Techniques for measuring metallic Corrosion in concrete".

TC-178 TMC "Testing and Modelling chloride penetration in concrete".

TC-213-MAI "Model Assisted integral Service Life Prediction of concrete structures".



3 | TC CHAIRS

PROF. HASSAN BAAJ
CPATT University of Waterloo, Canada

TC Chair



It was twenty or twenty-one years ago, when my PhD supervisor and long-time mentor, Prof. Hervé Di Benedetto, told me that during my PhD, I will be characterizing some materials as part of the RILEM TG activities focusing on fatigue of bituminous mixes.

Back then, I was a PhD student at ENTPE in Lyon, France. At that time, I did not know what RILEM was, but I really felt that a great opportunity showed up for me to learn new things and exchange ideas with international experts. This is exactly what happened! RILEM offered me a great opportunity as a student-member to work with and learn from most knowledgeable, and experienced researchers from different countries. I was always fascinated by the wonderful discussions and deep reflections that used to take place during these meetings.

I learned a lot from listening to or discussing with experts like Louis Francken, Manfred Partl, Chantal de la Roche, Ulf Isacsson and several other experts! My work with RILEM gave me the opportunity to be one of the co-authors of an important journal paper that summarised the findings of the work of the TG.¹ This paper became an important reference that has been cited over 260 times so far.

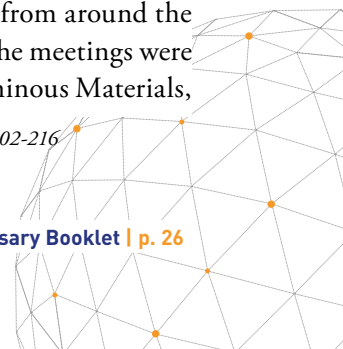
Finally, it was really nice for me as a student to travel around Europe to attend all these meetings which allowed me to see many labs and even visit some nice cities when Hervé would let me stay for an extra day or two 😊.

After completing my PhD in 2002, I pursued my career in research in Canada at the National Research Council and later as industrial researcher with Colas Canada. One of the challenges I faced was the fact that most of RILEM committee meetings used to be held mainly in Europe, which somehow limited my involvement in the organization. This however didn't prevent me from following the activities of the different TCs which allowed me to become again an active member, when I returned back to France in 2008, to pursue my career as a researcher at Lafarge Research Centre. During these years, I also benefited from the quality work done by different RILEM TCs, in the asphalt and concrete areas, and used this in my research projects.

In 2014, I decided to pursue a career change by moving to academia after several years working in industrial R&D. Being more involved in RILEM became then not only possible, but necessary. I certainly wanted to continue my learning journey with RILEM, but I also wanted to pay back and contribute somehow to the success of this great organization. Hence, I am an active member of several TCs and chairing since September 2016, the RILEM Technical Committee TC-CHA 278 (Crack-Healing of Asphalt Materials).

I was also honoured to host the Annual Meeting of the RILEM Cluster-F (Bituminous Materials and Polymers) in October 2019. More than 50 researchers and academics from several academic institutions, from around the world, attended these meeting at the University of Waterloo in Canada. We really had fun and the meetings were great! I also seized this opportunity to organize a mini symposium on High-Performance Bituminous Materials,

1. Fatigue of bituminous mixtures, H Di Benedetto, C De La Roche, H Baaj, A Pronk, R Lundström, Materials and structures 37 (3), 202-216



where some of these international researchers shared their knowledge with about 120 attendees from academia, industry, and transportation agencies.

In December 2019, I co-chaired an International Workshop on Crack-Healing of Asphalt Pavement Materials at Beijing University of Technology organized under the aegis of our TC. Finally, I am one of the four co-chairs of the Scientific Committee of the RILEM International Symposium on Bituminous Materials (Lyon, June 8-10, 2020) with Prof. di Benedetto and two other RILEM TC leaders.

My journey with RILEM started more than 20 years ago when I was a student and I hope that it will continue for many more years. Over these years, RILEM has always allowed me to meet and work closely with amazing researchers who later became my good friends.

I am member of several other excellent organizations but there is something unique about RILEM that makes it so special to me! We will be celebrating the 75th anniversary of RILEM in 2021 and RILEM has really achieved a lot in these years! I am truly confident, that RILEM will achieve much more in the next 25 years so I can write more and share more stories for the 100th anniversary of this great organization.

3 | TC CHAIRS

ASSISTANT PROF. DR. JORGE BRANCO University of Bologna, Italy

*Colonnetti Medalist 2017,
Ed RTL, TAC, Convener Cluster E*



Being chair of a RILEM TC it is a very demanding but also a very recognized position.

The highlight is the contribution that the TC offers to improve the current state of research on the reinforcement of timber elements and structures. Moreover, to work with different experts in a specific field is a huge challenge.

Unfortunately, it is not so easy to keep the focus and the attention of the members in the TCs, in their very demanding academic life.

The key progress while in this position was the publishing of the STAR.

RILEM needs to find ways to motivate TC members more. I also feel that not only RILEM members should be contributors. If there an expert who is not a RILEM member, their contribution to the TC should be considered.

I missed an opportunity to organize a PhD course on the research results.

My advice to future office-bearers is to promote different activities, like PhD courses, workshops, and try to have activities more dedicated for young researchers.



3 | TC CHAIRS

PROF. DENYS BREYSSE Bordeaux University, France

Fellow 2018, TC Chair



RILEM has offered me the opportunity to write few words about the scientific involvement of Bordeaux University in RILEM activities during these last thirty years. This involvement is mainly related with the participation to technical committees.

From a personal point of view, it dates back as far as in the 1980s when, as a young researcher, I participated in TC-125 devoted to “Design by testing” and contributed to a national state-of-the-art report. At that time, the RILEM office was in Cachan, France, at the same campus as my research laboratory (LMT Cachan), and the link was of course quite natural. A few years later, I collaborated in 146-TCF Tightness of concrete with respect to fluids, chaired by Pr. H.W. Reinhardt. I still have a very vivid memory about this work (Bruno GERARD, who was my PhD student at this time, was also involved) and I was impressed by the character, expertise and kindness of Pr. REINHARDT. He gave a very strong impression not only as a leading scientist, but also as a man with a broad culture.

It is during the 2000s that, after having moved to Bordeaux University and having co-chaired a French collaborative book on Non-Destructive Testing for Concrete, I submitted to RILEM the idea of a new TC on this topic. Thus the 207-INR TC was established, and I had the chance of managing it. This has really been a very strong experience, with many meetings always involving leading scientists. One challenge is, as the reader probably knows, to really reach a consensus between experts on every point. Managing a composite group with a variety of opinions, and to reach a consensus is not always easy and requires some kind of “diplomatic skill”. But one can be sure that it is worth it! It is also during these meeting that comradeship or friendship can develop, and not only because of what we drink during after meeting events.

Logically, when 207-INR TC published its results in a Springer book in 2012, we had identified some issues requiring further study. It is for that reason that 249-ISC TC was created, devoted to Non-Destructive Strength evaluation of concrete. Our recommendations and guidelines are to be published in few months and all members are really hoping that it will improve the quality of engineering practice regarding this field.

Thus, the loop seems to have closed, after about 30 years of personal collaboration with RILEM. But the Bordeaux University will remain very active in RILEM works. Three colleagues (Dr Mehdi SBARTAI, Dr. Jean François LATASTE et Dr. Jean Christophe MINDEGUIA) are regular members with a strong involvement in topics like Non-Destructive testing, evaluation of moisture in construction materials or fire damage of concrete.

I am sure that many new pages will be written before the RILEM 100th anniversary.



3 | TC CHAIRS

PROF. ARNAUD CASTEL

University of Technology, Sydney, Australia

TC Chair TC CAM 2018

Arnaud Castel graduated with his PhD in January 2000 at the Laboratory of Materials and Construction Durability at the University of Toulouse in France under the supervision of Professor Raoul Francois, the treasurer of the RILEM from 2007 to 2019. He obtained a Special award for excellence in Civil Engineering research related to his PhD Thesis on steel reinforcement corrosion in concrete, F.N.T.P., Paris, La Défense on 14 March 2001. His early academic career was at the University of Toulouse from 2000 to 2010.

His first involvement in a RILEM Technical Committee was for TC RILEM MAI “Model assisted integral service life prediction of steel reinforced concrete structures with respect to corrosion induced damage” in 2005.

In 2011, he was appointed as a professor at the University of Nice Sophia Antipolis in France. He resigned in 2012 for a position of A/Professor at the University of New South Wales, Sydney Australia. He accepted this strategic appointment at the CIES (Centre for Infrastructures and Engineering Safety) seeking for a more research-intensive environment and to build the capacity of CIES in concrete technology and durability. He was appointed Full Professor at University of Technology, Sydney (UTS) in 2019.

Since he started to work as a staff member at the UNSW Sydney, Arnaud Castel has been strongly involved in RILEM as a member of TC DTA “Durability testing of alkali-activated materials” from 2013 to 2018, Chair of TC CAM “Chloride transport in alkali-activated materials” since 2018 and also member of recent TC CCL “Calcined Clays as Supplementary Cementitious Materials”.

3 | TC CHAIRS

PROF. EDUARDO M. R. FAIRBAIRN Federal University of Rio de Janeiro, Brazil

*RILEM Officer, DAC, Regional Brazilian Convener,
TC Chair TC 245-CMS*



Key facts and dates of the relationship with RILEM:

Technical committees:

TC 208-HFC:

Member: High performance fiber reinforced cementitious composites 2006-2011.

TC 219-ACS:

Member: Alkali Aggregate Reaction in concrete structures: performance testing and appraisal 2008-2013.

TC 240-FDS:

Member: A framework for durability design of fibre-reinforced strain-hardening cement-based composites (SHCC) 2010 -2014.

TC 245-CMS:

Chairman: Thermal cracking of massive concrete structures 2013-2017.

Organisation of RILEM conferences:

- Strain hardening cementitious composites (SHCC2), Rio de Janeiro, 12-14 December 2011.
- Numerical modeling strategies for sustainable concrete structures (SSCS 2015), Rio de Janeiro, 14-16 December 2015.

RILEM Officer:

- Brazilian Delegate, 2008-2014
- Brazilian Convener, 2014-.....

Past experiences:

My M.Sc. thesis supervisor (1978), Prof. Fernando L. B. Carneiro, invented the Brazilian (splitting) Test in 1943 and presented it internationally in 1947 in the International Meeting of Materials Testing Laboratories, in Paris, during which RILEM was founded. With the influence of Prof. Carneiro, who became president of RILEM later, my first journal paper, with the conclusions of my Master's thesis research, published in *Matériaux et Constructions* in 1980 (Fairbairn and Carneiro, 1980).

After returning from my PhD in France in 1984, I was admitted as a teacher at the Federal University of Rio de Janeiro working with Prof. Carneiro until his retirement. At the time of his death, it was my honor (together with my colleague Franz-Joseph Ulm) to write his obituary which was officially published in the same RILEM journal (Fairbairn and Ulm, 2002) where we co-authored my first paper.

Key personalities:

Folker Wittmann, Victor Li, Ian Sims, Philip Nixon, among others.



References:

- Fairbairn, E. M. R., Carneiro, F. L. L. B. (1980), Influence des gaines sur la résistance des âmes des poutres en béton précontraint, *Matériaux et Constructions*, Vol. 13, 169-173.
- Fairbairn, E. M. R., Ulm, F.-J. (2002), A Tribute to Fernando L. L. B. Carneiro (1913 - 2001) engineer and scientist who invented the Brazilian Test, *Materials and Structures/Matériaux et Constructions*, Vol. 35, 195-196.

3 | TC CHAIRS

DR. ARLINDO FREITAS GONÇALVES
LNEC (Laboratório Nacional de Engenharia Civil), Lisbon
Head of Materials Department since 2010

*Fellow 2013, Chair MAC, DAC, TC member,
Regional Convener Latin America*



The committee TC 116-PCD, chaired initially by Prof. Hubert Karl HILSDORF, is the one of which I hold the best memories. The high-quality state-of-the-art report and experimental work developed in the committee allowed the publication of the recommendation “Tests for gas permeability of concrete - Preconditioning of concrete test specimens for the measurement of gas permeability and capillary absorption of water”.

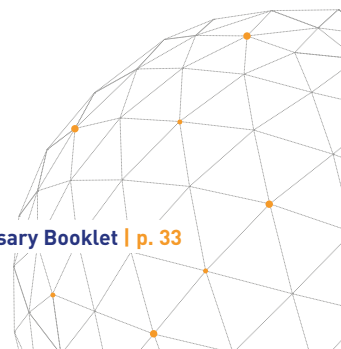
The member who impressed me the most was Prof. Theodossius T. TASSIOS, who spoke fluent English, French, German, of course, in addition to Greek. This ability was very relevant in the 1970's.

Regarding the future of RILEM, it is important to continue to ensure that TCs have clear objectives and outputs, so that, whenever possible, recommendations may be produced.

EAC should make growing use of Profession seminars (e.g. practicing engineers).

RILEM should have a secretary general, similar to fib, so that the President of RILEM can be freed from daily business matters.

The General Council meetings should be valued, through the inclusion of more topics for discussion. In its present model, the General Council meetings are merely formal, under-attended and used simply to approve what has been previously decided by the Bureau. Alternatively, electronic voting could be used to get the opinion of RILEM members.



3 | TC CHAIRS

PROF. DR. EDDIE KOENDERS
Institute of Construction and Building Materials
TU Darmstadt, Germany

TC Chair TC 270-CIM



Among the highlights of being a Chair of a TC are the regular meetings with the internationally motivated member group of specialists, to discuss the topics associated with the TC. In addition, other important highlights are definitely the possibility to initiate and contribute to the progress of the TC, to help better understanding the TC topics, gathering published information, to compare and analyse TC results, and finally, to structure the TC results in a State-of-the-Art Report (STAR).

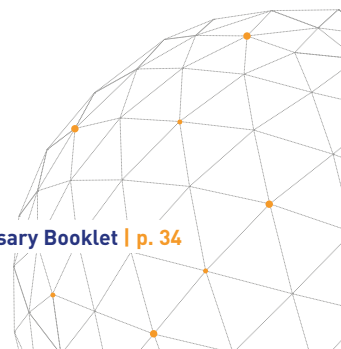
Lowlights in general are on the one hand the time and effort that goes along with the organization and traveling to the meetings, but on the other hand, the gain makes it always worth to go for it!

Challenges are mainly related to the obligation to do the TC work within the four-year time frame, which is the default lifetime of a TC, and to produce a STAR report as a final deliverable within this time constraint. To reach this, the committee must be active, and its members participate actively in the various meetings and discussions throughout the meetings.

The key progress made by RILEM is mostly related to the continuous support they offer in terms of providing the ability to schedule meetings during either the RILEM Week or the RILEM Spring convention. In addition, the development of the website content management system progressed greatly.

I think that RILEM developed very well over the last decades. In my opinion, a potential field that could be further developed is the educational part of RILEM, in terms of e-courses for PhD and MSc students, etc. In this way RILEM will become more familiar to younger students that are interested in construction materials. These courses could also address topics of Technical Committees.

I would recommend that office-bearers introduce young materials researchers/students to RILEM and the benefits RILEM can bring them.



3 | TC CHAIRS

DR. VALÉRIE L'HOSTIS CEA

TC Chair TC 226 CNM



I “met” RILEM during the Workshop “Use and long term performance of concrete in nuclear power plant fuel cycle facilities” which was co-sponsored by RILEM and by OECD-NEA/CSNI, organized in 2004 in Madrid by Prof Carmen Andrade.

During the Workshop, it was mentioned by Dan Naus that a RILEM TC dedicated to concrete for nuclear applications just finished. He proposed me, with Carmen Andrade, to integrate the RILEM network and to follow up Dan Naus’ activities by proposing a new TC. That is the origin of the proposition of the TC 226-CNM from 2008 to 2015 (Concrete for Nuclear Management). The TC aimed at providing a review on existing R&D programs on long-term prediction for nuclear applications, as well as to identify the gaps in the existing knowledge, in order to propose subjects that need further research.

Members who can be acknowledged were Carmen Andrade (IETcc, Spain), Damien Féron (CEA, France), Christophe Gallé (CEA, France), Valérie L’Hostis (CEA, France), David Kosson (Vanderbilt University, United States), Florence Sanchez (Vanderbilt University, United States), Ken Philipose (AECL, Canada), Steve Williams (NDA, United Kingdom), Nick Smart (SERCO, UK), Pablo Zuloaga (ENRESA, Spain), Robert Gens (Ondraf/Niras, Belgium), Fred Glasser (University of Aberdeen), Bruno Kursten (SCK•CEN, Belgium), Jacob Philip (NRC, United States), Marta Castellote (IETcc, Spain). The final report edition in 2016 (Performance assessment of concrete structures and engineered barriers for nuclear applications).

Conclusions of RILEM TC-226-CNM have been successful thanks to the support of RILEM Pascale Ducornet and her colleagues. Thanks a lot to them.

Three Workshops have been organized through the sponsoring of RILEM. RILEM offer the opportunity to meet experts in the field, to share experiences and to access to the state of the art of all domains involving concrete. I hope the same success for the future RILEM activities.

Happy Birthday RILEM!



3 | TC CHAIRS

**PROF. DR. JOSÉ FERNANDO
MARTIRENA-HERNÁNDEZ**
Universidad Central de las Villas, Cuba

TC Chair



Highlights:

- Excellent visibility within the scientific community
- Prestige and capacity of mobilizing people and resources
- Up to date information on the subject
- Collaboration with teams around the globe

Lowlights:

- Endless traveling
- People work on voluntarily basis (do not always comply)

Challenges I encountered while a TC chair at RILEM:

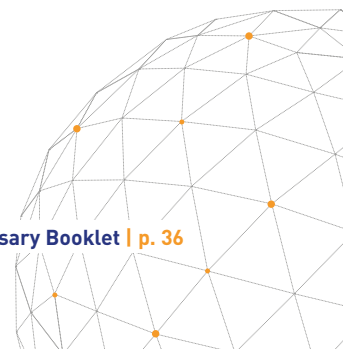
- To be chairman being based outside Europe or North America
- Financial support to attend TC meetings
- Outreach to people

Key progress made by RILEM while in this position:

- Pin calcined clays as relevant subject
- Gathering together people and teams around the globe
- Compile and sort out relevant information developed by independent teams
- Visibility of the subject calcined clays
- Links to the industry

I think RILEM needs to develop by:

- More intense use of social networks
- Limit meetings with physical presence
- Strengthen collaboration with people/teams outside Europe-North America
- Also, with standard organizations in relevant regions (Europe, US, Japan)
- My advice to future office-bearers:
- Try to be more active online
- Foster online meetings and gatherings



3 | TC CHAIRS

PROF. MASAYUSA OHTSU Kumamoto University, Japan

Past TC Chair



TC212-ACD: Acoustic emission and related NDE techniques for Crack detection and Damage evaluation in concrete, 2005-2010

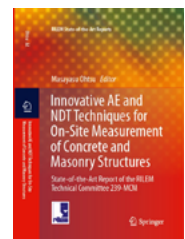
TC-239 MCM: On-Site Measurement of Concrete and Masonry Structures by Visualized NDT, 2010-2016

As a chair of the above two committees, I reply your inquiries, as follows:

Highlights as Past Chair of the TCs with RILEM

TC212-ACD:

1. Organization of the International Conference On-Site Assessment of Concrete, Masonry and Timber Structures: SACoMaTiS 2008, September 1-2, 2008 at Varenna.
2. Publication of three RILEM Recommendations in 2010
 - Ohtsu, M. (2010), Measurement method of AE signals in concrete, *Materials and Structures*, 43, 1177-1181.
 - Ohtsu, M. (2010), Test method for damage qualification of reinforced concrete beams by AE, *Materials and Structures*, 43, 1183-1186.
 - Ohtsu, M. (2010), Test method for classification of active cracks in concrete structures by AE, *Materials and Structures*, 43, 1187-1189.



TC-239 MCM:

Publication of the State-of-the-Art report in 2016

Challenges I encountered while in this position at RILEM

TC212-ACD & TC-239 MCM:

In order to keep the meeting active, I organized a series of the Kumamoto International Workshop on Fracture, AE and NDE in Concrete (KIFA) in 2005, 2009, 2010, 2013, in addition to many international conferences organized by other members.

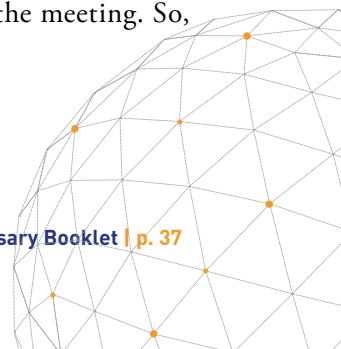
Key progress made by RILEM while in this position

TC-239 MCM:

As can be seen in the picture above, the State-of-the-Art report was published by Springer and became commercially available.

How do I think RILEM needs to develop?

During RILEM week, not many members of the committee are interested in participating the meeting. So, RILEM should consider the task to gather more interest from members attending the week.



3 | TC CHAIRS



PROF. IOANNA PAPAYIANNI
Aristotle University of Thessaloniki, Greece

TC Chair

It is a highlight after some hours of scientific discussion (among 20-30 persons) to end up with an acceptable conclusion or a bottom line.

Challenges I encountered while Chair of a TC were financial support for young researchers (from Turkey, India, South America) to participate in the activities of RILEM TCs.

Key progress made was the Innovative aspects in research even in existing knowledge are very well clarified under the multi-disciplinary prism, so a very sound knowledge is promoted.

I think RILEM needs to develop as follows:

- Develop a strategic policy for attracting young researchers and professionals.
- An effort should be made to transfer the sound knowledge produced at RILEM TCs to practitioners, associations, industry, and society. They should be involved in the works of RILEM to enable a change in the status of construction.

Although I planned with other core members of our RILEM TC, to extend the activities and disseminate better the produced results by sharing knowledge and experience with European society, the application for a European project fund was not approved.

My advice to future office-bearers is:

- Exploit all possibilities of financial instruments to enhance economics of RILEM.
- Explain better to International and European Organizations the impact of RILEM work to society. For example: RILEM TCs produce sound knowledge at pre-normative level that means time and cost saving.



3 | TC CHAIRS

PROF. DR. MANFRED N. PARTL Empa, Switzerland and KTH, Sweden

Hon Member 2017, Fellow 2003, TC Chair, TAC, Cluster E Convener, Assoc Ed 2020, DAC Expert



My highlights and lowlights as Chair of TCs with RILEM

Highlights were:

- the general progress that the topic of bituminous materials and asphalt made during the life time of my three TC's from 1999 to 2017 leading to an increasing visibility of the subject within RILEM.
- the success of the 3 major conferences as well as the output of different state of the art reports, proceedings, recommendations and scientific publications.
- the good and open minded contact between the members as well as their commitment to do voluntary work and interact with other TC's and organizations (such as CEN) for the sake of the valuable progress in the asphalt field.
- the joint venture contract between ISAP and RILEM.
- we could close the TCs after an average lifetime of 6years in a punctual manner.
- the support and the contact with the RILEM Bodies was always open and non-bureaucratic.

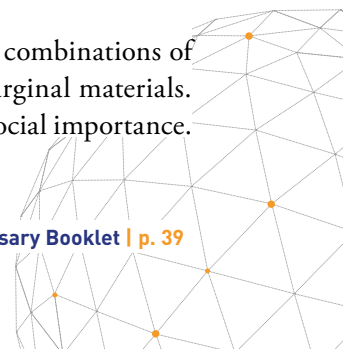
Lowlights and challenges were:

- progress was still slow due to the fact that no funding for common RILEM research projects was available and, that due to voluntarism RILEM work was not everyone's highest priority and only driven by own interest.
- it was difficult to get enough members from out of Europe involved, in particular from Asia, South-America, Africa and Australia. We even organized an annual meeting in Australia, which was very poorly attended. From the 18 annual meetings we had only 5 outside of Europe, none of which were in Asia and Africa.
- it was also difficult to keep interest from industry (industry members) and road authorities.
- it was always difficult to motivate the mostly academic members to write useful recommendations for practitioners, since this work did not count much for their professional career.

Due to the strong orientation of RILEM towards cementitious materials and the special and narrow time schedule of the official RILEM annual week as well as the geographical diversity of the RILEM annual meeting locations, we could never manage to motivate TCs members to have the TC annual meetings in combination with this event. Instead we were planning combined annual meetings with other asphalt TCs (Cluster meetings) for extensive exchange and coordination of the bituminous/asphalt TCs.

Key progress is that RILEM has managed to have improved visibility also in non-cementitious materials, particularly in asphaltic materials, creating a special cluster first for Bitumen, Masonry and Timber and recently for Bituminous Materials and Polymers

Regarding the future of RILEM, it should work towards focusing more on new materials and combinations of materials. This is particularly true with respect to re-use and recycling as well as the use of marginal materials. Material resources and sustainability (energy saving, reduction of greenhouse gases) are of great social importance.



Bituminous and polymeric materials (but not exclusively) are well suited as a starting point for this. RILEM is still too focused on cementitious materials and must better bring together experts from different material domains. It should also continue to work on finding a better balance between science and industry and must make sure that its four major pillar:

- 1) science development,
 - 2) pre-standardization (recommendations),
 - 3) regional exchange,
 - 4) education,
- are developed at equal strength and weight within the organization

Given the worldwide jungle of existing scientific and professional organizations, RILEM should also seek more alliances with others without jeopardizing its own goals, of course.

My advice to future office-bearers

My TC's were all quite large with sub-groups as task groups. This requires a lot of commitment and energy from the chair. Hence, my advice for future office bearers is not to blow up their TCs to a size that cannot be handled anymore and not to formulate goals that are too general and too ambitious to fulfill with a voluntary team under the professional landscape of today.

3 | TC CHAIRS

PROF. CARLO PELLEGRINO ICEA, University of Padova, Italy

Past TC Chair, EAC



29th July 2019

My main contribution to RILEM was the chairmanship, from 2009 to 2014, of the Technical Committee 234-DUC “Design procedures for the Use of Composites in strengthening of reinforced concrete structures”. The main motivation of proposing this TC was the significant research that was dedicated in that period to investigate the field of rehabilitation and strengthening of reinforced concrete structures and particularly, the increasing interest related to the use of innovative composite materials and FRP (Fiber Reinforced Polymer).

This Technical Committee involved about 40 members from various countries. The main basic idea of the proposal, approved by RILEM, was related to the fact that, despite the number of experimental, analytical and numerical works available and aimed at investigating the mechanical performances of reinforced concrete strengthened elements and structures, design rules for the intervention and procedures aimed at checking the efficiency of the strengthening technique were not well defined at that time. The main challenging aim of the TC was to integrate and harmonize the standardization and recommendation groups which were active in the field of the application of Fiber Reinforced Polymer and composite materials on reinforced concrete structures, both at national and international level.

As Chairman of the TC 234-DUC, I was invited to present the “Report of TC 234-DUC – Design procedures for the use of composites in strengthening of reinforced concrete structures” in the 67th RILEM Week, Paris, France, 2nd-4th September 2013. Over that period, it was a great pleasure and honour for me to be member of the Editorial Advisory Committee of the prestigious International Journal “Materials and Structures”. The final outcome of the work of the TC 234-DUC was the book Pellegrino C., Sena-Cruz J. (eds.), Design Procedures for the Use of Composites in Strengthening of Reinforced Concrete Structures - State-of-the-Art Report of the RILEM Technical Committee 234-DUC, 392 pp., Springer Netherlands, Series “RILEM State-of-the-Art Reports”, Vol. 19, 2015, DOI: 10.1007/978-94-017-7336-2, a useful instrument for engineers and researchers working about existing structures having thousands of downloads at present.

I am very grateful for RILEM, since the experience of chairing a Technical Committee was a great opportunity for me to have knowledge of and exchange ideas with a lot of esteemed colleagues from various countries and remain in contact with many of them for future initiatives and projects.



3 | TC CHAIRS

DR. LILY POULIKAKOS

Empa, Switzerland

TC Chair 2011-2013: Deputy Chair TC 231-NBM Nano Bituminous Materials

2014-2018: Deputy Chair 252-CMB, Chemo Mechanical Characterization of Bituminous Materials

2018-Present: Chair TC 279-WMR, Waste and Marginal Materials for Roads



I became familiar with RILEM as I was approached in 2011 to be deputy chair of RILEM TC 231-NBM “Nano Bituminous Materials”. I was active in this role from 2011 to 2013 and found the experience most rewarding, as I was surrounded by a very motivated team of experts from around the world. We spent hours discussing test methods and appropriate analysis methods of the data. The publication from this cooperation on DSC and AFM investigations of bitumen is one of my highest cited papers.

The success of this TC led me to accept the proposition of my colleague to be the deputy chair of a follow up TC, TC 252-CMB, Chemo Mechanical Characterization of Bituminous Materials. Our cooperation within this TC led to important findings regarding aging of bitumen in the hot mix and warm mix processes. The TC 252-CMB concluded with several publications and a very well attended symposium in 2018. I am currently chair of a newly formed TC 279-WMR, waste and marginal materials for roads. In this TC we investigate the effect of waste on bitumen, and mixtures as performance enhancing additives.

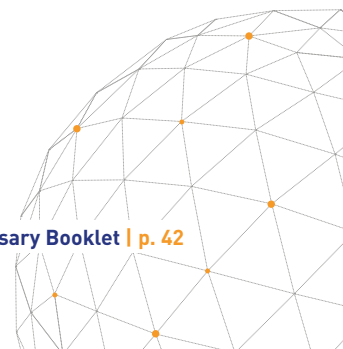
Due to unforeseen circumstances the TC chairs of NBM and CMB were not able to fulfill their duties as chair and I became the default chair of these TCs. As such I was able to count on the support and cooperation of highly talented colleagues who are still very active in my new TC 279-WMR.

I consider the many cooperative scientific publications as important highlights, bringing to the public domain the experience of experts in the field.

I believe RILEM should develop in two ways: gender balance and geographic balance.

As the 50th anniversary of cluster F for bituminous materials was recently celebrated, I was surprised to learn that up to date, I have been (by default) the sole female chair of a TC in cluster F. At the same time, I have observed that we have extremely talented and knowledgeable female colleagues working on bituminous materials and in every field, who need the support and encouragement of their peers. I hope that we will move in this direction in the future.

Currently our TCs are very euro-centric. With the increased advancement of remote communication, it seems natural that we can incorporate more international experts in our TCs.



3 | TC CHAIRS

PROF. HANS W. REINHARDT
Universität Stuttgart, Germany

*Hon President 2001, Fellow 1996, Hon Member 2009
TC Chair*



It is a good idea to prepare something commemorative for RILEM's 75th Anniversary.

It is long ago since I have chaired a RILEM TC, I think "my" last TC was disbanded in 2005. However, I was, and I am still a member of a RILEM TC.

My experience as chairman of a TC was always:

You must have some engaged and enthusiastic members who are responsible for chapters of a report. The best is to make a list of contents at the very beginning of the TC activities and to ask members for the leaders of chapters. After that, a clear schedule for presenting the results of the chapters should be made preferably in conjunction with other RILEM events. It is important that the chapters are clear cut and not ambiguous. The content of the chapters should be manageable and not too ambitious because otherwise the chapters will never be ready within a five years period.

The TC chairman must be strict about sticking to the time schedule.

It is always nice to have the yearly meetings at various places, if possible, at the places where relevant research is being carried out. During this, students of the local department can be guests and learn from the experienced TC members. This will also attract young people to RILEM.

At the end of a TC, a workshop or symposium should be organized presenting the results of the TC and additionally relevant research of other establishments. A RILEM book is always valuable.

My experience with RILEM TCs was always positive because if one can stimulate growth in research, one personally grows with the TC and can learn from others. During the life of a TC, friendships develop, and a network of researchers is established which lasts longer than the TC.



3 | TC CHAIRS



PROF. MOEMA RIBAS SILVA
Federal University of Espírito Santo, Brazil

Fellow 2002, TC Chair

When, in 1988, I was invited to propose a RILEM TC concerning the microbial impacts on building materials, mainly concrete, I was not convinced that it could become successful, considering that, at this time, just a small number of researchers worked on this matter. Nevertheless, I thought that the TC could be the first step to disseminate the subject. This was a great challenge for continuing the TC.

As the studies progressed, researchers from everywhere became engaged. Since different disciplines were supposed to be applied to the studies and due to the importance of the Microbiology, the Chemistry and other disciplines on these studies, researchers from different specialities joined the TC and published several papers.

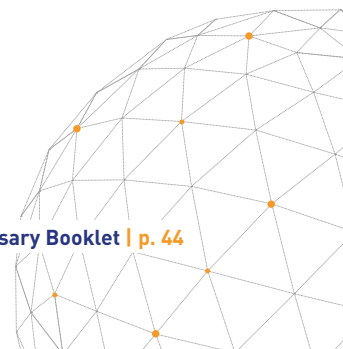
Articles have also been published in *Matériaux et Construction* and among these, the most read until today are “Microbial impact on building materials: an overview” and “Techniques applied to the study of the microbial impact on building materials”. Both publications were authored by different members of the committee.

Another challenge was to congregate all these researchers from so many different areas (such as Civil Engineering, Microbiology, Chemistry and Geology), to work together.

The TC 183-MIB allowed these researchers to get to know RILEM, to become a TC member and to participate in their activities. An example is Dr. Nele De Belie, who received the Robert L’Hermite Medal in 2010 and is still an active RILEM member.

The TC 183-MIB contributed also to the celebration of an international accord between the Federal University of Espírito Santo (Brazil) and the Hochschule Bremen/UAS (Germany) for studying the microbial impacts on cultural heritages. Some meetings have been organised by the TC 183-MIB, in different countries such as Brazil (Brasília, Vitória and São Paulo) as well as Portugal (Lisbon) and Argentina (Buenos Aires).

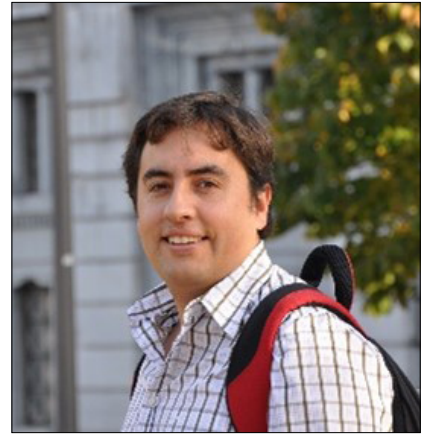
To chair the RILEM TC 183-MIB was a big task, but extremely rewarding.



3 | TC CHAIRS

DR. JAVIER SANCHEZ MONTERO IETcc-CSIC, Spain

TC Chair



My relationship with RILEM is mainly through participation in technical committees (TCs). Since in 2002, when I had only been working for a few months at the IETcc-CSIC, I participated in the organization of the RILEM week in Madrid (Spain).

Over this period, I participated directly or indirectly in various committees, for example:

- TC 207-INR “Interpretation of NDT results and assessment of RC structures” since 2004.
- TC NUM “Numerical modelling of cement-based materials” since 2011.

Currently I am the chairman of the TC-CCH committee “Stress Corrosion Cracking and Hydrogen Embrittlement of Concrete-Reinforcing Steels”.

In addition to participating in the technical committees that have allowed me to learn and discuss ideas with renowned researchers, I have also participated in several “RILEM Weeks”, which is a forum where you can share and receive the most innovative and advanced work.

I have been able to learn from eminent researchers such as: Hans Reinhardt, Gustavo Guinea and Jaime Planas, experts in fracture mechanics, and Joost Gulikers, Christopher Leung, Øystein Vennesland and Mark Alexander, experts in concrete durability and corrosion. These researchers have been fundamental in my being able to understand concrete and structures and, above all, the current state of knowledge about durability from its mechanisms to models or monitoring.

The main milestone I have reached within RILEM is being chairman of the TC-CCH committee “Stress Corrosion Cracking and Hydrogen Embrittlement of Concrete-Reinforcing Steels”. It is a unique opportunity to establish a working group with experts in the field and be able to establish the state of the art of this topic.

I have always felt comfortable in RILEM. It has a very friendly environment which allowed me to advance in my work and meet most important researchers.

I do not think there should be any substantial changes in the organization. Perhaps RILEM can improve the work of the groups with the incorporation of new technologies and software tools.



3 | TC CHAIRS

DR. MARIA ROSA VALLUZZI University of Padova, Italy

*Fellow 2015, Robert L'Hermite Medalist 2005,
TC Chair, TAC Expert,
Bureau member and Assoc Editor M&S 2020*



Highlights as Past Chair of the TC are that it was an exceptional experience for me to guide a lot of valuable experts and academics (much more expert than me), a lot of work but also a lot of fun.

Lowlights as Past Chair of the TC are that it was a lot of work to Chair a TC, as no funds are provided for research, so people are not really motivated to contribute very actively.

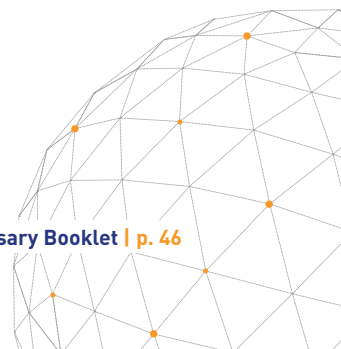
Challenges I encountered while in this position at RILEM were that sometimes at the beginning finding good and optimized strategies for achieving sound results with the involved people (one of these results was the Data Warehouse) can be difficult.

Key progress made by RILEM while in this position, was that more publications in journals (and regulating them) from TCs, has strongly increased motivation of members to contribute to TC activities.

RILEM's progress made so far is good to me.

As regards opportunities missed, there were none, but the position was not an easy job at all but was an interesting experience.

My advice to future office bearers is 'Just put your efforts in producing good results for dissemination in the international community'.



3 | TC CHAIRS

PROF. KLAAS VAN BREUGEL Delft University of Technology, The Netherlands

Fellow 2014, TC member



TC 244 - Numerical modelling of cement-based materials

Term: 2011 - 2019

Chair: Prof. Klaas van Breugel
Secretary: Prof. Wolfgang Brameshuber (2011 – 2016†)
Dr. Patel Ravi (2016 – 2019)

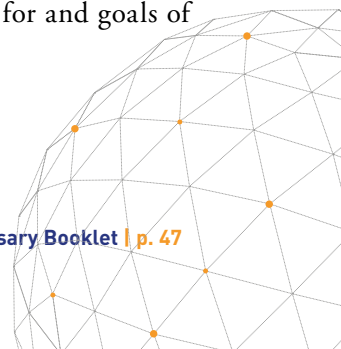
Although the area of interest of TC 244 ‘Numerical modelling is cementitious materials’ seems very clear, it is not immediately clear what the goal of this TC actually is. After long discussions the task of the TC was defined as: *Providing background information about (families of) numerical models for simulating the performance of concrete and concrete structures in subsequent stages of the materials lifetime. This background information should enable concrete technologists and engineers to assess the appropriateness of models for use in specific circumstances and for particular purposes.*

Given the tedious discussions preceding the formulation of the TC’s task, it was decided that the agreement could be regarded as a first result. It was also made clear that the goal of this TC was not to assess, qualify or rank numerical models. Valuable contributions to these discussions came from the secretary, Prof. Wolfgang Brameshuber, whose sudden death in 2016 meant a great loss to the TC. His loss, as well as unexpected changes of the chairman’s personal circumstances, delayed the TC’s agenda. Thanks to RILEM’s understanding attitude, the TC was still able to complete its job. The final report is expected at the end of 2020.

Due to the long term of the TC, we have seen a number of membership changes. This certainly caused another challenge for the progress of the work. New members provided new input, which compensated for the withdrawn expertise, but also challenged the coherence of the various contributions to the final report.

The final report contains a brief overview of different types of numerical models at different scales and developed for different purposes, including an example of a concept for multiscale modelling. Such a report is seen as an added value to currently available review reports on numerical modelling.

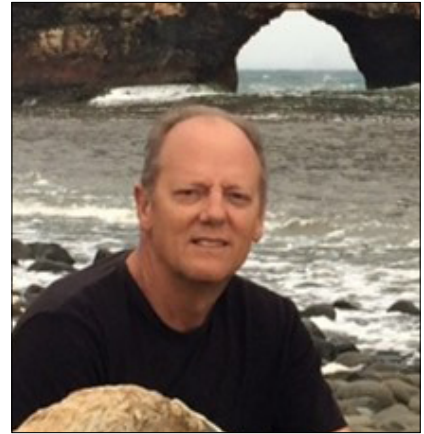
(Numerical) Modelling will remain essential in both science and engineering for both materials design, optimization studies and performance predictions. The complexity of modelling is often underestimated, which is, in fact, a direct consequence of an underestimation of the complexity of the real world. For the future it is important, therefore, that both experimental and modelling studies remain defined and promoted in parallel. More specific for modelling studies, it is considered important to clearly define the reasons for and goals of numerical models.



In the second half of the TC's mandate we had fruitful contacts with representatives of COST action TU1404 and the European project Superconcrete, both active on modelling. In hindsight there could have been more interaction at an earlier stage, although difference of goals can also be considered a good reason to work in parallel.

For future TCs in the field of numerical modelling, it is good to realise that modellers can have a different perception of what modelling in science and engineering entails. Developing models as tools for doing research, for example, is certainly different from developing models for simulating and solving on-site engineering problems. This kind of awareness may be helpful when defining new modelling studies.

3 | TC CHAIRS



PROF. GIDEON VAN ZIJL

University of Stellenbosch, Cape Town South Africa

EAC Member, Chair RILEM TC 240-FDS, 2010-2015

Co-chair RILEM TC 208-HFC, Subcommittee 2 Durability, 2005-2009

Without doubt, each TC meeting in this period (2005-2015) was a highlight for me, starting in Hawaii 2005, and subsequently in Alexandroupoulos 2006, Stuttgart 2007 at HPRCC-5, Gifu in 2008 at CONCREEP-8, Stellenbosch 2009 at ACM 2009 (SHCC series), Dresden 2010, Rio de Janeiro 2011 at SHCC-2, Guimarães 2012 at BEFIB, Toledo 2013 at FRAMCOS-8, Paris 2013 at RILEM Week (which I unfortunately missed), Delft 2014 at SHCC-3, Stuttgart 2015 at HPRCC-7, and in Leipzig later in 2015.

The initiation and continued SHCC workshop series, with its roots in Hawaii (2005) where we debated and selected the descriptive name Strain-hardening Cement-based Composites over Sunday lunch, and Stellenbosch (2009), was followed by SHCC-2 in Rio de Janeiro hosted by Prof Romildo Tolido Filho, SHCC-3 in Delft hosted by Prof Erik Schlangen, SHCC-4 in Dresden hosted by Profs Viktor Mechtcherine, Volker Slowik and Petr Kabele. SHCC-5 is planned for June 2021 in Japan by Prof Minoru Kunieda.

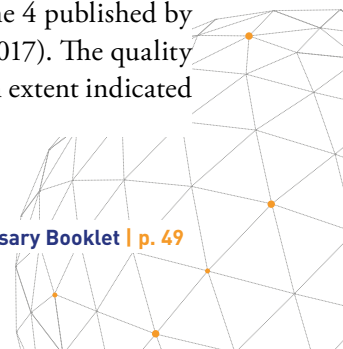
Another highlight was to perform research and publish with several of my colleague TC members in this time. Apart from the two published state-of-the-art reports (Reports 4 and 22 published by Springer), the culmination of laboratory tests performed by 5 laboratories in Leipzig, Rio de Janeiro, Qingdao, Stellenbosch and Tōhoku in a paper entitled “Comparative testing of crack formation in SHCC” stands out. This paper was selected as one of the ten best in 2016 in Materials and Structures, and one of the first published with open access.

Although the value of meeting with leading minds in related research fields outweighs the cost and time to travel from my country of residence, South Africa, this is a challenge. We successfully arranged several teleconferencing meetings, thanks to the efforts of TC 240-FDS secretary Prof Flavio de Andrade Silva residing in Rio de Janeiro. While physical face to face meetings are essential, I recommend intermediate teleconference meetings of the full TC committee to sustain momentum of TC work.

I cannot omit mentioning the required careful selection of conferences to attend by researchers far from Europe, even in competition with RILEM Week and RILEM Spring Meetings. Unfortunately, this has meant that I missed several such occasions, and will also miss the upcoming (at the time of writing this contribution) RILEM Week 2019 in Nanjing.

My impression is that in general, activities were invigorated over this period. If I am not mistaken, the number of new TCs and members increased significantly in the late 2000s, and early 2010s.

I had good experiences with the process of publishing the state-of-the-art reports as books, with our first one edited by Professor Folker Wittmann and myself, one of the first in this format (Report Volume 4 published by Springer, 2011) and the second edited by Prof Volker Slowik and myself (Report Volume 22, 2017). The quality of publication in the Materials and Structures Journal has improved markedly in this time, to an extent indicated by the rising impact factor.



Regarding development of RILEM in the future, accessibility requires attention. It is essential to maintain and improve on involving brilliant young (and senior!) minds. As a positive, successful initiative which I trust will live on, my PhD-students were inspired by travel grants to attend RILEM Week in 2018 to present their research papers. It is fine and in fact essential to base this on quality of the contributions.

I maintain that the value brought to my personal and research growth by involvement as member and chair of TCs has been overwhelming. The efforts to attend meetings, and to drive the timeous writing of report chapters are outweighed by the reward. The care and quality of RILEM Week should be scrutinised continuously, but of course arranging TC meetings at (before/during/after) top conference series relevant to the TC topic is advised.

3 | TC CHAIRS

EMERITUS PROF. DR. ENRIC VÁZQUEZ RAMONICH

Universitat Politècnica de Catalunya, Spain

Fellow 2017, TC Chair



In this brief paper, I aim to state a few points which I consider to be the objective regarding the TC “Progress of Recycling in the Built Environment” on which I served as chairman and as the responsible person for the publication of the corresponding RILEM State-of-Art Report.

The result of the collective task of the 12 members of the committee and the 23 consulting collaborators allowed to present a potent tool for countries that are beginning to recycle and apply aggregates from construction and demolition waste. By introducing the new theoretical approaches and practical achievements obtained, it can also be used as a self-assessment tool to the countries most advanced in this field.

We consider that the main highlights of this work are, on the one hand, the fitness of CDW’s recycling activity to meet the demands of an updated environmental perspective, featuring the sustainability of this activity and the ways of measuring it, the economic and social drivers, and the need to improve the established practices.

We also consider the inclusion of the Global Impact Assessment of Urban Renewal based on new sustainable strategies featuring the use of CDW aggregates to be a highlight. Lastly, we make special consideration of the overall impact of the chapters on the durability of recycled concrete, and the experiences and suggestions regarding the use of fine fractions.

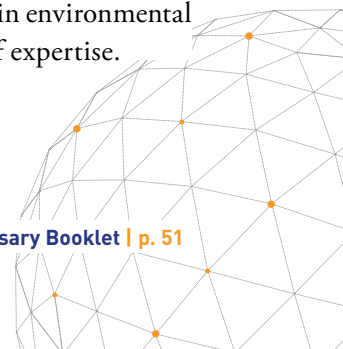
Without undermining the task of many researchers, we consider the difficulties in evaluating the contribution to research and its relationship with the reality of the use of the CDW in countries that are least active in its use to be a challenge and perhaps a lowlight.

I must state that RILEM represented ease in the final, personal presentation, and a great help at all internal and external levels to serve in my position as Chairman of the TC.

The creation of a new committee that considered the relationship between structural issues and the achievements of our State-of-Art, has been a success of RILEM.

RILEM has suggested normative indications on previous occasions and in past publications. This contribution is still necessary to assist countries that are starting to be active in fields such as the implementation of recycled concrete and to encourage reflection and criticism regarding those countries which had regulations in place for years. I consider it necessary to recover this activity.

My advice to future office-bearers is the need to make necessary a scientific and rigorous training in environmental science when undertaking tasks on the various committees of RILEM, regardless of the field of expertise.



3 | TC CHAIRS

PROF. DR. FENG XING
Shenzhen University, China

TC Chair



It is my great pleasure to congratulate RILEM (International Union of Laboratories and Experts in Construction Materials, Systems and Structures) on its 75th anniversary in 2021.

My connection with RILEM started in 2004, which was also the year we began to establish the Shenzhen Durability Center for Civil Engineering. As a leader of a team conducting research on durability of civil engineering, I was keen to grasp the latest international research trends in this field, especially in Europe. Through the Academician Prof. Zhaoyuan Chen of the Chinese Academy of Engineering, I learned about Dr. Ningxu Han, who graduated from TU Delft and is a member of RILEM, who is familiar with concrete durability researches and trends in Europe as he was studying Duracrete in The Netherlands at the time.

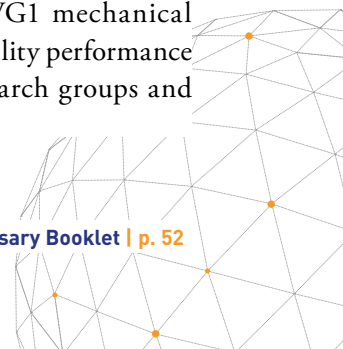
In 2008, I met Prof. Dr. Erik Schlangen during my visit to TU Delft, who is the Chair of the RILEM Technical Committee 221-SHC: Self-healing phenomena in cement-based materials. That is also when our team started to use microcapsules technology to study self-healing concrete. Prof. Schlangen thought highly of our study and included our research results in the State-of-the-Art report.

In 2011, I also joined RILEM TC 246-TDC: Test methods to determine durability of concrete under combined environmental actions and mechanical load, which is chaired by Prof. Yan YAO from the China Building Materials Academy. In this TC, we have conducted relevant researches and it was great to get to know and to work with many well-known colleagues/peers.

At the same time, many research activities were conducting in our Laboratory: the Guangdong Provincial Key Laboratory for Marine Civil Engineering (Key Laboratory), which was officially established in 2011 authorized by Department of Science and Technology of Guangdong Province. It was based on the Shenzhen Durability Center for Civil Engineering (authorized by Department of Science and Technology of Shenzhen in 2004), at the Shenzhen University. In 2016, the Key Laboratory and the Microlab of TU Delft jointly established the Sino-Dutch Joint Laboratory of Civil Engineering Materials, which was approved by Guangdong Department of Education.

Also, in 2016, together with Prof. Schlangen, we organized a RILEM TC SHE (Self-Healing Concrete – Its efficiency and evaluation), with me as Chair and Prof. Schlangen as the Deputy Chair. The TC studies efficiency and evaluation of self-healing concrete from two prospects: one is self-healing due to damage; the other is self-recovery of protection functionality. The purpose of the TC is to provide a state-of-the-art report and to give a recommendation of testing methods for efficiency and evaluation of self-healing concrete.

We have three individual groups to deal with different issues respectively, including WG1 mechanical performance, WG2 Durability performance 1 (gas and water transportation), and WG3 Durability performance 2 (ion transportation). Up to now, TC SHE has held three meetings, developed three research groups and literature review on schedule.

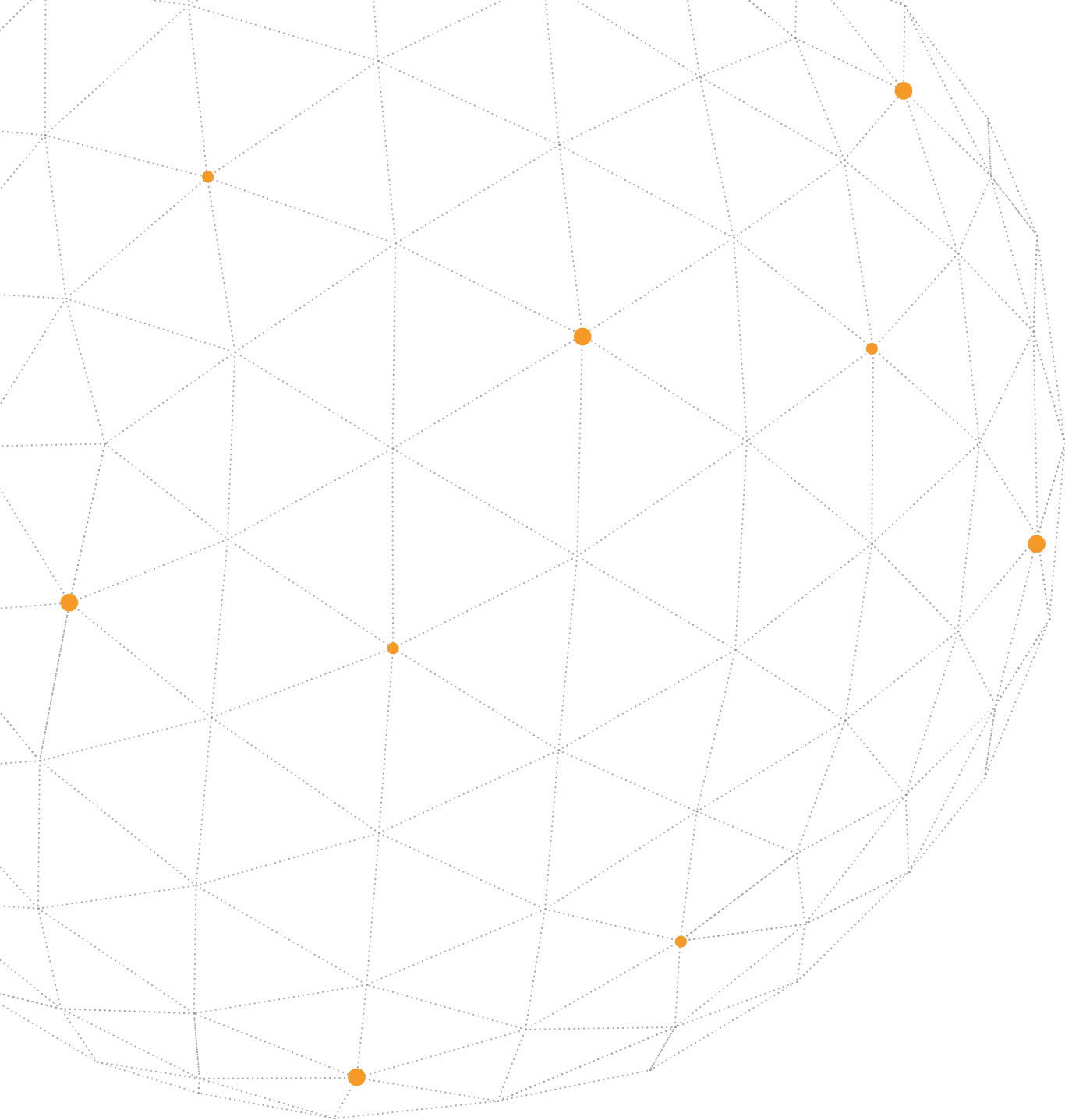


Besides Prof. Erik Schlangen and Prof. Ningxu Han (Shenzhen Univ.), many active leading researchers in self-healing area have participated in this technical committee, including: Prof. Nele De Belie (Univ. Ghent), Prof. Toshiharu Kishi (Univ. Tokyo), Prof. Liberato Ferrara (Milan Inst. Tech), Prof. Henk Jonkers (TU Delft), Prof. Abir Al-Tabbaa (Univ. Cambridge), Prof. Tony Jefferson (Univ. Cardiff), Zhengwu Jiang (Tongji Univ.), Chunxiang Qian (Southeast University, China) et al.

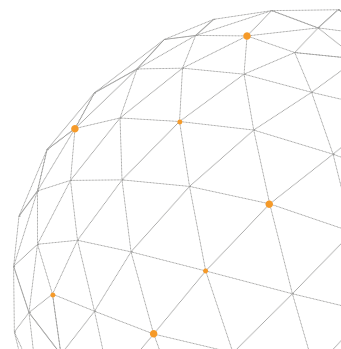
In 2016, I encouraged the Key Laboratory, Shenzhen University to become a member of RILEM as a corporate. With the establishment of RILEM China, chaired by Academician Prof. Changwen Miao, and followed by Prof. Zongjin Li, we have been actively participating in RILEM's activities. We also joined the Advanced Civil Engineering Materials Collaborative Innovation Center which was organized by Southeast University, Tsinghua University and Shenzhen University.

Nowadays, not only myself, but many of my colleagues from our team are more actively involved in RILEM's activities. For instance, Prof. Ningxu Han has joined the TC CEC: Controlled expansion of concrete by adding MgO-based expansive agents taking the combined influence of composition and size of concrete elements into consideration chaired by Prof. Jiaping Liu, and TC TMS: Test method for concrete durability under combined role of sulphate and chloride ions chaired by Prof. Changwen Miao.

In other words, through RILEM, we have not only promoted academic research progress and enhanced academic exchange, but it is also a great platform to socialize with global leading researchers in the field and to expand our network. I wish RILEM a wonderful future.



4 | AWARDEES



4 | RILEM AWARDEES

MS. ALICE TITUS BAKERA University of Cape Town, South Africa

Best Poster Award 2018
“Durability Properties of Concrete Containing Metakaolin”



Winning the 2018 RILEM poster award taught me that success is limited to our imagination and desire to strive for the best.

Without this lesson, perhaps I would have already given up my potential and leaned towards mediocrity without exploring the best version of me with courage and confidence. This award has cultivated my potential and paved my career path to the profession I am proud of partaking.

It has entrusted me not only to local and international research and academic collaborations but also built my platform to engage in community services that focus on providing and supporting education. Through these collaborations and services, I have connected and networked with enthusiastic and energetic individuals, with whom together we are designed to bring positive changes in the world.

The RILEM membership and publication opportunities, which were accompanied by the award, have also increased my impact in the research community. I now experience the essence of my research to different audiences in the field. To me, these are my significant impacts, seeing myself as a rising, significant individual in the field of science and engineering and a mentor to those who look up to me.



4 | RILEM AWARDEES

PROF. SUSAN ANDREA BERNAL LOPEZ University of Leeds, West Yorkshire, UK

*Colonnetti Medalist 2016, Assoc Editor RTL, TC Co-Chair,
and TC member*



I joined RILEM soon after I completed my doctoral studies, as a member of the technical committee in alkali-activated materials (TC 224-AAM).

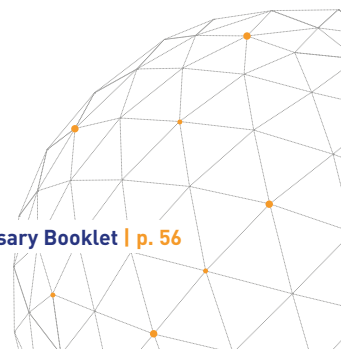
I will never forget my first RILEM week in Hong Kong in 2011. It was such an amazing experience, as a recent graduate, to meet in person so many of the world-leading scientists in my field. It opened a new world of opportunities and made me realise the importance of participating in thought-provoking discussions to develop interesting research that could be relevant for academia and industry.

Over the years, I have had the pleasure to meet extraordinary and inspiring colleagues through RILEM, from all career stages, and now I have the pleasure of calling many of them my friends. These people have supported me unconditionally to develop a successful career, they have inspired me to achieve my professional ambitions, and to be the best researcher I can possibly be.

I was honoured with one of the RILEM Colonnetti medals in 2016. This recognition and the support and friendship from my fellow RILEM friends, from all over the world, gave me the confidence to get back to my research, after some difficult years, with more motivation than ever.

For me RILEM is its members, from the lovely Pascale who was always there to resolve any questions, to each of the researchers who volunteer their time and efforts to make this organisation a true family.

I feel proud and honoured to be part of this organisation, and hope to make a meaningful contribution to the world of science in the years to come, inspiring the ne generation of researchers, while being actively involved in RILEM activities.



4 | RILEM AWARDEES



DR. AUGUSTO CANNONE FALCHETTO
University of Technology, Braunschweig, Germany

L'Hermite Medalist 2019, TC member

I joined the RILEM activities in February 2014 during a meeting of TC 252-CMB on chemo-mechanical characterization of bituminous materials.

Since then, I became RILEM member and I started working in the same committee as well as in others:

- TC 237-SIB on Testing and characterization of sustainable innovative bituminous materials and systems
- TC 241-MCD on Mechanisms of Cracking and Debonding in Asphalt and Composite Pavement.

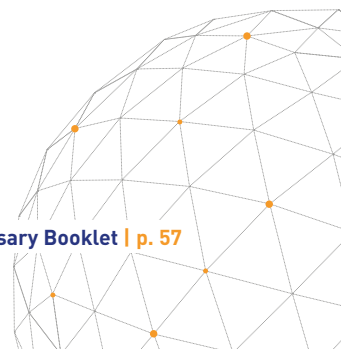
After that I became more and more involved as task group leader in two new TCs:

- TC 264-RAP on Asphalt Pavement Recycling
- TC 279-WMR on Valorisation of Waste and Secondary Materials for Roads

During these years, I had the opportunity of meeting several outstanding professors and scientists who helped me to develop and advance my scientific work within and outside the RILEM research.

This gave me the possibility to organize and chair the symposium closing the activities of the TC 252-CMB and publishing the RILEM book of proceedings as editor.

My scientific contribution and my active involvement in RILEM was acknowledged in 2019 with the Robert L'Hermite Medal, which I received in Nanjing, China. For this reason, I was invited to provide a keynote opening lecture and an interview which are available on the RILEM website.



4 | RILEM AWARDEES

DR. BAHMAN GHIASSI University of Nottingham, United Kingdom

Gustavo Colonnetti Medalist 2019, TC member



My personal history with RILEM is:

- 2011: became member of RILEM
- 2011: became member of RILEM TC 223-MSM
- 2012: became member of RILEM TC 250-CSM
- 2017: became member of RILEM TC 270-CIM
- 2019: became member of RILEM TC 281-CCC
- 2019: became member of RILEM TC IMC
- 2020: became member of RILEM TC MCC

I cannot name a specific RILEM person who contributed to my development, as I think the influence and impact of RILEM has been really beyond individuals. Contributing to RILEM technical committees have given me a unique opportunity to meet many leading experienced and young researchers from around the world. Interaction, exchanging ideas and working with those researchers have had a significant influence on my development as a researcher. I have made great friends and mentors at both personal and professional levels, with whom I am actively collaborating.

Highlights of my association with RILEM were:

- 2011: became member of RILEM
- 2019: Receiving the Gustavo Colonnetti medal

I think the impact of RILEM in the field of construction materials and structures has been growing extensively. Moving forward, I think the RILEM needs to consider the following to further increase its impact and reach. Most of the activities of RILEM are being held in Europe. This makes sense as most of the members are from Europe, and the members contribute to the committees with their own budget. Traveling to and out of Europe would be too extensive or timely. At the same time, extension of the RILEM activities to other continents is essential to further increase its impact as well as to further increase the quality of its outputs taking advantage of a greater mass of scientists and researchers. This could be done through establishment of twin committees (same committee run in parallel in different continents), facilitating participation in meetings (through video conferences) and participation in discussions (through online platforms and forums). Facilitating participation in meetings could also give opportunity to younger researchers (PhD and postdoctoral researchers) who cannot attend the meetings due to budget limitations. Personally, this has always been a limitation for me during the past years.

RILEM has done a fantastic job in producing massive data (through state-of-the-art books/reports, round robin tests, or round robin numerical modelling activities). To avoid loss of this data and to further allow the use of them by other researchers, it is essential to follow a full open access policy on publishing these data (at least after publication). This has been followed in some committees, but not all.

To continue what has been done until now and to further improve the success of RILEM, I think RILEM should further include motivated young scientists in different positions (TAC, head of technical committees, etc.). Young scientists, with the support of the experienced member of RILEM, can make a difference.

4 | RILEM AWARDEES



ASST. PROF. MIJA HUBLER
CIEST, University of Colorado, Boulder, USA

Colonnetti Medalist 2020, TC member

I became involved in RILEM as a PhD student while I was studying at Northwestern University.

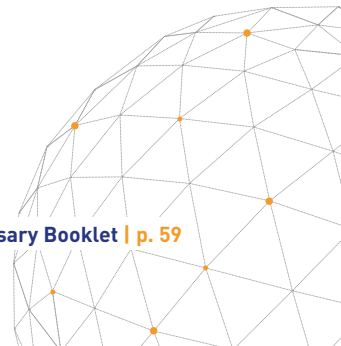
My advisor, Zdeněk Bažant, encouraged me to join as a member of Technical Committee MDC – *Multi-decade creep and shrinkage of concrete: material model and structural analysis*. I met the other members of this committee at conferences during 2012.

My thesis work became part of the RILEM draft recommendation: TC-242-MDC *multi-decade creep and shrinkage of concrete: material model and structural analysis*, which was published in 2015.

After I joined the faculty at the University of Colorado, Boulder, I enjoyed visiting the Technical Committee 259-ISR – *Prognosis of deterioration and loss of serviceability in structures affected by alkali-silica reactions*, led by Victor Saouma.

I was honored as a Gustavo Colonnetti medalist in 2020. I gave a lecture at the third RILEM Spring Convention in Guimarães, Portugal during which I had the pleasure to virtually meet the conference organizers and other attendees.

This year I have also published an invited RILEM Technical Letter entitled “Improving Concrete Toughness by Aggregate Arrangement” and joined the Technical Committee CCS – *Early age and long-term crack width analysis in RC Structures*.



4 | RILEM AWARDEES

PROF. BILL LING
Hunan University, China

L'Hermite Medalist 2020, TC Member



I am a Professor of Civil Engineering at Hunan University and a Senior Member of RILEM since 2017.

I have focused my academic career on the study of low-embodied-energy cement and concrete, specifically in developing wastes and CO₂ to value-added construction materials.

I am a member of several technical committees with RILEM related to durability, supplementary cementing materials as well as valorization of waste. Being involved in interlaboratory test with other 24 labs across the globe for carbonation testing of mortar/concrete (under Working Group 2 of TC 281-CCC) provided me an unique opportunity to work with experts from different labs and understand the first-hand research development in a specific field.

This year, I was delighted to receive the Robert L'Hermite Medal and honoured to join a list of past awardees who are now among the world's most distinguished researchers in the field. It is an amazing and incredibly humbling experience for me to be recognized in my field by an eminent scientific society like RILEM.



4 | RILEM AWARDEES

PROF. FERNANDO MORENO-NAVARRO University of Granada, Spain

Robert L'Hermite Medalist 2018, TC member



I began participating in RILEM Bituminous Materials and Technical Committees in 2015. Since then, I have been working actively in 3 of them (264-RAP: Asphalt Pavement Recycling; 278-CHA: Crack-Healing of Asphalt Pavement Materials; and 280-CBE: Multiphase Characterization of Cold Bitumen Emulsion Materials) and as TG2 leader in 279-WMR: Valorisation of Waste and Secondary Materials for Roads.

In 2018, I had the honour of receiving the Robert L'Hermite Medal.

RILEM gave me the opportunity to meet gurus from other disciplines and to know their works, which has helped me to have a global vision of construction materials and structures. RILEM annual week is great event, not only by connecting researchers from different fields and ages, but also for offering the opportunity to meet friends who have the same motivations as yourself.

RILEM is an indispensable community in the world of construction materials and structures that provides knowledge and great advances on these fields. However, in spite of research studies carried out independent of industry interests, to develop moving forward, RILEM should listen to the future challenges proposed by industry and infrastructure administrations in order to give answer to them and to make them consider RILEM as an important player in day to day activities.

Next link offers the video of the Robert L'Hermite Medallist 2018 Lecture:
https://www.youtube.com/watch?v=xN_JGQCgsZE



4 | RILEM AWARDEES

PROF. JOHN PROVIS

University of Sheffield, United Kingdom

*Robert L'Hermite Medalist 2013,
Hon President 2020, Editor in Chief M&S 2020, Assoc Ed M&S,
Deputy Ed in Chief RTL 2020, TAC Expert, TC Chair*



I have been involved with RILEM since 2007, when the first TC on alkali-activated materials (TC 224-AAM) was launched. At the time, I had recently finished my PhD, and was looking to start building international links in my research career - and at the time, little did I know how enormous a role RILEM would play in that process!

Within a couple of years, I had been invited to take over as Secretary of TC 224-AAM, which led me to edit and compile the state-of-the-art report which resulted from the work of that TC. Since then I have also been Chair of TC 247-DTA and heavily involved with several other TCs and am now serving as Editor-in-Chief of the RILEM journal Materials & Structures.

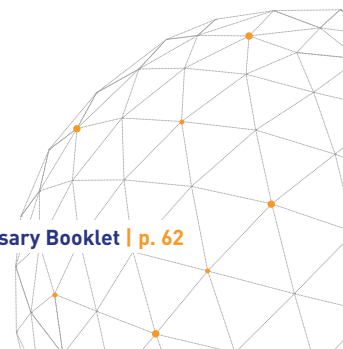
I was also incredibly honoured to have been awarded the Robert L'Hermite Medal in 2013, and to have been invited to serve since 2016 as a TAC Expert.

When I was a researcher starting my independent career, the opportunity to connect directly with international leaders through RILEM and its TCs was absolutely invaluable; it gave a ready-made global network of the best people in the world in each given research topic. Through RILEM, I have had the opportunity to meet, know, and become friends with the people who had been (via their published work) my role models and reference points when I started out in construction materials research. This community enriches both my research work and my ability to enjoy everything that comes along with having an international network of expert friends and colleagues.



I genuinely value my involvement in RILEM and hope that its next 75 years will enrich the lives and careers of many more researchers worldwide, as the first 75 have!

I also attached a couple of the photos from the Paris RILEM week where I was presented with the L'Hermite Medal.



4 | RILEM AWARDEES

MS. SRIPRIYA RENGARAJU Indian Institute of Technology, Madras

Best Poster Award 2017
*“Challenges in Determining the Chloride Threshold
of Steel Embedded in Cementitious Systems”*



As a Ph.D. student, my main objective behind the participation was to interact and discuss my research with renowned researchers in the RILEM 71st week poster session.

When the organizers announced the poster award, it was a pleasant surprise. Getting recognition in the international arena motivated me further to excel in my area of research and boosted my self-confidence.

This award acted as a great incentive in my journey and nurtured me to disseminate the knowledge. I thank the Organizers and Committee members for giving me the opportunity.



4 | RILEM AWARDEES

PROF. ENRICO SASSONI University of Bologna, Italy

*Colonnetti Medal 2017,
Ed RTL, TAC, Convener Cluster E*



My personal experience in RILEM started in 2017, when I was awarded one of the two “Gustavo Colonnetti Medals” for that year. The same year I was invited to join the editorial board of the newly born journal “RILEM Technical Letters”.

My involvement in RILEM further progressed in 2018, when I joined one of the RILEM Technical Committees and I was invited to join the Technical Activities Committee (TAC), as the Convener of Cluster E dedicated to “Masonry, Timber and Cultural Heritage”.

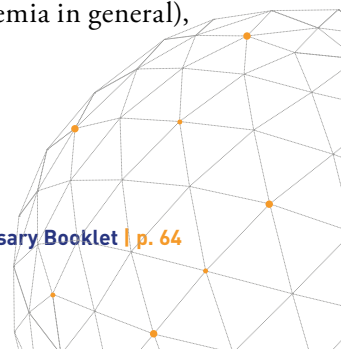
All these achievements, in addition to being a real honor to me, significantly contributed to the advancement of my career, as they represent a very important acknowledgment from the reference scientific community.

Through these acknowledgements to my research activity, mostly dedicated to the preservation of cultural heritage, I feel that RILEM also wanted to express how important in general this topic is to the association. Combined with the recent creation of a new Cluster specifically dedicated to traditional building materials and cultural heritage, I think it is clear that RILEM recognizes this field as strategic and deserving of further support.

The creation of a new Cluster dedicated to cultural heritage was promoted by the former TAC Chair, Prof. Nicolas Roussel. To me, Nicolas was a key person and a mentor that I had the opportunity to meet through RILEM. Not only he believed in the importance and quality of my research, but he also gave me some very important advice for my future work in academia. During a lunch in Detroit, I remember he suggested that I always be constructive in my approach to work and to other colleagues. Rather than complaining about things that do not work and surrendering to it, he convinced me that it is more fruitful (and more satisfying) to hold on and to do your part, then things will start to work nicely. It might seem commonplace, but it is not.

Through RILEM I also had the opportunity to work with Prof. Robert Flatt, who was the former Convener of Cluster E dedicated to cultural heritage. Collaborating with Robert allowed me to learn much about the strategic development of this scientific field and about the right diplomatic routes to achieve it.

All these experiences have had a deep impact on the development of my scientific career and, as a consequence, on my whole life. I think that RILEM recognition and involvement of young researchers can be extremely fruitful, both for the researchers, whose career can be significantly impacted by RILEM acknowledgements, and for the association itself, which can benefit from their energy, motivation and point of view. I think this point is strategic for RILEM further development (actually, also for the development of academia in general), so I will do my best to pursue it in the future as a RILEM member.



4 | RILEM AWARDEES

PROF. CAIJUN SHI Hunan University, Changsha, China

Fellow 2016, TC member



I joined RILEM in 2007 as a senior member, then start to get involved with several technical committees, such as Alkali-activated Materials, Mechanical Properties of Self-Compacting Concrete, Sulphate Attack, Durability of Alkali-activated Materials, etc. I made some contributions to those committee documents from my research and experience. At the same time, I also learned a lot and got to know quite a lot of people through committee meetings and RILEM weeks. I also have been trying to promote RILEM in China and to convince more Chinese people to become RILEM members. I am very pleased that I was elected as a RILEM fellow in 2016.

With the sponsorship and supports from RILEM, I initiated and organized three series of international conferences: International Symposium on Design, Performance and Use of Self-Consolidating Concrete (SCC) (2005 in Changsha, 2009 in Beijing, 2014 in Xiamen, and 2018 in Changsha), International Conference on Chemically Activated Materials (2009 in Jinan, 2014 in Changsha, 2017 in Gold Coast, Australia), International Conference on UHPC Materials and Structure (2016 in Changsha and 2018 in Fuzhou). A total of 8 conference proceedings from these conferences have been published by RILEM. The production of these proceedings facilitated the submission and publication of high-quality conference papers, exchange of technical information from all over the world and promotion of RILEM.

I think that the current RILEM operating mode can keep moving forward. However, I suggest that RILEM should have free student e-membership to let more students get involved with the activities and development of RILEM.

4 | RILEM AWARDEES



DR. RUBEN SNELLINGS

Senior Researcher, Sustainable Materials, VITO, Belgium

*Colonnaletti Medalist 2016, Assoc Ed RTL,
Deputy Chair TC 267-TRM, TC member*

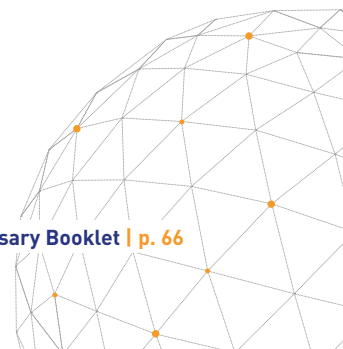
My first close encounter with RILEM came very soon after defending my PhD at KU Leuven back in 2011. My PhD supervisor Jan Elsen suggested that I should join the newly established TC 238 SCM (Supplementary Cementitious Materials). Fortunately, my application was enthusiastically welcomed by the TC chairperson, and my postdoc supervisor at the time, Nele De Belie. I can well recall my slight anxiety at the kick-off meeting in Madrid, when I found myself in a room with so many of the leading scientists in the field, most of whom I had only admired on paper. That anxiety quickly made way for great anticipation, as TC SCM was not only one of the largest RILEM TCs in terms of members but proved to be also one of prolific activity inspired by broad ambitions and open discussions. Review papers, books, reports on round robins, recommendations etc. stand witness of the voluntary and constructive attitude experienced during the TC workshops and meetings.

One of the greatest assets of RILEM is exactly in creating this environment for scientists and experts to share and confront ideas and expertise and to provide the opportunity to start rewarding collaborations on topics of common interest. Perhaps as important is that a certain commitment to a scope of work provides a driver to seek consensus. The often-resulting state-of-the-art documents or recommendations that express such consensus act as milestones marking scientific progress and carry as such considerable authority.

In my still relatively few years with RILEM I have had the pleasure to interact and be inspired by some of the most committed and knowledgeable members of the scientific community, for all of whom I cherish great appreciation and gratitude. Next to warm recollections of the TC SCM period, my deep involvement as deputy chair of Karen Scrivener in TC 267 TRM (Tests on Reactivity of supplementary cementitious Materials) has been very rewarding on many levels. Particularly, continuous, voluntary support of the TC TRM members has been truly encouraging.

In keeping with the intention of its founders, and perhaps despite the current political “Zeitgeist” towards isolationism, I can only wish that RILEM can continue connecting researchers and communities of researchers at the international level in the future and provide them a platform for global cooperation. Reaching out beyond its original European base both in range as in topics will be key to remain as relevant as it is today.

On another level, it would be worthwhile to reflect on how RILEM as an association could mobilize its potential to address some of the great societal challenges such as climate change or sustainable development.



4 | RILEM AWARDEES

DR. IR. DIDIER SNOECK

Ghent University, Magnel-Vandepitte Laboratory
for Structural Engineering and Building Materials
Guest Professor, Vrije Universiteit Brussel,
Department Mechanics of Materials and Constructions

Colonnetti Medalist 2018, TC member



During my PhD, promoted by Prof. Dr. Ir. Nele De Belie, and postdoctoral research at the Magnel-Vandepitte Laboratory for Structural Engineering and Building Materials of Ghent University I heard of RILEM and contacted its experts on multiple occasions and was able to start multiple collaborations.

I have been a member of RILEM since 2011 and currently participate as member in one active Technical Committee: RILEM TC 260-RSC: Recommendations for use of SAPs in concrete construction, as well as RILEM TC SHE: Self-healing concrete - Its efficiency and evaluation which was subsequently been cancelled. I participated in various RILEM conferences and especially during the RILEM weeks, courses, and additional meetings by the TC's.

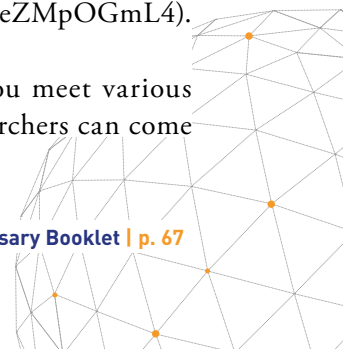
In the frame of the past and current committees, I participate(d) in several round-robin tests and I was co-convenor of one round-robin, on absorption kinetics of superabsorbent polymers, together with Prof. Dr.-Ing. Viktor Mechtcherine and Dr. Christof Schröfl of the Technical University of Dresden. With these round-robin tests, we wanted to make different measurement techniques more uniform and verify whether new promising results were repeatable using different raw materials. Furthermore, this research resulted in recommendations for practitioners making the link towards the industry and further use and application of new admixtures.

In 2016, I had the pleasure of giving a lecture during the RILEM Doctoral Course on Supplementary Cementitious Materials, hosted by Prof. Dr. Ir. Ole Mejlhede Jensen of the Technical University of Denmark. I assisted during the complete course and during the practical exercises on autogenous shrinkage. This was a nice, and educational experience in both ways. During the Doctoral Course, I gave the participants an overview on self-healing and autogenous shrinkage when using supplementary cementitious materials. On the other hand, I learned a lot in teaching a highly interested group of future experts in the field. RILEM supports various PhD courses and this provides a solid basis for learning opportunities for PhD students and the possibility for them to make valuable connections.

In 2014, I had a research stay at the Technical University of Denmark with Prof. Dr. Ir. Ole Mejlhede Jensen and in 2017, a long research stay at the Technical University of Eindhoven under the guidance of Dr. Ir. Leo Pel. It is important to perform research abroad to get new ideas and insights for your research and to get to know other labs and techniques, as well as meeting these experts.

In 2018, I was very honoured to receive one of the RILEM Gustavo Colonnetti medals for my research on self-healing and microstructure of cementitious materials with superabsorbent polymers. The lecture during the RILEM Spring convention can be found on YouTube (<https://www.youtube.com/watch?v=w9eZMpOGmL4>).

RILEM is still expanding internationally and this is one of its great advantages, as you meet various researchers, some just starting their research. RILEM supports moments when these researchers can come



together to investigate different scientific issues and to come up with a proper solution. In this continuously changing world, the investigations performed in the frame of RILEM are very useful today, with topics such as sustainability and durability of concrete with and without new admixtures.

I will continue to work with colleagues and experts from RILEM as it may lead to new ideas and outcomes. The international network, which one can build upon, is one of the major advantages of RILEM. In this way, we can advance scientific knowledge and encourage industrial application.

4 | RILEM AWARDEES



ASSOC. PROF. CLAIRE WHITE Princeton University, USA

Colonnetti Medalist 2019, TC member

I joined RILEM when I was a postdoc at Los Alamos National Laboratory, where I was combining atomistic simulations and scattering techniques to investigate how alkali-activated materials evolve over time. However, it was not until I was an Assistant Professor at Princeton University that I started attending TC meetings. I really wanted to be tied in with the more industrial aspects of sustainable cements once I became a faculty member.

My former PhD advisors have been associated with RILEM for quite some time (Jannie van Deventer and John Provis), and it was through them that I learnt about the importance of the organization. Various mentors supported my development and growth as an independent researcher during not only my PhD studies but throughout my career, and with their support and guidance I have been able to make significant contributions in the cements-community and beyond.

Highlights of my association with RILEM:

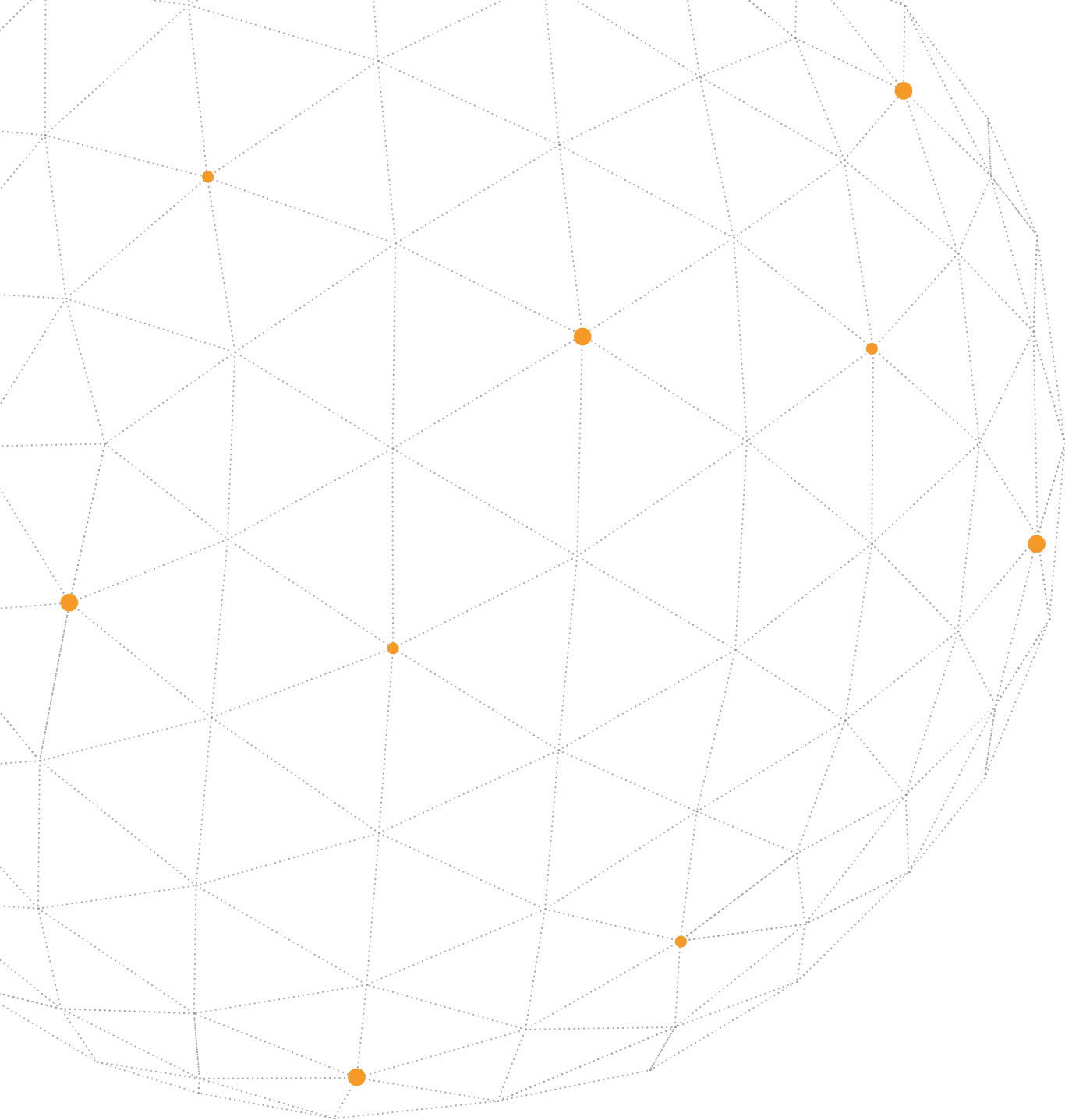
- Member of TCs:
 - TC 247-DTA
 - TC-283-CAM
 - MPA: Mechanical properties of alkali-activated concrete
- Recipient of the 2019 Gustavo Colonnetti Award

Although my research is founded in the fundamental chemistry and physics of sustainable cements, with the aim of being able to predict long-term performance by understanding the fundamental mechanisms at play, it is extremely important to know about the challenges and opportunities in industry, especially regarding the introduction and optimization of more sustainable versions of concrete. RILEM has been a crucial source for this information and education, especially by involvement in the relevant technical committees.

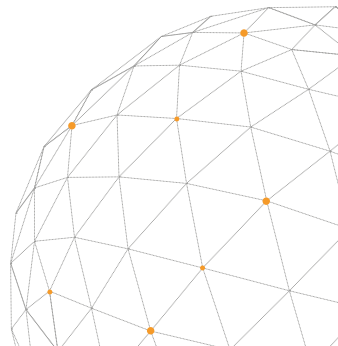
RILEM should continue to expand in directions that involve alternative and more sustainable construction materials. It is clear that a range of cementitious materials are needed to enable worldwide societal growth whilst lowering the carbon dioxide intensity of the concrete industry, akin to the diversification that has occurred in the energy industry (i.e., solar, wind, hydro in addition to the use of fossil fuels).

A video can be found on the RILEM website.





5 | CORPORATE MEMBERS



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

PROF. MIKE RILEY¹ AND DR. ANA BRÁS²

1. Head of the Department of the Built Environment

2. Senior Lecturer (Associate Professor)

Liverpool John Moores University, Liverpool, UK

*Corporate Institutional Member
TC member*



Liverpool John Moores University, UK, has been collaborating with RILEM in the last years, promoting innovation, ensuring technology transfer and development cooperation. The LJMU research on novel bio-based multi-functional systems to provide a solution for significant indoor environment quality and structural durability, has been widely disseminated via our participation in the RILEM Technical Committees. Our work is contributing to the RILEM Technical Committee State-of-the-Art Reports (STAR) and round robin tests at our laboratories in the following committees:

- RILEM technical committee SHE: Self-healing concrete – Its efficiency and evaluation
- RILEM technical committee 274-TCE (Testing and characterisation of earth-based building materials and elements).
- RILEM technical committee 275-HDB (Hygrothermal behaviour and durability of Bio-aggregate based building materials).

The Department of the Built Environment, LJMU, hosted a RILEM 274-TCE meeting in Liverpool on the 14th December 2018. The discussion included recent advances in this research field and round robin tests to be implemented.

Our LJMU-RILEM partnership intends to encourage transfer and application of knowledge world-wide, promote and maintain excellence in research and technology and promote education and training and a higher education and industry levels.

Professor Mike Riley, BSc (Hons), MSc, PhD, SFHEA, CEnv, FRICS, FRISM

HoD at the Department of the Built Environment

Built Environment and Sustainable Technologies (BEST) Research Institute, Department of Built Environment, Liverpool John Moores University, Byrom Street, Liverpool, L3 3AF, UK

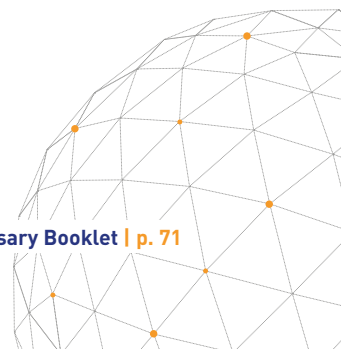
A handwritten signature in blue ink, appearing to read "M Riley".

Dr Ana Brás PhD, MEng, CEng FICE, FHEA

Senior Lecturer (Associate Professor), Built Environment

Liverpool John Moores University

A handwritten signature in blue ink, appearing to read "Ana Mayraide Armada Brás".



5 | CORPORATE MEMBERS

1. INSTITUTIONAL



MR. IR. CARLO DE PAUW **BBRI, Belgium, Past Director General** **Corporate Institutional Member**

RILEM Honorary President, 2007, TC member

As young researcher at BBRI I got involved already in the late 70's with the issue of recycling of construction and demolition waste. It was obvious that this would become a topic of growing interest, but the first reaction from industry was initially not that enthusiastic. Rapidly we did quite some pioneering work at BBRI on this topic. Later on in my career being confronted with the earthquake disaster in the town of El Asnam in Algeria, I got involved with studying possible options for cleaning the rubble of the disaster and with feasibility studies for recycling the rubble in the manufacturing of concrete building block for re-erecting facilities in Algeria.

International contacts where established by the end of the 80's in the context of RILEM and together with distinct Danish contacts I had the opportunity to get involved in setting up the RILEM Technical Committee TC 121: Specification for Concrete with Recycled Aggregates. Getting involved as co-author in drafting the RILEM Report 9 on "Disaster Planning, Structural Assessment, Demolition and Recycling" was a logical evolution to be able to share knowledge gained through our research in Belgium.

It has been a real pleasure for me many years later to act in 2007 as RILEM Honorary President for the RILEM week organised in Ghent, Belgium in collaboration with my Alma Mater the State University of Ghent.

Through my career at the BBRI where I retired as General Director in 2009, RILEM has always been a most renown and valuable international forum to exchange ideas and information on many topics.

It has been my pleasure and I have been proud to be able to serve personally on several RILEM Technical Committees and to motivate many of my co-workers to get involved with this prestigious association.

It is great to see that RILEM is doing well running up to its 75th Anniversary!



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR. MARIO DE ROOIJ TNO, The Netherlands Corporate Institutional Member

RILEM Staff member, TC deputy chair, TC member



TNO congratulates RILEM on its 75th year celebration! That it may inspire both our organizations to continue its long path of collaboration for many future events to come.

The history between RILEM and TNO goes back to very fundamental landmarks. The fifth president of RILEM was Prof. C.A. Lobry van Troostenburg de Bruyn jr. (Lobry de Bruyn in short). During the meeting in The Hague in 1952, it was he who proposed the name for the still developing organization: RILEM - Réunion Internationale des Laboratoires d'Essais et de Recherches sur les Matériaux et les Constructions. At that time Prof. Lobry de Bruyn was director of the Central Institute for Materials Research (CIMO) of TNO. He was also professor at Delft University of Technology in building materials.

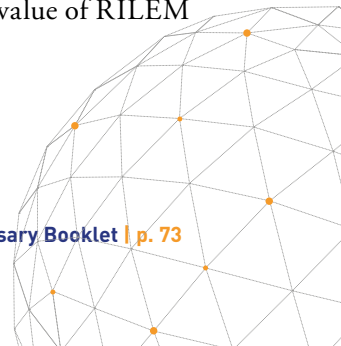
Like the wide and open mind of Prof. Lobry de Bruyn, TNO has ever since been involved in many fields of RILEM's rich history, revolving around materials like concrete, masonry, plasters and in slightly less frequent cases bitumen and wood. Within these domains the degradation or service life of the materials has been a continuous baseline in RILEM collaboration. Topics discussed in many committees included: service life design, salt crystallization, moisture influence, chloride corrosion processes, carbonation, and alkali silica reactions.

The work is typically done in RILEM technical committees where personal relations form the backbone of the collaboration. Fortunately, TNO has often been capable to participate in these committees when committee topics of RILEM and research topics from TNO lined up. On the other hand, it is realized within TNO that fundamental research for RILEM committee work or writing up RILEM-recommendations does have to compete nowadays with company research for funding. This is identified as a risk for the range of future activities in RILEM collaboration.

Having said that, RILEM has established a recognized position over the last 75 years in terms of setting pre-standards through RILEM-recommendations, providing broad harmonized state-of-the-art reports in research topics and educating our new generation scientists through an ever-growing educational course program. And all of this realized on a worldwide playing field, not limited by geographical borders, but only driven by the interest of laboratories and experts in construction materials, systems and structures.

In closing this 75th celebration contribution to RILEM, a remark is made towards the relatively young educational program of RILEM. Again, stories between RILEM and TNO align, as TNO played an important role in developing and teaching the early editions of the Concrete Microscopy Course set up in 2005. We are proud to see that this course is still taught and thus one of the many proofs of the additional value of RILEM in the building industry.

To many more years to come!





Field trip to bridge with signs of ASR during committee meeting of TC-219-ACS.



Dr. Mario de Rooij, Dr. Ian Sims, Dr. Bruno Godart, and Dr. Esperanza Menéndez Méndez in an intermediate meeting. Photo courtesy of Dr. Tetsuya Katayama.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

PROF. DR. IR. GEERT DE SCHUTTER

Magnel-Vandepitte Laboratory for Structural Engineering and Building Materials, Ghent University

(until Feb. 2020 known as Magnel Laboratory for Concrete Research)

Corporate Institutional Member

*Robert L'Hermite Medalist 2001, Fellow 2015,
TAC, TC Chair TC 205-DSC, TC Co-Chair TC 228-MPS,
TC Co-chair TC TMS,
Main organizer of RILEM Annual Week 2007 Ghent,
MAC member 2008-2009, Advisory Member 2009-2014,
DAC Chair 2015-2019, Regional Convener East-Asia 2013-2016,
Bureau Member 2004-2009, Advisory Member 2009-2019,
RILEM Recommending Committee Chair 2014,
Director of Development 2009-2014*



For the researchers working at the Magnel-Vandepitte Laboratory for Structural Engineering and Building Materials (until Feb. 2020 known as Magnel Laboratory for Concrete Research), Ghent University, Belgium, RILEM has always been and still is an important international organization.

The scientific work in the technical committees is very instrumental to many of our research projects. It is important for our doctoral students and postdocs to link up with the international experts, and to discuss their own research progress. Contributing to state-of-the-art reports and recommendations is a most important task for our researchers.

We are very proud to see that several of our researchers have received important RILEM awards like the RILEM Robert L'Hermite Medal and the Gustavo Colonnetti Medal, and have been named RILEM Fellows. A major highlight in our historical involvement in RILEM has been the organization of the RILEM Week in Ghent in 2007, in conjunction with the 5th International RILEM Symposium on Self-Compacting Concrete. Our staff has also been involved with the organization of many other conferences and workshops and has been chairing several technical committees.

Currently, the Magnel-Vandepitte Laboratory is very proud to host the chairs of two standing committees, DAC and TAC. It is our pleasure to deliver this service to the research community in our field. Being part of RILEM is a key issue to our research group, and we intend to continue our active involvement in RILEM for many years to come.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL



PROF. OLE JENSEN

Technical University of Denmark
Corporate Institutional Member

RILEM Staff member, TC deputy chair, TC member

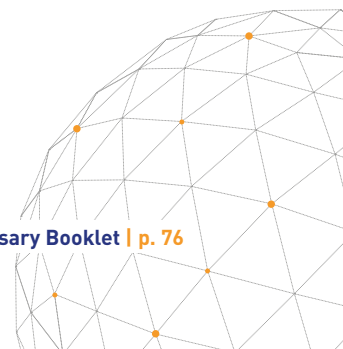
In relation to RILEM's 75 years celebration The Technical University of Denmark sends its warm congratulations.

Since the birth of RILEM the Danish representation has been active and considerable and it has involved all aspects of RILEM's work, both administratively and technically: Membership, deputy chairmanship, chairmanship of many Technical Committees and of all the administrative committees, including the Technical Activities Committee, Educational Activities Committee, Board of Editors and BUREAU.

We have organized many RILEM events, including the RILEM week, and we have supported RILEM as founding member, benefactor member and through work as RILEM president and honorary president.

More than anything we have highly enjoyed the collaboration with many competent colleagues from all parts of the world. We look forward to continuing this collaboration.

Happy birthday!



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR VALÉRIE L'HOSTIS

CEA

Corporate Institutional Member

TC Chair TC 226-CNM



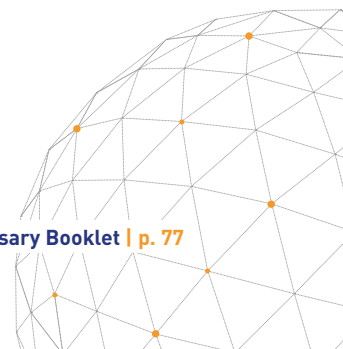
The French Alternative Energies and Atomic Energy Commission is a public body established in October 1945. As leader in research, development and innovation, the CEA is active in four main areas: low-carbon energies, defense and security, information technologies and health technologies. In each of these fields, the CEA maintains a cross-disciplinary culture of engineers and researchers, building on the synergies between fundamental and technological research.

In the field of construction materials, the laboratory of concrete and clay behavior has been involved in the RILEM association. The team is expert for studying the behaviour of cementitious materials in various environments: identification of mechanisms and behaviour laws, multi-scale characterization, modelling and numerical simulation, chemistry-transport-mechanics couplings, mock-up tests, instrumentation.

Workshops, congresses, and Technical Committees sponsored by RILEM represent for us an opportunity to learn from experts from all over the world and share results with the community.

CEA has been the leader of a RILEM technical committee between 2008 and 2013 and editing a state-of-the-art report in 2016, Performance assessment of concrete structures and engineered barriers for nuclear applications – Conclusions of RILEM TC 226-CNM (ISBN 978-94-024-0903-1). The main scope of the TC was to share experience of several countries where nuclear industry is used (USA, Canada, Japan, and many countries in Europe) through organization of Workshops sponsored by RILEM (2009, 2010 and 2012).

In the future, CEA will continue to contribute to RILEM events, Workshops and Technical Committees as RILEM is a strong network for our institution.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

PROF. PAULO B. LOURENÇO University of Minho, Portugal Corporate Institutional Member

*TAC member and Cluster convener
TC member*

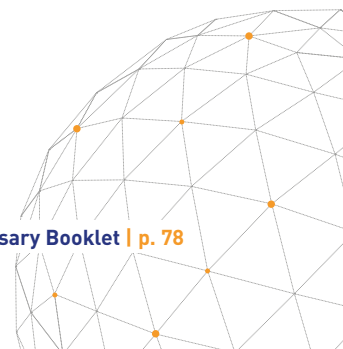


The Department of Civil Engineering of the University of Minho includes about 50 scholars on aspects such as developing innovative materials, technologies and systems in the fields of built environment, systems and infrastructures for transport, water and wastewater and for territory development, contributing to climate-change-resilient buildings and infrastructures. In fact, the Department addresses the basic requirements needed to bring building products to the market such as: Mechanical resistance and stability; Safety in the case of fire; Hygiene, health and the environment; Safety in use; Protection against noise; Energy economy and heat retention.

Its activity in the broad scope of the built environment is strongly committed with RILEM and 15 members were engaged in RILEM activities in the most recent directory of members, from concrete to masonry, or from timber to pavements. Besides several events co-sponsored with RILEM, University of Minho organized the “8th RILEM International Symposium on Fibre Reinforced Concrete: challenges and opportunities” in 2012 and the “RILEM Spring Convention and Workshop on Ambitioning a sustainable future for built environment: comprehensive strategies for unprecedented challenges” in 2020. We recognize the leading role of RILEM in advancing scientific knowledge and bringing research and practice together.

Knowledge in the area of construction has been essential to human development and the quality of life of populations, be it from drinking water supply to pollution control, from transport infrastructures to energy production, or from housing to urban planning.

The construction activity has contributed decisively for the improvement of comfort, mobility, health and longevity. But, it is important to reduce the consumption of natural resources, reduce CO2 emissions and other pollutants, and also to reduce waste, minimize impact on ecosystems, move towards energy-positive buildings and respond to the challenges of digital transformation. A knowledge-based society is required to train competent professionals, to disseminate good practice and to develop research in the various fields of the built environment, in which RILEM must actively lead the way.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR. RER.NAT. BIRGIT MENG
BAM (Bundesanstalt für
Materialforschung und -prüfung),
Germany
Corporate Institutional Member

RILEM L'Hermitte Medallist 1995, TAC, MAC,
TC member



BAM is the German Federal Institute for Materials research and testing, located in Berlin.

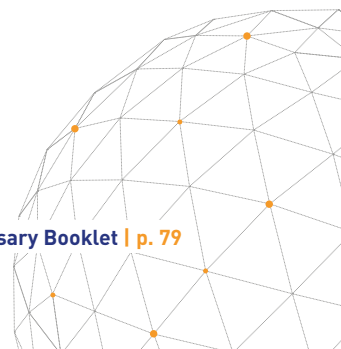
We are active in almost all fields of materials research. Referring to construction materials our paramount focus is improving durability and analyzing damage mechanisms to avoid failure.

Being an active member of the RILEM community has provided us ever since with an enormously inspiring and fruitful scientific network.

Our academic staff therefore always enjoyed participating in different committees, for example related to concrete constituents, transport phenomena, durability assessment, damage analysis and cultural heritage. Within the standing committees they also contributed to RILEM management.

We especially appreciate and profit from RILEM's unique and manifold efforts to combine basic and applied research and to mediate between different approaches.

Networking within RILEM is characterized by gaining knowledge through sharing and discussing recent findings, and it accomplishes a most effective interaction between different disciplines, generations, and geographical regions.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR. MITSUMASA MIDORIKAWA

Building Research Institute, Japan

BRI President



I sincerely celebrate that RILEM will commemorate the 75th anniversary in 2021. This year is also the 75th anniversary of the Building Research Institute (BRI) Japan, since its establishment in 1946. We, BRI Japan joined RILEM in 1953 as an institutional (titular) member. So, since the beginning of RILEM, BRI has supported RILEM as a representative of Japan (National Delegate) and from 2016 as a president and a secretariat of the National Group (JPN-RILEM). I am hoping that we will be able to act as a good partner of RILEM in the future.

In retrospect, the RILEM Annual Week was held in 1984 and in 2004, at BRI. Both of them were successful with many participants from different countries. Through such activities, we are very pleased that many researchers in the construction field of Japan can participate and engage in various activities of TC and other RILEM activities now. In 2022, RILEM Week will be held in Kyoto, and BRI wishes to make an unchanging contribution for it as in the past.

Finally, I wish to express my sincere hope that the RILEM 75th anniversary commemoration ceremony to be held in 2021 will be carried out successfully.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR. CHRISTOPH MÜLLER
Managing Director, VDZ, Germany
Corporate Institutional Member

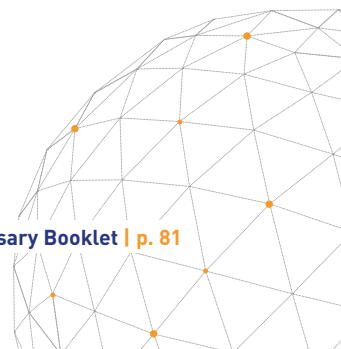
TC member



“RILEM means getting to know the world”, as Gerd Wischer, former CEO of the VDZ once tried to sum it up. And right he was: RILEM stands for collaboration across an international network of passionate colleagues around the world. It provides the institutional framework for the regular exchange of technical experts and scientists, documentation on State of science and technology, and thus provides ideas for technical research and technological progress. The important work of the Technical Committees supports the development and implementation of regulations at national and international level. VDZ appreciates being able to contribute to this work and values the ongoing exchange and the constructive, technically oriented, and pre-normative work.

Doing so, VDZ for example, was a member of the four RILEM Technical Committees 106-AAR (1988-2000), 191-ARP (2000-2006), 219-ACS (2006-2014) and 258-AAA (2014-2019) on the mitigation of damaging alkali aggregate reactions in concrete structures.

One example of great collaboration was the work of the EU funded project, PARTNER, that was undertaken from 2002 to 2006 to assess the RILEM methods as the basis for European (CEN) Standard methods. In this project 24 partners from 14 European countries evaluated the RILEM methods and some regional methods. Ongoing field trials with large concrete blocks were established for long term evaluation. The work aims at providing a good basis for harmonising test methods on ASR in Europe in the future.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

DR. AO PENG KONG

LECM, President of the Board of Directors, China

TC member



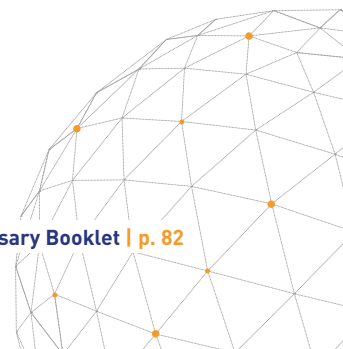
RILEM has been, since its inception in 1947, a leading institution working towards the scientific advancement in the field of construction materials, systems, and structures. The output resulting from this work, with publications in the forms of reports, articles, recommendations, proceedings and journals, showcase the fact that RILEM has always been at the forefront of research and development. It is therefore no surprise that the importance of RILEM remains today undiminished.

The Civil Engineering Laboratory of Macau (LECM) is thus proud to be a long-time corporate member of RILEM. We are in good company, as corporate membership is shared with similar institutions across the entire globe.

As the construction industry changes, with ever increasing technology development in its various related fields, challenges arise that require state-of-the-art knowledge and know-how. The best way to face such challenges is to join forces within an integrated framework such as that of The International Union of Testing and Research Laboratories for Materials and Structures, allowing advanced research and knowledge-sharing.

Therefore, and in line with the Silk Road Spirit as expressed in the People's Republic of China's "Belt & Road Initiative", we hope to strengthen our relationship in the future, aiming to develop ties that cross borders through a platform of knowledge-sharing and scientific collaboration.

In conclusion, LECM warmly congratulates RILEM for its 75th anniversary, celebrating its remarkable history which, we are sure, will continue well into the future.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

PROF. ERIK SCHLANGEN
Delft University of Technology,
The Netherlands

Hon President 2018, TC Chair



TU-DELFT LINKS WITH RILEM AND VIEWS OF THE FUTURE.

RILEM is an organisation which is valuable for the activities at the faculty of Civil Engineering at Delft University of Technology. Delft University of Technology is a corporate member of RILEM. The staff members of Delft University participate in many Technical committees of RILEM. Furthermore, for several committees they take the role as chairman or co-chairman.

Delft University has organised PhD-courses since 2008, supported by the RILEM educational committee. Currently 3 different courses are running annually:

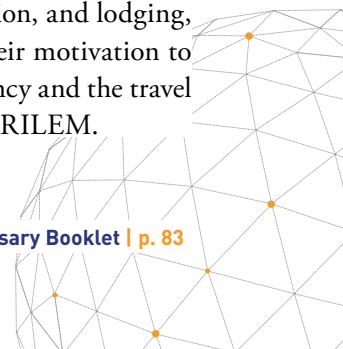
1. MMC: Multiscale Modelling of Concrete
2. CMC: Concrete Microscopy Course
3. CSC2I: Corrosion Science & Corrosion Control for Infrastructure

Delft University has organised many conferences which are supported by RILEM. The sponsorship of RILEM is very valuable, for attracting participants and sending out announcements to the community. A few conferences are also part of a conference series organised together with other universities. In the last decade the following conferences have been organised:

- 2nd and 4th International conference on Service Life Design, 2010 and 2018
- ConMod, Symposium on Concrete Modelling, 2008 and 2018
- SHCC3, International RILEM Conference on Strain Hardening Cementitious Composites, 2014
- AMS'14, Ageing of Materials and Structures, 2014
- 7th International RILEM conference on cracking in Pavements, 2012
- RILEM conference on Fire Spalling, 2011
- International RILEM Conference on Microstructure Related Durability of Cementitious Composites (Microdurability) 2012 and 2020

The 72nd RILEM Annual Week was organised by Delft University of Technology in Delft, The Netherlands. The RILEM week had many activities, the SLD4 conference on service life design of structures, the Conmod2018 Symposium on concrete modelling, a special workshop by Klaas van Breugel, 3 PhD-courses on concrete modelling, microscopy and corrosion, meetings of the standing committees of RILEM and 11 technical committees planned their meeting in Delft. In total 394 participants from 42 countries took part in all the events.

New at the 72nd RILEM week were the RILEM travel grants, that RILEM offered to 14 young (under 35) researchers from developing countries. The winners of the grant, which covered travel, registration, and lodging, were selected by a jury that carefully looked to the relevance of the topic of their work and their motivation to participate in the RILEM events. One of the highlights was a breakfast with the RILEM presidency and the travel grant winners, which resulted in fruitful brainstorm session for new directions and initiatives for RILEM.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

PROF. ALAIN SELLIER

Paul Sabatier University, Toulouse III,
Head LMDC

TC member



LMDC, (Laboratory for Material and Durability of Constructions, in Toulouse, France), has taken advantages of RILEM for its international cooperation over three decades. Thanks to RILEM, more than 50 researchers or PhD students of LMDC were able to participate in 14 committees in different fields of the science of materials applied to Civil Engineering.

The first topics discussed by LMDC in the RILEM framework concerned the diffusion of chlorides, in the years 1990-2000 (Prof. Ollivier and Pr Carcasses), the problems of reinforcement anchoring, also during this same period (Pr Granju). Then, the effects of aqueous aggressive environments on concretes were studied in the years 2000-2004 (Pr Escadeillas and Pr Bertron), leading to the original studies of interactions between materials and biological films in the following period (Pr Bertron). From the years 2008, non-destructive characterization techniques were more and more used. In 2012 a TC was proposed on this topic (Pr Balayssac).

LMDC also participated in the test methods to determine the Chloride threshold initiating corrosion (TC 235 CTC Pr François). The modeling of the structural effects of the alkali aggregates reactions started in 2014 (Pr Sellier and Dr Multon). During the last 5 years (2015-2019), natural materials (Pr Aubert), agrosourced construction materials (Dr Magniont), aging of concretes in biochemical contexts (Pr Bertron) and the progress of alternative binders (Pr Cyr), led the LMDC researchers to propose new technical committees.

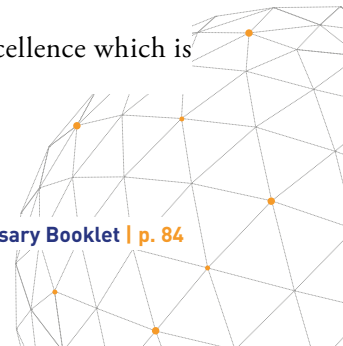
New approaches to the topic of initiation of chloride-induced reinforcement corrosion were studied in the TC 262 SCI (Pr François). Over the period 2002-2018, the LMDC organized with the RILEM three TC final conferences (2006 for the TC RLS, 2008 for PEA, and 2018 for the TC MCI).

Pr Raoul François was appointed Treasurer of the RILEM in 2007 and was awarded the honorary title of RILEM Fellow in 2012. Prof. A. Bertron was distinguished by receiving the Robert L'Hermite medal in 2016.

Each year, LMDC sends its doctoral students and researchers to annual conferences organized by RILEM all over the world. LMDC is also a major supplier of scientific articles for the flag ship journal of RILEM: Materials & Structures, one of the most important reference journals for its activities. LMDC also contributes to the new open access journal launched by RILEM: RILEM Technical Letters with Prof. Bertron as editor and Prof. Balayssac as associate editor. .

As this non-exhaustive list shows, RILEM is one of the best ways, for LMDC, to build relationships between high quality scientists in the field of materials science for civil engineering in order to improve research, and an excellent way to submit its research results for peer review.

So, LMDC will continue to support and take advantage of this indispensable network of excellence which is RILEM.



5 | CORPORATE MEMBERS

1. INSTITUTIONAL

ASSOC. PROF. WIM VAN DEN BERGH Associate Professor, University of Antwerp, Belgium

TC member



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The first topics discussed by LMDC in the RILEM framework concerned the diffusion of chlorides, in the years 1990-2000 (Prof. Ollivier and Pr Carcasses), the problems of reinforcement anchoring, also during this same period (Pr Granju). Then, the effects of aqueous aggressive environments on concretes were studied in the years 2000-2004 (Pr Escadeillas and Pr Bertron), leading to the original studies of interactions between materials and biological films in the following period (Pr Bertron). From the years 2008, non-destructive characterization techniques were more and more used. In 2012 a TC was proposed on this topic (Pr Balayssac).

LMDC also participated in the test methods to determine the Chloride threshold initiating corrosion (TC 235 CTC Pr François). The modeling of the structural effects of the alkali aggregates reactions started in 2014 (Pr Sellier and Dr Multon). During the last 5 years (2015-2019), natural materials (Pr Aubert), agro-sourced construction materials (Dr Magniont), aging of concretes in biochemical contexts (Pr Bertron) and the progress of alternative binders (Pr Cyr), led the LMDC researchers to propose new technical committees.

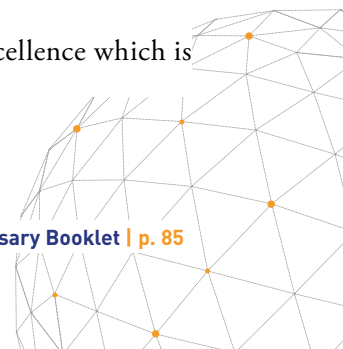
New approaches to the topic of initiation of chloride-induced reinforcement corrosion were studied in the TC 262 SCI (Pr François). Over the period 2002-2018, the LMDC organized with the RILEM three TC final conferences (2006 for the TC RLS, 2008 for PEA, and 2018 for the TC MCI).

Pr Raoul François was appointed Treasurer of the RILEM in 2007 and was awarded the honorary title of RILEM Fellow in 2012. Prof. A. Bertron was distinguished by receiving the Robert L'Hermite medal in 2016.

Each year, LMDC sends its doctoral students and researchers to annual conferences organized by RILEM all over the world. LMDC is also a major supplier of scientific articles for the flag ship journal of RILEM: Materials & Structures, one of the most important reference journals for its activities. LMDC also contributes to the new open access journal launched by RILEM: RILEM Technical Letters with Prof. Bertron as editor and Prof. Balayssac as associate editor. .

As this non-exhaustive list shows, RILEM is one of the best ways, for LMDC, to build relationships between high quality scientists in the field of materials science for civil engineering in order to improve research, and an excellent way to submit its research results for peer review.

So, LMDC will continue to support and take advantage of this indispensable network of excellence which is RILEM.



5 | CORPORATE MEMBERS

2. INDUSTRIAL

MS. EDITH TARTARI

Selenizza Natural Bitumen, Albania

TC member

SELENIZZA®
NATURAL BITUMEN



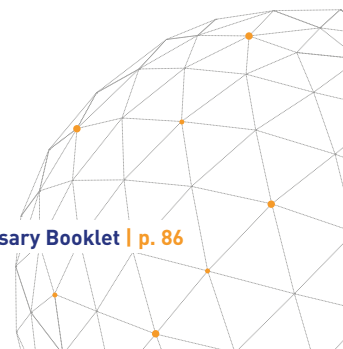
Our company SELENICE BITUMI SHA operates a mine of natural bitumen and produces the additive Selenizza which is used in the road construction for the implementation of High Modulus Asphalt Mixes. I became a member of RILEM as Representative of SELENICE BITUMI SHA in 2017.

I have had the opportunity for a couple of years before that date, to participate at various symposiums and workshops organized by RILEM, such as the Annual RILEM meeting in Montreal, 27 September 2016, just to name one, and was captivated by not only the excellent technical level of the research works presented but also, by the openness to new ideas, materials or experiences, which distinguished these events.

Since my membership, my participation in various technical committee meetings, enabled me to know firsthand many scientific and technical developments related to road construction materials, providing a source of fresh ideas on how to optimize the use of our product. I also was offered the opportunity to share with other RILEM members our experience and findings as well as explore new collaboration opportunities.

I should particularly like to mention the RILEM 252-CMB Symposium (Braunschweig, Germany), held in September 17-18 2018, where I made an oral presentation and submitted a paper entitled “New binders using natural bitumen Selenizza”, receiving positive reactions and feedback from the participants.

I am very enthusiastic about our involvement in RILEM and look ahead with confidence and great expectations to its contribution to improvement of our product performances.



5 | CORPORATE MEMBERS

3. ASSOCIATE

PROF. GORDON AIREY

Director, Nottingham Transportation Engineering Centre (NTEC), United Kingdom

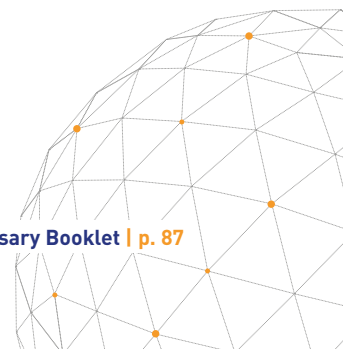
TC member



The Nottingham Transportation Engineering Centre (NTEC) at the University of Nottingham has been actively involved in RILEM technical committee activities over the last 20 years. This involvement initially was limited to the work of Technical Committee TC 182-PEB which was primarily concerned with the performance testing and evaluation of bituminous materials and was the only TC, at that time, dealing with bituminous materials. Thanks to the success of TC 182-PEB, the University of Nottingham is now involved in five TCs as part of Cluster F: Bituminous Materials and Polymers.

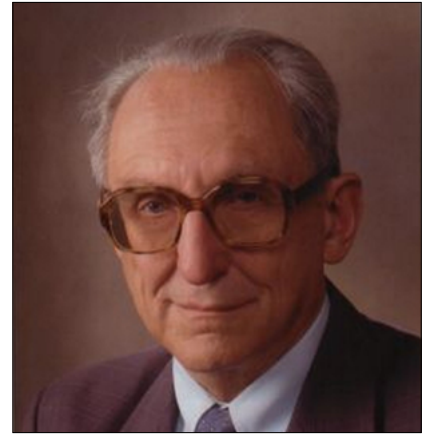
The opportunity to collaborate with international partner organisations as part of the testing and report writing activities of RILEM, as well as through the dedicated RILEM symposia and conferences, has provided an excellent avenue for knowledge exchange and career development for a large number of researchers at the University of Nottingham. The wide range of activities generated through RILEM has inspired both academics and students to engage in collaborative research, leadership (both at technical committee as well as task group levels) and personal development. Highlights are too numerous to mention although hosting the annual Cluster F TC meeting at the University of Nottingham in 2017 was both a rewarding and honouring experience for the RILEM team within NTEC.

As we enter an uncharted period of our history, one constant will be the continued link between RILEM, and the University of Nottingham and the activities associated with NTEC. Cluster F is more than just a community of bituminous material researchers, academics and industry, it is a family and that will continue long into the future.



5 | CORPORATE MEMBERS

3. ASSOCIATE



PROF. ANDRZEJ M. BRANDT IPPT PAN, Warszawa, Poland

RILEM CCC Chair 1990, RILEM Fellow 2006, TC Chair

IPPT PAN was created in 1954 by six leading Polish scientists, and one of them was Waclaw Olszak, who was a RILEM Founding Member and RILEM President in 1963. IPPT PAN was also related to RILEM through a small group of researchers involved in studies and development of new methods and materials for building constructions. I had occasion to organize that group and to coordinate during several years the links between Polish researchers and RILEM. That activity covered participation at several RILEM initiatives and actions, e.g. since 1975 in 19FRC and 49TFR.

Later, I joined CCC and chaired it up to 1999 taking part at several so-called RILEM weeks presenting our research. After Professors Waclaw Olszak and Stanislaw Kajfasz, it was my duty to take over the representation of Poland in RILEM in 1992. The present representative is Professor Izabela Hager from Cracow University of Technology.

Several of our colleagues from Polish universities participated in a few RILEM committees and working groups during the last 75 years. That activity covered various properties of concretes and other building materials. I had the pleasure to coordinate since 1970, a small but active group of researchers in IPPT, involved in advanced studies of fibre reinforced concretes (FRC).

Since 1985 we have been organizing regular 3-annual conferences, “Brittle Matrix Composites” that are sponsored by RILEM. These meetings cover advanced problems of composites with cement and ceramic matrices. At present we are preparing BMC-12 for September 2019 and we expect to get again honorary sponsoring from RILEM.

Without any doubt the participation of colleagues in RILEM events from my country has been below expectation. I hope very much that Polish scientists will become more active in RILEM in the future.



5 | CORPORATE MEMBERS

3. ASSOCIATE

PROF. JOSÉ GÁLLIGO ESTÉVEZ

**LCEM (Central Laboratory
for Structures and Materials)**

Fellow 1998, TAC, MAC



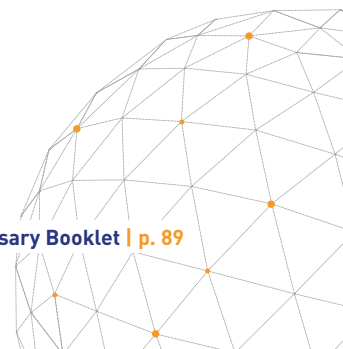
The link between RILEM and the Central Laboratory for Structures and Materials, LCEM of the Center for Studies and Experimentation on Public Works CEDEX, of Spain, started at the very inception of RILEM in 1947, with Prof. Eduardo Torroja, Director of the LCEM, being a co-founder of RILEM, then President in 1951. Since then, the involvement of CEDEX-LCEM in RILEM has been constant, both at the scientific level, particularly cement and concrete research and testing, and at the management level.

In the last 20 years, CEDEX-LCEM has organized at Madrid a number of important RILEM events. On 22-23 April 1999, the RILEM 2000 Workshop, aimed at “instilling greater creativity within the RILEM discussion groups” was held at CEDEX Headquarters. This workshop followed the previous Workshops Madrid I (1987) and Madrid II (1992), so that “Madrid has become RILEM’s favorite city when it comes to making future plans”, as declared by RILEM’s President Jacques Bresson at the opening session of the 2000 Workshop.

The involvement of CEDEX-LCEM in RILEM has included the organization of the Madrid General Council on September 1992, the collaboration with the Torroja Institute for organizing the 2002 RILEM Annual Week, with Carmen Andrade being RILEM’s President, and the organization of the RILEM Internal Workshop at CEDEX (March, 2006), under the title “Making RILEM more attractive”. For all these, it was very important that the Directors of the LCEM were in those years very active members of the Standing Committees of RILEM: José Manuel Gállico, successively President of the Technical Activities Committee (TAC), member of the Bureau, and President of the Management Advisory Committee (MAC) during the period 1994-2005, and Rafael Astudillo, member of the MAC, 2008-2011.

The worldwide economy crisis starting in 2008 affected severely the international links of CEDEX, including those with RILEM. The attendance to RILEM General Council and Annual Week was strongly reduced, also the participation in RILEM Technical Committees.

Now in 2019, with the clear progressive improvement of the financial situation at Spain, CEDEX-LCEM is ready to return to a strong link with RILEM, both at the organizational and the scientific level, following the continuous interest of CEDEX in research and testing of construction materials, advanced techniques for evaluation and assessment of structures, durability and lifecycle of building materials, and development of advanced materials, both concrete-like, organic and composite materials for use in building and civil engineering.



5 | CORPORATE MEMBERS

3. ASSOCIATE

ING. EDGARDO VILLA (PRESIDENT)
ING. GUILLERMO GOICOA (SECRETARY)

**AAHES (Argentine Association
for Structural Concrete)**

TC member



In the past two decades AAHES, Asociación Argentina del Hormigón Estructural (Argentine Association for Structural Concrete) has enjoyed a fruitful relationship with RILEM.

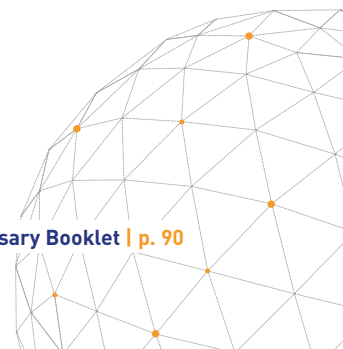
Almost yearly we have had joint Courses in Buenos Aires, and other cities across our country (Rosario, Salta, Neuquén), which were organized with the special participation of Carmen Andrade and Esperanza Menéndez. These Courses lectures resulted in five books being printed in Argentina or Spain, in 2010, 2011, 2012 and 2013.

In 2010 an Assembly, organized by AAHES, met in Buenos Aires, with the presence of RILEM President, Prof. Peter Richner, gave birth to Lat-RILEM, a RILEM Chapter for Latin-American Countries; it was the first RILEM Regional Group, which opened a road later followed by other regions.

In 2011 AAHES organized, at the Civil Engineering College of National University of Buenos Aires, the very interesting Lecture given by Prof. Wolfgang Brameshuber on “Textile Reinforced Concrete”, which was successful not only regarding the number of listeners, but also because of the many students that then joined RILEM, following the Lecturer’s invitation. Previously, AAHES had excerpted and summarized texts from “Textile Reinforced Concrete” (a State-of-the-Art Report of RILEM Technical Committee 201-TRC) and from “Textile Reinforced Concrete” (edited by W. Brameshuber), translated them into Spanish and printed a booklet to be distributed among the audience.

In those years, Eng. Luis Lima, then AAHES President, was appointed as International Expert, first, and then as a Member of RILEM Bureau.

As a result of all those shared activities, many a lasting relationship was tied up between Argentina and other countries’ RILEM researchers.



5 | CORPORATE MEMBERS

3. ASSOCIATE

MR. JEAN HERRISON
Imerys Aluminates, France

TC member

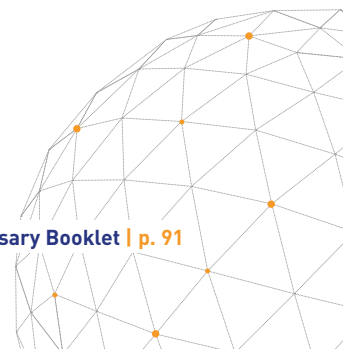


Imerys Aluminates is currently involved in the Cluster B (Transport and Deterioration Mechanisms) and more especially on the TC 253-MCI: Microorganisms-cementitious materials interactions lead by Pr. Bertron and Dr. Jonkers.

Since 2013 and thanks to RILEM, we have access to a network of high scientific level of experts who help us to be updated with latest scientific researches around the world on this specific topic. The achievement of the STAR will crystalize all work undertaken by contributors and will participate to spread the advanced knowledge generated.

For us, it has been the opportunity to meet numbers of brilliant enthusiastic people and learn a lot from them. Our network in the field of construction materials and structures will not be the same without our involvement in RILEM.

Imerys Aluminates wishes all the best for the 75th Anniversary of RILEM and many collaborations for the future.



5 | CORPORATE MEMBERS

3. ASSOCIATE



TECHNISCHE
UNIVERSITÄT
DARMSTADT

PROF. EAB KOENDERS

Institute of Construction and Building Materials,
TU Darmstadt, Germany

**INSTITUT FÜR
WERKSTOFFE
IM BAUWESEN**

The Institute of Construction and Building Materials as a RILEM partner has various links to their networking portfolio. Currently, our most pronounced activities are the doctoral course on “Computational Methods for Building Physics and Construction Materials” organized annually since 2017, which is scientifically supported by RILEM’s Educational Activities Committee (EAC), and chairing RILEM TC 270-CIM on “Benchmarking Chloride Ingress Models on Real-life Case Studies: Theory and Practice”, which is part of RILEM Technical Activities Committee (TAC). In addition, several institute members actively participate in other RILEM TCs like TC-254 CMS, TC-253 MCI, TC-244 NUM, or were active in various past TCs like 195-DTD, 214-CCD and 227-HPB. They contributed to several book chapters of STARs such as recently to the RILEM TC 254-CMS STAR titled “Thermal Cracking of Massive Concrete Structures” published by Springer in 2018. With these links, the institute is actively contributing to RILEM networking activities, which allows their researchers to interact and exchange scientific and educational information at the international playing field on construction and building materials. Future perspective will be on extending these links by further participation in the various RILEM events, but also by involving young researchers and students in RILEM supported research and educational activities.



5 | CORPORATE MEMBERS

3. ASSOCIATE

EMERITUS. PROF. LUIS LIMA

UNNOBA, Argentina

*Fellow 2015, TAC Expert, Bureau member,
President LAT-RILEM, TC member*



UNNOBA (Universidad Nacional del Noroeste de Buenos Aires) is a new Argentina National University established in 2003 in the middle of the main agricultural area of the country. The region has also some important industries mainly in metal-mechanical and agricultural areas.

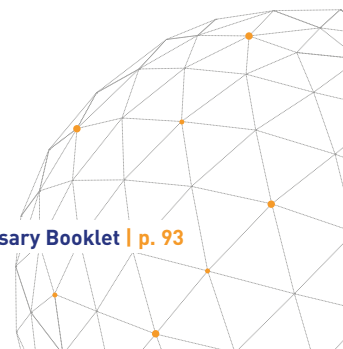
UNNOBA legal existence began by law of December 2002 and its academic activities in June 2003 with the nomination of Luis Lima as first Rector. Its affiliation to RILEM was in 2011.

Since the beginning of its activities UNNOBA has had a strong link with RILEM:

1. In 2012, 2013 and 2015 having supported the International Courses on Structural Concrete organized by AAHES (Argentine Association for Structural Concrete) and RILEM.
2. LEMEJ (UNNOBA Testing Materials and Structures Laboratory) are translating systematically RILEM Recommendations and publishing some of them in their journal “Materiales y Estructuras”.
3. LEMEJ are also publishing a series of thematic RILEM Recommendations, like “Concrete elaboration and Control”, “Bituminous Materials”, etc, in bilingual editions (English and Spanish).
4. Participation of LEMEJ Vice-Director (Miguel Tortoriello) in TC “AMC, use of Agro-Based Materials as Cementitious Additions in Concrete and Cement-Based Materials”.

UNNOBA also has an important participation in Lat-RILEM activities, among them:

- Organization of “II Latin-American Congress on Structural Timber” in 2017.
- Now it is organizing the “International Congress on Welding. COINSO 2021” taking place in May 2021.



5 | CORPORATE MEMBERS

3. ASSOCIATE

DR. MAXIME LION

EDF, France

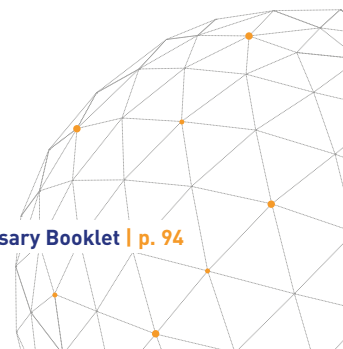
TC member



The TEGG department of the EDF group (*Electricité De France* – french electric utility company) is dedicated to the expertise of the materials in the field of civil engineering: soils, rocks, cements, aggregates, concretes, organic materials...

As an entity positioned between engineering and R&D activities, the TEGG department has long been involved in some RILEM committees, which often consist to fill gaps in the knowledge and the testing practices, through the writing of state of the art and recommendations documents. This is especially the case in the field of concrete durability where EDF-TEGG participation is the most active.

We can mention for example these topics: alkali-aggregate reaction, delayed ettringite formation, thermal spalling, and concretes under combined actions.



5 | CORPORATE MEMBERS

3. ASSOCIATE

**PROF. MARIA ANTONIETTA AIELLO,
PROF. MARIANOVELLA LEONE,
PROF. FRANCESCO MICELLI**
University of Salento, Lecce (Italy)



TC members



The Structural Engineering group at the University of Salento has been part of RILEM from 2013 as a Corporate Member.

For two decades the research group has been involved in research activities related to structural mechanics of concrete and masonry materials, strengthening and repair, durability problems and sustainability in construction industry.

The members have been involved in Scientific Committees of RILEM International Conferences, and actively participated to the technical committees 223-MS (Masonry strengthening with composite materials) and 250-CSM (Composites for sustainable strengthening of masonry).

The members of University of Salento participated to several research programs, conferences, and educational events by sharing their experiences with several RILEM members. Every time the cultural exchanges with RILEM members strongly contributed to reach a strong increase of knowledge, and to a personal and team development.

RILEM publications and events are always considered a milestone for the education of young researchers, and for the development of innovation in construction industry. A strong support as peer reviewer is provided by the members of University of Salento to the Journal Materials and Structures.

The growth of the entire scientific community, in the field of construction materials and structures, has been pursued thanks to 75 years of RILEM's activity. We look forward to being in the RILEM community for a long time... enjoying the culture, the friendship, and the joy of transmitting the good ambitions to the next generations of researchers and engineers.



ASSOC. PROF. STANISLAV POSPÍŠIL

ITAM CAS, Czechoslovakia

(Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences)

TC member



The Institute of Theoretical and Applied Mechanics of the Czech Academy of Sciences was one of the founding members of RILEM, that time under its historic name “Research and testing institute for building materials and structures” of the Czech Technical University in Prague.

In the fifties the Institute became a part of the Academy and later split into two independent institutions. For some time, the national secretary of RILEM had its seat in the part belonging to the Czech Technical University and the links of ITAM with RILEM had weakened. The prevailing orientation of ITAM in theoretical research brought new interests that for a moment lowered the successful mutual co-operation.

The situation started to change after involvement of the Institute in preparing a new TC 138 on test methods for thin-walled metal structures, which initiated after an international conference on “Experimental model research and testing of thin-walled structures” organized by T. Peköz and M. Drdácý in 1997. Since then, the interest in cooperation with RILEM strengthened and resulted in participation of other researchers in the new Technical Committees. There were first the following: Repair mortars for historic masonry with J. Válek (2003), Interpretation of NDT results and assessment of RC structures with M. Drdácý (2004), Strategies for the assessment of historic masonry structures with NDT (M. Drdácý, J. Válek – 2005-2014) and In-situ assessment of timber (M. Drdácý, B. Kasal, M. Kloiber – 2005-2012). This intensity was significantly influenced by late professor Luigia Binda from POLIMI who supported the development of RILEM activities.

ITAM organized international workshop on “In-situ evaluation & non-destructive testing of historic wood and masonry structures” and jointly with RILEM issued under the same title a book edited by L. Binda, M. Drdácý and B. Kasal, which is still one of the main reference and textbook for students in the field. The work in TCs continued with the Design and application of hydraulic grouts for repair and strengthening of historic masonry structures (J. Válek – 2010-2016), Specifications for non-structural grouting of historic masonry and architectural surfaces (J. Válek as Deputy Chair, Z. Slížková – 2010-2017) and Reinforcement of Timber Elements in Existing Structures (M. Drdácý – 2011). The rich involvement of ITAM underpinned the organization of a very successful Historic Mortars International Conference in 2010 chaired by J. Válek and which was followed by a RILEM Book series publication dedicated to this topic.

And the history continues with the most recent work in the TCs on Accelerated laboratory test for the assessment of the durability of materials with respect to salt crystallization (C. Nunes, Z. Slížková – 2016) and on Specifications for testing and evaluation of lime-based repair materials for historic structures (J. Válek Deputy Chair – 2017).

ITAM in recent decades significantly improved and newly developed its experimental base with a high potential of forefront research in modern laboratories and testing facilities, to a large extent unique in the world. The Institution’s authorities strongly support international cooperation with important international bodies, among which RILEM is the number one in the field of experimental mechanics and material and structural testing. In the strategies of ITAM the future activities in the RILEM Technical Committees with relevant publication in the RILEM journal and booklets have a high priority as well as organization of joint events, namely conferences and workshops.

DR. SUVIMOL SUJJAVANICH Kasetsart University, Thailand

TC member



Kasetsart University

Kasetsart University has initiated relationships with RILEM since 2012 as the following timeline:

In 2009 the performance investigation of a large infrastructure, toll way project located in central part of Thailand, showed the first evidence of alkali-silica reaction (ASR) in Thailand and reported on in 2011 (Sujjavanich, et al. 2011). This was the first time this deterioration type in concrete structures in Thailand was published. The problematic rocks were black quartzite with traces of pyrite, mica, and sericite. Some of these rocks were slow late-reactive types. The awareness of its importance and impact on the deteriorated structure had been increasing among a small group of researchers. The effort to initiate a first small group discussion/seminar among research groups was arranged at Kasetsart University in September 2012. Since then the research on ASR has been continued, focusing on local materials and prevention. Because of the similar and related geological landscape in neighboring countries, some information was also gathered there.

In the same year, 2012, a researcher from Kasetsart University participated the 14th ICAAR in Texas, USA and had a good opportunity to observe the RILEM committee meeting (TC-ACS), by the introduction of a committee member, Dr. V. Jensen.

Later Dr. Maarten A.T.M. Broekmanns, one of the RILEM members, joined the local workshop as a keynote speaker on “AAR Deterioration of Concrete Infrastructure workshop”, held at Kasetsart University in Bangkok during August 2013. This was the third local event that provided the opportunity for about 70 Thai engineers and persons from construction industry to learn about this deterioration problem, to be aware of the risk and to discuss the potential problem in the future.

Following this event, the small group discussion among researchers and engineering students with Dr. V. Jensen, from Norway was arranged in the ASR Topics. On 4-5 November 2015, a seminar (7th of local public presentation on AAR) was the fruit of collaboration from EIT¹, KU2 RILEM³, TCA⁴ and support from NORCEM⁵, NTNU⁶, SINTEF⁷ was held at the EIT, Bangkok. Prof. Borge Wigum, the chairman of TC 258-AAA and Dr. Jan Lingard the Committee’s secretary, were the invited speakers. The seminar was very well received.

During this time, with the recognition of the importance of long-term behaviors-information of AAR-affected concrete, the beginning phase of establishing the exposure site was initiated.

In 2016 two researchers visited NTNU and SINTEF in Norway to observe the research work on AAR of both institutes. This helped widen the understanding of the current works on AAR, which benefited our research in this area and the plan for the activities to increase the public awareness and other possible measures from government sector.

It can be summarized that from the time of the first report of AAR, the awareness of the problem and the risk were continuously raised and resulted in the continued research in behaviors, its impacts on local materials and

environment and mitigation. This is partly supported by RILEM in both direct and indirect ways. At present, the AAR problem has received more attention than in the past and this reflection has been shown from the specifications of several large infrastructure construction projects.

During this time, we have been an institutional membership of RILEM instead of individual member.

We plan to set up another workshop on this issue and a short seminar/discussion among the construction industry, academic and government sectors, to set up measures to deal with the problem. The available information from the previous research confirmed the risk. Also, on a large scale, we have a plan to schedule an international workshop in AAR topics, possibly with the support from RILEM, since several countries in Asia have already faced the AAR problems, while some countries with potential risks have no information and experiences.

Note:

EIT¹ = The Engineering Institute of Thailand under H.M. The King's Patronage,

KU² = Kasetsart University,

RILEM³ = International Union of Laboratories and Experts in Construction Materials, Systems, and Structures),

TCA⁴ = Thailand Concrete Association,

NORCEM⁵ = Norwegian cement company,

NTNU⁶ = Norwegian University of Science and Technology,

SINTEF⁷ = Independent European research organization.

5 | CORPORATE MEMBERS

3. ASSOCIATE

ING. LUIS TRAVERSA
Director of LEMIT, Argentina



LEMIT is one of the leading Research Centers devoted to construction materials in Argentina. It not only promotes research but also the training of qualified human resources and technology transfer to the private sector in the field. Different departments constitute it, from which the most developed units are the Concrete Technology, Binders, Road Technology, Historical Constructions, Foundry and Welding, and Geology.

The history of LEMIT started in 1942 when it was founded in La Plata City for providing support for the testing of construction materials during a boom of infrastructure construction in the Buenos Aires Province. Since then, it has actively contributed to the private sector and gained recognition by academia at the same time. Over the years, researchers at LEMIT have conducted some of the most advanced research programs in South America, especially regarding Concrete Technology and Road Technology. Our Center has then constituted a reliable partner of many organizations with similar interests.

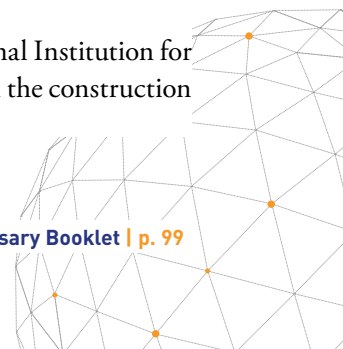
LEMIT officially linked with RILEM in 2010, but members of LEMIT have interacted and participated in RILEM activities, since the very early days of RILEM. Therefore, the history of LEMIT has been developing in parallel with the history of RILEM. Over the last years, several joint activities have been celebrated in La Plata city, from which the most relevant examples were a joint fib International Symposium in 2005, and an International Conference, together with ACI, in 2015. LEMIT also offered support to periodic RILEM activities such as the annual International Courses from the SEDUREC group in association with AAHES celebrated in Argentina between 2010 and 2017, and other small conferences. This relationship between LEMIT and RILEM is now very solid, as it has contributed significantly to both the visibility of RILEM in Argentina and the internationalization of LEMIT.

In 2014, the fruitful partnership resulted in LEMIT allocating the Lat-RILEM Secretariat. This supportive action has strengthened even more the bond and promoted additional joint activities, as a result of enhanced synergy.

In the upcoming years, the collaboration between LEMIT and RILEM has excellent perspectives. LEMIT will be organizing an International Congress on Concrete Technology in La Plata in 2020, and it will again constitute an ideal opportunity for RILEM to celebrate associated activities. As a Latin American organization, we are also very proud that Mexico is hosting the 2021 RILEM Week, and at LEMIT we will offer all the support needed for a successful edition of this event. In addition, the recent partnership agreement between RILEM and AATH has created a new strategic association of RILEM in Argentina and given that LEMIT and AATH have always worked side by side, this threesome will offer great opportunities for a very successful collaboration.

At LEMIT, we really appreciate the cooperation with RILEM, which resulted in mutual benefits over the years.

We congratulate all past and present RILEM members for sustaining such a prestigious International Institution for the anniversary of 75 years. RILEM has always promoted human development in connection with the construction sector, and it will always be esteemed for that.



5 | CORPORATE MEMBERS

3. ASSOCIATE

**PROF. MICHAEL P. WISTUBA,
PROF. LAURA DE LORENZIS**

TU Braunschweig, Germany

**Michael P. Wistuba: Chair The Braunschweig Pavement
Engineering Centre,**

Laura de Lorenzis: Chair the Institute for Applied Mechanics



Michael P. Wistuba, Convener TAC Cluster F

Laura de Lorenzis, Robert L'Hermite Medalist 2011, Assoc Editor M&S

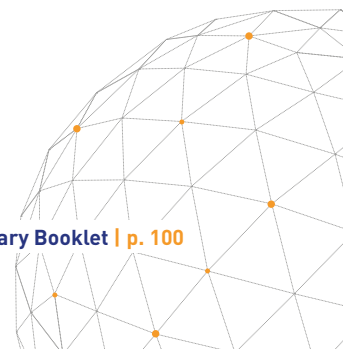
The TU Braunschweig in Northern Germany has been and is involved in numerous RILEM activities in the fields of experimental research and modeling studies on building and road pavement materials and structures.

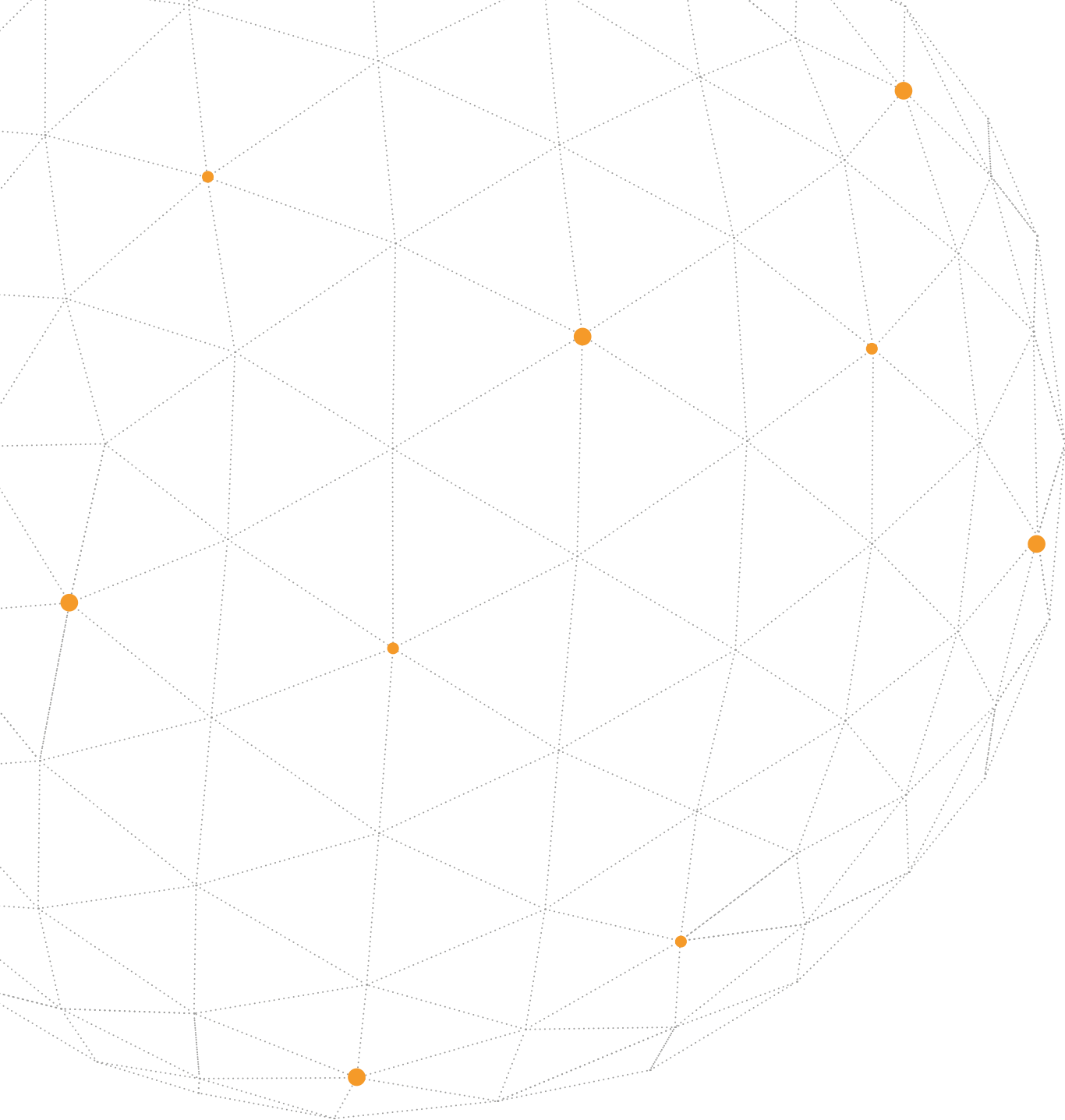
In view of the 75th anniversary of RILEM, the active RILEM members of TU Braunschweig would like to sum up their feelings about RILEM with the following words: Great respect and admiration for what has been achieved by RILEM in research and development. Enthusiasm for RILEM's continued effort in connecting professionals worldwide and for strengthening research communities. And deep gratitude for steadily reminding all RILEM members of being united people, researching together for a prosperous and sustainable future!

Today, several institutes from the TU Braunschweig are particularly engaged in RILEM Technical Committees and Technical Advisory Committee, and in scientific events under the umbrella of RILEM, including The Braunschweig Pavement Engineering Centre, chaired by Professor Michael P. Wistuba, the Institute for Applied Mechanics, formerly chaired by Professor Laura De Lorenzis, and the Institute for Building Materials, Concrete Construction and Fire Safety, chaired by Professor Dirk Lowke.

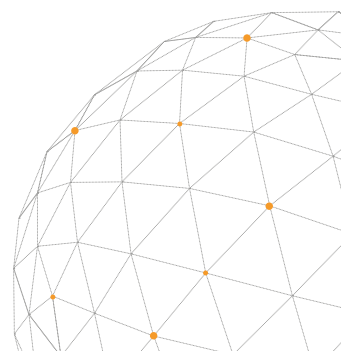
Since 2018, Professor Michael P. Wistuba has been Convener of RILEM Cluster F for Bituminous Materials and Polymers. The Technical Committees within this cluster aim at developing asphalt pavement materials, which are highly sustainable, energy efficient and can be recycled repeatedly. In September 2018, the Braunschweig Pavement Engineering Centre was privileged to arrange in Braunschweig a recognized scientific RILEM event, the RILEM 252 CMB Symposium on chemo mechanical characterization of bituminous materials. In 2019, the Centre was very delighted to congratulate its team member Professor Augusto Cannone Falchetto for being nominated Robert L'Hermite Medalist 2018, the most prestigious RILEM award.

Professor Laura De Lorenzis was nominated Robert L'Hermite Medalist in 2011. She has been linked with RILEM activities for many years. In the years of her research activities on composite strengthening of civil engineering structures, she was a member of RILEM Technical Committee MSC "Masonry strengthening with composite materials", of which she acted as Secretary the first year of its constitution, and of RILEM Technical Committee DUC "Design procedures for the use of composites in strengthening of reinforced concrete structures". Since 2011 she is Associate Editor of Materials and Structures, of which she was Deputy Editor-in-Chief from March 2016 to May 2017.





6 | INTERNATIONAL PARTNERS





American Concrete Institute

38800 Country Club Drive
Farmington Hills, MI 48331 USA
+1.248.848.3700
www.concrete.org

January 31, 2019

Members and Staff of RILEM:

On behalf of the American Concrete Institute's Executive Committee, Board of Direction, membership, and staff, I send congratulations to RILEM on the celebration of your 75th anniversary.

Over the past 75 years, RILEM has supported and advanced the cement and concrete industry in many important ways ranging from promoting sustainable and safe concrete construction, and improved performance, stimulating new directions of research and its applications, promoting excellence in concrete construction, and promoting cooperation at international scale by general access to advanced knowledge.

The mission of RILEM to advance scientific knowledge related to construction materials, systems and structures and to encourage transfer and application of this knowledge world-wide is well aligned with ACI's mission to develop, disseminate, and advance the adoption of its consensus-based knowledge on concrete and its uses. As RILEM and ACI both strive to achieve our related missions, the outcome will be clearly aligned with ACI and RILEM's shared vision of a future where everyone has the knowledge needed to use concrete effectively to meet the demands of a changing world.

ACI and RILEM have a long history of working together to improve the use of cement and concrete in all forms of construction. Many RILEM members and staff work on ACI committees, helping develop the latest codes, reports, and guidelines related to the effective and efficient use of concrete. Additionally, many ACI members have the privilege and pleasure of serving on RILEM committees. The ACI staff and members look forward to the next 75 years of working together with RILEM staff and members to advance the cement and concrete industry.

On this most important event, ACI congratulates RILEM on reaching the historic milestone of 75 years of providing a platform where a broad range of players including academics, researchers, testing laboratories, suppliers, contractors, owners and authorities work together to advance the scientific cooperation in construction materials and structures.

Sincerely,

A handwritten signature in black ink that reads "Ronald G. Burg". The signature is written in a cursive, flowing style.

Ronald G. Burg, P.E.
Executive Vice President

Copy to: David Lange, ACI President



Always advancing

6 | INTERNATIONAL PARTNERS

**TOR OLE OLSEN,
HUGO CORRES PEIRETTI,
HARALD S. MÜLLER,
DAVID FERNÁNDEZ-ORDÓÑEZ**

**fib (International Federation for Structural Concrete),
Lausanne Switzerland**

fib *President*, fib *Immediate Past President*,
fib *Honorary President*, fib *Secretary General*



A story of successful collaboration

The *fib* (formed by the merger of CEB and FIP) and RILEM are associations that were initiated shortly after the end of World War II. Each association developed in its field the knowledge in concrete structures and concrete as a material. They participated in 1957 in the creation of a *Liaison Committee between the International Civil Engineering Associations* (CEB, FIP, IABSE IASS and RILEM, which CECM and CIB joined afterwards). This Liaison Committee established a culture of collaboration from the early stages of these associations. This culture of collaboration generated numerous joint work groups, including the Joint Committee on Structural Safety (JCSS) that is still active to this day.

In 2015, a Memorandum of Collaboration was signed between the *fib* and RILEM. This agreement acknowledges that the *fib* and RILEM are both international not-for-profit organizations with similar structures and goals. The *fib* advances the technical, economic, aesthetic and environmental performances of concrete structures worldwide. RILEM advances scientific knowledge related to construction materials, systems and structures and encourages the transfer and application of this knowledge worldwide.

The main goal of this cooperation is to address key topics in the field of structural concrete by having members of each organization participate in the group or committee activities of the other. Members of both organizations benefit directly from this agreement by being able to purchase the other organization's publications at a discounted price. Both organizations believe that their cooperation generates greater productivity and accuracy in scientific output. A significant number of professionals are members of both organizations.

Since 2015, numerous groups collaborate in the production of knowledge. The Model Code 2020 (MC2020) – a *fib* initiative – has allowed many Commissions Task Groups and Action Groups in *fib* to collaborate with the relevant TC of RILEM. At the moment, there are more than 30 groups that are collaborating in one way or another.

Several events generated fruitful cooperation. **FRC2018** was organized under the umbrella of ACI-*fib* and RILEM:

FRC2018: Fibre Reinforced Concrete: from Design to Structural Applications

Joint ACI-*fib*-RILEM International Workshop

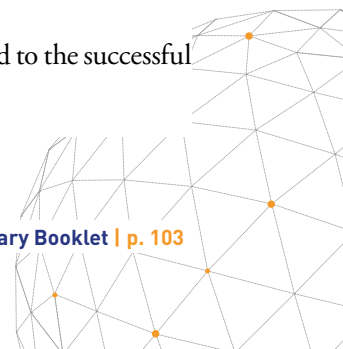
This success has led to the next BEFIB, which will be a joint event that will take place in 2021:

BEFIB 2021: Fiber Reinforced Concrete

X Joint RILEM-*fib* International Symposium

The collaboration between *fib* and RILEM is a successful history of how two organizations can work together to advance knowledge, in this case for concrete structures.

From the *fib*, we congratulate RILEM for the 75th anniversary of its constitution, and we look forward to the successful projects our collaboration will bring.



6 | INTERNATIONAL PARTNERS

DAVID MILLAR
Concrete Institute of Australia

Chief Executive Officer

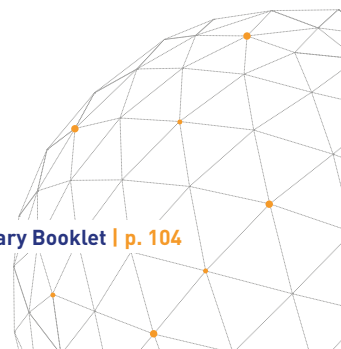
CONCRETE INSTITUTE 
of AUSTRALIA



The Concrete Institute of Australia congratulates RILEM on reaching 75 years of advancing scientific knowledge with respect to construction materials, systems and structures, as well as encouraging the transfer and application of this knowledge around the world.

The Institute has a long history with RILEM dating back to the 1990's when we co-sponsored the RILEM conference held in Melbourne in 1992. We have also been privileged to host the annual RILEM Week at our biennial conference in Melbourne in 2015. The relationships and friendships forged through these events has led to our formal International Partner Agreement that was signed during the 2015 conference. This has allowed our Australian industry members to be able to access the incredible information related to concrete materials that has been distributed by RILEM.

We wish RILEM and all its members every success for a wonderful celebration and look forward to continuing our association for many years to come.



6 | INTERNATIONAL PARTNERS



PROF. EMERITUS. DR.-ING. HARALD S. MÜLLER

**Institute of Concrete Structures and Building Materials,
Karlsruhe Institute of Technology, Germany
Past President fib**

TC Chair and member

Encounters, observations, experiences

As a long-term RILEM member, I would like to subdivide and summarize my RILEM memories into three major subjects: (1) General Council Meeting 1988, (2) database on creep and shrinkage, and (3) fib-RILEM collaboration.

As a young research engineer at the Institute of Concrete Structures and Building Materials at the University of Karlsruhe, Germany (today: KIT Karlsruhe), Prof. Hubert Hilsdorf, who was heading the German RILEM Group at that time, charged me in 1986 with the organisation of the RILEM General Council Meeting 1988, which took place in Baden-Baden, a famous historical city close to Karlsruhe. This was a rather challenging business, and I learned a lot both about the structure of RILEM, its different standing committees and about how to run a prestigious annual meeting of prominent researchers world-wide. A particular highlight was that I got into contact with several prominent RILEM protagonists of that time, among them Maurice Fickelson (General Secretary) and Prof. Elio Giangreco (President). My task also included the fundraising, and together with Prof. Hilsdorf we were quite successful. Consequently, we were able to organize a memorable event also in view of all social aspects. Deeply impressed by all this, I was warmly embarrassed and kissed by President Giangreco at the end of his speech at the gala dinner...

Prof. Zdenek Bazant, pioneering the research field of creep and shrinkage, initiated to build up a database on creep and shrinkage tests within RILEM. This database had its origins in data selections established at the Northwestern University in 1978 (Liisa Panula, Zdenek P. Bazant) and at the University of Karlsruhe in 1982 (Harald S. Müller, Hubert K. Hilsdorf). Within RILEM TC 69, chaired by Prof. Bazant, a subcommittee was formed to develop the so-called RILEM Database on Creep and Shrinkage. This subcommittee was chaired by me, and it accomplished a report which was approved at the verge of the 5th International RILEM Symposium on Creep and Shrinkage of Concrete (ConCreep 5) in Barcelona 1993. This work was continued by establishing RILEM TC 179-CSP in 1994. Members have been Bazant (US), Brooks (GB), Carol (SP), Chern (TAI), Chiorino (I), Gardner (CAN), Huet (CH), LeRoy (F), Müller (GER, chairman), Sakata (JP), Schwesinger (GER), Tsubaki (JP). Some years later the database was considerably extended within the RILEM business of Prof. Bazant and his co-workers S. Baweja, M. Hubler and R. Wan-Wendner.

For decades there has been always a good co-operation between RILEM and the Comité Euro-International du Béton (CEB) in particular by personal contacts, as many prominent engineers and researchers were active in both organisations. Every now and then, the idea was pushed to formalize this contact by some kind of an official agreement. During my term as the President of the International Federation of Structural Concrete (fib), which was formed by a merger of CEB and FIP in 1998, RILEM President Prof. Mark Alexander and myself discussed this subject during a two-days meeting in Karlsruhe in June 2015. We were supported by Johan Vyncke (Deputy RILEM President), Gordon Clark (Past fib President), Frank Dehn (Presidium Member of fib) and the secretaries

of both organisation, Petra Schumacher (fib) and Pascale Ducornet (RILEM). We quickly succeeded in working out a suitable document, and it was great pleasure for Prof. Alexander and me that we could sign the official fib-RILEM Memorandum of Cooperation, at the occasion of the RILEM Week in Sydney, Australia in Sept. 2015.

I appreciate RILEM as an outstanding, very valuable, and utmost important organisation in the field of material sciences within civil engineering. RILEM made a great development in the past decades, and it is still today full of “life”, innovations, and science. Congratulations and all the best for the future!

6 | INTERNATIONAL PARTNERS

MANABU YOSHIMURA
Japan Concrete Institute

JCI President



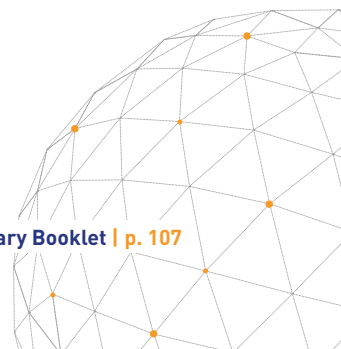
On behalf of the Japan Concrete Institute (JCI), we extend our heartiest congratulations to RILEM for 75 years of outstanding service and achievement. RILEM deserves immense credit for its record of leadership in the field of construction materials, systems and structures ever since its establishment shortly after the conclusion of World War II, achieving historic advancements in testing and recommendations in the field through forward thinking and far-sighted strategies.

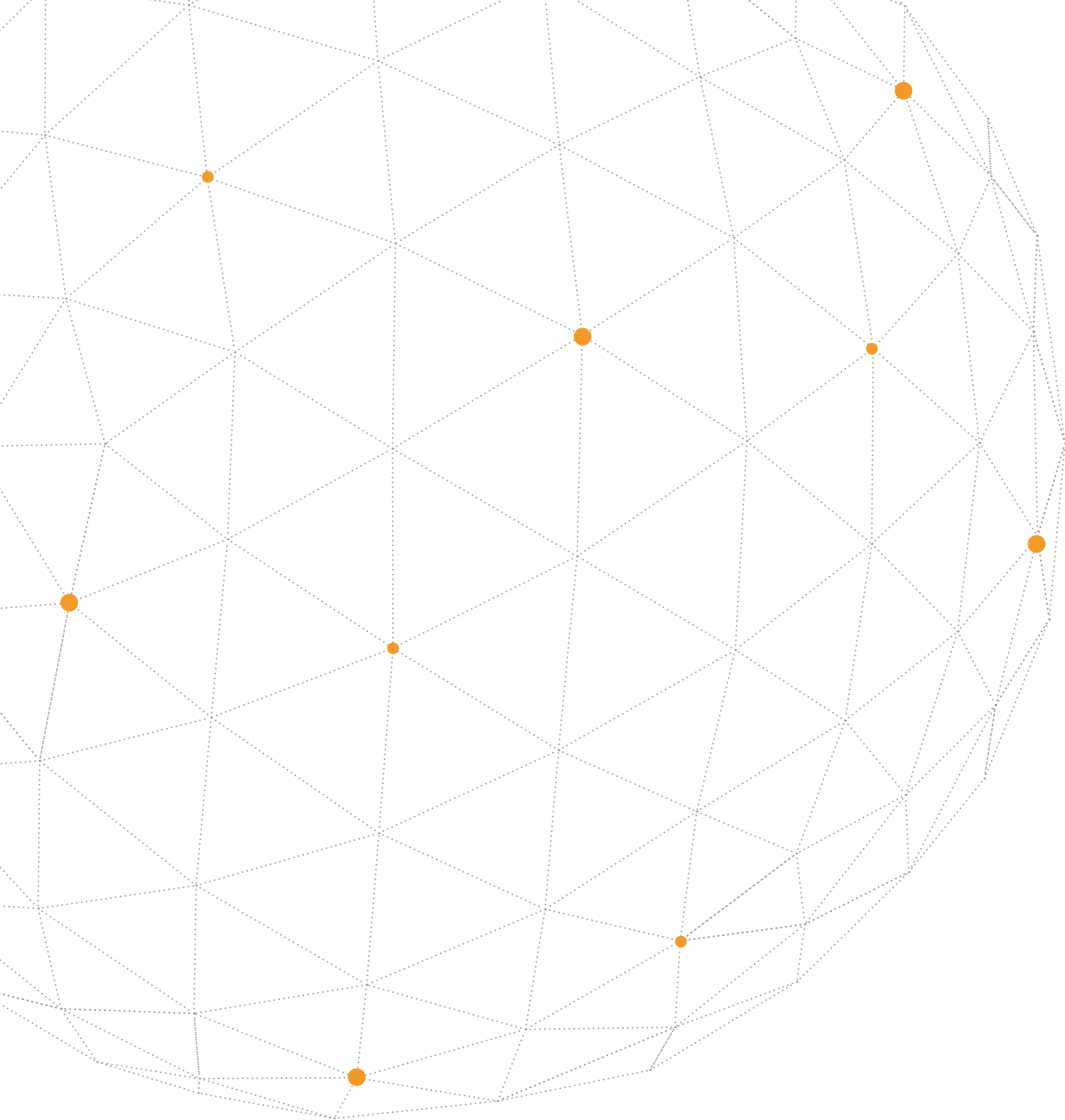
Academic and technical institutes such as RILEM, with brilliant committees of dedicated researchers and committed professionalism, can only aim for the highest results. Thus, working with RILEM is always a great honor for JCI, and we deeply value each and every one of our interactions and collaborations.

With its academic culture and technical expertise, RILEM has time and again proved its worth, deservedly gaining much recognition and fame over the years in the field and society at large. Under eminently able leadership, the association has achieved true excellence. RILEM members all over the world consider it a privilege to be able to work internationally in RILEM, where they enjoy access to a great breadth of knowledge and information. Not only does RILEM provide a rich learning platform but it also offers ever expanding research capabilities to its members.

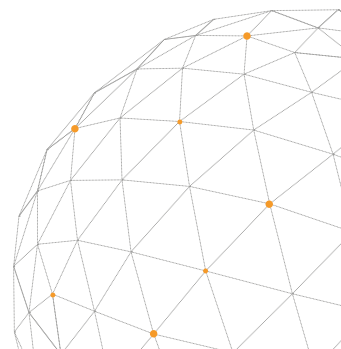
RILEM and JCI have jointly organized a number of highly successful international events, to wit “Concrete Durability and Service Life Planning” in 2006 and “Control of Cracking in Concrete Structures” in 2012 and 2017, stimulating active exchanges between our organizations. The signing of an International Partner Agreement between RILEM and JCI in 2007 and its renewal in 2015 formalized our cooperative efforts then, now, and into the future. JCI will host a prestigious international event, RILEM Week, in Kyoto in September 2022, and will continue holding and jointly sponsoring conferences, symposiums, workshops or seminars with RILEM. The close collaboration between RILEM and JCI at present and going forward, including the establishment of joint committees and the co-publication of technical reports and recommendations, plays an important role for the sharing of knowledge and expertise in the field of construction materials, systems and structures worldwide.

JCI wishes RILEM much continued success and looks forward to many more fruitful collaborations with RILEM for years to come.



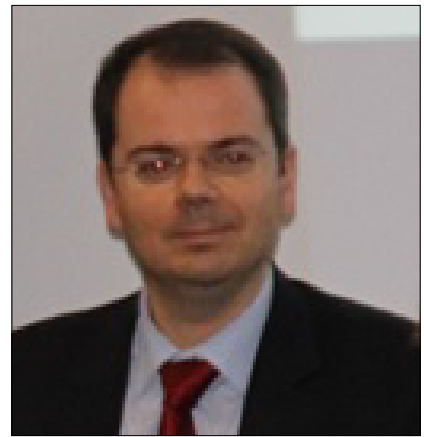


7 | PERSONAL



PROF. DR. DIMITRIOS AGGELIS
MEMC-Vrije Universiteit Brussel, Belgium
Department of Materials and Constructions

*Robert L'Hermite Medalist 2012,
Assoc Editor M & S, TC Vice-Chair*



What is RILEM to me?

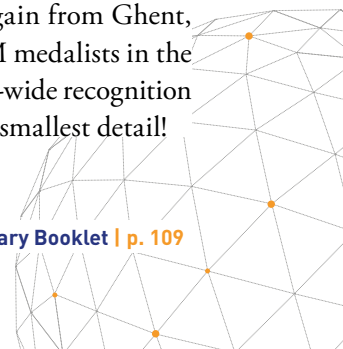
My first knowledge of RILEM came during my PhD study years, when I got familiar with the work of Prof. Christian Grosse and Prof. Hans-Wolf Reinhardt in TC 218-SFC. At that time, I was repeatedly failing to introduce ultrasound pulses into fresh concrete specimens, while they were already issuing standards on the subject... Some years later I ran into Christian while eating breakfast at the SACOMATIS conference in Varenna, Italy 2008. I did not miss the chance to sit down with him and quickly decided that it was worth joining the committee, even at my own expenses. At the same event, I was also asked by Prof. M. Ohtsu and Prof. T. Shiotani (with whom I had worked in Japan) to join their TC (212-ACD) since I was already giving topical presentations about concrete acoustic monitoring in the meetings. I accepted this very gladly and this is approximately when my relations with RILEM essentially started. I was very happy, as a young researcher, to be part of setting up guidelines published in an international journal like Materials and Structures. In the framework of this TC, I first got to know about the characterization power of certain acoustic parameters, that I applied so many times later and expanded to different media offering me publications and recognition.

Not much later I received the great honor of the RILEM Robert' L'Hermite medal during the RILEM week of 2012 in Cape Town, South Africa. It was great a feeling, knowing that my effort in the field of monitoring of structural materials was recognized by experts who I did not know in person and had no relation with previously! This gave me a sense of justice and strong confidence and motivation in a professionally insecure period of my life, as I was moving from Ioannina, Greece to Belgium. Making this trip to Cape Town with many members of my family and receiving this honor in front of the best researchers in the field was an unforgettable experience.

Later I got involved in different committees, while now I am vice-chair of TC 269-IAM. It is most enjoyable to be involved but due to limited available time I could not right now expand to even heavier commitments although I would like to. The meetings we hold approximately twice a year with the TC chairman, Prof. T. Shiotani from Kyoto are always enjoyable (including the dinners that follow...). In several conferences where I am involved as organizer, I arrange a RILEM TC meeting of a running committee, therefore I hosted TC meetings in 2011 in Ioannina, and Brussels, Belgium 2015, 2017, 2018.

I recognize that RILEM is the network where you can have great connections. Years back when I was fresh in Belgium, I sought cooperation from Prof. Geert De Schutter, from Ghent University. I was glad about his positive reply when he said, "of course I know you, you have received the RILEM medal..."

Another example of an important person who I met through RILEM is Prof. Nele De Belie, again from Ghent, with whom we also cooperate in Flemish projects. (Flanders region has probably the most RILEM medalists in the world...). Getting to work with people like them makes you quickly understand that having world-wide recognition as an expert is something that comes from hard work and high efficiency, taking care of even the smallest detail!



Recently another very honoring invitation came through Prof. Pietro Lura from EMPA, Switzerland, to become associate editor of Materials and Structures journal. I gladly accepted, and I hope I can work to maintain (if possible to further improve), the very high standards of the published articles in cooperation with Prof. John Provis who succeeded Pietro as Editor-in-Chief.

In my view, RILEM has an important role, brings people (engineers, researchers) together to discuss issues. This helps networking and making contact easier. It is a perfect platform for young people to meet seniors for discussions. Since the members are all active in their respective fields, it constantly follows the research trends, with new committees and topics on techniques and materials. It is not easy to quantify the influence from an involvement in an organization, but I can certainly acknowledge that I am glad that I have been part of RILEM for about a decade now. It helped me with the connections I made, by the repetitive nature of the contact in the meetings, the level of the discussions that stimulated thinking, while also the fact that I am included in the list of Robert L' Hermite medalists, is a great distinction that I will forever keep.

I wish RILEM to continue to grow, providing the ground for maturing the discussions on the serious technological issues that our engineering world faces.

7 | PERSONAL

PROF. SOFIANE AMZIANE
Université Clermont Auvergne, Univ BPC,
Institut Pascal, France

TC Chair, TC Member



I graduated from USTHB, Algiers in 1993 and then I got my PhD at Ecole Centrale de Nantes, France in 1998. I took a position of Associate Prof. in 1998 at UBS, Lorient and became Prof. at the Univ Clermont Auvergne at Clermont Ferrand in 2008.

I have been a member of RILEM since 1996, first as a doctoral student and then as a senior member since 2003. I have been very involved in technical committees since 2008, first as an observer member on the self-compacting concrete committee and then as a member of the concrete pressure against formwork committee. In 2010 I launched the '236 committee' dedicated to bio-based materials. This committee is followed by the committee on the Hygrothermal and Durability of BBM TC-HDB 276.

Dr. Nicolas Roussel is certainly the principal scientific personality who has encouraged me to get involved in the RILEM organization. I met many very dynamic personalities with whom we have built very solid collaborations. Among them, the collaboration with Prof. Dr. Sonebi has certainly been the most successful.

A highlight of my association with RILEM is that together with my friend Prof. Mohammed Sonebi from Queens University of Belfast, we created the RILEM series of international conferences on building biomaterials (ICBBM). We are already in the third edition (2 at Clermont Ferrand France and one at Belfast, UK). It has become the principal meeting in this very important field in the context of climate change.

On the scientific level, the publication of recommendations on the characterization of plants aggregates is the publication that I am most proud in Materials and Structures, 2017.

I do not know where to start because I have so many anecdotes. Every RILEM week or TC Committee is an opportunity for unforgettable memories.

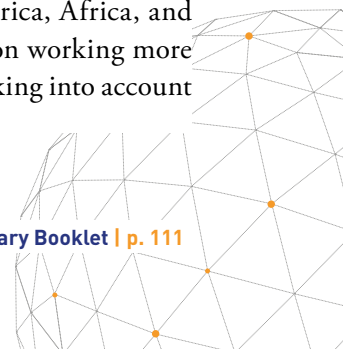
Perhaps the trip from Chennai to the Temple of Mahabalipuram in a Tuk-tuk over 70 km is one of the most extraordinary challenging and scary experiences, while driving on the Highway!

I also cannot even count how many evenings were spent until 3 a.m. discussing science and other more entertaining topics with friends in RILEM...

At the 74th RILEM Week held remotely, from 30 August to 4 September 2020, I was most honored to receive the status of RILEM Fellow, which is and will be one of my most memorable moments for many years to come.



I think RILEM needs to develop to move forward, by continuing to strengthen further collaborations and networking in the countries of South America, Africa, and Asia. RILEM can also extend their effort on working more on the educational content for engineers, taking into account climate and environmental challenges.



DR. CARMEN ANDRADE CIMNE UCP, Spain

*Robert L'Hermite Medalist 1986, RILEM President 2000-2003
RILEM Hon President 2002, Fellow 1995,
Hon Member LAT-RILEM 2014,
RILEM Hon Member 2015, MAC, TAC, TC Chair*



EXPANDING THE FRONTIERS OF KNOWLEDGE

Today's foremost international construction associations, RILEM, fib (initially CEB and FIP) and IASS, were founded shortly after the end of World War II. RILEM was chartered thanks to the personal initiative of Robert L'Hermite, director of the Laboratoire de Bâtiment et Travaux Public. In early 1946, L'Hermite persuaded Professor Mirko Ros of Zurich who was visiting the laboratory, of the need to create a forum for exchanging information on laboratory test methods. After the destruction wreaked by war, housing and infrastructures had to be rebuilt and vast quantities of new materials were needed. The first meeting was attended by Professors F. Campus, G. Colonnati and E. Torroja, among other directors of national laboratories. The association was founded in 1947. Eduardo Torroja, elected President in 1951, organised a meeting of the Bureau in Madrid every year. He appointed the Central Testing Laboratory (today's Cedex), of which he was also Director, as Spain's delegate to RILEM. That did not, however, prevent researchers at the Institute for Construction and Cement Engineering founded by Torroja himself from establishing close (and ongoing) working relations with the newly created 'Réunion Internationale des Laboratoires et d'Essais des Matériaux' (RILEM).

When I arrived at the Eduardo Torroja Institute for Construction and Cement (IETcc) in 1969 to research and write my PhD. thesis, my supervisor José Calleja, Head of the Department of Chemistry, was an active member of Committee 032-RCA 'Resistance of Concrete to Chemical Attack'. It should come as no surprise, then, that when I took a permanent position with the institute in 1979 one of my first international ventures was as member, alongside C. Page, R. Bakker, O. Gjorv, H. Arup, K. Treadaway and K. Tuutti, of Committee 60-CSC, 'Corrosion of Steel in Concrete', then chaired by Peter Schissel.

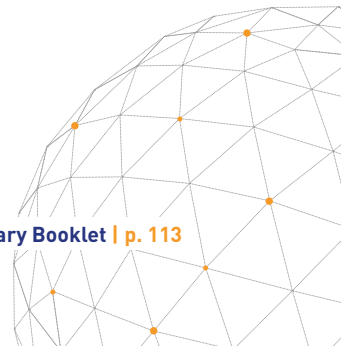
In the following years I participated very intensely in RILEM. In 1986 I was awarded the Robert L'Hermite Medal and joined the Technical Advisory Committee (TAC), which I subsequently chaired. Later, as chair of the Management Advisory Committee (MAC), I sat on the Bureau, where I was elected Vice-President in 1998 and President in 2000. In 2002, the IETcc hosted in Madrid the General Council, which for the first time was held simultaneously with a technical event, an arrangement that has since become routine practice. In those same years, I also proposed and chaired a number of technical committees (TCs) on reinforcement corrosion: 154-EMC 'Electrochemical Techniques for Measuring Metallic Corrosion in Concrete; 178-TMC 'Testing and Modelling Chloride Penetration in Concrete' and 213-MAI 'Model-Assisted Integral Service Life Prediction of Concrete Structures'. The intensity of those years has now given way to mere membership in a few committees, where I learn something new at every meeting I attend.

I have always deemed RILEM to be a forum for researchers determined to expand the frontiers of knowledge with a powerful sense of engineering that integrates the micro and macro dimensions. I still remember how impacted I was by its 'Strategic Workshops', always held in Madrid, that reviewed the life of the association and its activities with astounding creativity and charted its course for the following 20 years. Those workshops led, among many other initiatives, to the creation of the Director of Development, a temporary position from which Geert de Schutter



designed a strategy now routinely updated by the Bureau. My participation in RILEM has always reinforced my conviction that the synergies created by joint work drive progress more quickly than individual endeavour: the volume of science incubated by RILEM's committees has consistently been greater than generated by the sum of their constituent memberships.

Imagining future needs, implementing good science and innovative practice, prioritising scientific evidence and jointly seeking the universal laws underlying events are in my mind essentials if RILEM is to continue to attract the speciality's most outstanding talent. It is not a large, but a highly qualified, membership that is needed to confront experimental findings honestly, creatively and critically. Consistently opting for excellence over the convenience of known or familiar facts will enable RILEM to meet its social commitment to expand the frontiers of knowledge.





PROF. UELI ANGST
ETH Zürich, Switzerland

*Robert L'Hermite Medalist 2017,
Assoc Ed RTL 2020-present, TC Chair TC 262-SCI (2014-2021)*

I joined RILEM about 10 years ago. At that time, I was a PhD student at the Norwegian University of Science and Technology in Trondheim, Norway, and just published a review paper on critical chloride contents for corrosion of steel in concrete. This publication caught the attention of Tang LUPING and Jens Mejer FREDERIKSEN, chair and secretary, respectively, of RILEM TC 235-CTC, which was a TC that just started at the same time (2009) and had a scope that was very close to my publication. I was invited to join the TC, which stimulated my enthusiasm to actively contribute to the TC work.

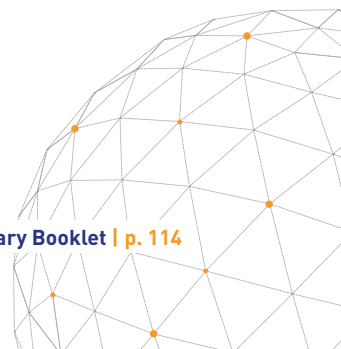
In this sense, RILEM played an important role for me to connect within the community in the field and establish relationships with some of the most respected researchers in the field, including Rob POLDER, Maria Cruz ALONSO, Raoul FRANCOIS, or Henrik SØRENSEN – just to mention a few.

After the end of TC 235-CTC, I established (together with Mette GEIKER as secretary) a new TC on corrosion of steel in concrete, that is, TC 262-SCI, which started in 2014. I was honored to serve RILEM as the youngest chair of a TC at that time and to bring together the community and to recruit new RILEM members to work on the topic of chloride-induced corrosion from a new perspective.

My time in RILEM reached its peak in 2017, when I was awarded the Robert L'Hermite medal.

Thanks to RILEM, I also met Nicolas ROUSSEL, who is another “RILEM person” who gave me valuable advice throughout my career, and who invited me to become an associate editor of the young journal RILEM TECHNICAL LETTERS.

I wish RILEM all the best and hope it can continue the 75 years success story into the future. In this regard, I wish that RILEM will keep one of its main strengths, which is being a flexible and unbureaucratic organization, that provides the structure for experts to meet and collaborate in a pragmatic and efficient manner. I also wish that by this, RILEM can contribute to address the grand future challenges related to our ageing and new infrastructure around the world, which essentially are questions of *Construction Materials, Systems and Structures*.





PROF. ZDENĚK P. BAŽANT
McCormick School of Engineering, Illinois, USA

*Robert L'Hermite Medalist 1975, RILEM Fellow 1996,
Honorary member 2015*

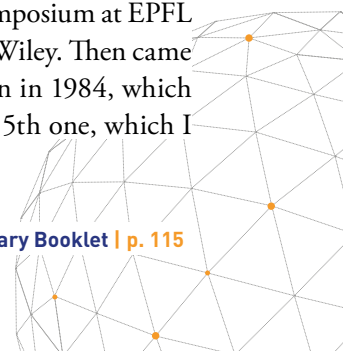
At the impending 75th jubilee, it is with great satisfaction that I recall my 53 years of involvement in RILEM. It is a society that, since its inception, has been filling, with great success, an important gap in fostering materials research in cement and concrete, and more broadly in all building materials. My post-doctoral appointment as a 'stagiaire' at C.E.B.T.P., 12 rue Brancion, during 1966-67, was my first job after crossing the Iron Curtain. Luckily, the director of my research was the famous Robert L'Hermite, a giant in concrete research.

This experience changed my research direction toward material modeling backed by experiments and anchored in physics. During that stay in Paris, the broad-ranging and inspiring discussions at my daily lunches with Maurice Fickelson, RILEM Secretary General, and Jacques Bresson, later to become President, provoked my interest in the vision of RILEM, and particularly in its new journal, *Matériaux et constructions*, which at that time superseded the 'Bulletin de RILEM'. That journal became my favorite for publishing papers, one of which, on Crack Band Theory (1983), eventually became my highest cited paper and was also the highest cited of that Journal. An earlier one, in 1970, initiated my research into the thermodynamics and creep effects of water adsorption in hardened cement paste, which eventually earned me the first RILEM L'Hermite Medal. Receiving it at the RILEM Annual Meeting in Edinburgh in 1975 and having inspiring discussions at the banquet table with L'Hermite and Hilsdorf, was a memorable experience.

It has been rewarding and stimulating to serve on several RILEM committees and chair over the decades a few of them (TC-69, TC-GFS, TC-107 CSP, TC-107 GCS and TC-242 MDC). My work in these committees promulgated our Northwestern creep and shrinkage prediction models BP, B3 and B4. After committee scrutiny, the last two of them promptly became RILEM recommendations (1995 and 2015). Recently, both have also been endorsed by the ACI Committee 209, Creep and Shrinkage.

I found the RILEM committees to be generally more readily receptive to innovation than those of ACI. This is inevitable and unsurprising for three reasons: 1) the RILEM committees are narrower in scope, organized, with a sunset date, for a precisely defined objective, and thus consist only of specialists in that narrow objective; 2) the RILEM committees consist mostly of top researchers while the code-related ones in ACI must inevitably be dominated by the best practitioners and practice-oriented professors-consultants, all of whom demand extensive explanations, abundant verifications and design demonstrations, to get convinced and reach a consensus; and 3) the RILEM recommendations are not mandatory (neither are ACI code specifications, but in practice hardly any engineer would risk violating them).

The innovative spirit of RILEM has also been manifested in its thematic conferences. It has been my pleasure and privilege to organize and chair several of RILEM activities – first it was the NSF-RILEM creep Symposium at EPFL Lausanne, co-organized in 1979 with Folker Wittmann, with proceedings published as a book by Wiley. Then came the 4th International RILEM Symposium on Creep and Shrinkage of Concrete at Northwestern in 1984, which I dedicated to the memory of L'Hermite (with a commemorative session), and subsequently the 5th one, which I

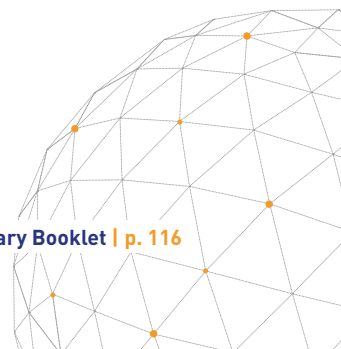


organized jointly with Ignacio Carol at UPC Barcelona in 1993. Both led to high-level proceedings volumes of lasting impact. Later, the conferences of ConCreep and FraMCoS, two societies whose founding in 1992 and 2001 were my pet projects, have also been co-sponsored by RILEM.

It was under the auspices of RILEM (and under NSF funding) that the late Liisa Panula, my outstanding and perseverant student, produced the first large international database on concrete creep and shrinkage and the prediction model BP. Both were first presented, and vehemently debated by Rüsçh and others, at the 3rd RILEM Symposium on Creep and Shrinkage in Leeds in 1978, chaired by Adam Neville. Recently, my stellar student Mia Hubler (now an assistant professor at UC Boulder, and the latest recipient of the Colonetti Meddal) and Roman Wendner (a Schrödinger Fellow at Northwestern, now a professor in Ghent) greatly extended this database into the Northwestern-RILEM database, which is by far the largest and broadest assembled so far, containing over 4,000 test curves. This database is currently being subjected, by M. Rasoolinejad at Northwestern, to sophisticated computer filtering of measurement imperfections, along with a physically justified separation of autogenous shrinkage from drying shrinkage.

The RILEM Committee TC-89-FMT (under the chairmanship of Surendra Shah) was also the first to accept, in 1990, in the form of a RILEM recommendation, the size effect method for measuring the fracture energy and characteristic length of concrete, developed by my team at Northwestern. Decades later, this testing method was unequivocally endorsed by ACI committee 446, Fracture Mechanics (chaired at that time by Gianluca Cusatis and currently by Christian Carloni), and recently recommended to ASTM. The non-statistical energetic size effect law (SEL), on which this testing method (formulated in 1984) is based, was for several decades the subject of extensive discussions, justifications, experimental verifications and design checks in ACI until, in 2019, a size effect factor based on SEL was incorporated into ACI Standard 318-2019, as part of the specifications for beam shear, strut-and-tie model, slab punching and, optionally, footings. Prior RILEM approval was surely helpful for the success in ACI (in the committees of fib Model Code and Eurocode, no such success yet).

Overall, I feel happily satisfied by my half-century bond with RILEM. It helped me to channel my activities in a productive way, and to find excellent collaborators and debate partners with whom to foster progress in research.





PROF. HANS BEUSHAUSEN
University of Cape Town, South Africa

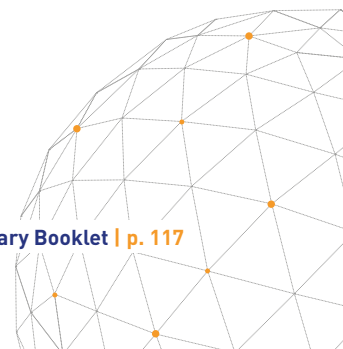
Bureau member, DAC Chair, TC Chair

It was Mark Alexander who sent me to represent him at the 58th RILEM Week in Lisbon because he had other commitments to attend to. As an early-career PhD student this occasion marked my first exposure to the RILEM community and there I was – sitting in some executive committee meeting with all the “big names” discussing matters related to RILEM, an organization I knew nothing about. I remember that the topic of the moment related to the challenge of attracting young researchers into RILEM, a topic that has very much remained relevant until today. Back then, I wondered what all the fuss was about because clearly, all it would take to grow the cohort of young researchers was for well-intended supervisors to send their PhD students to RILEM events and support their participation in TC activities. I was very lucky in this regard, as my own PhD supervisor had come to appreciate the opportunities that come with international cooperation, considering that our research operations in South Africa are physically fairly remote from the rest of the world.

Following Lisbon, I attended a comparative evaluation of various concrete durability test methods, organized by TC 189-NEC at EMPA in Zurich in September 2003 and also became a member of TC 193-RLS, contributing to the work on bonded concrete overlays, which was the topic of my PhD research at the University of Cape Town. Later, I chaired TC 230-PSC - an experience that taught me as much about people management as it did about concrete durability testing.

Participation in RILEM TCs was an incredible opportunity not only related to contributing to knowledge development and rubbing shoulders with leading international researchers, but also to making friends and establishing a life-long professional network with likeminded people from all over the globe. Thinking back to all the highlights in my RILEM career, it is mostly these personal relationships that come to mind. There are many key personalities whom I met through RILEM and who have helped me progress in my career, but I won't list them here at the risk of omitting some. Among those who left the biggest personal impression through their eminence, kindness and humour it is worth mentioning Dubravka Bjiegovich, Lech Czarnecki and Alex Vaysburd, as well as Mark Alexander, who is the perfect personification of RILEM's activities and values.

How should RILEM develop into the future? As DAC Chair, I believe we are on the right trajectory, with many active and highly relevant TCs, numerous international partners from industry and likeminded professional organisations, and an incredible network of active researchers who are determined to contribute to the development and advance of knowledge in the field of construction materials technology and testing. The challenge remains to attract young blood into RILEM, but we have increasingly been successful in doing so in recent years. From my own experience I know that RILEM has far too much to offer to these young researchers for them not to grab this opportunity – we just have to present it to them.





PROF. TÚLIO N. BITTENCOURT
Polytechnic School at the University of São Paulo, Brazil

*President LatRILEM,
RILEM Board member; TAC member*

Another RILEM Story in Latin America

I had the privilege of joining RILEM as a member of TAC, by invitation of my dear friend Ravindra Gettu. We had had a strong collaboration with him before during his period in Barcelona where my wife did part of her doctoral degree under his supervision. At that time, we exchanged doctoral students and had some joint publications.

I think the purpose of my participation was to strengthen the links with Brazil and Latin America. During the same period, I was serving as the President of the Brazilian Concrete Institute, so it was natural to have an agreement of cooperation between the two institutions.

This collaboration was accepted very well and implemented with the strong support of Peter Richner and Geert De Schutter, who became good friends of mine. They came to Brazil to present lectures and courses in the following years.

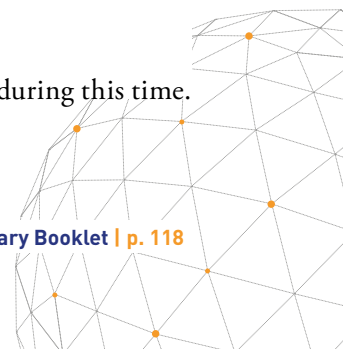
This process of collaboration was even more intense during the presidency of my dear friend Mark Alexander when the idea of a Regional Group was materialized by Luis Lima, Vanderley John, Yury Villagran, Carmen Andrade and other colleagues from the region. Vanderley John organized a RILEM Meeting in São Paulo and I became the president of LatRILEM a little later, replacing Prof. Luis Lima.

Over the same period, I became a member of the RILEM Board. It was a privilege to be part of a team of very prominent people under the leadership of Johan Vyncke. I have a Belgian family background, so it was fantastic for me to have this closer contact with Johan and Geert over these past years.

I served as the President of LatRILEM for four years and we tried hard to promote RILEM in the region with the support of Yury Villagran, Ruby Mejia and Luis Traversa. This effort continues under the responsibility of the new Presidium that now counts with the participation of Alejandro Duran and the leadership of Luis Traversa, and with the important support of Yury Villagran as the secretary and Roberto Torrent as an enthusiast of RILEM in the region.

I tried my best to serve RILEM and promote its fundamental activities in our region. But more than that, I will always keep in my memories the friendships and the good discussions and the technical and social meetings we had over all these years. Before I finish this short story, I would like to thank Pascale and Anne for all the support they provided me over these years.

Thank you all for allowing me to be a member of RILEM and become a friend of many of you during this time.





PROF. EMERITA. DR. DUBRAVKA BJEGOVIĆ
University of Zagreb, Croatia

RILEM Honorary Member 2017, TC member

I became a member of RILEM in 1979 and already in 1980 I was involved in TC 032-RCA: Resistance of concrete to chemical attack, which was headed by Micheline Moranville Regourd from Ecole Normale Supérieure de Cachan, France, a great researcher in concrete microstructures at that time and a great person. The members of TC 032-RC published the paper titled 'Seawater attack on concrete and precautionary measures' in *Materiaux et Constructions*, Vol.18, N° 105, Issue date: 1985-05-01, pp 223-226.

Together with my professors Kostrenčić and Ukrainčik, both members of RILEM at that time, professor Micheline Moranville Regourd was an ideal model of researcher and scientist for me, after a period of professional work and at the beginning of my research work. Talking with Micheline, I learned a lot about concrete microstructure, test methods, and the mechanism of microstructure changes under the influence of the environment.

Geoffrey Osborne, OBE, former Head of Concrete Durability Section at the Building Research Establishment, UK, a Fellow of the Royal Society of Chemistry and former CANMET/ACI award winner, whose main research interests include studies on properties of Portland and high alumina cements, their use with blast-furnace slag and pozzolans and long-term durability of concrete, was also a person who has considerably influenced my development in concrete technology.

From HG Smolczyk, also a member of TC 032 I learned a lot about slag cement, the chemistry of slag and its influence on the strength of blast furnace cements and alkali-reactive aggregates.

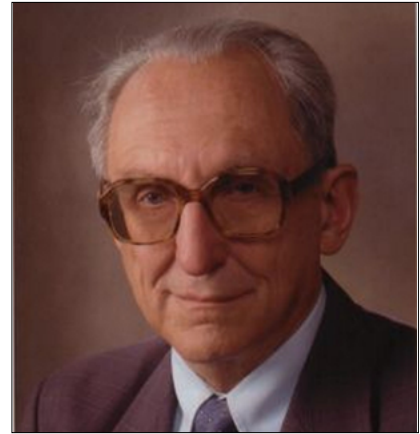
However, my further development and research have been mostly influenced by professor P. K. Mehta, who was professor at University of California, Berkeley, CA, with an extensive knowledge on concrete behaviour in the marine environment. The work in TC 032, the meetings with professor Mehta and many buildings located along the Adriatic Sea in Croatia, which have problems with corrosion of reinforced concrete, determined my further research path in the field of durability of concrete in aggressive environments.

In the field of concrete durability, I spent twenty years on practical projects at the Croatian Civil Engineering Institute. After that at the Faculty of Civil Engineering, University of Zagreb, Croatia I was course leader of the following courses:

- At graduate studies, Materials course: Theory and technology of concrete, Durability of construction materials, Recovery and reinforcement technology, Fire protection,
- At doctoral studies: Special chapters of the theory of concrete, Contemporary approach to the durability of construction materials, Optimization of materials in the repair and rehabilitation systems, New materials in civil engineering, Theory and modeling of structure protection,
- On postgraduate specialist studies of Fire engineering: Behavior of construction materials and elements in fire, Fire protection regulations.

RILEM has always been to me a source of information and knowledge, which I have wanted to convey to my students. The participation in RILEM conferences has always been a scientific gain, but also a source of new comprehension and meetings with so many people of the same interests and also with the people full of knowledge but very approachable and easy to communicate with.

Now we are at the time of the fourth industrial revolution, when the present possibilities will be multiplied by emerging technology breakthroughs in the fields such as artificial intelligence, robotics, the Internet of Things, 3-D printing, nanotechnology, biotechnology, materials science and quantum computing. So, I think RILEM should be linked more with the industry, which today owns large research laboratories and a lot of human resources.



PROF. ANDRZEJ M. BRANDT
IPPT PAN, Warszawa, Poland

RILEM CCC Chair 1990, RILEM Fellow 2006, TC Chair

My first contacts with RILEM were thanks to its founder Robert L'Hermite and were related to my studies at the Centre de Hautes Etudes du Béton, du Béton Armé et du Béton Précontraint in Paris 1958/59, where he delivered a series of excellent lectures on concrete properties and technology. Very often after his lectures interesting discussions were initiated and he never rejected questions and problems that we proposed.

Later, in 1971 Robert L'Hermite agreed to publish my booklet in the series 'Cahiers de la Recherche' nr 29 (Eyrolles) under the title 'Les déformations du béton d'après la mesure de six composantes'. At that occasion I had the pleasure of a long discussion with Robert L'Hermite on the composition of my book and about my original concept to measure six components of strain inside concrete elements. I do not need to add that such a discussion was very important to me as a relatively young scientist.

Over several years I studied regularly RILEM magazines where I have published a few articles. My modest participation to RILEM work was concentrated on fiber concretes as a member of two committees 19-FRC and 49-TFR chaired by R.N. Swamy. The results of joined works were discussed consecutively at the meetings and symposia in 1975, 1978, 1985, 1986 and 1994 in Sheffield.

I was invited to join the Concrete Coordinating Committee for RILEM, and we met in Helsinki (1990). After the next meeting in Helsinki in 1992 I took over the chair of that group from Professor Heikki Poijarvi and later we met several times in Vienna, Trento and Warsaw until the dissolution around 1999.

At the occasion of the RILEM meeting in Casablanca in April 1992 I took over the function of Polish delegate to RILEM from Professor Stanislas Kajfasz. My duty was to coordinate the participation of Polish scientists in RILEM committees and their work on various RILEM committees, even though this was rather limited due to financial restrictions, visa requirements, etc.

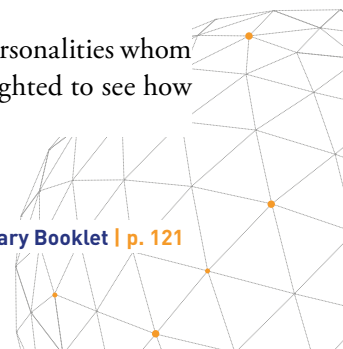
Very important events for me were so-called RILEM weeks and I participated at a few: no 51 in Zürich (1997), no 54 in Paris (2000), no 55 in Stuttgart (2001), no 56 in Madrid (2002) and no 58 in Koriyama and Tsukuba (2004).

In Helsinki (2000) I presented one of the opening lectures at the RILEM International Symposium Integrated Life-Cycle Design of Materials and Structures chaired by Heikki Poijarvi.

In March 2014 I took part at the RILEM Strategic Brussels Workshop where we discussed future development in the research area covered by RILEM and its organization modifications.

Since 2009 I have transferred my duties as a representative of RILEM in Poland to my younger colleague, still maintaining close relations with the RILEM through its magazine, various publications and personal relations.

Without any doubt I appreciate highly my work with RILEM and my contacts with numerous personalities whom I had occasion to meet, together with the charming ladies at the RILEM secretariat. I am delighted to see how RILEM is developing in the last decades for the benefit of the entire building community.





DR. JACQUES BRESSON

RILEM President 1997-2000, Hon President 2000, TAC Secretariat

LA RILEM

It is at the request of Professor Mark Alexander that I will offer you some thoughts on the future of RILEM as I see it.

TWENTY YEARS LATER ...

Yes, it's been 20 years since I left RILEM that I had followed since the 1960s. I was working at the time under the direction of Robert L'HERMITE and I was in charge of the secretariat of TAC that had just been created. A giant step has been taken by RILEM since that date: 50 commissions in operation, 200 recommendations and hundreds of expert participations...

It's a beautiful development.

Is this ECLAIRE-T THE PRESENT?

The RILEM's magnificent past is a daily life that moves forward but does not look far enough into the future: If we must keep in mind the memory of the past so as not to repeat it, it is of no use in the time of crisis that we are able to see.

“History is the science of things that do not repeat themselves” Paul Valéry.

But, thinking about the future of RILEM cannot be done in a world that is changing and without taking-into-account unprecedented events:

The ecological crisis

Climate warming

Globalization

Overexploitation of natural resources (e.g. sand)

The dumping of chemical waste into the wild

The disappearance of biodiversity

Pollution of the oceans by plastics

The decline in populations in Western countries

The increase in populations in African countries

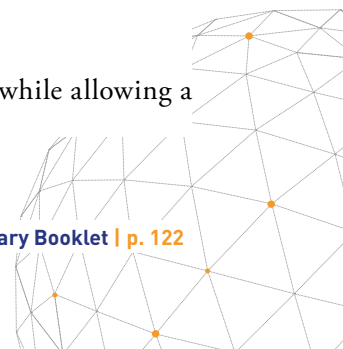
Deforestation, etc

Worse still: “We do not think that life is inexhaustible and that it will survive all kinds of extreme situations and that we can therefore destroy it as much as we want” Achille Mbembe.

If, like Raymond Aron, we think that “It is the individuals who write history” then RILEM, which is a sum of individuals will rewrite its history.

INFLECHIR THE HISTORY OF THE RILEM!

Of course, I have no miracle recipe to propose, just a working method facilitating reflection while allowing a smooth mutation of RILEM, smooth and smoothly.



C'esr le NUDGE.

A “NUDGE PANEL” PROJECT FOR BETTER MANAGEMENT TOMORROW

NUDGE is an English term that can be translated into French as “help”

THE NUDGE is a new policy-making tool.

THE NUDGE is the result of the study of behavioural sciences.

Perhaps it will be the tool for new practices at RILEM, namely, to go towards innovation, discovery?

The aim of this group would be to encourage RILEM members to move towards a policy of the future.

The NUDGE PANEL could be taken over by about 15 people from different backgrounds:

RILEM Members, Engineers, Architects, Economists, Ecologists, Chemists, an IPCC Expert¹ - A YOUNG AND MULTIDISCIPLINARY GROUP.

It should include at least 60% of members aged 30-40 years.

This group should report on its reflections and proposals for action to the Office, as well as their implementation and follow-up.

A FEW EXAMPLES

Sustainable development, Sustainable Materials Issues. The sustainable city.

Digital technologies

The priority for the renovation of existing structures

Design of new, sustainable, and repairable infrastructure

Evolution of architecture

Decarbonised concretes

The cement industry is responsible for nearly 5% of the world's carbon dioxide emissions

Use of finely-ground dairy

Concrete by recycling dairy, clay sludge and gypsum from construction site waste, etc

I wish everyone an excellent RILEM WEEK in NANGING.

¹ Intergovernmental Panel on Climate Assessment,

² Bibliography: Tim Jackson: Prosperity Without Growth. (2nd edition)
Richard Thaler (Nobel Prize in Economics) and Casst Sunsten: The Nudge etc.
Eric Singler, Directeur de la BVA Nudge Unit.

PROF. NELE DE BELIE

Magnel-Vandepitte Laboratory for Structural Engineering
and Building Materials
Ghent University, Belgium

*Robert L'Hermite Medal 2010, RILEM Fellow 2015,
TAC Chair, TC Chair TC 281-CCC 2020,
Deputy Editor in Chief M&S 2020*



As a young recently appointed professor in the field of Concrete Durability at Ghent University, I was attracted to RILEM, mainly because of my interest in two RILEM Technical Committees that had activities very close to my field of research. In 2002 I joined TC MIB – Microbial impact on building materials (chaired by Moema Ribas Silva), and TC ECM – Environment-conscious construction materials and systems (chaired by Yoshihiko Ohama). Joining those TCs opened many possibilities for collaboration and helped me to establish a network in those areas.

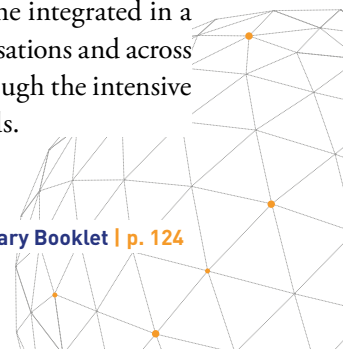
Very soon I was actively involved in the organisation of workshops and conferences by these TCs and the preparation of review papers and recommendations. In 2003 I furthermore joined TC ATC – Advanced testing on cement based materials during setting and hardening (followed by TC-SFC – Sonic methods for quality control of fresh cementitious materials in 2006, both chaired by Hans-Wolf Reinhardt), and TC PAE – Performance of cement-based materials in aggressive aqueous environment (chaired by Mark Alexander). Both chairs were key personalities who introduced me in the large RILEM community and contributed to the further development of my career.

A milestone was the RILEM week in Aachen in 2010, when I received the Robert L'Hermite medal for my “cross-discipline research regarding microbial degradation, consolidation and crack healing in concrete, and development of new techniques to investigate concrete durability”. Soon after, I was invited to join the Technical Activities Committee (TAC) as expert and then as Convener of cluster D (later B) related to deterioration mechanisms (2010-2015). I joined many more TCs (SHC, TDC, EEC, SRT, MCI, TRM, IAM, SHE, SAP, RSC, ...).

In 2011 I initiated as chair the TC SCM - Hydration and microstructure of concrete with supplementary cementitious materials. I was fortunate to have many outstanding experts as member of my TC, as well as very engaged young colleagues and PhD students. We organised 5 workshops, 2 special sessions and a conference segment, performed 2 Round Robin Tests, published 8 journal papers, 2 recommendations and a state-of-the-art book and initiated 2 follow-up TCs (TC TRM - Tests for Reactivity of Materials chaired by Karen Scrivener, and TC CCC - Carbonation of concrete with supplementary cementitious materials chaired by me). Together with Kosta Kovler and Ole Jensen, both expert in organizing educational activities, we also realized a tutorial (in Cancun) and a PhD course (during the RILEM week in Lyngby, 2016).

In 2015 I was awarded the RILEM fellowship. I was elected chair of the Recommending Committee (RC) for the new Vice-President in 2017 and since autumn 2018 I started as chair of TAC and ex officio deputy editor in chief of the RILEM journal Materials and Structures. I am honoured to carry out this task; TAC is directly linked to all the very interesting research and networking activities that are carried out within the RILEM TCs which makes you feel in the middle of the action.

In future, RILEM should proceed further to involve researchers from an early age, which is facilitated by the Educational Activities Committee, and associated temporary free RILEM membership for participants of PhD schools. For young researchers, RILEM brings many renowned experts within reach; they become integrated in a large network. RILEM should keep fostering the collaborations world-wide, also with other organisations and across disciplines. I have always experienced it as a privilege to be part of the large RILEM “family”. Through the intensive collaboration in TCs, PhD schools and conferences, many colleagues have become lifelong friends.



7 | PERSONAL

PROF. DR. IR. GEERT DE SCHUTTER

Magnel-Vandepitte Laboratory for Structural Engineering and Building Materials, Ghent University, Belgium

Robert L'Hermite Medalist 2001, Fellow 2015, TAC, TC Chair TC 205-DSC, TC Co-Chair TC 228-MPS, TC Co-chair TC TMS, Main organizer of RILEM Annual Week 2007 Ghent, MAC member 2008-2009, Advisory Member 2009-2014, DAC Chair 2015-2019, Regional Convener East-Asia 2013-2016, Bureau Member 2004-2009, Advisory Member 2009-2019, RILEM Recommending Committee Chair 2014, Director of Development 2009-2014

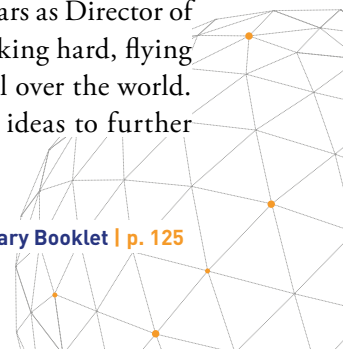


Geert De Schutter is an enthusiastic RILEM member since 1999, with an active start in RILEM TC 181-EAS “Early age shrinkage induced stresses and cracking in cementitious systems”, chaired by Arnon Bentur. In the nearly 20 years of RILEM membership, he has been taking many tasks and responsibilities in RILEM.

- From 2009 to 2014, he was RILEM Director of Development.
- He was voting member of RILEM Bureau (2004-2008), advisory member since 2009.
- Voting member of MAC (2008-2009).
- Since 2009, he is member of DAC, and became DAC chair in 2015, Outgoing Chair in 2020.
- He was Regional Convener for East-Asia from 2013 to 2016.
- In 2014 he was chair of the RILEM Recommending Committee.
- He was chair of RILEM TC 205-DSC, co-chair (secretary) of RILEM TC 228-MPS, co-chair of RILEM TC TMS, and active member of more than 10 RILEM TCs.
- He was (co-)editor of two RILEM STAR Reports, (co-)editor of 4 RILEM Proceedings, and (co-)author of about 10 chapters in RILEM Star Reports.
- He is author of two books supported by EAC
- He organized one PhD-course supported by EAC
- He organized the 61st RILEM Annual Week in Ghent in 2007.
- He was (co-)chair of several RILEM conferences
- He was member of the scientific committee of numerous RILEM (co-sponsored) events.
- In 2001, Geert De Schutter was awarded the RILEM Robert L'Hermite Medal.
- He was named RILEM Fellow in 2015.
- Best reviewer 2015 Award, Materials and Structures

As a young person, making your way into an international organization gathering top experts and scientists in the field might be a challenge. Yet, I personally had a totally different experience within RILEM. Arnon Bentur and several other top experts pulled me into RILEM, listened with interest to my early research findings, and gradually pushed me to develop state-of-the-art technical activities within RILEM. Very soon, they even invited me to take a seat on the Bureau, contributing to the development of the organization. This rapid pathway from profound interest and encouragement towards having confidence and giving responsibilities has always been remarkable to me. It made me feel very welcome within the RILEM family. Every RILEM meeting feels like a homecoming. This feeling I would like to pass on to next RILEM generations.

My first personal highlight was the organization of the 61st RILEM Annual Week in Ghent, in conjunction with the 5th International RILEM Symposium on Self-Compacting Concrete. However, my years as Director of Development have been key years to me (and to RILEM, I hope). It was a combination of working hard, flying thousands of miles to all continents, and interacting with numerous colleagues in our field all over the world. I have always been very thankful for the confidence given by RILEM while proposing new ideas to further



develop the organization worldwide. Not all my ideas have been successful, and not all plans have been fully completed. Nevertheless, I believe we made substantial progress during these years, not as much due to my efforts, but rather thanks to the great efforts taken by the secretariat, the presidency, the chairs and members of the standing committees, and finally all RILEM members. I only proposed some dreams, and the RILEM family turned many of these dreams into reality.

My personal anecdote which I remember well is:

During the RILEM Week in Varenna, Italy, 2008, I was facing the job interview to become Director of Development. Minutes before the interview, I was in the beautiful garden of the villa where we had the meetings. Somewhat nervous, I was standing near the edge of the lake, observing the waterfront a few metres down. Peter Richner approached me and asked me whether I had the intention to jump. I answered: “Not now, maybe after the job interview”. Peter spontaneously replied: “Then we all jump!”. My nerves cooled down, and the interview went well. And afterwards, we all jumped... not literally, but proverbial, into the at that moment unknown experience of what a Director of Development would mean to RILEM. A few years later, during the RILEM Week in Haifa, Israel, Peter Richner made me jump and swim literally, into the Mediterranean Sea along the very nice sandy beaches in Haifa. A duly remarkable experience I will never forget.

Regarding RILEM’s needs to develop, moving forward:

In many corners of the world, there are many different opinions, approaches, traditions, feelings... On the one hand, this makes world-wide development of an organization a challenge. On the other hand, it gives remarkable opportunities. In this context, I recently came across a very nice saying: “In sameness we connect, in differences we grow”. I consider this as a relevant motto for the further development of RILEM on a global scale.

Below is a YouTube interviews in relation to RILEM
<https://www.youtube.com/watch?v=ol89ZgUQ5FQ>



ASSOC. PROF. DR. DIMITRI FEYS
Missouri University of Science and Technology, USA

DAC, Regional Convener North America, and Caribbean, TC Chair

My personal history with RILEM started with the SCC2007 conference in Ghent, Belgium. At that time, I was a Ph-D student under the supervision of Prof. G. de Schutter, and I was strongly involved with the organization of the conference. During the 2007 RILEM week, which was held in conjunction with this conference, I became member of my first TC: 222-SCF: simulation of concrete flow. In fact, two weeks before the conference, there was a RILEM Ph-D course on concrete rheology in Denmark, where we were encouraged to attend the meeting and join the committee. In 2015, Mohammed Sonebi (chair) and I (deputy) started TC 266-MRP: measuring rheological properties of cement-based materials, which resulted from a 2-year discussion with different colleagues on the scope of this committee. In 2018, I was selected as the regional convener for North America and the Caribbean, which includes participation in DAC as well.

Key Personalities I have met are:

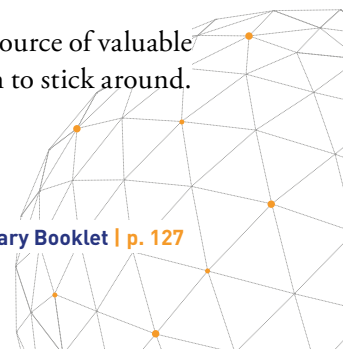
- Prof. Geert de Schutter: Although I cannot say that I have met Prof. de Schutter through RILEM, he contributed substantially (and actually still does,) in my development within RILEM. Through him, I learned how RILEM works, how it is structured, what its main missions are, etc. Although a strong proportion of my development in general can be attributed to Geert, I would not have had the interest in RILEM if it were not for him.
- Dr. Nicolas Roussel: I have had the opportunity to meet Dr. Nicolas Roussel during several conferences, meetings, and the above-mentioned Ph-D course. I think Nicolas pushed me strongly into the inter-disciplinary aspects of research and trying to achieve the highest quality possible.
- Prof. Kamal Khayat: My post-doctoral training at the Universite de Sherbrooke has left me with life-long lessons, and that would not have been possible without meeting Prof. Khayat. Especially his diligence, work ethics, attention to details and leadership have left a strong impression on me and have shaped me the way I am.
- Of course, there are many other influential people in RILEM, and I thank everyone who has supported me throughout the years.

My highlights are:

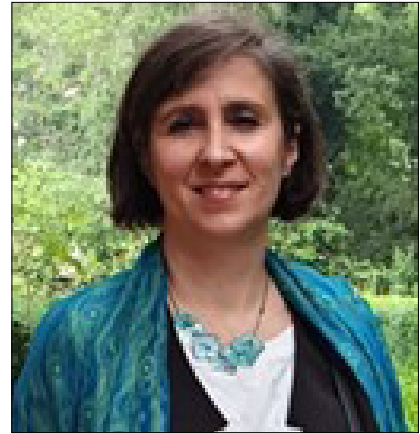
- First committee: TC-222 (2007)
- Deputy chair of TC-266: started in 2015
- Regional convener for North America and the Caribbean / DAC member: started 2019

My personal anecdote highlights the collegiality and friendly atmosphere of RILEM people. The day prior to the 2nd meeting of TC-222, in Paris, we were all invited to Nicolas Roussel's apartment for an aperitif before getting out to dinner. This welcoming spirit has surprised me but shows the collegiality within RILEM.

I think RILEM has established itself in the world of construction materials and as trustworthy source of valuable information. The organization facilitates the involvement of young people and encourages them to stick around.



One possible way for RILEM to move forward is to enable virtual attendance of the meetings. We all have busy schedules and we cannot travel half of the globe for the meetings only, especially since RILEM has been growing much more outside Europe. I think allowing virtual attendance to meetings will be helpful to gather more experts and have the input of more experts in the committee meetings and documents.



PROF. ELISA FRANZONI

Alma Mater Studiorum – University of Bologna
Bologna, Italy

Assoc Editor 2020, TC member

I joined RILEM in **2013**, being also accepted as a member of the Technical Committee “Methods of measuring moisture in building materials and structures” (**TC 248-MMB**, Chair: Prof. Lars-Olof Nilsson, Deputy Chair: Prof. Kurt Kielsgaard Hansen, 2012-2017). Since the first meeting in Paris on June 2, 2013, I participated in the activities of TC-MMB and hosted one meeting in Bologna (March 5-6, 2015), finally contributing to the State-of-the Art Report Vol. 26, published in 2018.

In 2016, I joined the **TC 271-ASC** (Chair: Dr. Barbara Lubelli, Deputy Chair: Inge Rörig-Dalgaard), which is presently active, and also hosted, together with my colleague Prof. Stefano De Miranda, a meeting in Bologna in January 2019.

In 2016, I enthusiastically accepted the invitation by Prof. Pietro Lura to join the Editorial Board of **Materials and Structures** as an **Associate Editor** and I have been holding this role since then, mostly dealing with papers on materials and technologies for historical and heritage buildings.

In 2017, **Dr. Enrico Sassoni**, whom I supervised since his PhD and presently works in my research group in Bologna, was awarded the **Gustavo Colonnetti medal** by RILEM, which made me extremely proud.

Since my first participation in the **TC-MMB** meeting in Paris, I was impressed about the great opportunity offered by the technical committees by **exchanging opinions, experience and know-how with other scientists in a free and unbiased way, without any sense of competition, but at the same time with a deep sense of commitment**. From a scientific point of view, the participation in this committee contributed to my growth and increased my knowledge on the problem of rising damp in masonry walls, which is one of my main research interests. Particularly, I learned a lot about the applicability of several measurement techniques, as well as the different perspectives that northern and Mediterranean countries have with the problem of damp in buildings. My enthusiasm about the activities of the TCs was confirmed when I joined the TC-ASC, which copes with the most challenging task of developing a new salt crystallization resistance test.

I regard this opportunity for a **free exchange of knowledge** as **one of the most important values of RILEM**.

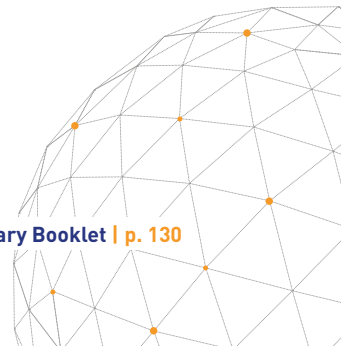
My participation in RILEM also gave me the chance to meet and/or establish stronger bonds with some **valuable colleagues**, which enriched me thanks to their outstanding personalities. Amongst others, **Prof. Lars-Olof Nilsson** provided me with an example of how a chair can stimulate the debate among different people (even having counterposed opinions), being also able to wrap up the discussion and drive it towards a shared outcome. His scientific scrupulousness was an inspiration to me, ...as well as his capability to have all the TC members seated and ready to start the meetings before the scheduled time!

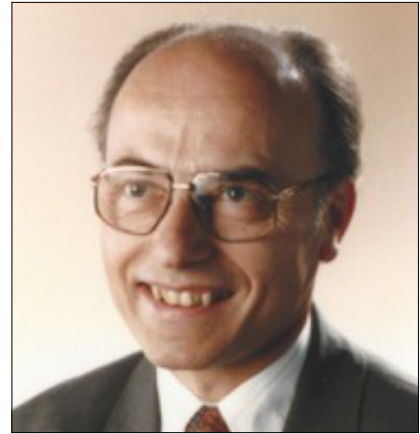
Prof. Pietro Lura, former Editor-in-chief of Materials and Structures, impressed me with his capacity to quickly process an incredible amount of papers without any loss of accuracy, always identifying at a glance the innovative

issues and the potential impact of the research papers submitted. He was an inspiration to me for his ability to turn hard work into an enjoyable activity, with his touch of humour, and for his enthusiasm in getting involved in curiosity-driven researches, (such as the one on the Terranova render in rationalist architecture).

In my opinion, **RILEM** really represents a powerful way to get scientists together, improving and diffusing the knowledge on building materials among the scientific community worldwide. Today, this role is **still extremely important**, notwithstanding the availability of multiple diffusion channels for research compared to 75 years ago. Indeed, the impressively increased number of journals and papers makes even more important to have a **reference point** for knowledge exchange and discussion.

I hope that my own contribution in the field of materials for the conservation and repair of historical buildings will help RILEM in its continuous growth, especially in the **forthcoming years**, when the sensitivity to Cultural Heritage preservation is expected to further diffuse outside the borders of Europe and all over the world.





MR. HERMANN W. FRITZ
Retired from EMPA Dübendorf, Switzerland

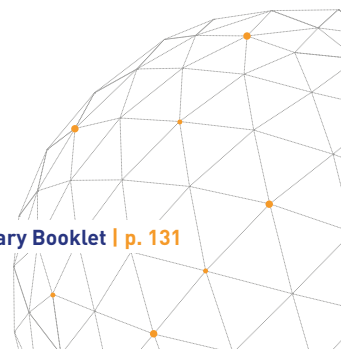
Honorary Member 2001, Fellow 1997, TC Chair

My first RILEM contact goes back to 1978 with my participation in a seminar on the thermal susceptibility of bituminous binders, during which our laboratory presented results from applied research projects on different bituminous binders focusing on rheological measurements.

I participated both as member or president of various technical commissions and the coordination committee. This gave me the opportunity to advance technical knowledge and make personal contacts with scientists from around the world with diverse backgrounds.

The meetings of the general council, the international symposiums and the technical commissions on binders and bituminous materials are wonderful souvenirs that deserve mentions for their high scientific standards. The organizers always succeeded in creating remarkable events from both a professional and social perspective.

A special memory goes back to 1988 when I was chair of the TC 101-BAT, 'Bitumen and Asphalt Testing'. It was decided to organize for 60 participants a workshop on the 'Formulation, control and behavior of polymer modified bitumens, either for waterproofing or for road construction' in the small medieval city of Dubrovnik along the shores of the Adriatic Sea. Three months prior to the event, registrations and hotel reservations disappeared inexplicably. The Yugoslav RILEM member and I frantically recontacted all the participants and secured their hotel reservations. Thanks to our efforts, including during the holidays, we were able to gather as planned and welcome more than 100 participants in this marvellous city less than 3 years before the Croatian declaration of independence.





DR. EDWARD GARBOCZI

NIST (National Institute of Standards and Technology), USA

Robert L'Hermite Medalist 1992, TC member

Right after my Ph.D. was finished, I was employed at Armstrong World Industries in Lancaster, Pennsylvania, USA, 1985-1988, in their Basic Research Division. I was working on phosphate cements, trying to develop a process for greatly improving the strength and toughness of this material for inorganic, flame-resistant ceiling boards. I started reading the macro-defect-free (MDF) cement literature for inspiration and was especially influenced by a special issue of the Philosophical Transactions of the Royal Society of London, volume 310, September 1983, entitled *Technology in the 1990s: developments in the science and technology of hydraulic cements*. Although the MDF articles were my main reason for reading that issue, one article in that issue that stood out to me was *Cement in the 1990s: challenges and opportunities*, by Geoffrey Frohnsdorff and Jan Skalny, both of whom have since passed away. I still have that issue on my office bookshelf, and it will go with me when I eventually retire. At Armstrong, I also worked on the transport properties of fibrous gasket materials, which introduced me to mercury porosimetry and various theories of ion and fluid transport in porous materials.

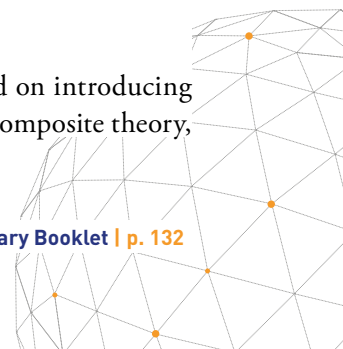
In 1988, I went to the National Institute of Standards and Technology (NIST), in Gaithersburg, Maryland, USA, where Geoff Frohnsdorff himself was my division chief and Jim Clifton was my group leader. Both were staunch, active members of RILEM who rapidly got me introduced to this organization, which I had not heard of before, since my background was condensed matter physics and amorphous semiconductors, not cements and other building materials. But I quickly found out that many of the same ideas and techniques that applied to random semiconductors also applied to random porous composites like concrete.

Applying percolation concepts and various porous material theories to the transport properties of cement-based materials was instrumental, I have been told, in RILEM awarding me the L'Hermite Medal in 1992, which I accepted in Madrid, Spain. That was the first time I ever gave a lecture that was being simultaneously translated, which gave me a real feel for the multi-national aspect of RILEM. This award was most definitely a highlight for me, in my association with RILEM.

I served on two technical committees and contributed to two state-of-the-art reports, and I found other RILEM state-of-the-art reports quite valuable as I developed my knowledge of the cement-based materials field. I attended several RILEM conferences over the years, as well as annual meetings, always learned a lot, and contributed to the published proceedings.

However, the people I met through RILEM were the best part of RILEM for me, people such as Jacques Marchand (Canada), Pietro Lura (Italy), Barbara Lothenbach (Switzerland), Arnon Bentur (Israel), Folker Wittmann (Switzerland), Erich Schlangen, Klaas van Bruegel, Guang Ye (Netherlands), Carmen Andrade (Spain), Mark Alexander (South Africa), Francois de Larrard (France), and many others, among whom are many co-authors. Their input into my professional career has been invaluable.

For 20 years, I ran the NIST/ACBM/RILEM Computer Modeling Workshop, which focused on introducing young (and some not-so young) scientists and engineers to the concepts of percolation theory, composite theory,



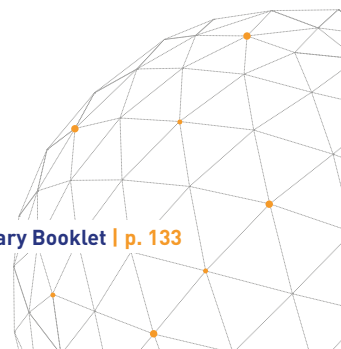
and cement hydration/microstructure models. RILEM supported this effort by offering educational points for attendance, and each year at least 1/3 of the attendees were from outside the US, most of whom were associated with RILEM.

Going forward into the next 75 years, I think that RILEM should continue its tradition of technical rigor and excellence, and the work of its technical committees should continue. The journal *Materials and Structures* is top-notch and performs a valuable service in the field by providing a home for basic research in building materials, so the investment in time and money needs to be made for continuous improvement.

In 2018, to help celebrate the 50th anniversary of this journal, I wrote a short article entitled “RILEM and the National Institute of Standards and Technology (NIST) over the past 50 years” (*Materials and Structures* October, 2018), which clearly showed how valuable the journal has been to NIST for a long time. In the future, *Materials and Structures* needs to keep moving with the times, especially the push to all-electronic publishing.

I think that the dual efforts of RILEM to attract both young researchers and keep expanding its geographical reach should continually be increased, to ensure the future health of building materials research, which is vital to a growing world.

Finally, the most valuable part of RILEM to me has always been bringing researchers together, junior and senior, and this needs to continue over the next 75 years. If it does, I predict that RILEM will remain a healthy, vibrant, and crucial part of the international building materials research community.





DR. RAVINDRA GETTU
Indian Institute of Technology, Madras

*President 2018-2021, Fellow 2012,
TAC Chair, Bureau Expert*

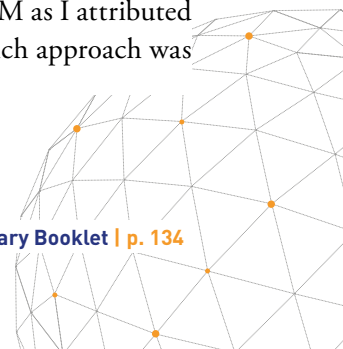
In March of 2006, I was invited to a workshop in Madrid where the strategy for the future development of RILEM was being discussed and planned. I think I was there since RILEM was looking to increase its footprint in Asia, and it was felt that new members should be brought into the fold from across the world. I was quite impressed that RILEM was openly strategizing to have a greater outreach, rather than resting on its laurels and going on with business as usual. I was then motivated to get more involved in this forward-looking organization that represented researchers in construction materials on an international scale, not aligning to specific interests or rooted in any particular country.

Thereafter, I was nominated to the Technical Activities Committee (TAC) and the Bureau as an Expert (2007-10), and as the cliché goes, the rest is history, as I went on to become Cluster Convener and Chairperson of TAC (2010-14), and later Vice President (2015-18) and President (2018-21) of RILEM. My participation in TAC, for more than a decade, was a great learning experience as I became aware of the cutting-edge research, over a wide span of areas, from the new committee and conference sponsorship proposals, award nominations and so on. The discussions with top experts, listening to enthusiastic young researchers and resolution of unavoidable disputes were absolutely enriching.

The major change I have seen at the post-2006 RILEM was that the administration was more in the hands of the member officers rather than have the Secretary General in absolute control, which gave the impression to many that RILEM was bureaucratic and even autocratic. Certainly, RILEM's future lies in the membership playing crucial roles in the administration and policies. This, however, taxes the volunteers quite a bit, though the Association has been fortunate to have many willing to serve and dedicate substantial time and resources.

An important repercussion of having members participate in the decision-making within RILEM and not going by the rule book is that actions are dynamically implemented to deliver what is best for the membership and what is in line with the vision for the future. The fallout was that Pascale Ducornet, the Secretary-General (2009-19), would be confused, to put it mildly, keeping up with the changes that were constantly proposed. An anecdote that comes to mind is the occasion when a new member of the Bureau thought out loud that the decisions would be simple, black or white, as we would go by the rules. Anne Griffoin and I, who were with him, smiled at each other and said "In RILEM, it is always 50 shades of grey". However, I am glad that we are a vibrant organization willing to mend, bend and transcend, and I hope we will continue to be so.

Looking back, my first acquaintance with RILEM, in the absence of a better description, was circa 1990, in relation to the TC 089-FMT: Fracture mechanics of concrete - Test methods, when I was asked to help finalise the recommendation for the size effect method. As a doctoral student, I was overawed by RILEM as I attributed to it the ability to bring together a variety of opinions, create consensus and even mandate which approach was to be followed.



Later, I participated in two other TCs (QFS and 187-SOC) related to fracture of concrete as the secretary, more often the mediator between different schools of thought. In retrospect, it was a great learning experience to work with stalwarts in the field though they were stubborn at times and could not see the woods for the trees. More importantly, I learnt that a TC is better off presenting validated information rather than trying to decide on which model or theory is best since time would anyway pass judgement. I base this conclusion after having participated in long discussions, or rather arguments, for example, about which fracture model was better, where a lot of time was spent on moot aspects or irreconcilable differences rather than publicizing the state-of-the-art for possible application or informing the community at large.

Over the years, the biggest benefit for me personally through my involvement with RILEM has been the mentoring that I have received and the camaraderie. I have met, chatted with and exchanged thoughts with the likes of Luigia Binda, Peter Richner, Slava Falikman, Hervé di Benedetto and others with whom I do not share specific research interests but got the opportunity to do so thanks to being in the standing committees of RILEM. Many others with the common affection or addiction for concrete became good friends, such as Wolfgang Brameshuber, Mark Alexander, Johan Vyncke, Esperanza Menéndez, Viktor Mechtcherine, Nicolas Roussel and Konsta Kovler.

My final thought regarding the RILEM family is about the willingness to share, to help and to participate that I have seen in all these wonderful people and many others. I shall cherish the memories, always.



DR. ARLINDO FREITAS GONÇALVES

LNEC (Laboratório Nacional de Engenharia Civil), Lisbon
Head of Materials Department since 2010.

*Fellow 2013, Chair MAC, DAC, TC member,
Regional Convener Latin America*

Birth date: 07-08-53

Academic and scientific degrees

- Academic degree – Civil engineer by IST, in 1976
- Scientific degree – Research Officer in construction materials by LNEC, since 1987
- Senior Research Officer of LNEC, in 1991
- Senior Research Officer with habilitation, in 2000
- Principal Research Officer, in 2001

Workplace

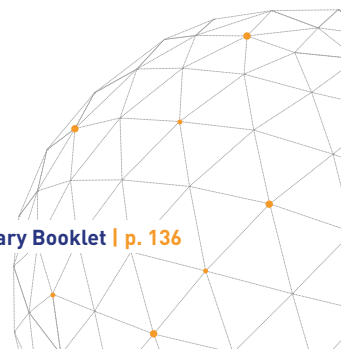
Materials Department of Laboratório Nacional de Engenharia Civil - Lisbon

Participation in Rilem Technical committees

- TC 84-AAC “Application of admixtures to concrete”
- TC 116 PCD “Permeability of concrete as a criterion of its durability”
- TC 189-NEC “Non-destructive evaluation of the ‘covercrete’ (concrete cover)”
- TC 196-ICC “Internal curing of concretes”
- TC 198-URM “Use of recycled materials in construction”
- TC 207-INR “Interpretation of NDT results and assessment of RC structures”
- TC 230-PSC “Performance-based specifications and control of concrete durability”
- TC 249-ISC “Non-destructive in situ strength assessment of concrete”

Activities as Rilem Officer

- RILEM Senior member: 1993- 2017
- National Delegate of Portugal: 2003-2016
- MAC member: 2005-2009
- Chairman of MAC: 2009-2013
- DAC member: 2013-2018
- Regional Convenor for Latin-America: 2013-2018



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Committees :
(created in 2013)

- TC CMI
- TC CMS
- TC SRI

RILEM NEWSLETTER April 2013:
Please click on the link below to see the Newsletter of April 2013
Newsletter of April 2013

RILEM TC 223 MSC:
Please click on the link below
you will be forwarded to the Data Warehouse web site
<https://rilem223dwh.azureweb.it>

Editorial from the MAC Chair, Arlindo Gonçalves

From MAC to DAC



MAC is one of the Standing Committees of RILEM and has as mission to monitor the most relevant indicators and to make proposals to the Bureau in matters related to management and promotion of RILEM activities.

During this last four years, in close cooperation with the Director of Development, particular attention was given to worldwide growth of RILEM, aiming to enhance the participation of some regions on RILEM activities and to strengthen contacts with other organizations. As a consequence, the LAT-RILEM regional group, which comprises countries from South and Central America, was created, and the CIS-RILEM, which encompasses countries from the former USSR, can become a reality at very short-term. Furthermore, the formation of a National group in China is well advanced, and partnership agreements were established with major international and national organizations (AO, BRACON, ISAP, JO ...).

With the position of Director of Development coming to an end in January 2014, and in order not to lose the momentum created by the world-wide developments of the recent years, a redefinition of MAC mission was considered of strategic importance, by focusing its activities on management of RILEM and its development, with special emphasis on international relations. To achieve this goal, MAC will adopt a structure parallel to that of TAC, with the appointment of Regional Convenors.

Similarly to what happens with Cluster Convenors in TAC, which take care of a cluster of technical activities, Regional Convenors will have to promote RILEM and monitor its development in the assigned region. This will include the follow-up of Regional RILEM Groups, National RILEM Groups and International Organizations. Within MAC, a total of eight different regions (e.g., North-America, Eastern-Europe and Pacific) was foreseen.

This new mission of MAC, which will adopt the designation of DAC – Development Activities Committee – responds to the current challenges that RILEM presently faces, allowing to consolidate its involvement and to secure its actual status of global organization. The current proposal will be submitted for approval by the RILEM General Council during the next RILEM week in Paris.

Also in Paris, my mandate as MAC Chair will come to an end. So I would like to take this opportunity to acknowledge the fruitful collaboration of all MAC members and all support provided by the Presidency, the General Secretary and the Director of Development.

Arlindo Gonçalves
RILEM MAC Chair

RECEIVE INFORMATION ABOUT RILEM

NON-MEMBERS

RILEM FLYER

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Chinese version

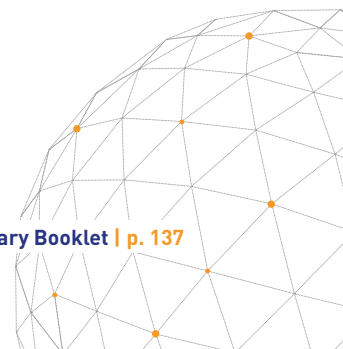
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PROF. ROBERT DOUGLAS HOOTON

**Professor, Dept. of Civil & Mineral Engineering,
University of Toronto, Canada**

Fellow 2015, EAC Outgoing Chair, DAC, TAC, TC member

I first became involved with RILEM as a corresponding member of TC 67 FAB, Fly Ash in Building chaired by P. K. Mehta from 1983-1986 when I was still working at Ontario Hydro's Research Division. I then became a corresponding member of a few other TCs in the early 1990s but only became an active member over the last 20 years. I have been a member of several TCs and made presentations at numerous RILEM Week conferences as well as TC sponsored symposia.

On the administrative side, I have served on the nomination committee, the Colonnetti and L'Hermite Medals committee, the Development Activities Committee (DAC), Educational Activities Committee (EAC), that I chaired until 2019, and was also an ex-officio member of TAC. I was greatly honored to be made a RILEM Fellow in 2015 during the RILEM week in Melbourne. My only regret with serving on these administrative committees is that I was rarely able to enjoy the presentations at the conferences associated with the annual RILEM Weeks.

While I have come to know many academic and industry leaders through other organizations and conferences, I have met several influential people whom I wouldn't have got to know as well and be able to interact with, except through RILEM. These include Mark Alexander, Lars-Olof Nilsson, Tang Luping, Carmen Andrade, Nicolas Roussel, Nele de Belie, Geert de Schutter, Johan Vyncke, Arnon Bentur and Ravindra Gettu, to name but a few.

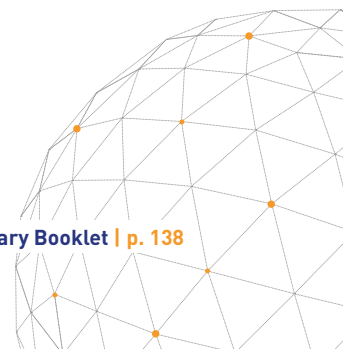
I have also enjoyed meeting and dining with good friends in many interesting cities of the world, not only during the RILEM weeks but at individual technical committee meetings. I look forward to continuing this global journey including the pleasure of returning to Paris for the upcoming RILEM anniversary meetings.

RILEM operations have greatly evolved for the better since I first became a member, and it needs to keep evolving in order to remain relevant in an age of rapidly changing methods of communication. Its journals are first class, due to its excellent editorial teams and thorough review processes, and continue to draw excellent papers, in a time where there are many journals to choose from. In addition, RILEM leadership has been forward thinking in developing relationships with other national and global technical organizations that also cover building materials and related test methods.

Finally, what really amazes me is how RILEM functions so well with such a small permanent staff. The efforts of Pascale Ducornet and Anne Griffoin over recent years have been extraordinary. With Pascale's retirement in 2019, even though I have rotated off most of the administrative committees, I look forward to working with Judith Hardy as well as her staff, Anne, and Fanta Sylla.

My RILEM U-tube links from Fall 2017 and Spring 2018 RILEM weeks

<https://www.youtube.com/watch?v=tpw9XAa4f8k>





PROF. KAMAL KHAYAT

Missouri University of Science and Technology, USA
Vernon and Marlaee Jones Professor of Civil Engineering

Fellow 2015, DAC, Convener North America, TC Chair

The following are the key dates and roles in my personal ‘history’ with RILEM:

- 2019** : Co-Editor, Keynote Speaker, 9th Inter. RILEM Symposium on Self-Compacting Concrete, Dresden, Germany.
- 2018** : Honorary Chair, International RILEM Workshop on Rheological Measurements of Cement-Based Materials, IRWRMC 2018, Arras, France.
- 2016** : Chair of the Organizing Committee and Keynote Speaker, 8th Inter. RILEM Symposium on Self-Compacting Concrete and 6th North American Conference on the Design and Use of Self-Consolidating Concrete, SCC 2016, Washington, D.C.
- 2015** : RILEM Fellow
- 2013** : Chair of International Scientific Committee and Keynote Speaker, 7th RILEM Conference on Self-Compacting Concrete, Sept., Paris, France
- 2010** : Chair of the Organizing Committee and Keynote Speaker, 6th Inter. RILEM Symposium on Self-Compacting Concrete and 4th North American Conference on the Design and Use of Self-Consolidating Concrete, SCC 2010, Montreal, Canada.

I was also a member of the RILEM Development Advisory Committee, DAC – Convener for North America (2014-18) and Chair of RILEM TC 228 Mechanical Properties of SCC (2008-2013).

Highlights of my association with RILEM were being a member of the following TCs:

- TC-FPC on Form Pressure of SCC (current)
- TC-MRP Measuring Rheological Properties of Cement-based Materials (current)
- TC 228 Mechanical Properties of SCC (Chair - 2008-2013)
- TC205 Durability of SCC (past)
- TC174 Self-Compacting Concrete (past)
- TC145 Workability of Special Concrete (past)

Nearly 40 publications were accepted for the journal Materials and Structures, starting in 1998.

In 2016 the Best Paper Award was received for:

Feys, D., de Schutter, G., Khayat, K.H., and Verhoeven, R., 2016, “Changes in Rheology of Self-Consolidating Concrete Induced by Pumping.” Materials and Structures, 49 (11) pp. 4657-4677.

Several publications were also accepted for RILEM Reports as well as proceedings of RILEM Conferences.





Photo of RILEM TC 205 at Ghent in 2007



Photo at the Giant Causeway in Northern Ireland during a RILEM TC 228 meeting at Queens, Belfast with Sue Taylor, Kamal Khayat, and Sofiane Amziane



Photos of RILEM TC 228 at Queens of Belfast in 2011



Below are some photographs of past RILEM experiences:

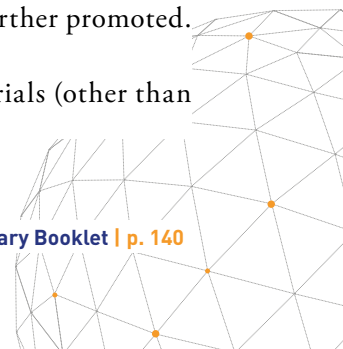
I continue to think that the future is bright for RILEM in its quest to assume leadership in the technical field of construction materials. RILEM has come a long way as a leading international technical organization. The recent restructuring of the Bureau and strong leadership of RILEM Presidency over the last 10 years has propelled it in the right direction.

The number of TCs is expanding in an impressive manner and has been attracting top talents from around the world – more efforts need to be made to facilitate the integration of members from outside central Europe.

Efforts are needed to attract partners from the private and public sectors to join RILEM. Having the spring meeting at different locations is helpful to attract new members and consolidate the interest of current members.

Joint conferences and activities with ACI are beneficial to both societies and need to be further promoted.

The Bureau may want to consider launching a second journal for non-cementitious materials (other than Materials and Structures and the Materials Letters).



7 | PERSONAL



MR. MICHAEL KHRAPKO CPE Consultancy, New Zealand

TC Member, DAC, Convener South Pacific

It all started in Stockholm in September 1999 when I attended the 1st International Symposium on SCC. I was impressed with the new technology, amount of supporting international research and global interest in the subject. That is where I first time heard about RILEM. I brought ideas of SCC back home to New Zealand where it was relatively quickly developed into commercial products across several cities (that time I worked for a large national concrete manufacturing company).

Self-Compacting Concrete technology became my prime interest for the next few years. In 2001, I attended the 2nd International Symposium on SCC in Tokyo, where I learned that there was a RILEM SCC Technical Committee meeting scheduled during the workshop. I asked if I could attend. Åke Skarendahl, then a chairman of the RILEM SCC Technical Committee, asked me to join the committee and subsequently RILEM membership. So, my nearly 20 years relationship with RILEM started.

During the first 10-12 years I participated in several RILEM Technical Committees, mostly related to different aspects of SCC guidelines developments. The committees' meetings were usually coincided with the international conferences and symposiums, which were either organised or supported by RILEM.

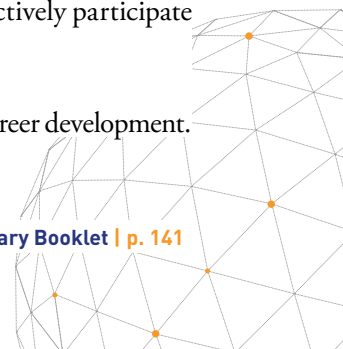
At the meetings and conferences, I met several world-class researchers and just great people. Åke Skarendahl, Peter Bartos, Geert De Shutter, Olafur Wallevik, Hajime Okamura, Nicolas Roussel, Carmen Andrade, Peter Billberg, Surendra Shah, Kamal Khayat, Doug Hooton, Mark Alexander, Ole Jensen, Kosta Kovler, Slava Falikman – just to mention a few... Support from this network of scientists during the years was exceptional!

Close relation with RILEM assisted in adoption of the RILEM TC 162-TDF: “Test and Design Methods for Steel Fibre Reinforced Concrete” in the New Zealand Concrete Structures design standard (NZS 3101:2006).

Living in the remote part of the world, like New Zealand, makes it difficult for people to learn about most recent developments in concrete science from the first hands. The idea of bringing the world experts to New Zealand was well received by RILEM members and supported by RILEM. So, the 9th International Symposium on High Performance Concrete that took place in August 2011 in Rotorua (NZ) was indeed the highlight of my association with RILEM. In 2014 RILEM introduced DAC – Development Advisory Committee with the prime focus on RILEM's international activities. I was asked to convene the relationship between RILEM and South Pacific region. This resulted in signing partnership agreements between RILEM and CIA (Concrete Institute of Australia) and RILEM and NZCS (New Zealand Concrete Society, now Concrete NZ Learned Society).

In summary I would like to say that the last 20 years of my working career were closely related with RILEM, which I enjoyed both professionally and personally. I had a unique opportunity to meet with the world-class experts who gave me lots of very special knowledge, inspiration, support, and confidence. I have been trying as much I could to connect the scientific achievements with practice. And I strongly believe that RILEM could do much more in this regard, placing greater focus on encouraging the concrete industry members to join RILEM and actively participate in RILEM undertakings.

My personal professional experience shows that doing this opens great opportunities in professional career development.





PROF. DR. EDDIE KOENDERS
Institute of Construction and Building Materials
TU Darmstadt, Germany

TC Chair

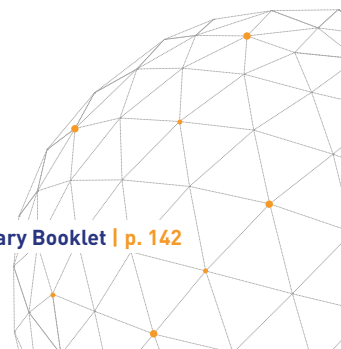
My history with RILEM started during my time as a PhD student at the TU Delft in The Netherlands (1993 – 1997). During that period, I became an active member in the RILEM Technical Committee 195-DTD on “Recommendation for test methods for autogenous deformation and thermal dilation of early age concrete”. This was a topic that was very similar to my PhD work and it gave me the opportunity to join and discuss international activities via the RILEM network. Later I joined many other RILEM TCs and during my time in Delft we organized several conferences, which were also supported by RILEM. In addition, we also developed the multi-scale modelling course which is one of the RILEM EAC courses that runs annually already 10 years, starting from 2008.

After my move to the TU Darmstadt in Germany, our institute also became a RILEM member, allowing our PhD students to be active in RILEM TCs as well as other activities. At present, I am chairing the RILEM TC 270-CIM on “Benchmarking Chloride Ingress Models on Real-life Case Studies: Theory and Practice” (2016 to 2020). We also have a RILEM EAC course on Computational Methods for Building Physics and Construction Materials, which is held annually since 2016.

I think that RILEM is a very important platform for researchers to stay connected to the international playing field of materials.

Most highlights are directly reflecting to the activities, meaning conferences, courses, TCs, and recently also the TAC meetings. All these activities have their own highlights, as you meet many people and get the opportunity to discuss and exchange ideas and new initiatives. This typically also applies to courses where you can discuss and exchange knowledge with young (next generation) researchers.

In my opinion RILEM is moving in the right direction. However, regarding education activities, I think that RILEM should develop itself further, so that they can directly connect to university courses. This is a task for the near future since this will be an opportunity for massive extension of their visibility to young students and future researchers.



PROF. KONSTANTIN KOVLER

Technion – Israel Institute of Technology

RILEM Fellow (2006), TAC, Convener Cluster B, EAC, Assoc Editor M&S, TC chair and member



My first introduction to RILEM took place in the mid-1980s. At the time, I was still a PhD student in the midst of writing my thesis, for which I employed the experimental and analytical methods promoted by the RILEM Technical Committee on Fracture Mechanics of Concrete lead by Prof. F. Wittmann and late Prof. Yu. Zaitsev. 1991 was the year of my very first publication in the RILEM conference proceedings edited by Prof. H.-W. Reinhardt. My intensive collaboration with RILEM started in the mid-1990s, when Prof. Arnon Bentur introduced me to the RILEM Technical Committees, and later also the standing committees. Arnon was (and still is) my mentor and senior colleague to whom I am greatly indebted.

At present, it is difficult to recall exactly in how many RILEM committees I participated throughout my professional career; serving as chairman of ICC-196 (2002-07), cluster B convener and Technical Activities Committee member (2004-09), secretary of Educational Activities Committee (2010-2015), and as a member of numerous RILEM Technical Committees, such as TDF-162, EAS-181, ATS-185, RLS-193, DTD-195, SHC-221, SAP-225, SCM-238, CMS-254 and finally CEC organized just recently.

In addition, I have had the distinct pleasure of editing the RILEM flagman journal “Materials and Structures” for many years and helping to organize RILEM conferences, doctoral courses and an annual RILEM week (in Haifa, 2009) – in total 28 events – each of which of course enriched my own professional experience. More importantly, these events also helped to promote RILEM in different forums and to recruit into our organization many promising PhD students and young researchers, who are now taking leading positions in modern building science and engineering all over the world.

I would like to congratulate the RILEM community on its 75th anniversary, and wish it to be stronger and also younger, to continue fostering channels of collaboration and spreading its professional expertise while at the same time learning from the achievements of our partnering professional associations such as fib and ACI, and not shying away from working alongside the industry. I wish RILEM to continue being the flagship in implementing the achievements of modern building science into practice and promoting advanced construction materials and technologies around the world. Long live RILEM!



Lastly, as a personal tribute, here are a few photos, not known to the RILEM community, though some of our colleagues should recognize themselves, in situations both serious and less so.

Figure 1 – with Prof. Ole M. Jensen (on the left) and Prof. Ravindra Gettu (on the right), RILEM week in Ghent, Sept. 2007

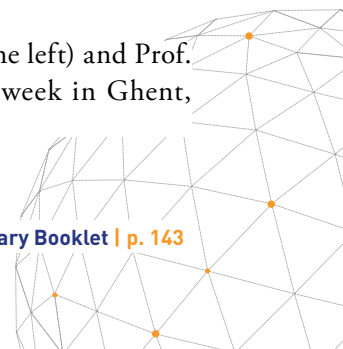




Figure 2 – with Prof. Arnon Bentur (on the right), RILEM Week in Hong-Kong, Sept. 2011



Figure 4 – Practical exercise during the RILEM doctoral course on Early Age Concrete, Tomsk, Russia, July 2015



Figure 3 – Biking on the City Wall (Xi'an, China) between lectures at the doctoral course, August 2011, with (L to R): Prof. Ole M. Jensen (Technical Univ. of Denmark), Dr. Pan Feng (Southeast University, China) and Prod. Doug Hooton (University of Toronto, Canada)



Figure 5 – Surprised by fearless parrots landing on your hair, on the right: Nathalie Jacobs, Springer Executive Editor, The Netherlands – after the meetings during the RILEM week in Melbourne, Australia, Sept. 2015

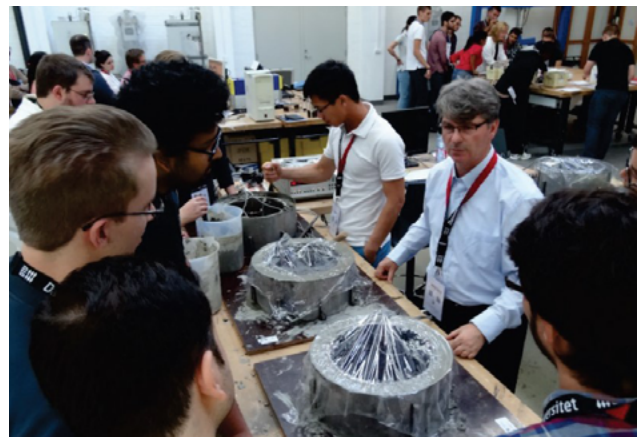
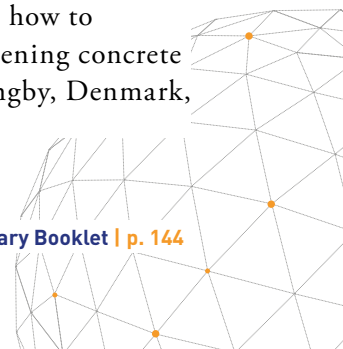


Figure 6 - Instructing in the lab on how to investigate crack formation in hardening concrete (RILEM PhD Course in DTU, Lyngby, Denmark, Aug. 2016)



PROF. DR.-ING. JÖRG KROPP

**Institute for Building Materials, University of Applied Sciences Bremen, Germany
and Deputy Director of Bremen Institute for Materials Testing
in both positions retired since March 2017**

RILEM Fellow, Chair CCC, Bureau member, TC Chair



My 30 years with RILEM – some thoughts

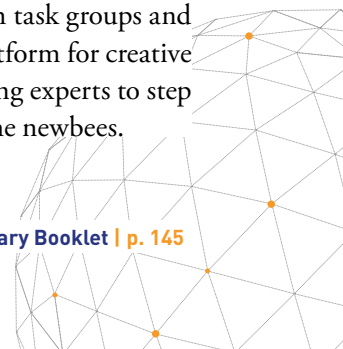
The key issue of RILEM technical work lies in the cooperation of scientists and practitioners who take the initiative and challenge to promote the state of the art in a specific field – on a voluntary basis and free of personal or business interests – this commitment forms the basis of mutual understanding, support and finally often leads to a lasting friendship between RILEM members.

Right from the beginning of my engagement in RILEM, i.e. my first participation in a Technical Committee meeting, I enjoyed the exchange with experts from the four corners of the world, and I was impressed not only by their expertise and broad views on the addressed field of the committee, but also how approachable and accommodating they were - an excellent chance for me to broaden my own horizon. With time and more engagements in RILEM, at first on the technical level, later-on also as an officer in the organization, I had the privilege to meet more and more distinguished experts, many of them used to fill the list of references in my own earlier publications. It was a great experience to exchange with them now on a personal level!

Writing these lines, I tried to develop a “short list” of colleagues who deserve special mention. However, with ongoing proof reading and correcting this list became too long for the editors of this booklet. So, I cancelled both lists. But even after decades I still have a few special events in mind: A remarkable conversation on durability issues in general with G.M. Idorn during a train ride returning from a RILEM Workshop, as well as a fruitful discussion with Sven Pihlajavaara on pore structure and carbonation of hcp. And I am very grateful for the cooperation with Jacques Bresson, Michel Brusin and Pascale Ducornet over many years!

Up-dating of RILEM and its further development has been an on-going effort, in order to strengthen the competitiveness of our organization in an international environment of technical/scientific organizations for professionals. Of course emerging technological developments must be anticipated but also the mode of working in TCs or operations in the organization, i.e. leadership and/or guidance, assignment of responsibilities and privileges, identification of potential new stake holders and how they could profit from a cooperation/membership with RILEM are analyzed continuously. What is the future output of RILEM and who will produce it? Who will buy it to gain which profit? No easy answers are available in our rapidly changing world.

In the effort of modernization, however, we must not abandon those features of RILEM, that make the difference among competing organizations, that make RILEM a unique organization for its members. In my understanding, much of it takes place on the personal level of communication and cooperation between its members. However, these benefits may be realized only while being involved in RILEM work, in Technical Committees, in task groups and in the administration. Thus, RILEM is not an organization for “consumers” of outputs, it is a platform for creative experts who are eager to develop materials and methods. It takes courage for both sides – for young experts to step into RILEM and follow their ideas as well as for RILEM to extend the necessary confidence to the newbies.



Activities within the RILEM Administration

Member of the Concrete Coordinating Committee (CCC) from 1996 until 2001
Chairman of the Concrete Coordination Committee (CCC) from 1997 until 2001
Member of the RILEM Bureau from 2001 until 2004
Member of various task groups on further development of RILEM strategies and policies

Activities within RILEM Technical Committees

Secretary of RILEM TC 116 – PCD Permeability of Concrete as a Criterion of Its Durability, chaired by Prof. Dr. H.K. Hilsdorf from 1989 until 1992
Chairman of RILEM TC 116 – PCD from 1992 to completion of work in 1996
Liaison Officer of TC 116 - PCD to TC 124 – NDT Non-destructive Testing, chaired by Dr. Nicolas Carino
Joint Workshop of TC 116 PCD with TC 123 – MME Use of microstructural models and expert systems for cementitious materials, chaired by Dr. Hamlin Jennings and Dr. Karen Scrivener, workshop co-sponsored by NATO/ASI
Secretary of RILEM TC-178 – TMC Testing and Modelling the Chloride Ingress into Concrete, chaired by Dr. Carmen Andrade
Member of TC-213 – Integrated Service Life Modelling of Reinforced Concrete Structures, chaired by Dr. Carmen Andrade
Several workshops on chloride migration into concrete and service life modeling
Member of TC – 189 NEC Non-destructive Evaluation of the Permeability and Thickness of the Concrete Cover, chaired by Dr. Roberto Torrent
Member of TC – 183 MIB Microbial Impact on Building Materials, chaired by Prof. Dr. Moema Ribas-Silva
Member of TC 198 URM Use of Recycled Materials, chaired by Prof. Dr. Charles Hendriks
Member of TC – 165 SRM Sustainable Raw Materials – Construction and Demolition Waste, chaired by Prof. Dr. Charles Hendriks
Member of TC – 217 PRE (Progress of Recycling in the Built Environment), chaired by Prof. Dr. Enric Vazquez

The achievements of the committees' work were published in numerous papers in the RILEM magazine Materials and Structures, several RILEM Technical Recommendations (RTR) were developed on test procedures and 9 books were published as RILEM Reports or RILEM Proceedings.



PROF. KEFEI LI
Tsinghua University, China

*Assoc Editor 2020, TAC Expert, TC Chair,
DAC, Convener Cluster D, Regional Convener China*

My 30 years with RILEM – some thoughts

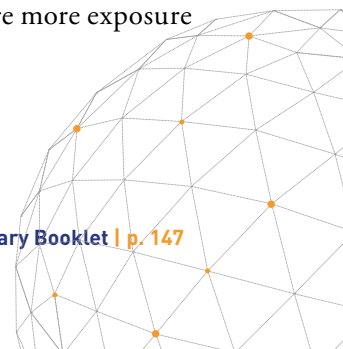
My first contact with RILEM dated back to 2003, when I purchased a technical document “Assessment of Existing Structures (2001)” during my stay in France, working as a R&D engineer. The contact was Mme Pascale Callec, whom I later found was the RILEM general secretary. This document made me aware of two important organizations which accompany me through my professional path until now: RILEM and JCSS.

Several years later, I joined the faculty of Civil Engineering Department, Tsinghua University (China), and technical reports and recommendations from various RILEM-TC became important literature sources for my research work. During one workshop organized by Lafarge Research Center in Lyon (2010), I met Prof. Ravindra Gettu for the first time, who invited me to join the TAC as an expert, which I accepted without hesitation. Three years later, I became the TC convener of cluster D “Service life and environmental impact”. During this period, my team organized the RILEM Symposium CONMOD’2014 in Tsinghua University (2014), I took the role of RILEM representative in JCSS board (2015-) and joined the Board of Editors (BoE) of Materials & Structures (2015-). In 2016 I rotated out from TAC and became China region convener (2016-). In 2019, I setup and chair the TC-DCM (Long-term durability of structural concretes in marine exposure conditions).

Throughout my long association with RILEM, all people, officers, personnel, and research fellows have been friendly and helpful. In particular, I owe my gratefulness to several persons: Mme Pascale Ducornet, the long-time general secretary of RILEM, helped me a lot with RILEM affairs and conference organization with high professionalism; Prof. Ravindra Gettu, the active RILEM president, invited me into TAC, trusted me, advised me and led my way through RILEM; Prof. Mark Alexander helped me with his rich TC experiences and professional knowledge. I am also impressed with Dr. Pietro Lura for his total devotion and high efficiency in the editorial works of Materials and Structures journal, and by Prof. De Schutter for his high enterprising spirit in concrete related research.

As aforementioned, my experience with RILEM started in 2003 by the purchase of a RILEM-HCSS joint report. At that time, I could not imagine that, years later, I would not only have joined RILEM TAC, in charge of TC reports, but also be appointed as the RILEM representative on JCSS Board. So, I take it more as a professional destiny than a coincidence.

After all these years in RILEM, this volunteer-based academic organization attracts me deeply. With time, I think RILEM should gain wider coverage, through involving more young fellows, and explore more exposure frontiers through new social media.



LUIS J. LIMA

Emeritus Professor of Northwest of Buenos Aires National University (UNNOBA), Argentine

*Fellow 2015, TAC Expert, Bureau member,
President LAT-RILEM, TC member*



A personal view of a fascinating knowledge experience

My personal history with RILEM is a long one. Simón Delpech, my “Testing Materials” Professor in La Plata University in 1956, and RILEM President in 1971, explain to us that there was an International Organization whose target was to coordinate the work of Testing Materials Laboratories all around the world. Its name was RILEM “Reunion International des Laboratoires de Essai des Matériaux”.

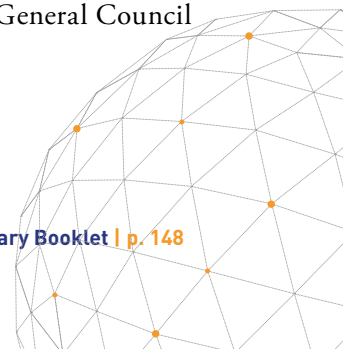
My real contact with RILEM activities and philosophy began in Paris in the scholar year 1965-66 during my postgraduate studies in the “Centre des Hautes Etudes du Béton Armé” where my “Concrete Properties” Professor was Robert L’Hermite. This effective contact with RILEM happened twice, first during the lectures of Professor L’Hermite and in frequent talks with him in the interval between these. Professor L’Hermite was patient, kind, and explained very clearly engineering concepts. Then during the following scholar year (1966/67) I had the chance of intensify my personal contacts with Prof. L’Hermite in the “Institute des Recherches Appliquées au Béton Armé (IRABA)”, at Saint-Remy-lès Chevreuse. At that time, I was doing my practical work and he was working on concrete creep.

Participation in RILEM activities and works

- 1971 - September, Buenos Aires RILEM International Symposium, participation in an experimental study on buckling in reinforced concrete columns.
- 1980-85 - Participation in the experimental works of TC 50 FMC, on fracture Mechanics of Concrete.
- 1981-83 - Participation in RILEM activities as Chief of Constructions Department in La Plata University.
- 1987 - September, RILEM International Symposium in Paris, participation with a paper on heterogeneity and anisotropy in reinforced concrete elements.
- 2007-2014 - Participation as organizer and lecturer in RILEM-AAHES (Asociación Argentina del Hormigón Estructural) technical and scientific annual Courses in different Argentine cities.

Participation in RILEM organizational activities

- 2008-2013 - Expert in RILEM Technical Activities Committee.
- 2009-2014 - Bureau Member.
- 2011-2014 - Organizing President of Lat-RILEM, first active RILEM international Group.
- 2014 - San Paolo (Brazil). Reception of a “certificate of appreciation” for the outstanding contribution in Lat-RILEM implementation and development.
- 2015 - RILEM Fellow, proposed in March by the RILEM Bureau and ratified by RILEM General Council in September.



Key personalities whom I met through RILEM and who contributed to my development were

- Robert L’Hermite and his holistic comprehension of concrete properties
- The Convenor of TC 50 FMC and some of the participants in the Committee with whom I performed the experimental works. I appreciate its serious and strict way to plan and perform experimental procedures and works
- Some of my colleagues in RILEM Technical Activities Committees and Bureau.

A highlight of my association with RILEM was my fruitful contacts with a lot of colleagues during my activity as International Expert and Bureau Member.

A personal anecdote:

One day at Saint-Remy-lès Chevreuse Laboratory, Professor L’Hermite was telling me the difficulties of performing representative rheological tests under constant loads and I asked him, thinking of Eduardo Torroja flexural tests, ‘why do you not use a box full of water and control the level periodically?’ His answer was: ‘have you thought of the box size?’ Obviously, I had not.

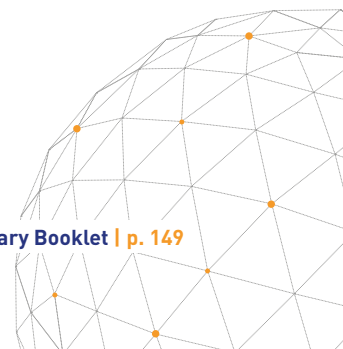
Picturing RILEM future

Now when I analyse the future development of a relevant institution like RILEM I think it must be taken in mind some main objectives:

- 1) To move forward with the same or better human and technical qualities and results as it’s are and historically it were,
- 2) To preserve carefully, the essential characteristics that have founded these qualities and results.
- 3) To change research subjects and internal organization keeping the actual international leadership

Referring to the changes that must be made, due mainly to the change with time of technical context and communicational possibilities, I think important: a) to increase the number of participants in RILEM technical works; b) to expand the dissemination of new knowledge defining different technical and educational addressed levels; c) In this proposal the participation of Regional Groups must be essentially the diffusion of RILEM works and way of work, for example translating to national languages –the languages of construction workers– the most useful documents referred to practical applications. I think it is a good way to increase construction quality all around the world.

In my opinion the RILEM qualities and characteristics that must be preserved in any future roadmap, are the ways of working toward the creation of new knowledge. It ensures efficiency, efficacy and optimum academic levels in any document produced by RILEM and published under its responsibility.





PROF. JIAPING LIU
Southeast University, China

DAC Expert; TC Chair, Vice-President CHN/RILEM

I got to know RILEM through the introduction by Prof. Changwen Miao. At the inaugural meeting of RILEM China National Group on August 3, 2014, I was very honored to be elected as the general secretary from 2014 to 2017 and now am the vice-president from 2019 to 2021.

In March 2018, a new Technical Committee-TC CEC “Controlled expansion of concrete by adding MgO-based expansive agents taking the combined influence of composition and size of concrete elements into consideration” was approved by the RILEM Technical Activities Committee during the RILEM Spring meeting. I was very honored to be chair of CEC. This TC is planned to run for 5 years from 2018 to 2023. Till now, 30 members from 14 countries, covering both academia and industry, have been recruited based on their expertise and interests in shrinkage and cracking control and expansive concrete.

I have been working with Prof. Changwen Miao in Sobute, the largest Building Chemicals Company in China, and in Southeast University. He introduced RILEM to me, and took me to many conferences hosted by RILEM, at which I learned about the mission, the goals of RILEM, and also got acquainted with many leading experts. With Prof. Changwen Miao’s help, I studied at Purdue University as a visiting scholar from May to November 2004, under Prof. Jason Weiss. Although the visit was very short, Prof. Jason Weiss’s spirit of scientific research had a great impact on my future research and work.

Prof. Ole M Jensen, from TUD, is one of my oldest friends. With his great support, we organized a series of international doctoral courses in Nanjing, China. Prof. Ole M Jensen is also the deputy chair of TC CEC. He has made many contributions to the application, start-up and operation of CEC. Prof. Wittmann, RILEM Honorary Member, Chairs of multiple RILEM TCs is one of the oldest friends of Prof. Changwen Miao. And he has been invited to Nanjing many times to talk with our research group. He also kindly provided a lot of help on our newly approved TC CEC. Other leading experts like Prof Kostantin Kovler, Prof. Geert De Schutter, Prof. Pietro Lura, Prof. Doug Hooton, Prof. Karen Scrivener, Prof. Guang Ye, have inspired and encouraged me greatly with their experience, knowledge, and kindness.

As a person who worked first in industry and then also in academia, I deeply understand that the external motive force to promote the continuous breakthrough of academic achievements is the technology transfer from academic achievements to engineering construction. So, I would suggest RILEM strengthen its collaboration with industries, by increasing propaganda through different languages, by inviting people from industries to share engineering experience and problems etc. This is also one of the goals of our newly approved RILEM TC CEC. We hope to use scientific ways of thinking to solve problems encountered in engineering, and to promote the application of innovative materials and technologies in the engineering for sustainable development.



**PROF. DR. JOSÉ FERNANDO
MARTIRENA-HERNÁNDEZ**
Universidad Central de las Villas, Cuba

TC Chair



As my work became more international through our collaboration with Prof. Karen Scrivener at EPFL, the need to have a broader platform for dissemination (and feedback) of our results became necessary. This is when I first thought of RILEM. Coincidentally I was at the conference DMBC 2014 at Sao Paulo, Brazil, and I happened to meet most key personalities in my sector, who were attending this conference and the RILEM week. A few months later I filed my application to become a senior member, which was quickly approved.

During 2015-2017, I participated in several RILEM conferences and became a member of the TC on SCMs. I realized that the work on TCs was extremely interesting and challenging, for most important scientific issues were discussed there.

In 2017 we decided to launch the TC on Calcined Clays, which had a kick-off meeting in Delft, in August 2018, and a second meeting at Rovinj, Croatia in March 2019. So, I am increasing my links to RILEM and through this I am facilitating my work and the dissemination of our results.

Some key personalities whom I met through RILEM and who contributed to my development are:

- Prof. Karen Scrivener, a great advocate of RILEM, insisted on my getting engaged in RILEM's activities.
- Dr. Roberto Torrent, also a great advocate of RILEM and an expert in concrete durability, has been very supportive of all efforts for collaboration between people.
- Dr. Ravindra Gettu has been passionate about RILEM and he has tried to encourage me to become even more involved (he proposed me as the Latin America Convenor). Through interaction with him I have learnt a lot about the organization.
- Prof. Mark Alexander, also a passionate RILEM person and a world scientific leader, impressed me with his humble attitude. I have learnt a lot from him about connecting with people from different origins and backgrounds.

Highlights of my association with RILEM are:

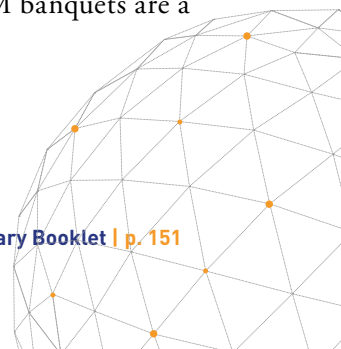
2014: becoming a member

2015-2016: my participation in the TC on SCMs

2017: call for the TC on Calcined Clays

Below are two personal anecdotes from past experiences:

Anecdote 1: I always thought of the RILEM banquet as a very formal and up-dressed activity. Having participated in at least 3 of them I have realized that I was completely mistaken. The RILEM banquets are a perfect way of socializing and a far more effective way of establishing strategic connections.



Anecdote 2: I was sitting in a bus in Sao Paolo during the DMBC conference and I realized I had Prof. Mark Alexander sitting next to me. I freaked out at the beginning but then his nice conversation calmed me down. We began a conversation as if we had known each other for a while...

I believe that RILEM should view the current challenges of being global and work in different contexts. It should continue to go beyond the borders of Europe and reach out to regions like Latin America and North America, where its presence is still weak. It should also try, with standardization bodies in countries/regions, to link up and better coordinate the work of pre-norm and standardization committees. Finally, it should consider having a stronger and more creative presence in social networks and media in general.



PROF. DR. IPPEI MARUYAMA
Nagoya University and The University of Tokyo, Japan

M&S Best Reviewer Award 2013, Assoc Editor M&S

Personal history with RILEM:

2005 RILEM member

2013 Materials and Structures: Best Reviewer Awards

2015-present Materials and Structures: Associate Editor

Highlights of my association with RILEM:

It was a great pleasure and a honoured position for me to be an associate editor of materials and structures. After accepting this position, I was involved in several international projects.

Personal anecdotes from past experiences:

I have many contacts and relationships with RILEM members personally, but not through RILEM committees. I know that some Japanese researchers are greatly involved in and contribute much to the RILEM / RILEM committees, but I find it was very difficult to join a RILEM committee due to limited time and travel distance.



DR. ENG. ESPERANZA MENÉNDEZ MÉNDEZ

Institute Eduardo Torroja of Construction Science (IETcc-CSIC), Spain

*Bureau Member (Expert) 2019, Fellow 2017,
Honorary member of Lat-RILEM 2014,
TAC Convener Cluster B 2015, TAC Expert Cluster B and D 2012*



Esperanza Menéndez Méndez, PhD. Industrial Engineer at the University Polytechnique of Madrid (UPM), extraordinary thesis award, started to collaborate with RILEM during the 90s, as member of the Eduardo Torroja Institute of Construction Science (IETcc-CSIC).

The Institute Eduardo Torroja of Construction Science (IETcc-CSIC) was founded by Eduardo Torroja with José M^a Aguirre and Modesto López Otero. From the beginning, Eduardo Torroja had a great interest in collaboration with national and international organizations, contributing to the formation of different national and international associations.

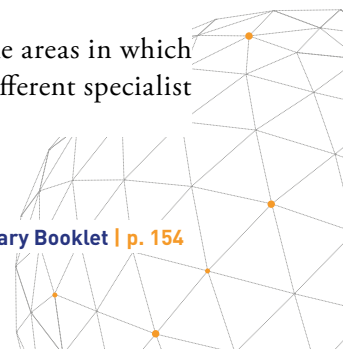
Some of these are *IABSE (International Association for Bridges and Structural)* created in 1922 and, after the 2nd World War, *RILEM (International Union of Laboratories and Experts in Construction Materials, Systems and Structures)* in 1947, and, in 1952 the *CIB (International Council for Building)*, the *ECCS (European Convention for Constructional Steelwork)*, the *CEB (Comité Européen du Béton)* and the *FIP (International Federation for Prestressing)*; CEB and FIP were later merged in *fib (Federation International du Béton)*.

In the first steps of the collaboration with RILEM, I attended different RILEM Conferences. Some of these conferences were:

- RILEM International Conference on *The Interfacial Transition Zone in Cementitious Composites*, 8-12 March 1998 in Haifa, Israel; organized by Arnor Bentur, Ammon Katz and Mark Alexander.
- International RILEM TC 186-ISA *Workshop on Internal Sulfate Attack and Delayed Ettringite Formation*, 4-6 September 2002 in Villars, Switzerland; organized by Karen Scrivener and Jan Skalny
- *Workshop TC 178-TMC Chlorides*, organized by Carmen Andrade and Jörg Kropp during the 56th RILEM Annual Week 2002 in Madrid, Spain
- *RILEM International Symposium on Environment-Conscious Materials and Systems for Sustainable Developments (ECM2004)*, September 6 to 7 2004 in Koriyama, Japan; organized by Kei-ichi Imamoto previously to the 58th RILEM Annual Week 2004 in Tokyo, Japan



The participation in these conferences permitted me to know relevant world specialists in the areas in which I started to work and gave me the opportunity to start contacting and collaboration with different specialist of RILEM.



With respect to the activities in the Technical Committees, I have participated in different TCs. The participation in these TCs has permitted to me collaborate with the best specialists at world level in different fields of research. Also, the conferences, congress and workshops organized in these TCs are always a good opportunity to debate and interchange experiences with specialists at world level and contrast the level of our work in relation to state of the art at international level. Finally, these TCs are a good forum to exchange ideas and to detect the gaps in the knowledge in a specific matter and plan new activities or TCs that cover these gaps.

My interest has been focused mainly in the interaction of concrete with the environment and the chemical reactions that can reduce or increase the durability of the concrete structures depending on interaction with this. My responsibilities of the work in the different TCs has increased with the time, focusing more on the chemical expansive reactions in the concrete structures. Some of the TCs in which I have been involved are:

TC 211-PAE– Performance of cement-based materials in aggressive aqueous environments (Mark Alexander & Nele de Belie).

My main contribution to this TC is:

- Co-author of the Chapter 2 (*Sulfate attack of concrete* – E. Menéndez, T. Matschei & F.P. Glasser) in the STAR on *Performance of Cement-Based Materials in Aggressive Aqueous Environments*

TC 219-ACS–Alkali aggregate reaction in concrete structures performance testing and appraisal (Phillip Nixon & Ian Sims).

My main contribution to this TC is:

- Participations in different Workshops
- Team leader of the STAR RILEM *Recommendations for the Prevention of Damage by Alkali-Aggregate Reactions in New Concrete* that content the actualized test methods for prevention of the AAR

TC 238-SCM – Hydration and microstructure of concrete with supplementary cementitious materials (Nele de Belie & Barbara Lothenbach).

My main contribution to this TC is:

- Co-author of the Chapter 2 (*Alternative Supplementary Cementitious Materials* – K. Sobolev, M. Kozhukhova, K. Sideris, E. Menéndez & M. Santhanam) in the STAR on *Properties and Application of Alternative Supplementary Cementitious Materials in Blended Cements*
- Co-author of the publication in M&S of the paper *Outcomes of the RILEM round robin on degree of reaction of slag and fly ash in blended cements*, related with the Round Robin Test about degree of reaction of blended cements.

TC 251-SRT – Sulfate resistance testing (Veronique Baroghel-Bouny & Esperanza Menéndez).

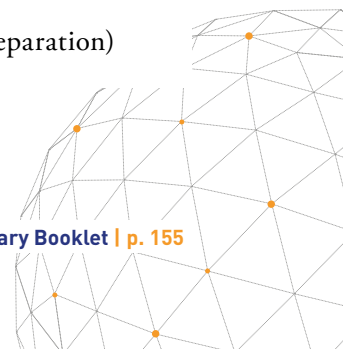
My main contribution to this TC is:

- Deputy-chair of the TC
- Leader of the WP2 related with External Sulfate Attack in Field Concrete
- Co-chair of the two Workshops: Workshop on External Sulfate Attack (ESA 2016) – Lisbon (Portugal) and Final Workshop of RILEM TC-251-SRT on External Sulfate Attack. Field Aspects and Lab Tests (TESA 2018) – Madrid (Spain)
- In preparation a publication related with critical parameters involved in the cases of sulfate attack in the field concrete, reported in the literature.

TC 255-FRS – Fire resistance of concrete structures repaired with polymer cement mortar (Takafumi Noguchi & Kei-ichi Imamoto)

My main contribution to this TC is:

- STAR on *Fire Resistance of Concrete Structures Repaired with Polymer Cement Mortar* (in preparation)
- Participation in the RRT on tests to determine the fire resistance of PCM.



TC 258-AAA – Avoiding alkali aggregate reaction in concrete – Performance based concept (Borge Wigum & Jan Lingard).

My main contribution to this TC is:

- Leader of the WP3 on Assessment of detailed alkali household in concrete, including internal aggregate release, recycling, and external supply
- Co-leader of the *STAR on Total Alkalies in Concrete*
- Co-responsible of the development on a *Recommendation on Determination of alkalis releasable by aggregates*. Coordination of two Round Robin Tests to define the parameters and conditions of testing.
- First author of the RILEM Recommendation AAR-8 related with Determination of Potential Releasable Alkalies by Aggregates in Concrete
- First author of two publications, in preparation, related with the results of the RRT of alkalis releasable by aggregates and related with the methods of analysis of alkalis from the extraction solutions and their limitations.

TC 259-ISR – Prognosis of deterioration and loss of serviceability in structures affected by alkali-silica reactions (Victor Sauma & Yann Le Pape/Leandro Sánchez).

My main contribution to this TC is:

- Co-author of the STAR on *Diagnosis & Prognosis of AAR in Existing Structures*

Future TC proposed in 2020.

- I have presented a new TC ASM related with the Alkali-aggregate reaction mitigation

On the other hand, from 2012 I have been collaborating in different roles of the Staff of RILEM:

- Expert of Clusters B and D of TAC, from March 2012 to September 2015
- Cluster convener B on Transport and Deterioration Mechanisms, from September 2015 until 2020
- Expert of the BUREAU, from 2018 to 2022

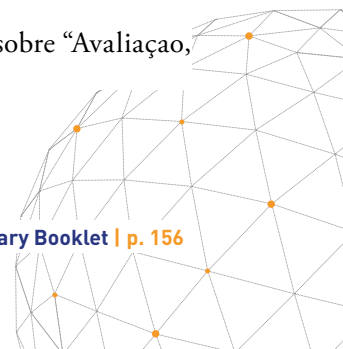
During these years, a lot of work has been done in the Technical Activities Committee (TAC), under the presidency of Ravindra Gettu. This work has permitted to implement and clarify the operating rules of the TCs and facilitate the inclusion of all the RILEM members in the activities of them.

With respect to Lat-RILEM, that is Latin-American Regional Group, I have collaborated from the beginning of its formation, especially in the organization of specialization courses related with the security and durability of concrete structures joint with Carlos Luchtenberg, from Argentina. The courses constituted a meeting forum of Latin-American specialists in construction many of which were later members of Lat-RILEM. These series of courses were led by Carmen Andrade (Spain) and Luis Lima (Argentina). Particularly, I have coordinated, with AAHES and other organization the courses held between 2009 and 2013 that are:

- Buenos Aires (Argentina), 2009 – Aplicaciones prácticas de seguridad y durabilidad de estructuras de hormigón
- Buenos Aires (Argentina), 2010 – Auscultación y diagnóstico de estructuras deterioradas
- Buenos Aires (Argentina), 2011 – Acercándonos a la realidad estructural: de lo prescriptivo a las especificaciones por comportamiento
- Salta (Argentina), 2012 – Vida útil de las estructuras de hormigón; proyecto y modelización
- Rosario (Argentina), 2013 – Vida útil de estructuras existentes. Monitoreo, intervención y rehabilitación
- La Plata (Argentina), 2013 – Diseño prestacional para durabilidad de estructuras de hormigón armado

Also, I have collaborated in the organization and coordination of two symposiums in Argentina and Brazil:

- Buenos Aires (Argentina), 2010 – 1er Simposio Técnicos Iberoamericanos sobre Estructuras y Materiales para la Construcción, Avances en Seguridad y Durabilidad “Ciclo de vida de las estructuras”
- Florianopolis (Brasil), 2011 (53º Ibracon) – 1º Simpósio Internacional RILEM/IBRACON sobre “Avaliação, Proteção e Reabilitação de Estruturas de Concreto com Corrosão de Armaduras”



In recognition of my work and collaboration in the activities in Lat-RILEM, I was nominated as *Honorary Member of Lat-RILEM* during the 68th RILEM Week in Sao Paulo (Brazil) in 2014.

One of the biggest advantages of being a member of RILEM is the possibility to participate in the different Technical Committees and collaborate in these with the main specialists at world level. It isn't possible to mention all the names of the personalities that I have known throughout my collaboration with RILEM, and the people of the IETcc-CSIC. One of my best impressions in my collaboration in RILEM was the closeness and cordiality of the members of RILEM Staff. Some of these persons are Peter Richner, Mark Alexander, Johan Vyncke, Ravindra Gettu, N. Roussel and N. de Belie. It is not possible to mention all the significant professionals that I have met through my collaboration with RILEM, but I want to mention two of the most important specialists in cement and concrete research at world level, namely F.P. Glasser and H.F.W. Taylor, who have contributed significantly to the improvement of these materials.

For me the most important highlight in the collaboration with RILEM, was the opportunity of participation in all the TCs without any restriction and the possibility of take responsibilities depending of your expertise and your interest in the different work developed in the TC. Personally, apart from the involvement in the work of the TCs, it has been most important to be involved in different committees of RILEM to understand the functioning of the organization and collaborate to improve its work. In this sense, in the last years several operating rules have been implemented, particularly clarity in TAC. I felt very grateful for the recognition of my work, with the nomination as *Fellow Member of RILEM in 2017*.

On the other hand, one of the most particular benefits of RILEM is the possibility to participate in all decisions in the General Council during the RILEM Week every year, as well as the complicity and cordiality during the RILEM dinner in which all the members can related in a relaxed atmosphere.

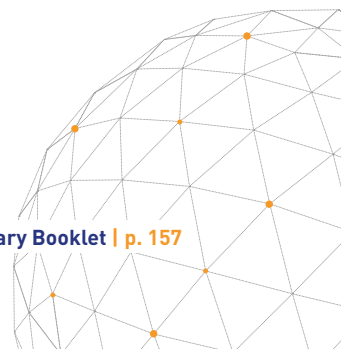
Finally, with respect to the moving forward of RILEM, during the Strategic Workshop held in Belgium in March of 2014 a critical analysis of the objectives and the future actions of RILEM were done. Apart from the conclusions of this Workshop, from my personal point of view, there are five essential points to the moving forward of RILEM.

These points are:

- a) maintain the presence of relevant researchers involved in TCs and format activities according to their experiences and knowledge,
- b) inclusion of young people in the work of RILEM by the participation in the specialization courses in current issues and in TCs activities in their areas of interest,
- c) maintain and implement the open and volunteer participation of all RILEM members in their activities of interest, especially in TCs,
- d) maintain the information to all RILEM members through the webpage, letters, and other current technologies and
- e) preserve the identity of RILEM publications with high level of quality, so continuing to be a worldwide reference of the classic and current construction topics.

As an example of the visibility of RILEM activities, in March of 2018 a Seminar on "Advances in durability and new materials in construction" was held in Barcelona (Spain) joint with the Spring meeting and all the conferences were accessible on YouTube at the following link:

https://www.youtube.com/watch?v=uRL_q1Wi7k8&index=8&list=PLpnYsQY7S_LPB2Cq5lQlFZZaRoqlgQV2k&t=0s





DR. RER. NAT. BIRGIT MENG

**BAM (Bundesanstalt für Materialforschung und -prüfung),
Germany**

RILEM L'Hermite Medalist 1995, TAC, MAC, TC member

My own personal 'history' with RILEM is:

- I worked as young scientist in ibac (Aachen) with Peter Schießl
- Already before 1995 I was reading and writing publications in M+S, joined the network in conferences and workshops and was aware of interesting RILEM TC's
- During 1995, I had my first intense involvement: I received the RILEM Robert L'Hermite medal in 1995
- I was invitation to join RILEM week in Morocco
- Between 1996 – 2001, I was a TAC-Member (from 1997-2001 affiliation at VDZ Düsseldorf, and from 2001 onwards headed the Division "Building Materials" in BAM, Berlin (titular Member) Staff members and myself contributing to different very fruitful TCs. From 2006 I became the main contact person responsible for RILEM involvement of all BAM -scientists
- From 2010 - 2016 MAC Member and am currently a member of TC AAA

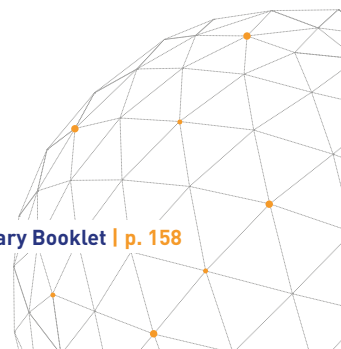
Key personalities whom I met through RILEM and who contributed to my development were:

- Peter Schießl, my PhD-supervisor, who introduced me in the RILEM network
- Volker Wittmann, president when I started to become involved, promoting my contributions
- Asko Sarja and Luiga Binda as colleagues in the TAC (1996-), showing me what the RILEM-ideas are like
- Hans Reinhardt supporting me every so often (he was German national delegate)
- Doug Hooton, always around everywhere
- Johann Vyncke and Mark Alexander while I participated later in the MAC

Highlights of my association with RILEM were being awarded the RILEM L'Hermite medal and joining strategic workshops and decisions already as a young scientist.

I think RILEM needs to develop moving forward by:

- keep on with its strong scientific approach in the TCs (which in my opinion is at the very heart of RILEM)
- involve young scientists of the next generations
- go on playing its specific scientific role in the environment with the other players (fib, CIB, standards, and guidelines for organizations, etc.)



7 | PERSONAL



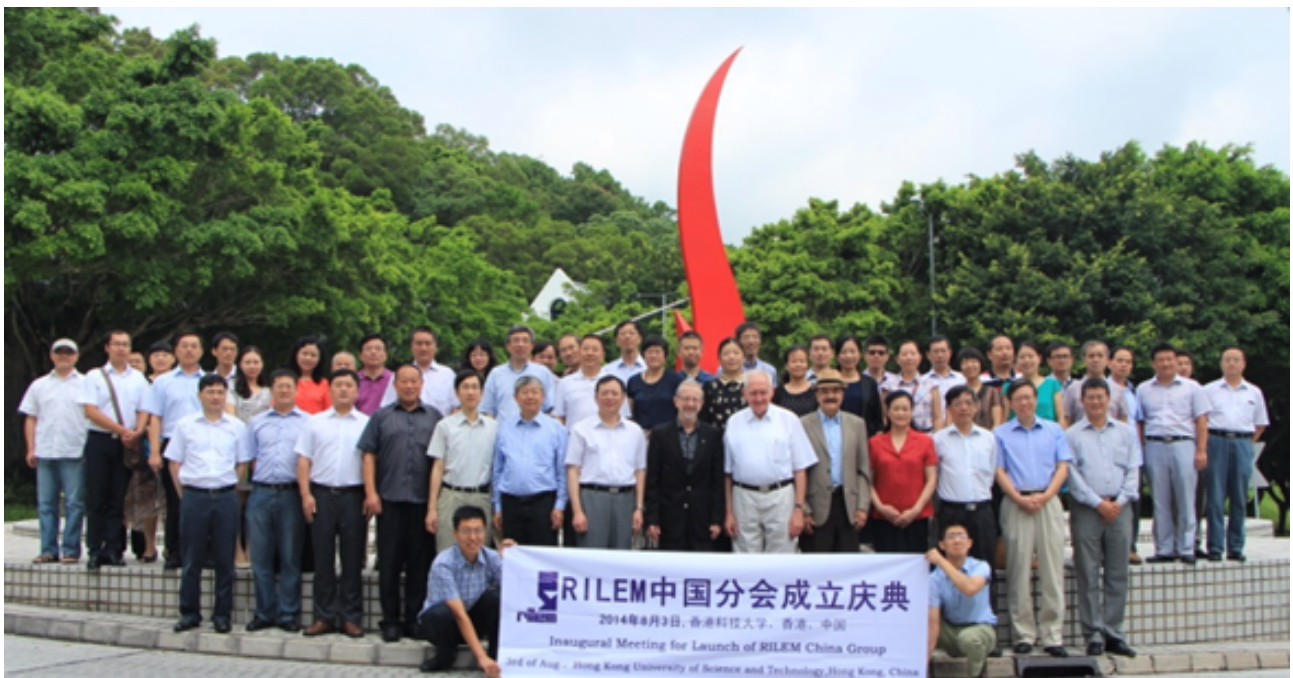
PROF. CHANGWEN MIAO Southeast University, China

*President CHN-RILEM, DAC Expert,
Hon President 2019, Current TC Chair*

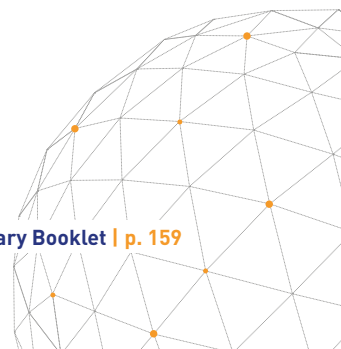
2009-2014, Expert member of the Development Advisory Committee
2014-2017, President of RILEM China National Group
2019, Honorary President of 73rd RILEM Annual Week

My own personal ‘history’ with RILEM started with the establishment of RILEM China National Group.

On August 3, 2014, the inaugural meeting of the RILEM China National Group took place at Hong Kong University of Science and Technology (HKUST), Hong Kong. I was very honored to be elected as president of RILEM China National Group and chaired the meeting. Participants expressed their good expectations in RILEM China and looked forward to making their contributions to the development of concrete materials and structures, and to sharing their knowledge and experience with international colleagues. RILEM China National Group is now renamed as CHN-RILEM.



Inaugural meeting of CHN-RILEM



The approval of newly proposed RILEM TC

A new Technical Committee-TC TMS: Test method for concrete durability under combined role of sulphate and chloride ions, was approved by the RILEM Technical Activities Committee during the RILEM Annual Week in Delft, The Netherlands, August 28, 2018. This newly approved TC is chaired by me. This TC is planned to run for 5 years from 2019 to 2023. At present, more than 20 members have been recruited from universities, research centers, and structural design companies, based on their expertise with sulphate attack and chloride transport in cement-based materials.

Key personalities whom I met through RILEM and who contributed to my development were:

Prof. F.H.Wittmann

- Prof. Wittmann, RILEM Honorary Member, Chairs of multiple RILEM TCs. Prof. Wittmann is one of my oldest friends. He has been invited to Nanjing many times to talk with my research group. Prof. Wittmann also kindly provided a lot of help on our newly approved RILEM TC TMS.

Prof. Ole M Jensen

- Prof. Ole M Jensen, from DTU, is the one who invited me into RILEM EAC, and since then we started organizing a series of the international doctoral courses in Nanjing, China. To date, four doctoral courses have been organized with the great support from Prof. Ole M Jensen. From these courses, Chinese PhD students enjoyed the great benefits of learning new knowledge on the most recent technologies and applications of concrete.

Prof. Klaas van Breugel, Prof. Eric Schlangen, and Prof. Guang Ye

- Through working with these three professors from TU Delft, we have successfully organized the International RILEM Conference on Microstructure Related Durability of Cementitious Composites three times. These international conferences have a worldwide reputation in the concrete field. They contribute significantly to the development of microstructure modeling and characterization in China.

Prof. Geert De Schutter

- Prof. Geert De Schutter is a Senior Full Professor of Ghent. From 2009 to 2016, he was the RILEM Regional Convener for East-Asia (2013-2016). With the great support from Prof. Schutter, our Chinese National RILEM Group was successfully established. Because of that, China became a RILEM Region on its own. In addition, as the vice-chairman, Prof. Geert De Schutter made lots of contributions to the application and operation of RILEM TC TMS.

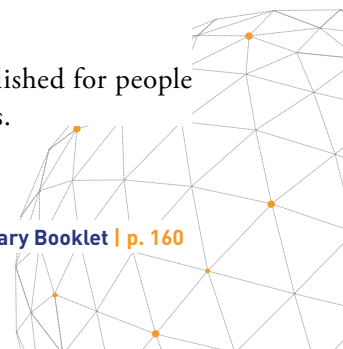
Prof. Karen Scrivener

- Prof. Karen Scrivener has been a very good friend of mine for a long time. We have collaborated on various aspects, such as the low carbon cement, durability, and chemical admixtures. By sharing our experience and solutions in China and Switzerland, we worked together to facilitate the development of low carbon and sustainability of worldwide cement industry.

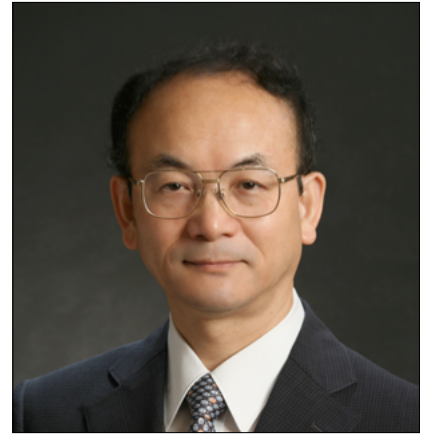
Regarding the future development of RILEM, I would suggest that it strengthen its collaboration with industries. For example, RILEM TC can play a vital role in involving industries by inviting them to participate in TC activities, which may also accelerate the technology transfer from academic achievements into engineering constructions.

Organize meetings or seminars among various regions of RILEM, could be a nice way for people located in different countries to share their expertise and most recent achievements.

Based on the research interests and facilities of lab members, joint laboratories can be established for people who share similar research interests. This would help to promote international collaborations.



7 | PERSONAL



EMERITUS. PROF. HIROZO MIHASHI Tohoku University, Japan

Fellow 2017, TAC, TC member

I started my activities related to RILEM in 1979 as a member of a RILEM Technical Committee (50-FMC). This TC was chaired by Folker H. Wittmann and published a state-of-the-art report (Fracture Mechanics of Concrete, Elsevier, 1983), recommended a test method to determine Fracture Energy of Concrete: GF by means of a three point bend test, and held an International Symposium on Fracture Toughness and Fracture Energy of Concrete in 1985. The proceedings were published in 1986. For establishing the recommendation, a round robin test was organized. I joined all these activities as a full member. It was the first experience for me to work in an international scientific committee as a member.

Since then, I enjoyed RILEM TC work especially on High Performance Fiber Reinforced Cement Composites (HPFRCC), Frost Damage in Concrete, and Self-Healing in Cement-Based Materials. Furthermore, I made every effort to encourage interaction between RILEM and Japanese Institutes. In September 2007, an International Partner Agreement between RILEM and the Japan Concrete Institute (JCI) was signed. This agreement was renewed in July 2015. I was a member of TAC meetings during several years in the beginning of 2000s.



Signing of JCI-RILEM Agreement



There are too many personalities who contributed to my development to count here. If I had to choose, I met the following personalities who contributed to my development in different topics.

- Regarding Fracture Mechanics of Concrete, F. H. Wittmann, A. Hillerborg, Z. P. Bazant, A. Carpinteri, and many others.
- As for HPFRCC, H.W. Reinhardt, A.E. Naaman and V.C. Li.
- Regarding Frost Damage of Concrete, M.J. Setzer and V. Penttala.

Highlights of our association (JCI) with RILEM were the signing of JCI and RILEM International Partner Agreement in 2007 and its renewal in 2015 (see photo above).

JCI held the following events co-sponsored by RILEM:

- International RILEM-JCI Seminar on Concrete Durability and Service Life Planning, 15-16 March 2006, Ein-Bokek, Israel.
- International JCI-RILEM Workshop on Crack Control of Mass Concrete and Related Issues concerning Early-Age of Concrete Structures (ConCrack 3), March 15-16, 2012, Paris France.
- International JCI-RILEM Workshop on Crack Control of Mass Concrete and Related Issues concerning Early-Age of Concrete Structures (ConCrack 5), April 24-26, 2017, Tokyo, Japan.

Furthermore, JCI held the following international conferences under the auspices of RILEM:

- The 8th International Conference on Creep, Shrinkage and Durability of Concrete and Concrete Structures (ConCreep 8), September 30 - October 2, 2008, Ise-Shima, Japan
- The 8th International Symposium on Utilization of High-Strength and High-Performance Concrete, October 27-29, 2008, Tokyo, Japan
- The 1st International Conference on Concrete Sustainability (ICCS 13), May 27-29, 2013, Tokyo, Japan
- The 3rd International Conference on Sustainable Construction Materials and Technologies (SCMT 3), August 19-21, 2013, Kyoto, Japan
- International Conference on Regeneration and Conservation of Concrete Structures (RCCS), June 1-3, 2015, Nagasaki, Japan

Regarding personal anecdotes, RILEM events offer not only scientific, but also cultural gifts. I made a couple of mistakes to enjoy them. For example, after the conference, participants were invited to the dinner. Quite often, the dinner started at 8 o'clock and continued until midnight. I was so sleepy because of the difference in time after a long flight. Therefore, usually most people were enjoying their dinner while I was fighting against sleepiness. Otherwise, I could sufficiently enjoy the cultural matters in many aspects because the cultural difference between e.g. European countries and Japan is so large. Nowadays, RILEM events are held in various places all over the world. It is very important for scientists to experience a quite different culture for creating new ideas because of their endless curiosity.

Since RILEM was established, many recommendations have been made and they worked well as pre-standards to promote sustainable and safe constructions, and improved performance. Sometimes, however, several recommendations related to quite similar subjects were issued and I wonder if still now they are existing as RILEM recommendations. Later issues do not always mean better ones. Some systematic reviewing may be necessary in a certain period.

There is no doubt that many Technical Committees contributed a lot to the advancement of scientific knowledge related to construction materials, systems, and structures. All new TCs start only after critical discussion in TAC meeting from the various points of view. Unfortunately, however, several TCs disappeared during the allotted period because of some personal reasons of the chairmen. Since the importance of the subjects of proposed TCs were approved in TAC meeting, at least a state-of-the-art report could be published even if the chairmen were changed and chaired by any other suitable experts.



EMERITUS. PROF. LARS-OLOF NILSSON University of Lund, Sweden

*Fellow 2012, Honorary Member 2017,
TAC, TC Chair, Cluster Convenor*

My first contact with RILEM was a few years after my PhD when I received an invitation 1983 to be secretary for the TC 35-PMB: ‘Methods of Predicting Moisture conditions in building materials and Components’. Of course, I accepted the invitation with pleasure since it came from Professor Sven Gabriel Bergström, the first professor of building materials in Sweden, who had been a most appreciated teacher during my engineering studies. I learnt later that he became an Honorary Member of RILEM already in 1981.

One early anecdote from that TC-work was a lunch with the RILEM Secretary General (Mr. Fickelson) at the RILEM premises in Paris, where I had one of my first acquaintances with French cuisine. We were served an excellent “coq á vin”, but the Secretary General of RILEM did not enjoy it; the rooster was not killed the correct way!

After two years prof. Bergström retired and I took over as chairman of the committee. We slowly realized that we had an impossible task. The topic of the TC was prediction methods, but we identified that the real need was something else: access to much better material properties. Without accurate input data, prediction methods fall short. That was clearly demonstrated at a workshop we organized, Nilsson (1987). Test methods of material properties for predicting moisture conditions of materials is a topic that still has not been researched by a RILEM TC.

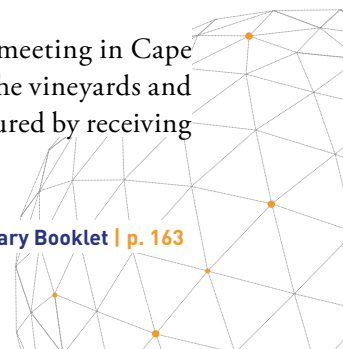
After that first positive experience, I participated in numerous TCs on various topics. In most cases it has been a great privilege to be part of deep discussions in those TCs, with many interesting researchers from all over the world. You could learn about their results in a far better way by having them explain it themselves around a table!

In TC 116-PCD “Permeability of Concrete as a criterion of its Durability” I was impressed by the way the chairman, Prof. Hilsdorf, managed to get many young researchers to work together to form a STAR. It made me understand the significant importance of the role as chairman of a RILEM TC.

In several TCs I have acted as an “opponent”, questioning parts of the main “message”, and have had the opportunity to contribute chapters with a critical view. I am happy that this is also a part of a TCs work.

In the last decade I was a member of the TAC for six years, including being a cluster convenor during several years. That experience gave me a new and broader insight into the work by several TCs and other RILEM activities.

In 2012 I was appointed a RILEM Fellow and the diploma was to be given to me at the GC-meeting in Cape Town. Unfortunately, everybody else learnt that I was absent and probably had “escaped” to the vineyards and the diploma had to be handed over at the RILEM dinner a few days later. Last year I was honoured by receiving



the Honorary Member title. That is an especially appreciated gesture, which means a lot to me, being on the same short list as my old teacher and mentor, Prof. Sven Gabriel Bergström.

I was happy to end my “RILEM career” with a STAR on “Methods of Measuring Moisture in Building Materials and Structures” as chairman of TC-248 that included real experts on every imaginable topic within moisture measurements.

Even so, I could not be prevented from entering a new TC in 2016!

In my opinion, RILEM’s main challenge concerns the core of RILEM activities, the TC-work. It must be developed to handle the rising travel costs that prevent many young researchers from participating. After a first upstart meeting it must be possible to continue with a series of web-meetings as the main tool. Most of the work in a TC is done just before the next meeting, in my experience, and traditional meeting schedules with one or two meetings a year making progress slow. Web-meetings could be more frequent, and shorter, to complete a task much quicker and to include members from all parts of the globe.

References

Nilsson (1987) Methods of predicting moisture conditions in building materials and components – RILEM Committee Work. Contribution to Nordic Symposium on Building Physics, Lund, August 1987. BFR-Document D13:1988, Stockholm

My committees:

- TC 35-PMB ‘Methods of Predicting Moisture conditions in building materials and components’. Secretary 1983-85. Chairman 1985-1988.
- TC 116-PCD ‘Permeability of Concrete as a criterion of its Durability’, 1990-1998
- TC-163 TPZ ‘Interfacial Transition Zone and Properties of Transfer’, 1995-1998
- TC-178 TMC ‘Testing and Modelling the Chloride Ingress in Concrete’, 1998-2004
- TC-230 PSC ‘Performance-based Specification and Control of Concrete Durability’, 2009-2014
- TC-235 CTC ‘Corrosion initiating Chloride Threshold Concentrations in Concrete, 2009-2016
- TC-248 MMB ‘Methods of Measuring Moisture in Building Materials and Structures, Chairman 2012-2017
- TC-CIM ‘Benchmarking Chloride Ingress Models on Real-life Case Studies: Theory and Practice’, 2016-
- TAC Technical Activities Committee, Member 2009-2014; Convenor Cluster C, 2010-2013

7 | PERSONAL



PROF. IOANNA PAPAYIANNI
Aristotle University of Thessaloniki, Greece

TC Chair

I was introduced to the world of RILEM by Prof. Theodosius Tassios in the middle of the 80's. I did research on cementitious materials in concrete and he suggested to me RILEM documents as basic literature. I perceived at once that RILEM Technical Recommendations contained filtrated and very comprehensive knowledge that helped me with proceeding in depth to my research. Afterwards, I read all hard copy editions found at the Library of Civil Engineering School of Aristotle University Thessaloniki. Therefore, I was always aware of selected good papers on advanced concrete technology. Later, RILEM, like a balloon above the planet earth, expanded into a broad spectrum of activities concerning materials, systems, and structures to cover the needs of modern construction worldwide.

In the 90's, I conducted as scientific responsible a NATO SfS project about Materials for Restoration of Monuments and Historical Buildings. I had organized an International Workshop on the objectives of the NATO project and there I met Prof. Luigia Binda, who invited me to join the RILEM TC 167 COM "Characterization of old mortars with respect to their repair" under the chairmanship of Prof. Caspar J.W.P. Groot from the University of Delft. The objectives of this TC were of great interest to me since Thessaloniki, my city, after the catastrophic earthquake of 1978 was an open restoration site.

Thenceforth, I actively participated in the relevant TCs, TC 203 RHM (2003), TC 243 SGM (2010), under the same chairmanship of Prof. Caspar Groot who promoted an atmosphere of fairness, mutual respect, and camaraderie within the TC members. I often remember his humor and provoking questions to make us feel relaxed.

Another TC 277 LHS, resulted from the works of the previous ones, was running from 2017 under the RILEM cluster E. For more than 15 years experts dedicated to restoration of monumental structures formed a core board that is working on producing innovative knowledge, sound test methods and a plethora of documents and publications on this topic. I strongly believed that in the frame of the above-mentioned sequential TC(s) a great impetus to the restoration sector has been given and principles like "compatibility" and "retreatability" were transferred into practice.

Apart from RILEM workshops organized by TC(s), a constitutional conference devoted to Historic Mortars (HMC) has been established and organized by the core board every three years. The first HMC was organized by Dr Rosario Velga from LNEC in Lisboa. The attached photos are from the last HMC 2016 organized by the Laboratory of Building Materials (AUPh) in Santorini.



The cornerstones for the success of RILEM are included in the title of this Union, namely LABORATORIES and EXPERTS. Young researchers working at Laboratories for testing material and structural elements meet experts who have spent a life working inside Labs or/and on sites. A knowledge flow from experts to young scientists like an opposite osmosis phenomenon occurs at the TC meetings. Many problems are clarified, and new options emerge by exchanging experiences. Interrelations of Labs are developed, helping with the execution of expensive tests or round robin testing. Moreover, any resolutions and documents produced at TC meetings are consensus-based. That is why the contribution of RILEM to the world is essential and much appreciated by the society at large. The real resource of RILEM is the great number of volunteers supporting the RILEM activities.

For 75 years RILEM has motivated a great number of scientists from all over the world to work for quality in construction in terms of safety, durability, sustainability and economy to meet the needs of a changing world, for a better future. However, continuous effort is required to transfer advanced technology achievements in practice. New modes of activities should be developed directly connected to the reality of construction/repair projects.

PROF. DR. MANFRED N. PARTL Empa, Switzerland and KTH, Sweden

Hon Member 2017, Fellow 2003, TC Chair, TAC, Cluster E Convener, Assoc Ed 2020, DAC Expert

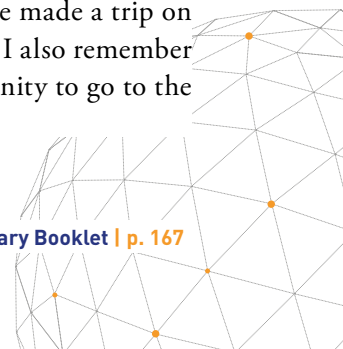


My first contact as active RILEM member was 1992 at the end of TC 101-BAT “Bitumen and Asphalt Testing” chaired by Hermann Fritz from Empa. As a young scientist and engineer it was a motivating honor to be in direct contact with well-known bituminous experts at that time, such as Louis Francken, Jean Verstraeten, Ulf Isacson, Enrico Eustaccio, Ian Pallos, Il-lan Ishai, some of who I only knew from their names in publications which I studied during my own PhD work. Since this was pre-internet time this was a big opportunity, given the fact that travelling for scientific exchange was quite tedious and expensive. It was even more inspiring being accepted by all these “bituminous dinosaurs” at eye level when 3 years later I was appointed as leader of Task Group 3 on “mechanical tests” within the Technical Committee TC 152 PBM “Performance of Bituminous Materials” under the chairmanship of Louis Francken. From then on, RILEM became part of my professional career motor.

In 1999 I was appointed chair of TC 182-PEB “Performance Testing and Evaluation of Bituminous Materials”, 2004 chair of TC 206-ATB “Advanced testing of Bituminous Materials” and 2010 chair of TC 237-SIB “Testing and Characterization of Sustainable Bituminous Materials”. Within the RILEM organization I became 2003 member of the TAC “Technical Advisory Committee”, 2007, Convener of Cluster E on “Bitumen, Masonry and Timber” and in 2014 member of DAC “Development Advisory Committee”. I was nominated twice member of jury for selecting the winner of the L’Hermite medalist and once member of the committee for proposing a new RILEM president. In 2003 I was granted the RILEM Fellowship and in 2017 I was awarded the RILEM Honorary Membership.

Looking back at the work of my TCs, it is very satisfying to see that they were very successful in proposing different recommendations, issuing several papers and state of the art reports as well as triggering major RILEM conferences, in particular MTBM97 in Lyon, PEBM03 in Zurich, ATCBM09 in Rhodes and TCSIBM15 in Ancona. They were also successful in promoting careers of many modern bitumen and asphalt experts who now hold many significant academic positions all over the world. Amongst many others, I would like to mention Hervé di Benedetto who is about my age and became through RILEM a long-time good colleague and friend of mine, providing active support in establishing modern fundamental mechanical and scientific principles in the activities of the RILEM bituminous TCs and making bitumen a material that was no longer in the shadow of all the other cement-concrete oriented TCs within RILEM. Without his and the commitment, idealism and personal initiatives of all the other (about 200) good colleagues who contributed many hours and devotion on a voluntary basis, the remarkable achievements of my RILEM TCs would not have been possible and I am deeply grateful and in debt to all of them.

But, of course, we also had a lot of fun and nice social events. Amongst others, I still remember when, at the meeting 2007 in Nantes, we were all invited to the famous “les machines de l’îles” where we made a trip on the great wooden Elephant and I found me suddenly trapped within a big fish like in a cage. I also remember many other well-organized meetings like in 2010 in Madison, where we had all the opportunity to go to the museum and sit on a Harley Davidson for a fake drive.



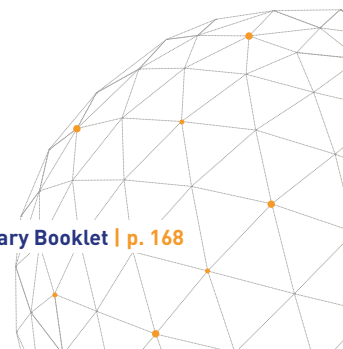
RILEM is truly a unique organization that has its value in voluntarism, meaning that only people who are interested in open discussions under experts and committed to the tasks of the different TC's, are participants. This is not always easy but, at the same time it is also the secret of RILEM's scientific success, provided it is not overshadowed by the increasing need to produce publications for the sake of personal visibility. Egoism instead of team spirit would be the death of all RILEM efforts.



Another risk is that TCs tend to promise too much. Ambitious goals are very positive but focusing on specific questions instead of trying to “save the world” with one single TC is certainly more rewarding at the end of the day. RILEM should continue to create more non-cementitious TCs and move forward to other materials testing and evaluation challenges.

Questions like testing of materials and structures from additive manufacturing and 3D printing are certainly topics that should be looked at. Combined materials in the field of polymers, ceramics and even unbound materials or recycling of waste and marginal materials are certainly topics that should be considered. In addition, of course, all testing and material issues that are related to global warming and required resilience to catastrophic events should be considered.

Anyway, I think RILEM with its long history, has proven that it is truly adaptable and meets scientific, technical and social needs, as well as serving as a platform for young engineers and scientists to enter their professional life and career. Hence, I am convinced that RILEM will continue pragmatically on its path to the future during the next decades successfully.



ASSOC. PROF. DR RADHAKRISHNA PILLAI

Indian Institute of Technology Madras

DAC, Regional Convener South Asia



My own personal ‘history’ with RILEM

Affiliate and Senior Member - From 2010, 2011 onwards, respectively

Regional Convener (RC), South-Asia (2018-2020)

Member, Development Advisory Committee (DAC) – 1st mandate from March 2019

Key personalities whom I met through RILEM and who contributed to my development

Prof. Mark Alexander

Prof. Surendra P. Shah

Dr. Carmen Andrade

Dr. Maria Cruz Alonso

Prof. Christoph Gehlen

Prof. Rob Polder

Prof. Michael Raupach

Prof. Doug Hooton

Prof. Jason Weiss

Prof. Angst Ueli

Members of the RILEM TC-SCI

Highlights of my association with RILEM

Key organiser for the 71st RILEM Annual Week 2017 in Chennai

Member of the RILEM TC-SCI

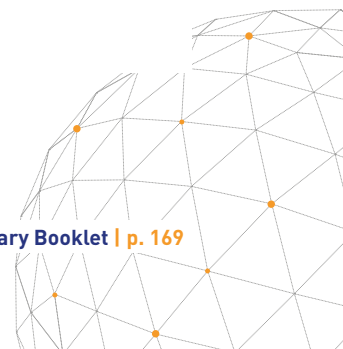
Member, DAC

Personal observations

I feel RILEM continues to focus on developing recommendations for testing materials and systems. Unlike many other professional organizations, I noticed that the RILEM events are attended mainly by scientists and academicians and the focus is mainly technical.

I think RILEM needs to develop moving forward by attracting more young professionals, graduate students, and senior undergraduate students from the countries with weak economies. My suggestions for this are

- enable Free e-membership,
- provide wide publicity for the RILEM Scholarships to attend RILEM Weeks/Conventions,
- provide free access to all the publications for a limited period,
- increase active participation in TCs by having TC meetings in various parts of the world.





PROF. GIOVANNI PLIZZARI
University of Brescia, Italy

*fib Representative, Deputy Editor in Chief of M&S,
TAC Expert, Convener Cluster C*

I joined RILEM as a member in 2004.

In 2014, I was invited by Ravindra Gettu (TAC Chair at that time) to become member of the Technical Activities Committee (TAC) as an expert. Since 2018 I have chaired of TAC Cluster C “Structural Performance and Design”.

I have also been Associate Editor of the international journal Materials and Structures and, from 2017, Deputy Editor in Chief.

My research nowadays mainly focuses on Fibre Reinforced Concrete (FRC) that has been widely studied by RILEM for more than 20 years. Milestones in this field are RILEM’s recommendations for TC 162-TDF on steel fibre reinforced concrete (SFRC):

- Test and design methods for SFRC: uni-axial tension test
- Test and design methods for SFRC: bending test
- Design of SFRC using the sigma-epsilon method: principles and applications
- Design of SFRC using the sigma-w method: principles and applications

RILEM also started a successful series of conferences on Fibre Reinforced Concrete (BEFIB) in 2000, organized in Paris by Pierre Rossi and Gilles Chanvillard.

I had the honour to organize with my friend Marco di Prisco the next conference (BEFIB 2004), in Varenna (Lake Como, Italy). Many participants still remember this as a very pleasant and fruitful event.

Shortly after BEFIB 2004 we organized the 1st European-USA workshop on FRC (in Bergamo, Italy), where several participants from Europe and the USA discussed the main open issues on material characterisation and design.

Ten years after this workshop, in 2014, fib (international federation of structural concrete) and ACI organized a new workshop in Montreal (Canada), with the sponsorship of RILEM. The three organisations (ACI, fib and RILEM) organized the next workshop in Desenzano (Lake Garda, Italy), in 2018.

All these activities provided an outstanding contribution to the development of FRC rules in the fib Model Code 2010, considered a reference document by many designers worldwide (especially for tunnel linings) and by many building-code makers in several countries of the world. MC 2010 was the first document to provide a simple FRC classification for considering FRC as a performance-based material, which represents the only way for really introducing FRC into the real world of designers. The idea of this classification was raised in Chennai, during

BEFIB 2008 (organized by Ravindra Gettu) with Pedro Serna, Marco di Prisco and me while drinking a cup of very good Indian tea.

Now I am honoured to be the RILEM and fib member to encourage links and joint activities between the two organisations, that have all the potentials to generate synergies, since RILEM has a huge experience in material testing and fib has expertise in structural design. Within this collaboration, there are now several joint activities, for example, in concrete industrial floors and digital concrete. The latter has been termed the “third industrial revolution” in recent years and promises to revolutionize the construction industry with the potential of freeform architecture, less material waste, reduced construction costs and increased worker safety.

Looking at the future, I hope to see a stronger collaboration between RILEM and other international associations, moving forward in the direction of a fruitful globalization of the culture of materials for constructions and design rules. This will be very helpful for all researchers and designers of the world.

PROF. HANS W. REINHARDT Universität Stuttgart, Germany

*Hon President 2001, Fellow 1996, Hon Member 2009
TC Chair*



The following lines give my very personal view of some experiences in RILEM.

My first encounter with RILEM was in 1967, when the TC 006 met in Stuttgart. The topic was the testing of natural stones. At the time, a diploma thesis on the influence of specimen size on the strength of cubes and cylinders was in progress in Stuttgart, which I supervised.

In the following year the symposium, “The evolution of mechanical equipment for testing building materials”, took place in Stuttgart. At that time, my first boss, Professor Gustav Weil, was National Delegate of Germany. The photo below shows the numerous participants from 25 countries. Maybe, you will recognise some of them. At that time, it was common that the lectures were simultaneously translated into English, French and German. As a young researcher, I was impressed by the international distinguished experts present. In addition, my boss has always enthusiastically reported from the RILEM meetings abroad. That is how I was inspired to become active in RILEM.

Later, I always appreciated the support of the secretariat of RILEM in organizing symposia. The first, which I directed myself, was “Testing during concrete construction” in 1990, an item that I consider to be very important still today.

The symposia series entitled “High Performance Fiber Reinforced Cement Composites (HPFRCC)” started in 1991 with Professor Naaman of the University of Michigan and was held seven times through 2015, alternatively in Germany and the USA.

I was always impressed by the international atmosphere and liked the many personal contacts and friendships that were associated with it. At RILEM, I appreciate the worldwide presence and, of course, the related activities. In the Technical Committees and Standing Committees it was always a give-and-take, and certainly a rich experience. Besides hard work, there were also social events which I liked and which I would not like to forget.

I can only recommend any young scientist to get involved in RILEM.

I wish RILEM many more successful years.





PROF. MOEMA RIBAS SILVA
Federal University of Espírito Santo, Brazil

Fellow 2002, TC Chair

Becoming a RILEM full member in 1983, recommended by Dr. Hernani Savio Sobral, the Brazilian Delegate, was a very important step in my development as a researcher and professor in the field of concrete technology. After becoming the Brazilian Representative, with the retirement of Dr. Sobral, I assumed the position of RILEM Brazil Delegate.

My doctoral thesis allowed me to work on concrete microstructure and biodeterioration of concrete structures. In 1998 I was invited to propose a Technical Committee on this matter, and I accepted the challenge, becoming the Chair of the TC 183-MIB - Microbial impacts on building materials - Weathering and conservation. This subject attracted some professionals working on this theme, who became RILEM members.

Through this activity it was possible to organize many events promoting meetings of the researchers in this area. Several articles were published which are read and cited by other researchers even today. Among these, the most popular articles are “Techniques applied to the study of microbial impact on building materials” which describes different techniques applied in the research, authored by a group of the TC members (R.G. Welton, M. Ribas Silva, C. Gaylarde, L. K. Herrera, X. Anleo, N. De Belie and S. Modry) and “Microbial impact on building materials: an overview”, authored by myself, Christine Gaylarde and Thomas Warsheid.

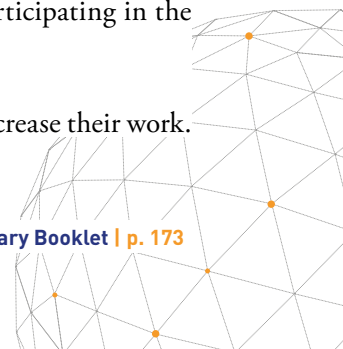
In 2007, for familial reasons, I had to leave my functions in RILEM. Dr. Nele De Belie, from the Ghent University, Belgium replaced me as Chair of the TC 183-MIB.

As a member, I observed that RILEM promotes the contact of the researchers working on the same subject, to contribute to discussions and formation of groups from different countries to work together. In the case of the TC-MIB this was very useful, considering that the research was multidisciplinary, involving researchers from different areas such as Chemistry, Building Materials, Biology, etc. RILEM help me to contact other researchers with whom I developed collaborations. The most important was the International Cooperation between the University of Brasília (Brazil) and the Hochschule Bremen, Germany, coordinated by me, and Dr. Jörg Kropp, to study biodeterioration of historic monuments.

During the Annual RILEM Meeting of 2002, in Madrid, I was surprised when Dr. Carmen Andrade, the RILEM president, nominated me as a RILEM Fellow. This made me very happy. Besides professional contacts, it was very agreeable to know people from different countries where the meetings took place such as: Portugal, Spain, Italy, Germany, Switzerland, Morocco, Mexico, Slovakia, Australia, etc.

RILEM was a great help on the development of my research. Being a RILEM member and participating in the meetings allowed me to make very interesting personal and professional contacts.

I hope that RILEM goes on promoting the contacts between researchers in order to help them increase their work.





DR. PETER RICHNER
Empa, Switzerland

President 2009-2012, Treasurer 2002-2007, Fellow 2007

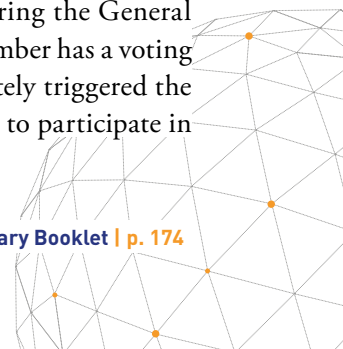
Since RILEM is a Swiss Association, it was a long tradition that a representative of Empa acted as treasurer of RILEM. When Prof. F. Eggimann retired from Empa in 2001, he proposed me for this position, and I was formally elected by the General Council in 2002 in Madrid even though I had not played any active role in RILEM up to that point. However, I rapidly learned to love the organization which was and still is composed of highly motivated people. Financially, it was a very difficult period, because we had a large number of “members” who did not pay their fees for many years and we were engaged in a complex discussion with the French tax authorities. Together with the secretariat and C. Andrade and A. Skarendahl, who were Presidents of RILEM over this period, we managed to set clear rules and procedures which laid the basis for the financial success of the association we have seen since then.

I was deeply honored when I was elected as Vice President in 2006 in Montreal. It was the start of nine intensive years. During the Presidency of A. Bentur from 2006-2009 the restructuring of RILEM, which already had started under A. Skarendahl, gained momentum. The focus was always on creating more value for the members. This also meant that we stopped the publication of Materials & Structures by RILEM itself. Instead we negotiated the first contract with Springer. The transition was anything but easy and the Editor in Chief J. Marchand, had to invest an enormous amount of time and energy to keep the Journal alive. The new orientation of RILEM also created tensions within the organization, which eventually led to the resignation of M. Brusin as Secretary General. P. Ducornet became his successor and at the same time the position of a Director of Development was created. G. De Schutter was the ideal person for this role and he was probably the most important person for me during my Presidency from 2009 to 2012, since he was not only doing an excellent job, but also became a friend.

Together with my colleagues in the Bureau, I tried to make RILEM more inclusive and more global. We continued to offer membership fees which scaled with the GDP of a country, to make it easier for colleagues from developing countries to become active members of RILEM.

We reactivated the connection to Latin America, intensified our contacts with China and Eastern Europe and Africa as well. In all cases I had the privilege to be supported by members which had good connections to these regions and were willing to open doors. I am more than happy when I have a look at today’s website of RILEM which has a separate header called “RILEM Worldwide”.

Of course, not everything worked from the start as we had hoped but the spirit of RILEM to give new ideas a try and to adapt the procedure if needed was key. This can be illustrated by a little anecdote from the RILEM Week 2011 in Hong Kong. We proposed to the General Council a change of the rules for the participation in the General Council. Until then, only a limited number of people were permitted to vote during the General Council, typically representatives of Titular Members. The new rule said that basically every member has a voting right. However, only members who paid their fees were considered as members. This immediately triggered the remark by the Honorary Member Prof. H. Reinhardt from Stuttgart that he would not be able to participate in



the General Council anymore since Honorary Members do not pay a membership fee ... It was probably the most embarrassing situation during my Presidency, but we managed to change the rules on the spot accordingly and the General Council approved them.

I was lucky to hand over the Presidency in 2012 to M. Alexander who gave the association an additional boost. RILEM has become today a truly global organization with a stable and active membership. I believe that this is due to the open culture within RILEM and the mutual respect between the members. The motivation is always to create, validate and disseminate knowledge in an open access approach. This makes RILEM unique and will guarantee the future success of the organization. With this spirit RILEM will be able to make most profit from new opportunities such as digitalization. The limited resources on this planet and the desperate need of millions of people for better infrastructure and housing ask for global access to the best available knowledge on construction materials and structures which only RILEM can provide.

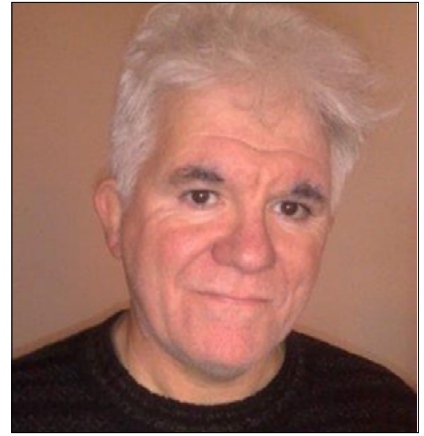


7 | PERSONAL

DR. PIERRE ROSSI

Gustave Eiffel University, IFSTTAR, France

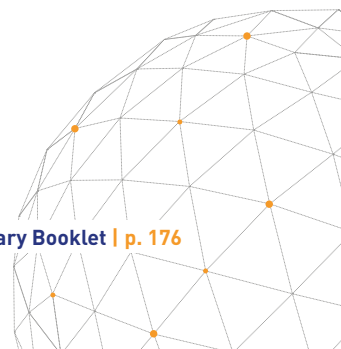
*Robert L'Hermite Medalist 1996,
TC member*



My research career has been linked closely with RILEM since my beginnings, thirty-five years ago, until today. So, I have a special affection and recognition for this International Association (and not only because it was created by the French!). I hope I have aged as well as it.

I was able to appreciate, beyond the excellent state of mind, that always circulated in it (international conference, working groups ...), its real usefulness to the industrial world, particularly through the technical recommendations that have allowed the profession of construction to maintain a good level of innovation.

If I had a wish (a recommendation would be too pretentious), to formulate for RILEM's future, I would say that, although historically RILEM has based its existence, fame, and competence on the experimental aspects, it seems important to me that in the future, it take into consideration the advent of numerical modelling in the profession of construction. This numerical modelling is revolutionizing the art of designing and building and I think that RILEM has all in place to accompany this advent.





PROF. ERIK SCHLANGEN

Delft University of Technology, The Netherlands

Hon President 2018, TC Chair

PERSONAL HISTORY WITH RILEM: RILEM and views of the future.

TC's that are completed:

- RILEM TC 89 fnt chaired by Alberto Carpinteri (1989-1993)
- As a PhD student participated in a round robin on “mixed mode fracture of concrete”.
- RILEM TC 90 fma chaired by Lennart Elfgren (1990-1995)
- As a PhD-student participated in a round robin on the “pull-out of anchor bolts in concrete structures”.
- RILEM TC 200 HTC chaired by Ulrich Schneider (1999-2004)
- Worked on RILEM recommendations on mechanical concrete properties at high temperatures.
- RILEM TC 221 SHC Chaired by Erik Schlangen (2005-2013)
- Published the state-of-the-art book on self-healing concrete.
- RILEM TC 240 FDS Chaired by Gideon van Zijl (2010-2016)
- Published state of the art book on durability of SHCC.
- RILEM TC 246 TDC Chaired by Yan Yao (2010-2018)
- Published state of the art articles on combined loading.

Ongoing TC's:

- RILEM TC 244 NUM Chaired by Klaas van Breugel (2011-.)
- RILEM TC 249 ISR Chaired by Viktor Saouma (2014-.)
- RILEM TC SHE chaired by Xing Feng (2016-.)

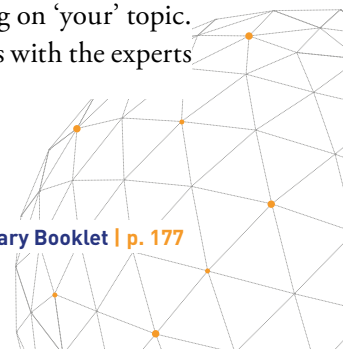
Serving as a co-chairman.

- RILEM TC 278 CHA chaired by Hassan Baaij (2016-.)
- RILEM TC CEC chaired by Jiaping Liu (2018-.)
- RILEM TC FTC Chaired by Folker Wittmann (2018-.)

Organisation of conferences:

- 2014: Chairman of RILEM conference SHCC3 on Strain Hardening Cementitious Composites in Dordrecht, The Netherlands.
- 2018: Honorary President of RILEM and Chairman of the organisation of the 72nd RILEM-week in Delft, The Netherlands.
- 2010-2020: Member of the organising committees of 8 RILEM-conferences organised by TU-Delft.

Through RILEM, I met many people who became part of my own development. RILEM conferences are excellent for meeting people. Participating in RILEM TC's is the best way to get to know people working on 'your' topic. When you attend the meetings of TC's you can discuss in detail the work of the TC for a few days with the experts and you also get to know them personally during lunches, dinners, and drinks.



The top 3 highlights of my association with RILEM are:

- 3rd place: Plenary lecture on Self-healing materials during the RILEM-week in Hong Kong in 2011
- 2nd place: Webinar for RILEM on Self-healing materials in 2012
- 1st place: Organisation of RILEM-week in Delft in 2018

Regarding Personal Anecdotes and Memories, usually anecdotes are of humorous nature. However, here I would like to mention a memory coming back from a RILEM meeting which I will never forget. It was on 9-11-2001. We had a 3-day meeting of RILEM TC-200-htc. In this TC we discussed behaviour of concrete at high temperatures and fire. I was driving back in my car from Stuttgart in Germany to Delft on the German autobahn. Normally cars drive here with a speed around 200 km/h. But that afternoon the tragedy happened in New York with the world trade centre. Everybody was listening to the news on the radio and the few cars that were on the highway all just stood still. At that moment you think that the world just stopped.

RILEM's future development:

The participations of young researchers in the work of RILEM is most important, because young people are the future. I participated as a PhD student already in two RILEM TC's. This turned out to be very fruitful for my future career. I loved discussing my work with the big professors and I was amazed that they also are really interested in the results you obtain.

Stimulating young researchers to come to RILEM-events is an important task for RILEM in the future. This should not be done to my opinion by organising special PhD-conferences, but the young researchers should attend the regular events and conferences. The interaction with the older guys is of utmost importance!

At the 72nd RILEM week in Delft we organised a RILEM travel grants competition, offering these grants to 14 young (under 35) researchers from developing countries. The winners of the grant, which covered travel, registration, and lodging, were selected by a jury that carefully looked at the relevance of the topic of their work and their motivation to participate in the RILEM events. One of the highlights also was a breakfast with the RILEM presidency and the travel grant winners which resulted in a fruitful brainstorming session for new directions and initiatives for RILEM. These kinds of supporting actions should be continued.

You Tube Interviews:

RILEM-Webinar in 2012 on self-healing:

<https://www.youtube.com/watch?v=yAsY2RaqE&feature=youtu.be>

TED-talk on Self-Healing Asphalt in 2012:

https://www.ted.com/talks/erik_schlangen_a_self_healing_asphalt

7 | PERSONAL

DR. WOLFRAM SCHMIDT

**BAM (Bundesanstalt für Materialforschung und -prüfung),
Germany**

*Bureau member 2020, Assoc Ed RTL,
DAC Regional Convener Sub-Saharan Africa, EAC Member*



My first contact with RILEM was a conference bag of the RILEM week in Lisbon 2003, which I did not even attend, but inherited when my department leader Matthias Maultzsch, (also a RILEM enthusiastic) retired a few years after the conference. The bag is super handy and has the perfect format for exactly the most urgent things required on the plane. I travel a lot, and still today this bag makes me happy. Even at the moment I started to write this text, travelling back from the RILEM Spring Convention 2019 in Rovinj, this bag was right next to me.

The bag came just in the time, when I attended my first RILEM conferences, encouraged by my division leader at that time, Birgit Meng. I think the first one was 2007 in Ghent. I was so excited to listen to all the famous personalities there, but quickly found out that beyond listening there was so much mutual communication. The community was so inclusive. Quickly, I became member of the Technical Committee MPS of Kamal Khayat and Geert de Schutter, and I think there is no better way to get addicted than working in the excellent atmosphere they created. Then, one step followed another, and suddenly I found myself heavily involved.

I was member of TC 228 chaired by Kamal Khayat and Geert de Schutter and today I am active in TC 266 with Mohammed Sonebi and Dimitri Feys as well as the newly founded TC AMC with Said Kenai and Mike Otieno, the formation of which had been a dream for a long time.

Since 2017, I am also proudly a member of the EAC. This is amazing, as it is very inspiring to learn what is going on in terms of e.g. PhD courses all over the world.

Finally, at the RILEM week 2018, I was elected Africa convener in the DAC. This role felt strange to me initially, since even though I may have become 50% or more African at heart, I am European. However, it makes a lot of sense, since so many of my activities take place on the African continent, and mobility is the greatest obstacle of most African researchers to becoming more active in RILEM. I think I do have a good overview of what is going on. Hence, I proudly try to push activities that can be linked with RILEM activities. The TC AMC might have been a good start, and a student seminar was organised along with a RILEM Mishikaki night in 2020. I hope that much more can be sparked.

I am chairman of the RILEM conference series Advances in Cement and Concrete in Africa (ACCTA), the first of which took place in 2013 and 2016, and which had a longer idle time recently for some reason. Together with Mike Otieno, we plan to put it back to life in 2022. Furthermore, in 2017, I co-organised the COMS conference in Zadar, which was also an important RILEM event.

We also organized the young students' educational series, Knowledge Exchange for Young Students (KEYS), which was co-sponsored by RILEM. This student conference series took many invited RILEM speakers to wonderful African places like Dar-es-Salaam, Accra, and Johannesburg, to inspire the next generation of researchers and I think the African experience has definitively had certain impact on many RILEM friends.

I think it would need the full membership list to be ticked off if I wanted to mention all key personalities that inspired me. I met so many incredibly experienced personalities like Suru, Dubravka, Mark, Karen, whom I adore for their scientific brilliance, philosophy, and world view. They have coined my own development, as much as all the young researchers and students did with their creativity, newness, and ambition, and all those wonderful people who liked to stay a bit longer for a good chat.

One of the greatest highlights with RILEM, was the working spirit I experienced during our KEYS Young Researchers Symposium in 2015 in Dar es Salaam. There were excellent RILEM keynote speakers and about 30 students, and we had three days of presentations from 8:00 a.m. to 6:00 p.m., followed by student workshops. No one forced the students and young researchers to work until late at night, but there was so much energy in the room, that some workshop groups worked until 11:00 p.m. and later.

The more I think about finding a single anecdote the more impossible it is getting. There are just too many of them, and they are best told with a glass of wine during a conference dinner. Some have to do with the odyssey in Seville, or intrigues in Johannesburg, others with missed session chairs in Chicago, Whisky in Belfast, or the camouflage water bottles in Rovinj, and there are so many more. There is drama, glitter, and big emotion, just like in soap operas or in real life. This is RILEM.

Although RILEM seriously wants to embrace the entire world, yet it is too exclusive in its communication with the world. There has been a tremendous modernisation process, that will attract and create new younger talents. Nevertheless, I doubt that many people enter RILEM without a mentor, who push and support active participation. For those, who do not have the privilege of such a mentorship, RILEM may remain quite abstract.

Much of the communication of RILEM is very relevant for a RILEM audience, but it may be less relevant from an outside point of view. By creating new and more transparent access roads, we can probably reduce unwanted exclusiveness.

And I believe, we have more stories to tell into the world. Some major message we need to send are:

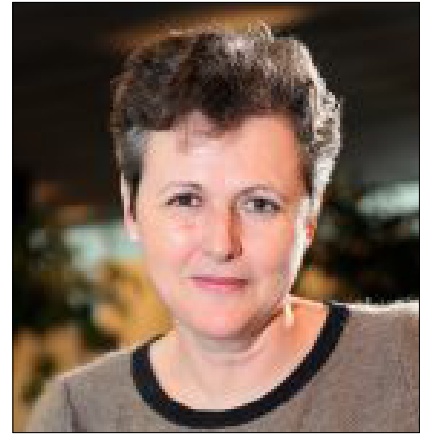
- On the larger scale RILEM contributes to a safer, more sustainable, and knowledge-based environment. RILEM and every individual in RILEM can make this world a better place.
- RILEM is 'Giving and Taking', but unlike in business, eventually there is more to allocate than is given, since RILEM itself, acts as a marvellous multiplier of the given input.
- RILEM is as unbiased as an organisation can be. In RILEM we should celebrate this much more, and be aware how blessed we are, but it also gives us a societal responsibility.

So, I believe that RILEM has a responsibility to the world, as well as potential that goes far beyond technical and administrative issues. And maybe we should put our responsibilities more into focus.

PROF. KAREN SCRIVENER

**EPFL, Swiss Federal Institute of Technology in Lausanne,
Switzerland**

*Honorary Member 2019, RILEM Fellow 2006
TAC, EAC Chair, TC Chair*

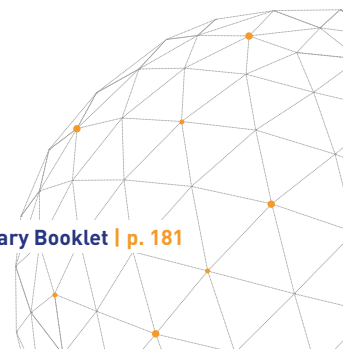


My first involvement with RILEM was as a recently graduated PhD student. There was great interest in modelling cement hydration, which led to the formation of the TC 68 MMH (Mathematical modelling of hydration). This committee quickly realised that you could not “mathematically model” a reaction which was not understood, so due to my PhD work Hal Taylor asked me to participate in the committee. Then, while I was still at Imperial College, I participated in a couple of committees on the ITZ (interfacial transition zone between cement paste and aggregate). However during the period that I worked for Lafarge (1996-2001), I had little contact with RILEM.

When I moved back to academia, EPFL, in 2001, I felt RILEM would be a good way to reactivate connections. The first RILEM week I attended, in this phase, would have been Paris in 2000, where I realised there was already a revolution going on to transform RILEM from a “old boys club” dominated by National representatives, to a much more open democratic institution with a more important role for the technical experts we see today. I joined TAC as one of the first cluster convenors and participated in many of the strategic workshops through the first decade of the 21st century. I think the open publication strategy and much more dynamic RILEM weeks are only two examples of the positive output of these workshops.

I have been active in several TCs in the last 20 years: Internal Sulfate Attack (DEF); Aggressive solutions, SCMs. I am particularly proud of the committee I currently chair – TRM (tests for reactivity of Materials). I think this is an excellent example of what a RILEM TC can do. We realised that although blended cements, containing SCMs (supplementary cementitious materials) are becoming more and more prevalent, but standards are very vague on quantifying their reactivity. First, we made a comprehensive assessment of existing methods and showed many traditional methods had very poor relations to performance on cement. This has led to the development of a new test method: R3 Rapid reliable and relevant. This test gives reliable indication in 3-7 days of the 28-day strength for a SCM in a blend and is close to being accepted as a new standard method.

As to people, I think in recent decades RILEM has been blessed by an outstanding series of pro-active presidents who have completely transformed the organisation for the better. Carman Andrade, Arnon Bentur, Peter Richner, Mark Alexander, Johan Vyncke and Ravindra Gettu. These and many others, who I am happy to count as friends and mentors, I have encountered through RILEM.



7 | PERSONAL

PROF. SURENDRA SHAH

Presidential Distinguished Professor, University of Texas, Arlington
Walter P Murphy Professor (Emeritus), Northwestern University, Illinois

*Honorary Member (2010), Robert L'Hermite Medalist (1980),
CCC, MAC, TACr*



My association with RILEM started in 1970 and I am fortunate in that it is still fruitfully continuing.

I have been Chair of the three RILEM committees and involved in the management part of the RILEM. I was also instrumental in RILEM's contract with Springer to publish our journal, *Materials and Structures*, when I was the editor-in-chief.

When I started at RILEM, it had a distinctive European flavour. When I received a notification (1980), that I was awarded the RILEM L'Hermite Medal, I thought that I must give my acceptance speech in French. So, I took private French lessons. I did give my acceptance speech in French during the ceremony in Switzerland (organized by EMPA).

Apparently, after my speech, Maurice Fickelson thought (wrongly) that I spoke fluent French, and he sent me the articles written in French to review. I had to ask my French graduate student to translate them in English before I could review them.

During that period, my wife and I travelled frequently in France. My "hotel" French was indeed helpful during those wonderful trips. We always travelled with our bible: Red Michelin. However, without practice, my French is now really bad.

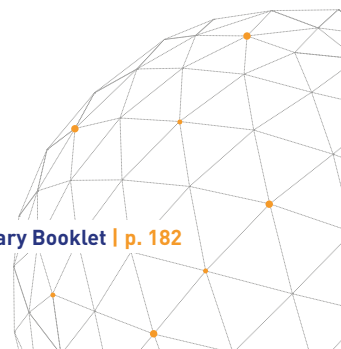
I am very pleased that RILEM now has evolved into truly international organization. This is clearly evident in the fact that the current president of RILEM, Ravindra Gettu is a distinguished professor at Indian Institute of Technology, in Madras. Its next general meeting is in Nanjing.

Initially RILEM was dominated by the state funded laboratories such as LCPC. It was run by the directors of those laboratories.

Now it is populated by a large number of very active researchers from all over the world.

The strength of the RILEM is its intellectual heft and in its focus on the science and technology of construction and building materials.

It is also noticeable that RILEM is forming ties with Asia and Africa where increasing urbanization will require abundant infrastructure materials and evolving knowledge of sustainability and conservation of energy in use of materials.



7 | PERSONAL

DR ÅKE SKARENDAHL **CBI (Swedish Cement and Concrete Institute)**

*President 2003-2006, Hon President 1999,
Bureau member, Hon Member 2009, Fellow 1996*



After finishing at the engineering school (Royal Institute of Technology, KTH, Stockholm), I accepted a position as a researcher at the Swedish Cement and Concrete Research Institute (CBI) – located at the KTH campus in Stockholm. Work on research projects were mixed with consultancy activities for the sector. Under the leadership of Professor Sven G Bergström, the institute director for a number of years, we young researchers were encouraged to look for worldwide knowledge as well as working with colleagues on the international arena. RILEM work was highly appreciated and I was proposed to take part in a committee working on fibre concrete.

In 1979 CBI organised a RILEM Symposium on Quality control of concrete structures in Stockholm. A colleague at CBI was working on papers on the theme of the symposium, while I was asked to organise the symposium as such. During the work with the symposium I interacted with a number of participants also active in the central groups of RILEM. I was asked to take on the task of being the secretary of the RILEM Coordination Committee, and that was supported by the Institute.

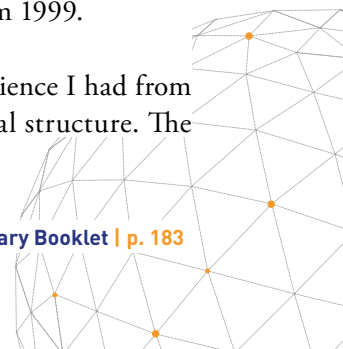
The involvement in the management work within RILEM led to participation in yearly spring meetings having an administrative character and broader annual autumn meetings (General Council meetings). This involvement gave valuable insight into the work and the persons involved in the RILEM TC network, as well as into the operation of the central groups of RILEM.

From my work in the Coordinating committee I realised the value offered through the cooperation within RILEM. Later on, when I was in charge of the research institute in Stockholm, I strongly encouraged my staff to engage in international cooperation. One day one of my co-workers returned from a RILEM TC meeting on workability and told me that Japanese members of that committee reported on laboratory tests as well as full scale tests with fresh concrete free flowing to the extent of not needing compaction with vibrators. We immediately started own work at home to evaluate this new possibility.

CBI took an initiative to start a RILEM Technical committee on the subject and asked for a leadership either from Japanese colleagues (Prof Okamura and coworkers) or Prof. Peter Bartos at Paisley University, based on their pioneering activities in the area. Both abstained from accepting the task as chairman, but supported – and contributed a lot – to the committee work as committee members. I was asked to take a lead as chairman, and the RILEM TC SCC was proposed and accepted through the RILEM procedure. The membership was proposed - and accepted - to be limited to around 15 members to get an efficient work mode.

TC SCC rapidly grew with membership covering four continents. The work of the committee was both interesting and rewarding and showed the drive that can be realised through the RILEM way of international cooperation. The work of the committee ended with the first RILEM symposium on SCC held in Stockholm 1999.

Based on the experience from the organisational work in RILEM, as well as the specific experience I had from leading a TC, I accepted an offer to join the Bureau. I enjoyed working on the organisational structure. The



procedures within RILEM led me to be president for three years, chairing General Council meetings in Moscow, Tokyo and Quebec.

When my active time in the Bureau came to an end, my work in Sweden shifted focus towards dealing with research and innovation within the construction and facilities management area at large. This work led me to operate more with a European rather than a global approach, and I became a more frequent visitor to Brussels than Paris.

I have found it extremely valuable to devote time to RILEM work – and I have never from any board heard any doubts questioning the value of the activities not giving enough in return. The work in close contact with the membership of RILEM has for me been very well spent time – as well as indeed very enjoyable.

The RILEM mode of operation is giving great value through the mechanisms of researcher interaction. Encouraging research workers to interact in real life, and not only study written reports, is significantly adding value. I have no doubt that cooperation within the international research society is also valuable from the point of efficiency in terms of speed and costs. My experience is that RILEM is an excellent tool to achieve this.



DR. MOHAMMED SONEBI Queens University, Belfast

*Fellow 2017, TC Chair
DAC, Reg Convener Middle East & North Africa*

Journey from Morocco/Canada/UK to RILEM

It is my pleasure to write this statement.

In 1955 the first RILEM meeting in Morocco was held, on the invitation of J. Delarue, Director of the Casablanca Laboratory (Laboratoire Public D'essais et d'Etude (LPEE), where I got my first job from 1985 to 1990 as Engineer in charge of control and testing of construction and responsible of R & D of Materials centre.

I knew of RILEM, since I was worked at LPEE which was a member of RILEM, and Director A. Hakimi was very active, as a chair of TC RILEM committee TC-164-EBM.

I used RILEM publications/recommendations, and papers from Materials and Structures in my work.

From 1988 to 1990, I was responsible for 2 projects to promote local materials, funded by the public department of Equipment related to the ramped Earth used in the Atlas Mountains and promotion of local gypsum. I was involved in monitoring building with ramped earth, being used for constructing a sky training centre and the second experimental house made with “béton banché” – gypsum and sand, in 1998 at the capital Rabat. These 2 projects demonstrated the importance of the sustainable and economical constructions with low carbon footprint (gypsum instead cement, as Morocco had a big reserve of gypsum and the ramped earth is typically used in the south of the country). Recently, I visited the gypsum house in 2017, and it is still in excellent condition (Fig. 1).

I also used several technical reports, recommendations and papers from Materials and Structures when I was doing my MSc and PhD at University of Sherbrooke, Canada (1990-1997).



Fig. 1 – Experimental house made with Béton banché (walls and roof).

After this, I was appointed in a position at Paisley University in 1998, and worked on several European projects with Prof. Peter Bartos, who was director of the Advanced Concrete and Masonry Centre, as well as the chair of the committee TC-145-WSC (Workability of Special Concrete). I joined RILEM and co-authored my first report for RILEM in 2002 (Bartos, P.J.M., Sonebi, M., Tamimi, A.), “Workability and Rheology of Fresh Concrete: Compendium of Tests”, TC145 WSM – Workability of Special Concrete Mixes, RILEM Publications S.a.r.l, Paris, 2002, 156 p.



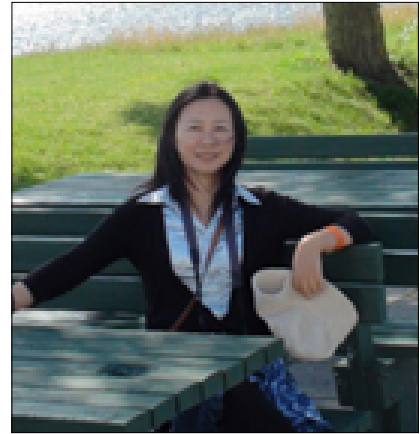
I also remembered the RILEM President Å Skarendahl from 2003-2006. I worked with him on the Brite EuRam project BR-PR-CT96-0366 and GRD2-2000-30024, “Testing self-compacting concrete” and collaborated on several TC-committees and international conferences/workshops on SCC. Both Prof. P. Bartos and Å Skarendahl and others (Prof. K. Khayat, Prof. M. Alexander, Mr. J. Vyncke, etc.) contributed a lot to my development with RILEM. We were awarded with our partners, a certificate by the **Commission of the European Union** for the Brite EuRam Project, as one of ten finalist projects considered for the **Descartes Prize 2002**.

With my involvement in these European projects on self-compacting concrete and other UK research activities, I contributed to other RILEM TCs such as TC-188, TC197, TC-205, TC-222, TC-228, TC-233 and recently with committees on Bio-based Building Materials TC-236 and 275. I am also a member of TC-276 on Digital Fabrication of Concrete. I am the chair of TC-266 on “Measuring Rheological Properties of Cement Based Materials”.

I co-edited 3 proceedings of the first, second and third International conferences on Bio-Based Building Materials 2015, 2017 and 2019 (Reports: PRO 99, PRO 119 and PRO 131) with RILEM Publications s.a.r.l. In 2016, I became the Regional Convenor of the Middle East and North Africa. In 2017, I was awarded the status of RILEM Fellow during RILEM week in Chennai (India), as the second person from the UK receiving this prestigious award from RILEM.

I think RILEM should activate more synergy, and strengthen their activities to attract more young researchers, by offering attractive membership. Also, to assist with progress for committees, more virtual meetings should be facilitated, thus offering a strong and reliable system of communication. Additionally, it is most important to accelerate RILEM activities in different regional parts of the world, particularly in developing countries.

7 | PERSONAL



DR. QIAN TIAN

Sobute, China

2015-2019 DAC Expert, TC member

I have been working with Prof. Changwen Miao in Sobute, the largest Building Chemicals Company in China. While Prof. Miao was working as a DAC Expert from year 2009 to 2014, I helped him with some work and got to know RILEM. In 2014, Dr. Roberto Torrent, the Chairman of DAC at that time, kindly invited me to contribute in following up the work initiated by Prof. Miao. This position was a little bit far beyond my working experience at that time and I felt high pressure at the beginning.

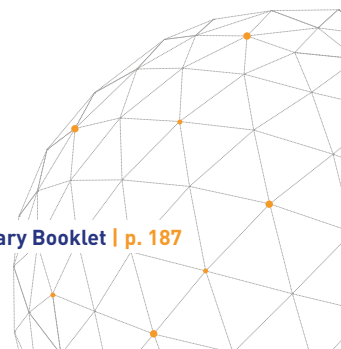
However, as the fresh woman of DAC I always received sincere encouragement from my RILEM ‘colleagues’ like Dr. Torrent, Prof. Geert De Schutter, Mr. John Vyncke, Prof. Mark Alexander, Mrs. Pascale Ducornet et al. Their great enthusiasm and devotion to RILEM also touched me and set good models for my work, in particular Prof. Ole Mejlhede Jensen who opened the international world for me and provided help as much as possible in the first place, whenever I had questions.

Other leading experts like Prof. Jason Weiss, Prof Kostantin Kovler, Prof. Pietro Lura, Prof. Doug Hooton, Prof. Wittmann et al, have inspired me greatly in my professional career with their experience and knowledge. It was an extremely wonderful time working for RILEM together with so many nice and leading professional “colleagues” with common interest and responsibilities.

During my tenure, I tried my best to promote the influence of RILEM in China, including the translation of the Chinese version RILEM flyer, application for 2019 RILEM Week, the set-up of two TCs and organization of four doctoral courses etc. Due to my limited experience, I felt very sorry for Dr. Torrent, who introduced me to DAC, aiming to promote possible RILEM activities, of particular interest to industry. At the end of my tenure, I did not make much progress in this regard.

But I still agree that RILEM should pay more attention to its efforts in the future development, particularly promoting the application of innovative materials and technologies in the traditional building industry for sustainable development of the world. Working in the largest application country of concrete, I will keep trying to promote the knowledge and experience transfer between China and the international world in this field through the platform of RILEM for the rest of my life.

Being one of the two female representatives of DAC, I appreciate the kind encouragement for gender balance. I also think it is most important to encourage more experienced women to be active in the central organization of RILEM in the future.





DR. ROBERTO TORRENT

Technical Director, Materials Advanced Services, Argentina

Fellow 2003, Hon Member 2016, DAC

SOME MEMORIES OF MY LONG ASSOCIATION WITH RILEM

I became aware of RILEM when working as a young researcher at INTI (National Institute of Industrial Technology) in Buenos Aires, Argentina, institution I joined just before graduation as Civil Eng. in the early 70s. INTI had a strong association with RILEM, first, through one of the founders of RILEM in 1947: Prof. Simón Delpech (RILEM Honorary Member 1973), who was also the founder of RILEM's Latin-American Group (GlaRilem) in 1963 and, later, through Prof. Luis M. Machado (RILEM Robert L'Hermite Medallist 1971), both strongly associated with the Institute. Prof. Machado was Secretary of the Latin-American Group of RILEM (GlaRilem), having his own office and secretarial support (provided by INTI).

My boss and one of the decisive tutors in my early career, Ing. Guillermo Napoleon Burgoa, had recently (I joined INTI in 1970) published a paper in *Materials & Structures* v2, n9, (1969), 195-202: "Méthode de maturation pour la prédiction en 24 heures de la résistance à 28 jours du mortier normal RILEM-CEMBUREAU". At that time, looking from the far South America, writing a paper in an international journal (there were few but very good at the time...) was seen as an odyssey, something beyond the reach of simple mortals... so, Mr. Burgoa was quite inspiring... All this background on which I was developing my career, prompt me to join RILEM, although that meant devoting a good deal of my annual salary to the endeavour... (this may have happened around 1974...).

After finishing my stay in the Univ. of Leeds (UK), that later led to my PhD degree there, I returned to Argentina in 1980, to take charge of the Materials Technology Div. of INTI. Soon after my return to the country, an unexpected, sad event took place, with the premature death of Prof. Luis M. Machado.



Foundation of the Latino-American Group 1963.



*Prof. S. DELPECH
Foundation member,
Honorary member, President 1970-1971*



Participants of the meeting in Lund, 1970.



Pr. L. M. Machado, Secrétaire du Groupe Latino-Américain de la RILEM



Prof. Julio Ricaldoni



Prof. Lobo Carneiro and his invention

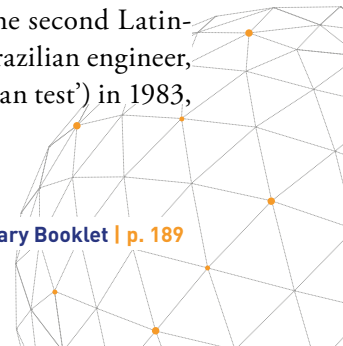


Me and my own invention

Following his death, an urgent meeting of GlaRilem was convened by Prof. Delpech, inviting to come to Buenos Aires the whole GlaRilem's Executive Council, composed by: Prof. Hernani Sobral (President, Brazil); Prof. Claudio Lapostol (1st Vicepresident, Chile) and Prof. Henrique Granada (2nd Vicepresident, Paraguay). In that meeting, in which I was present, it was decided to keep the GlaRilem Secretariat at INTI in Argentina and to designate me as new Secretary (I was also designated RILEM Delegate in Argentina). By that time, I had already published two papers in *Materials & Structures*, following the trail initiated by my tutor G.N. Burgoa.

And then, being just 34 years old, my strong involvement in RILEM started, which continued in time, despite abandoning my role as Delegate in Argentina and Secretary of GlaRilem, as a consequence of my transfer to Switzerland (1987).

I still recall my debut as Argentine Delegate and Secretary of GlaRilem; it was in the RILEM Meeting in Casablanca (Morocco) in 1981. It was very challenging for me, as I have to defend the nomination of Prof. Julio Ricaldoni, from Uruguay, as RILEM Honorary Member. Prof. Ricaldoni was a noted structural engineer and Dean of the Faculty of Engineering of the Universidad de la República, Uruguay (later Doctor Honoris Causa of the University), who had been unjustly jailed by the current dictatorship in Uruguay, simply because a student of his Faculty was caught preparing an explosive device. The nomination was acclaimed by a great number of Latin-American engineers, which I personally also supported. But my first mistake in advancing his nomination was to put more emphasis on his imprisonment than on his abundant merits for the award and somebody in the meeting reminded me that Honorary Membership is based on merits, not political circumstances.... a lesson learnt!. Later, I realized that I had been a bit bold because, at that time, there was an even bloodier dictatorship in my own country Argentina... Anyway, Prof. Ricaldoni was deservedly incorporated as the second Latin-American to receive RILEM Honorary Membership after Prof. Delpech. Third was the great Brazilian engineer, Prof. Fernando Lobo Carneiro (creator of the splitting tensile test of concrete, known as 'Brazilian test') in 1983,



an extraordinary personality I had the privilege to know personally and also to contribute to his nomination. The fourth is me, 33 years later (2016), which shows the decline of the presence of Latin-America in RILEM activities.

More recently, GlaRilem has regained life, thanks to the initiatives of Carmen Andrade and Luis Lima and of the Secretariat managed by Yury Villagrán.

Another story of that first meeting in Casablanca was related to the official dinner. I was not accommodated at the meeting's hotel, but in another good, but less expensive, hotel about 1 km away. When I arrived to the main hotel for the official dinner, I was wearing casual clothing, only to see that everybody was wearing formal attire, tie and jackets...and I had no time to return to my hotel to change clothes. So, there I was sitting in embarrassment, waiting for the bus to take us to the dinner's restaurant when....I saw a German Professor stepping down the hotel's staircase.....also in casual wear!! I jumped from my seat and told him "We shall seat together!!". Interesting, the dinner was the typical Moroccan lamb with rice and cous-cous, served on big pans, from which each of us had to help ourselves with own hands..... our casual clothing was an advantage as many jackets' sleeves got stained in the endeavour...!!.

RILEM was very important in my career and allowed me to knit an extraordinary network of contacts (with many of whom I established friendly relations), that I still preserve with care, attending RILEM Week meetings more or less regularly. I described this in a recent video

(<https://www.youtube.com/watch?v=v2yRGVK-tl0>).



DR. MARIA ROSA VALLUZZI
University of Padova, Italy

*Fellow 2015, Robert L’Hermite Medalist 2005,
TC Chair, TAC Expert,
Bureau member and Assoc Editor M&S 2020*

I became involved in RILEM TC activities just some years after my graduation (around the end of ‘90) thanks to my Thesis supervisor Prof. C. Modena. Main topics were modeling and durability of masonry (TC 177-MDT, TC 168-MMM). Then, I officially became a member of several TCs working on various topics: mortar and grouts (TC 203-RHM, TC 243-SGM, TC 257-DHM), timber (TC 215-AST, TC 245-RTE,), diagnosis of masonry (TC 216-SAM), and composite materials for repairing and strengthening of masonry and concrete (TC 223-MSM, TC 234-DUC, TC 250-CSM).

I chaired the TC 223-MSM “Masonry strengthening with composite materials” (2007-2013).

I was appointed as TAC member (expert on masonry) on 2006 until my last mandate on 2011, and as Bureau member on 2016 (still ongoing). I received the RILEM L’Hermite Medal in 2005 (I am possibly the first woman on the working list for masonry?) and became a RILEM Fellow in 2015.

My mentor in RILEM was most definitely Prof. L. Binda. To be at her side in some official meetings (spring meetings or RILEM weeks) was really an education for me. She passed on to me her enthusiasm about working on so challenging a material as masonry, as well as the main aspects of a responsible approach to the conservation of Cultural Heritage. It was also quite challenging to preserve the masonry material in the RILEM Clusters (traditionally more devoted to concrete and cement materials), so I had the privilege to assist with many of her “battles” (which led to “strong” debates) developed in TAC in those years. I had the opportunity to meet many other researchers and experts of great importance at international level, so that many fruitful contacts could be developed for research proposals and exchanges in the following years.

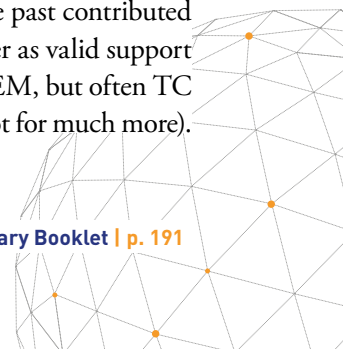
Highlights of my association with RILEM are:

L’Hermite Medal in 2005; TAC expert in 2006-2011; TC chair in 2007-2013; Fellow in 2015.

The anecdote I remember most is:

I got the letter for my L’Hermite Medal on April 1st (2005). I promptly asked Prof. Modena and Prof. Binda if they knew about this conferral (but they both did not know at all about it). I thought seriously that was a joke (being the 1st of April the “April fools’ day”!). After exactly 10 years I got my “RILEM Fellow” award and, again, the letter was dated 1st April (2015).

Regarding the future of RILEM, I think RILEM has made tremendous efforts in the last years to advance communication (social networks, web site, magazine, ...), and in trying to involve more people in the TCs community (for example, students and young researchers, by reduced membership fees and new awards; or people from less developed countries, by many activities promoted at macro-regional level). This is most definitely the right direction to follow. What I think should be improved is the issue of RILEM recommendations which in the past contributed to pre-normative documents and/or experimental procedures standardization, to which we still refer as valid support for both research and professional work. Without doubts the quality of research is still high in RILEM, but often TC results are limited to STAR or some publications (surely useful for authors and dissemination, but not for much more).



PROF. KLAAS VAN BREUGEL Delft University of Technology, The Netherlands

RILEM Awards and Positions held:
Fellow 2014, TC member



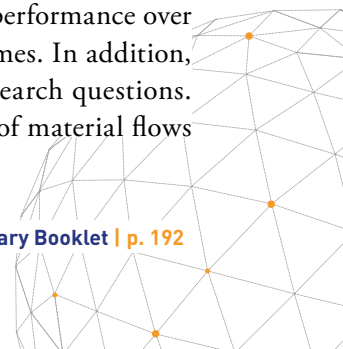
RILEM: The organisation you should join!

At the international RILEM Conference on “Cracking in Concrete at Early Ages” in Paris in 1982, I had the opportunity to present some results of my master thesis on numerical simulation of the probability of cracking in early-age concrete. The research was carried out at Delft University of Technology and partly supervised by Prof. F.H. Wittmann. At that conference I also met Prof. Rupert Springenschmid from the Technical University of Munich. In 1989 Prof. Springenschmid became the convenor of RILEM TC 119 on thermal cracking in concrete at early ages and the editor-in-chief of the RILEM proceedings 25 on the prevention of thermal cracking in young concrete. I was invited to join TC 119. It gave me the opportunity to meet people and build an international network with colleagues involved in research on young concrete.

In parallel with activities on modelling hydration and microstructure development in hardening concrete, I also met people active in research on cryogenic properties of steel and concrete. Designing tank structures for cryogenic storage of, for example, LNG was my second research topic at that time. I remember the meetings with Prof. F.S. Rostasy from Braunschweig, who was also involved in research on young concrete and greatly respected. Both prof. Springenschmid and Prof. Rostasy have certainly influenced my career a lot. The contacts with colleagues from the modelling community were not less inspiring. Long conversations with Prof. Hamlin Jennings, who I first met at the afore-mentioned RILEM conference in Paris, have significantly influenced my own modelling work.

The impact on the careers of individual researchers of the opportunities created by RILEM to meet people, organise events, develop and take courses and disseminate, share and discuss research results can hardly be overestimated! I have seen how RILEM has supported our initiatives to co-organise the international CONMOD conferences, the conferences on Service Life Design, the Microdurability series and the conference on Ageing of Materials, Structures and Systems, all under the banner of RILEM. The international Concrete Microscopy Course (CMC), Multiscale Modelling Course (MMCS) and on Corrosion Courses (CSC2I) would have been much less effective without the positive support of RILEM. As a member of the Education Committee I have seen how RILEM’s open attitude towards new initiatives has encouraged people to become active within the international community, either as provider of new knowledge or as a consumer of it.

Celebrating 75 years RILEM cannot go without reflection on the past and a look at the future. RILEM was founded shortly after the second world war. In Europe a lot had to be rebuilt and the challenges were enormous. In those decades, the demand for ‘new-built’ was huge. For ‘new-built’, knowledge about the short-term performance of materials is essential. Once structures are built, the focus shifts to the change of materials’ performance over time. The rate of material ageing and tendency to deteriorate are now dominant research themes. In addition, the growing awareness of environmental impact of the construction industry raises new research questions. The transition from a traditional to a circular building industry requires careful monitoring of material flows



and development of new strategies and technologies to ensure that materials remain identifiable and prevent unjustified mixing of material flows. I am convinced that RILEM can play an important role in this inevitable and challenging development, both in research and education. RILEM has the right contacts with the research community and the network to bring the relevant disciplines together. This all is certainly a great challenge, but a form of responsible stewardship to take a lead in this.

I would like to close by referring to one of the most fruitful thoughts I have gathered from discussions with one of the afore-mentioned RILEM delegates. During the RILEM conference in Paris in 1982 I discussed the numerical predictions of the probability of cracking in young concrete with Prof. Springenschmid. A conversation between an experienced senior experimentalist and an inexperienced junior modeller. “Your results are impressive,” Prof. Springenschmid said, “but given the extremely complex behaviour of hardening concrete it is impossible to make such predictions.” There is no better way to challenge young researchers than to say that something is impossible. Such debates are golden! But, and that’s the point, these golden moments only happen when people meet, listen and discuss with an open mind and with respect for each other’s expertise. Ultimately, experimentalists and modellers need each other! RILEM offers the platform to various disciplines that are jointly responsible for a sustainable future. I wish that RILEM continues to offer researchers a variety of platforms to develop and mature themselves and others for a better future.

Congratulations!



PROF. GIDEON VAN ZIJL

University of Stellenbosch, Cape Town South Africa

EAC Member, Chair RILEM TC 240-FDS, 2010-2015

Co-chair RILEM TC 208-HFC, Subcommittee 2 Durability, 2005-2009

My experiences with RILEM started in 2005, when I joined RILEM TC 208-HFC as co-chair of subcommittee 2 Durability. At the end of this TC's life in 2009, we realised that the work was incomplete. An inaugural meeting held in Stellenbosch, South Africa in November 2009, led to TC 240-FDS (2010-2015), which I chaired.

This has led to the conference series Strain-hardening Cement-based Composites (SHCC), with conferences since the inaugural conference in Stellenbosch (2009) in Rio de Janeiro (SHCC2 hosted by Romildo Toledo-Filho and Flavio de Andrade Silva), SHCC3 in Delft by Erik Schlangen, and SHCC4 in Dresden by Viktor Mechtcherine, Petr Kabele and Volker Slowik. SHCC5 is to be hosted by Minoru Kunieda in Japan in June 2021.

Key personalities whom you met through RILEM and who contributed to your development

I co-chaired TC 208-HFC SC2 with Professor Folker Wittmann, and it was a privilege to co-edit the state-of-the-art report with this exceptional academic and colleague. Working together with various colleagues and leading scientists from across the globe has been enriching, and certainly contributed to my development as researcher, and in many respects as person. These relations continue, and colleagues I got to know through RILEM activities remain friends, co-authors, and collaborators.

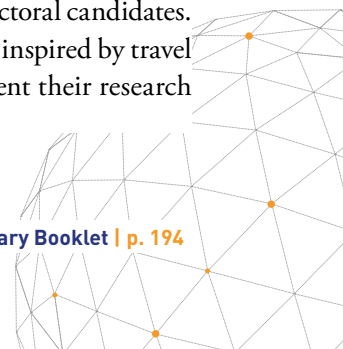
Highlights are the meetings with TC friends at their host institutions across the world, in Gifu, Rio de Janeiro, Dresden, Delft, Michigan, Leipzig, Hawaii, Minho, and of course to host them in Stellenbosch, Cape Town and even the Kruger Park! My sabbatical visits in Gifu with Keitetsu Rokugo, Dresden with Viktor Mechtcherine, and Delft with Erik Schlangen stand out.

Personal anecdotes from past experiences



Possibly the most memorable, and likely stepping on toes here, was a Sunday afternoon in May 2005 spent in Honolulu, Hawaii, debating the name SHCC. Earlier that day I went snorkelling together with South African colleague and co-delegate to the RILEM Workshop on HPFRCC (PRO 49), Santie Gouws, in a wonderful reserve, if I recall correctly the Hanauma Bay Nature Preserve. It was with reluctance that I left Santie there late morning, to travel back for the lunch meeting and this debate. In hindsight, this was a good investment after all.

I think RILEM needs to develop moving forward by keeping on involving brilliant young minds, starting with doctoral candidates. My PhD-students were extremely impressed and inspired by travel grants to attend RILEM Week in 2018, to present their research papers.





PROF. JASON WEISS
Oregon State University, USA

*Fellow 2015, Robert L'Hermite Medalist 2008,
Former Editor in Chief 2020, EAC member, TC member*

My key roles in RILEM were:

TC EAS, “Early-Age Shrinkage Cracking,” member 1999-2002
TC DTD, “Test Methods for Autogenous Deformation and Thermal Dilation of Early Age Concrete,” member 2002 – 2004
TC CCD, “Concrete cracking and its relation to durability: Integrating material properties with structural performance” (Chair) 2006-2012
TC EAC “Educational Activities Committee,” (Secretary) 2005-2011
TAC - Cluster D Leader 2006-2011
Committee on Nominations, 2008
Bureau Member, 2009 – 2012
Associate Editor RILEM Journal of Materials and Structures, 2005 - 2011, 2016 – present
Editor in Chief, RILEM Journal of Materials and Structures, 2011 – 2015

RILEM has been a fabulous experience of interacting with leaders in construction material industry from around the world. There are far too many people who influenced my development to name, and one always runs the risk of leaving someone off inadvertently.

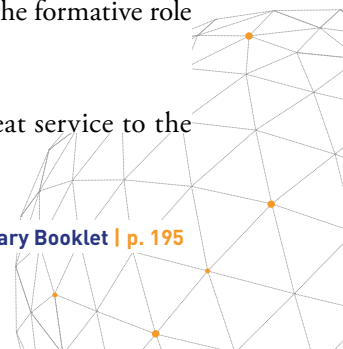
Some of my earliest involvement was in research of early age cracking and I was fortunate to meet Ole Jensen, Arnon Bentur, Pietro Lura, Kosta Kovler, Viktor Metcherine, Tore Arne Hammer, Laurent Barcelo, Oyvind Bjontegaard. I was also able to have the opportunity to work with Jacques Marchand, Sid Mindess, Mette Geiker, Nicholas Roussel, Robert Flatt, Karen Scrivener, Carmen Andrade, Mark Alexander, Geert de Schutter, Johan Vynke, Peter Richner, Jaiping Liu (met earlier but it has continued collaboration), Tian Qian, C Miao, Klaus Van Bruegel, Ipei Maruyama, Y Sato, G Fagerlund, B Perrson, E Schlangen, J Provis.

The highlights of my association with RILEM were:

- I helped host the 2004 symposium “Advances in Concrete through Science and Engineering”, organized by the Center for Advanced Cement Based Materials (ACBM) at Northwestern University and the International Union of Laboratories of Experts in Construction Materials, Systems and Structures (RILEM) in Evanston, Illinois, on March 21-24, 2004 (Pro 048)
- Received the RILEM Robert L'Hermite Medal in 2008
- Was elected RILEM Fellow in 2015

I have been fortunate to have a strong connection with RILEM and am incredibly thankful for the formative role RILEM and its members has played in my professional and personal life.

Further, I recognize that RILEM is a distinctive and unique organization that provides a great service to the



profession in three primary ways:

- enabling international exchange of ideas,
- providing high level scientific discussions on the material science of construction materials (this has long been a core of RILEM even before this was en-vogue), and
- bridging the gap between science and practice.

Nowhere is evidence of the primary benefits of RILEM more tangible than in the M&S Journal.

On the 50th anniversary of the journal, we want to take this moment to say thank you and to wish M&S continued success over the next 50 years.

(<https://link.springer.com/article/10.1617/s11527-018-1305-x>)

Personally, I think that RILEM is an enormously powerful organization. While 'seasons change' it would be great to see RILEM stay strong in its roots of providing high level scientific discussions that leads to measurable changes in the practice of manufacturing, using, and specifying construction materials. Some of the earliest meetings I was in enabled me to be fortunate to participate in good discussions that helped distil concepts to a common framework for further discussion and a platform that became more widely used throughout the community. I would like to see this discussion and debate continue through open committee discussions.

An interview in relation to RILEM can be found at
<https://www.youtube.com/watch?v=PN1aMiE-maw>

PROF. BØRGE JOHANNES WIGUM

Heidelberg Cement Northern Europe
Norwegian University of Science and Technology

TC Chair



The always challenging topic of Alkali Aggregate Reactions (AAR) in Concrete, has since my PhD degree in 1995, continually been my main research interest. A European research project, “European standard tests to prevent alkali reactions in aggregates” (PARTNER) (2002-2006), introduced me to RILEM, and I participated in my first RILEM TC-meeting in Iceland in 2002, in TC 191-ARP.

From 2007 to 2014 the activities continued into the successor committee; TC 219-ACS. When this TC terminated in early 2014, Dr Philip Nixon from the Building Research Establishment (BRE) in the UK, had been the Chairman, and Dr Ian Sims from Sandberg, UK (now with RSK Environment Ltd), had been the secretary, for 3 continuous TC’s regarding AAR for 25 years. The way they were leading this work, along with the European PARTNER project, was of great inspiration for me, and I had the honour to continue their endeavour, becoming the Chairman of the 4th TC on AAR in 2014 (TC 258-AAA). Along with the TC-secretary, Dr Jan Lindgård from SINTEF, Norway, we have been working on developing performance testing concepts, to be completed by the end of August 2020.

The TC’s dealing with AAR, have always been in close cooperation with the series of International Conferences on Alkali Aggregate Reactions in Concrete (ICAAR), which are arranged every 4th year. I had the pleasure to be the Chairman of the 13th ICAAR in Trondheim, Norway, in 2008. Based upon that experience, I realised the potential of increased international cooperation. Without RILEM, I would not have had the opportunities of liaison with colleagues around the globe and establishing lifelong friendship with many of them. Through RILEM, I have also learned to organise efficient meetings, hold discussions with different types of people with various background, and eventually establish consensus, even though we may not always have agreed on everything. I have also learned that the progress within our TC’s has been much more efficient in the cases when we have had ongoing parallel national research projects and PhD-studies, providing specific results into our discussions.

However, the world is changing and new generations of young scientists from all over the world are entering the stage. I recently attended an inaugural RILEM TC-meeting in Africa, on bio-ashes as Supplementary Cementitious Materials (SCM’s). As Africa is a huge continent, and TC members have limited opportunities of travelling, I realise the need to develop online solutions enabling the members to participate in active online discussions and web-meetings. By developing these applications, RILEM will truly be a global organisation, also including the new generation of young researchers during, and after their studies. RILEM should participate in setting the future global research agenda, and hence enabling initiation of new research projects with new corresponding TC’s.



Honoured after 25 years of heading of the three RILEM TCs on AAR since 1988; Dr Philip Nixon - Chairman (left), and Dr Ian Sims – Secretary (right). Professor Børge Johannes Wigum (middle) is the Chairman of the current RILEM TC 258-AAA.

7 | PERSONAL

PROF. DR.RER.NAT. DR.-ING E.H. FOLKER H. WITTMANN

Prof. emer. Swiss Federal Institute of Technology Zurich (ETHZ),

Prof Tongji University Shanghai and Visiting Prof at Qingdao University of Technology

Robert L'Hermite Medal 1976, RILEM President 1994-1997, Honorary President 1997, TC Chair, Honorary Member 2004



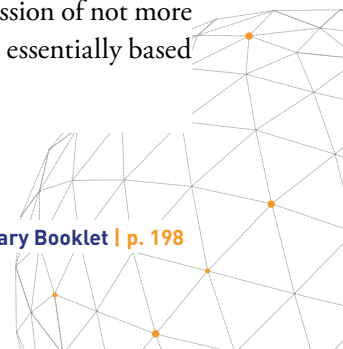
After having finished my studies in physics with a PhD on Mössbauer effect in the group of Heinz Maier-Leibnitz at Munich University of Technology (TUM) in 1965, I accepted the position of Head of the Physics Laboratory of the Institute for Concrete Structures at Munich University of Technology (TUM). There, my most important task was to introduce elements of basic physics into research on cement-based materials.

In 1968 Robert L'Hermite, M. G. Wästlund and Professor H. Rüschi organized a “Colloque RILEM” on “Physical and Chemical Causes of Creep and Shrinkage of Concrete” at TUM in Munich. My task was to serve as secretary. This was my first contact with RILEM members. A small group of internationally well-known experts such as S. E. Pihlajavaara, R. H. Mills, T. C. Hansen, and A. M. Neville attended this meeting by invitation. The opening lecture was presented by T. C. Powers on “The Thermodynamics of Volume Change and Creep”. The second contribution on “A Model for Hydrated Cement Paste as Determined from Sorption-length Change and Mechanical Properties” was co-authored by R. F. Feldman and P. J. Sereda, both from the National Research Council of Canada, and presented by P. J. Sereda.

A vivid discussion followed these two presentations. Finally, the arguments of Powers were considered by a majority to be more realistic and more convincing. Next morning when we started again, all participants found a paper on their place in which Feldman and Sereda tried to convince their colleagues that the approach of Powers was pure fantasy. Powers was deeply hurt and did not respond to this pamphlet. Later we learned that Powers had prepared a detailed book on the physical basis of creep and shrinkage, which he has never published after this humiliating experience in Munich. This was my first contact with a group of RILEM members and luckily enough later I never experienced something like this again.

In 1976 I received the Médaille Robert L'Hermite (RILEM Medal) for my work on the physical basis of creep and shrinkage of cement-based materials. Most important results were summarized in the so-called Munich Model. Later, I was nominated President of RILEM for the period of 1994-1997. To be quite honest I think I was nominated mainly because I could express myself reasonably well in French.

When Robert L'Hermite founded RILEM the dominating language during all meetings was French. When he travelled to foreign countries, he was always accompanied by two ladies who translated what he was presenting into English. One day somebody suggested, ‘Robert L'Hermite you should learn at least basic English. Everybody is convinced, you will learn this language in no time, as you are so intelligent’. His answer was very clear, however: ‘I will never learn or speak English. In contrast to French, English is a very inaccurate language and when you start to speak English, your thinking will become vague and inaccurate’. Is there some truth in this statement? It reminded me of my Latin teacher in high school. He told us several times that he can recognize after a discussion of not more than fifteen minutes if his partner has studied Latin or not. French, finally, is a language, which is essentially based on Latin.



The task of the president of RILEM at that time was quite limited. Maurice Fickelson, the secretary of RILEM in Paris, who also spoke French exclusively, took over most duties of the president.

During the period of my presidency, RILEM would celebrate its 50th anniversary. For this event we published a special volume: “Fifty Years of Evolution of Science and Technology of Building Materials and Structures – Selected RILEM Publications with Particular Impact to Further Evolution in this Field”. 47 papers were selected and grouped in 9 chapters. Each chapter started with early publications and ended with more recent papers published in the RILEM Bulletin or in the RILEM journal *Matériaux et Constructions*. In this way progress, and evolution in different fields of materials science during the first 50 years of RILEM, could be documented.

When Robert l’Hermite founded RILEM in 1947, his major aim was to build up a common platform for experts and directors of laboratories for testing building materials after the end of the second world war. He was convinced that progress in this fast-growing field could be significantly accelerated by intense international cooperation. This special volume documents in a convincing way the success of the initial idea of Robert L’Hermite.

Nowadays the most important work within RILEM is carried out in numerous technical committees (TCs). Experts from all over the world meet and work together, usually for a period of five years. Often the state-of-the-art in a specific field is documented or a recommendation is formulated as a major result of the work of TCs. By now about 270 technical committees have successfully finished their work and about 15 TCs are active at this moment. I had the task and the great pleasure to chair TC-50 FMC: Fracture mechanics of Concrete (1980-1985). For the first two years we worked hard on a recommendation on how to apply linear elastic fracture mechanics to a composite material such as concrete and how to determine fracture toughness K_{IC}.

Nearly all members were enthusiastic, except for Professor Arne Hillerborg from Sweden. During most meetings he was sitting there silent and apparently absent-minded. Then suddenly and close to the end of our meeting at Delft University of Technology he asked rather shyly whether we would allow him to present briefly, his ideas on fracture mechanics. It took him not more than 15 minutes to convince most of us that his approach to introduce fracture energy G_F to describe failure of concrete was far more realistic than linear elastic fracture mechanics to describe crack formation and failure of concrete. This short intervention was followed by a sudden and dramatic change of the aim of RILEM TC-50 FMC. The fictitious crack model and the fracture process zone replaced classical linear elastic fracture mechanics to describe crack formation in elements with most usual size. Finally, we prepared a recommendation on a test method how to determine fracture energy. This method is still widely used nowadays.

Some years later, I chaired RILEM TC-078 MCA: Recommended practice of aerated concrete based on RILEM Test Methods. This was a new and interesting experience for me because most members of this TC were from industry and from construction companies but not from research laboratories or universities. But after some initial friction and obvious misunderstandings we worked effectively and in a friendly atmosphere together. Major results were summarized in RILEM Recommended Practice “Autoclaved Aerated Concrete, Properties, Testing and Design”. This publication had a strong influence on applications and further development of autoclaved aerated concrete.

I also cooperated with members of TC-208 HFC: High performance fiber reinforced cementitious composites. Right from the beginning there was fierce fighting about the term “Engineered Cementitious Composites, ECC” as it was considered to be too general and not describing the term fiber reinforced cement-based materials correctly, specifically by many members of the TC. Finally, most if not all types of concrete are engineered cementitious composites. Many TC members left this TC after fierce and controversial discussions, but the misleading term is sometimes still used today.

More recently I cooperated with TC-248 MMB: Methods of measuring moisture in building materials and structures. Most important results were published just recently as a RILEM State-of-the-Art Report by Lars-Olof Nilsson. This is a typical example of a RILEM TC which has not developed and published new test methods but an overview on different methods to determine moisture content and moisture distributions in concrete were presented and discussed in a critical way.

As I am Professor at Tongji University, Shanghai, since 1986 and visiting professor at Qingdao University of Technology for more than 15 years I succeeded in initiating the first RILEM TC under Chinese leadership: TC-246 TDC, Durability of Concrete under Combined Environmental Actions and Mechanical Load. This TC was chaired by Prof. Yao Yan, president of the China Building Materials Academy (CBMA). Prof. Yao Yan was supported by Prof. Wang Ling and Dr. Li Juan, both also from CBMA. Together this “triumfeminat” did an excellent job although initially some RILEM officials had some serious doubts. They even visited CBMA to check if there was a promising group of experts and the necessary equipment available to run this complex task successfully. Nevertheless, our Chinese colleagues learned very quickly to work efficiently and successfully in an international environment of engineers and scientists. The final report of this TC now serves as a first tool to take combined actions into consideration in more realistic service life design and as a valuable basis for further studies. It may be mentioned at this point that I was appointed Tenured Honorary Professor of China Building Materials Academy for my continuing support.

Several RILEM TCs are now run successfully by Chinese colleagues. Several new TCs were set up in 2018 to study the influence of different load combinations on durability and service life of reinforced concrete structures. The most recent TC in this field is TC-FTC: Durability of concrete under the influence of Freeze-Thaw Cycles combined with chloride penetration. This new RILEM TC has full support of Professor Zhao Tiejun, vice-president of Qingdao University of Technology (QUT) and will be chaired by Professor Zhang Peng, Vice-dean of civil engineering at QUT. The first meeting is planned to be held at the beginning of next year.

So far not all results of RILEM TCs such as recommendations and new test methods are finally used and applied in the best possible way. RILEM TCs have produced an enormous amount of valuable results and data in different fields of building materials science. But too many results of past RILEM TCs, which could improve significantly existing design codes, are not fully taken into consideration so far. It is recommended that RILEM strengthens contacts and cooperation with national and international codifying bodies. In this way results of RILEM TCs can serve more effectively as a valuable basis for more realistic standards in the future.

In 2004 I was nominated honorary member of RILEM. So far there are more than 50 honorary members on this list. Not all of them are still alive or active. But it might be beneficial in the future to form an advisory board composed of active members of the list of honorary members. They may come together once a year, during the RILEM week for instance, to present new ideas for necessary corrections and further improvement of RILEM activities.



PROF. YAO YAN

China Building Materials Academy

Vice Chair CHN/RILEM TC Chair

Prof. YAO Yan is the President and Chief Scientist of China Building Materials Academy (CBMA). She has been devoted to the research of high-performance concrete (HPC) at CBMA over 35 years since she graduated from Tongji University in 1982. Her research is mainly focused on durability of concrete, HPC and its application technology.

My Personal history with RILEM is:

- 2011-2017, Chairlady of RILEM Technical Committee of 246 – TDC, Test Methods to Determine Durability of Concrete under Combined Environmental Actions and Mechanical Load
- 2014-now, Vice Chair of China-RILEM
- 2017-2021, Chair of WG 4 Effect of combined actions, TC 281-CCC Carbonation of concrete with supplementary cementitious materials.

I met many leading experts in concrete science through RILEM. For five years through 2011-2016, I cooperated closely with some renowned professors as a Chair of RILEM TC 246-TDC, such as, Folker Wittmann, Max Setzer, as well as young talented scientists, e.g., Nele De Belie from UGhent, Erik Schlangen from TU Delft, Christoph Gehlen from Munich Tech. Univ., etc. Our TC was like a big family, everyone contributing their efforts to the activities and outcomes of the TC.

Prof. Folker Wittmann provided the utmost assistance to my job as a chair. When I started to chair the RILEM TC 246-TDC, I had no experience in running a TC. Having been the former President of RILEM and having chaired several RILEM TCs, Prof. Wittmann gave a lot of guidance in every step of the TC. As a result, our TC members developed a recommendation on how to determine chloride penetration under the influence of load successfully thanks to his help. The recommendation is widely studied and applied worldwide now.

The highlights of my association with RILEM are that since the beginning of RILEM TC 246-TDC 2011, our TC secretary had frequent contact with Mrs. Pascale Ducornet, General Secretary of RILEM. She responded to our emails promptly and was always very nice and helpful. Prof. Mark Alexander who was then President of RILEM, gave special focus on our TC considering this TC was the first one chaired by mainland Chinese. Dr. Esperanza Menendez Mendez, IETcc (CSIC), Spain, Convener of Cluster B, and Dr. Nicolas Roussel, IFSTTAR, France, former Deputy Editors in Chief of M&S were also offering kind help during the TC period. I appreciate very much all their support to myself and our TC.

RILEM is outstanding in guides to good practice, recommendations, so it is important to strengthen the link with industry to widely disseminate the advanced knowledge related to construction materials, systems and structures, thus spreading the extensive application of RILEM recommendations across the globe. This is in line with one of the goals of RILEM, that is, to promote cooperation at international scale by general access to advanced knowledge.



DR. GUANG YE

Delft University of Technology, Section Materials and Environment, The Netherlands

Assoc Editor M&S 2020, TC Chair

I got to know about RILEM when I was a PhD student in the Concrete Structures Group at Delft University of Technology in 1999 and became a student RILEM member. In 2001, I was invited by prof. Jacques Marchand to contribute a paper to the Journal of Materials and Structures. This paper was also my first journal article.

In 2002, I joined my first RILEM technical committee 185- ATC (Advanced testing of cement based materials during setting and hardening) chaired by professor Hans-Wolf Reinhardt and contributed to the STAR report on simulation and modelling of advanced testing of cement based materials during setting and hardening. Since 2003, I have been participating in several RILEM technical committees, i.e., 185-ATC, 221-SHC, 224-AAM, 225-SAP, CCC, 235-CTC, 238-SCM, 244-NUM, 247-DTA, 260-RSC, 267-TRM and 273- RAC. In 2004, I served as secretary of 205-DSC (Durability of Self-Compacting Concrete) chaired by Prof. de Schutter.

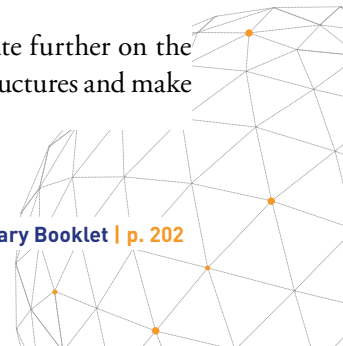
With the great support of RILEM, two Sino-Dutch conference series, i.e., the International Symposium on Service Life Design for Infrastructures co-organized by Delft University of Technology and Tongji University since 2006, and the International RILEM Conference on Microstructure Related Durability of Cementitious Composites co-organized by Delft University of Technology and Southeast University since 2008, each successfully holding 4 series. 8 conference proceedings were published by RILEM Publications s.a.r.l. These conferences provided a platform for the scientists and practitioners to promote and exchange their fundamental researches and experiences on durability design and service life prediction of concrete materials and structures.

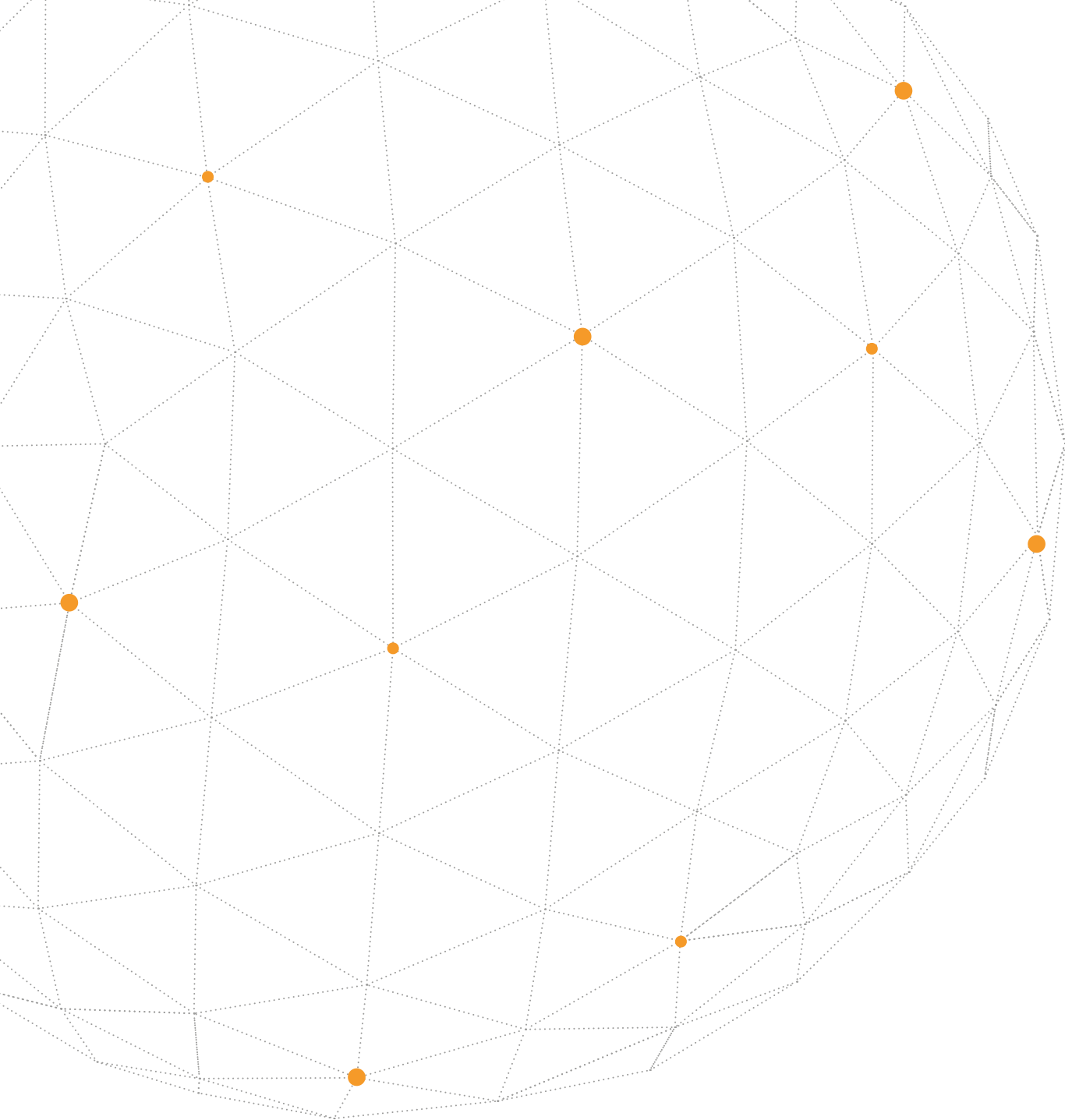
Starting from 2007 the RILEM doctoral courses on Multi-scale Modelling of Concrete (MMC) initiated by the colleagues from Microlab, Delft University of Technology and by dr. Jorge Dolado from Tecnalia, Spain has successfully been held 12 times. Six were hosted by the Chinese colleagues from Southeast University and Tsinghua University. The MMC course educated the young researchers on modelling techniques, created enthusiasm for multi-scale modelling and inspired them to contribute to further development on computational materials sciences of concrete.

At the beginning of the 21st century, in order to optimize international communication and development, RILEM developed its strategy to expand its influence to other continents. As a RILEM member originally from China, I have the advantages to connect RILEM with Chinese colleagues, like prof. Wei Sun and prof. Changwen Miao from Southeast University, prof. Yong Yuan from Tongji University, and prof. Peiyu Yan from Tsinghua University. In August 2014, I witnessed the launch of RILEM China National Group at the Hong Kong University of Science and Technology.

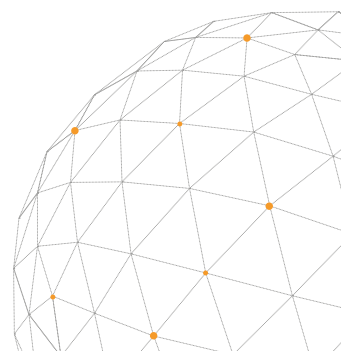
Since 2016, it was a great honour to become a RILEM officer and serve as associate editor of the journal of Materials and Structures. As a researcher in the field of concrete materials, it is very important to be a member of RILEM. The RILEM technical committees provide a unique opportunity to work together with other colleagues from all over the world and capture the latest development in the field.

In 2021, RILEM has its 75th celebration. I would like to see RILEM concentrate and contribute further on the development of new materials, technologies, and processes to lower the cost of buildings and infrastructures and make them safer and more sustainable. I wish RILEM a great success in the future!





8 | SECRETARIAT GENERAL



8 | SECRETARIAT GENERAL



DR. DANIELA CIANCIO
Self-employed, Engineering consultant

RILEM Implementation Manager (external consultant) 2019 -

I started my position as RILEM Implementation Manager in March 2019, attending the 2nd RILEM Spring Convention in Rovinj, Croatia. It was a full hands-on experience, where I met almost all the colleagues and the RILEM members I worked with in the following months.

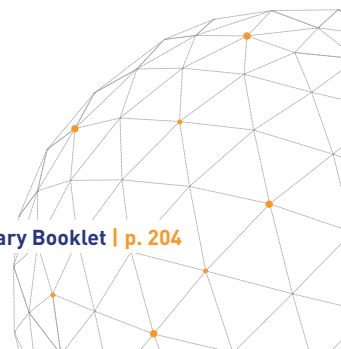
One of the main highlights of this position was evident since the very beginning: RILEM is a family, not an institution. I have felt welcome by everyone and I have established very friendly relationships with every single person I have worked/spoken with since then.

Another highlight of my job is feeling that I am doing something useful and that my work is appreciated. It was great to travel to China to attend the 73rd RILEM Annual Week, and it was definitively a lowlight having to cancel at the very last moment the trip to Guimaraes, Portugal, for the 3rd RILEM Spring Convention due to the COVID19 pandemic.

The challenges that I had to face at the beginning of my position were related to the process of becoming familiar with the RILEM structure, functioning and history. After more than 1 year in this position, I feel there is still much to learn.

What has happened in RILEM while in this position? I have seen the launch of the RILEM newsletter Bits&Bobs in November 2019 and of the first two RILEM Technical Reports (2018-2019 and 2019-2020).

I am not sure if I am a suitable person, given my short experience within RILEM, to give advice on how RILEM should develop in the future. I personally think that, in the end, if after 75 years RILEM is still here, functional, active, and productive, it means that it is a well-working institution!



8 | SECRETARIAT GENERAL



MS. PASCALE DUCORNET

*Secretary 1994-2000, Deputy Secretary General 2000-2009
Secretary General 2009-2019*

When Mark Alexander asked me to send him my contribution, as former General Secretary of RILEM, for the “history book” and to present my thoughts on the future of the association, I thought I was not the most appropriate person to give such advice.

The association has been thriving with so many members, its presidents and the teams of officers who surround them. I have always been amazed by the presidents who give so much of their time, their ideas and their dynamism to the association, and by their enthusiasm to renew and regenerate RILEM. Their personal investment, for several years, has been the strength of the association. And I am sure that the next presidents will be able to move the association forward as well.

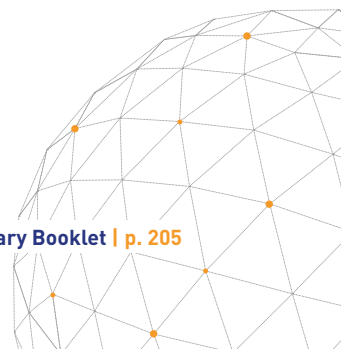
The DNA of RILEM is also made by its international conferences that allow researchers to meet and discuss. From the scientific and human point of view, these meetings are essential. I hope that the pandemic which affects us all with online meetings, deserted airports and the economic crisis that we all fear, will not spoil the good impulse of RILEM in the long term.

I am writing these lines a year after I left the general secretariat. I do feel a bit of nostalgia, of course, but I have the certainty that RILEM is in good hands helped by an efficient team at the secretariat.

I would like to thank all the Presidents who accompanied me during my years as Secretary General: Arnon Bentur, who believed in me and allowed me to become the first female Secretary General of RILEM, Peter Richner, Mark Alexander, Johan Vyncke and particularly Ravindra Gettu who helped me to leave the association and my work I had been passionate with for 25 years, smoothly.

I now live in the city* of the great “Vendée globe” race. Like I do to these courageous sailors, I wish RILEM good luck in the future.

* Les Sables-d’Olonne, in the “Pays de la Loire” region in west-central France, on the Atlantic Ocean.



8 | SECRETARIAT GENERAL

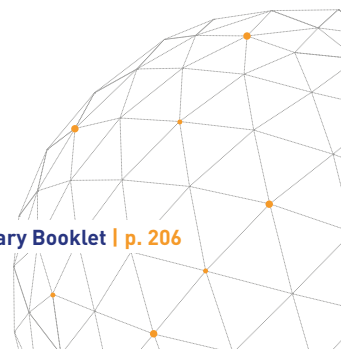


MS. ANNE GRIFFOIN

RILEM Head of Publications and Communication 2015 –

Coming from a very different field, (anti-money laundering and combating terrorism financing), it was a challenge to absorb the specific vocabulary related to construction materials. I remember my first TAC meeting where I had to present the latest publications. I joked about being grateful to know how to read and pronounce the titles because I had no clue what I was reading. It was like reading encrypted data. Over the years I am proud to say that I managed to grasp a few concepts and expand my vocabulary. It is no longer a reading exercise.

For the future, I believe our new team at the Secretariat will breathe new life into RILEM and the association will be refreshed and grow even more in the next 75 years.



8 | SECRETARIAT GENERAL



MRS. JUDITH HARDY

RILEM Secretary General 2019 -

When I applied for RILEM Secretary general position, I was particularly driven by the goals of the association to promote sustainable and safe construction, but also to promote international cooperation to improve materials performances.

Since I started in mid-June 2019, I grew even more enthusiastic to have the chance to work for and with major worldwide researchers, but also to facilitate participation of young researchers and students from all over the planet, to the leading international organization in materials and structures' activities.

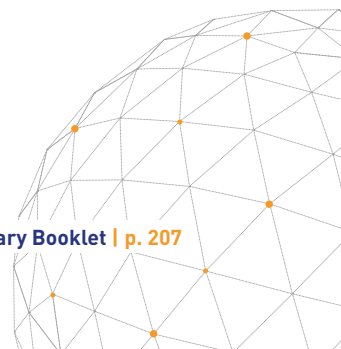
I am personally attached in helping, from the administrative and organizational point of view, to promote sustainable development, gender balance and growth of under-represented continents memberships, such as African memberships, doing my best to help regional convener Wolfram; and of course, to ensure the functioning of the association.

Despite the unprecedented pandemic and economic crisis, we are going through, I am hoping the online tools the secretariat provided to the TC chairs and officers will allow them to continue working together, thus responding to a recurrent request.

During this first year at RILEM I highly appreciated not only the unbureaucratic, democratic and very efficient organization of the work being made between RILEM members, to which I have had opportunity to collaborate, but also, the space given for proposals and decision making on administrative matters.

It has been an extraordinary chance to start working at RILEM under presidency of such empathic and intellectually bright presidents as Ravindra, Johan and Nicolas. And I am very thankful to them for their patience and listening.

Finally, I would like to thank former secretary general, Pascale, who introduced me to the big RILEM "machine", to which she seemed to be so deeply attached, as well as the RILEM team: Head of publication and communication, Anne, who has been a great support for the new RILEM team, Fanta who I hired just a few month after my arrival, and revealed herself an amazing managing assistant, service driven for all members; and finally Daniela, a bright and enthusiastic implementation manager, and great team player.



8 | SECRETARIAT GENERAL



MS. FANTA SYLLA

RILEM Administrative Assistant, EAC Secretary 2019 -

My arrival as an assistant in July 2019 at the RILEM General Secretariat coincided with a few major events: the departure of longtime General Secretary Mrs. Pascale Ducornet, replaced by Mrs. Judith Hardy and the coronavirus pandemic. Under the short but efficient tutelage of Mrs. Ducornet, I was introduced to the functioning of RILEM Association. In charge of membership and various administrative duties, I learned about the structure of the organization and the crucial role of the Secretariat.

Mrs. Judith Hardy introduced major changes in the way membership should be treated with a focus on digitalization to facilitate several processes such as subscription, payment, event proposals for our members. The challenge of course is implemented these processes all the while maintaining our relationship with the members. I believe we succeeded in doing so. I was lucky to be assisted by Mrs. Anne Griffoin who provided me with information and who still helps me make sense of how things work in RILEM.

During the 73rd RILEM Annual Week in Nanjing, it was decided that I would be EAC Secretary under the chair of Mrs. Karen Scrivener. This role has given me the opportunity to be more in touch with the educational activities of RILEM as well as the various committees that exist in the association.

In March 2020, the coronavirus pandemic halted the course of things for nearly everyone. Though the effect has yet to be all explored, we might have to face consequences in the next coming years. With Judith Hardy, Anne Griffoin and RILEM Implementation Manger, Daniela Ciancio, in the team, I believe that whatever difficulties may fall upon us will be confronted with endurance, inventiveness, and resource.

I am happy to be part of such an historical organization as RILEM and look forward to seeing the next generations in all parts of the world joining us for more scientific endeavors.

Future missions involve furthering RILEM opening to young researchers from Africa and the rest of the world so that RILEM remains a reference across generations and cultures.

Happy birthday RILEM and to many years to come!

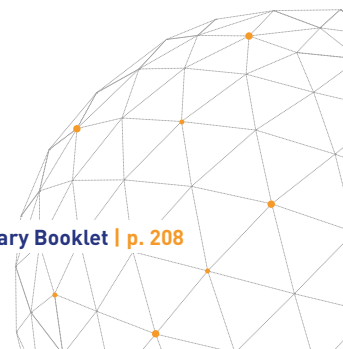


TABLE OF RILEM MEMBERS

SURNAME	CATEGORY GROUP	CATEGORY TYPE	PERSONAL/CORPORATE/PARTNER
Aggelis	7	Personal	Personal
Airey	5.3	Corporate Associate	University of Nottingham
Alexander	1	President	Past President
Amziane	7	Personal	Personal
Andrade	7	Personal	President/Personal
Andrade	3	TC Chair	TC Chair
Angst	7	Personal	Personal
Angst	3	TC Chair	TC Chair
Baaj	3	TC Chair	TC Chair
Bakera	4	Best Poster	Awardee
Bazant	7	Personal	Personal
Bentur	1	President	Past President
Beushausen	7	Personal	Personal
Bernal Lopez	4	Colonnetti Medal	Awardee/Personal
Bittencourt	7	Personal	Personal
Bjegovic	7	Personal	Personal
Branco	3	TC Chair	TC Chair
Brandt	5.3	Corporate Associate	IPPT
Brandt	7	Personal	Personal
Brandt	2	CCC	Bureau
Bras and Riley	5.1	Corporate Institutional	John Moores University, Liverpool
Bresson	7	Personal	Personal/Past President
Breysse	3	TC Chair	Bordeaux University
Burg	6	International Partner	ACI
Castel	3	TC Chair	University of Technology, Sydney
Ciancio	8	RILEM Secretariat	Implementation Manager
de Belie	7	Personal	Personal
de Pauw	5.1	Corporate/Institutional	BBRI/Personal
de Rooij	5.1	Corporate/Institutional	TNO
de Schutter	5.1	Corporate/Institutional	Ghent University
de Schutter	7	Personal	Personal
Ducornet	8	RILEM Secretariat	Past Secretary General
Fairbairn	3	TC Chair	TC Chair/Personal
Falchetto	4	L'Hermite Medal	Awardee/Personal
Fernandez-Ordonez	6	International Partner	fib
Feys	7	Personal	Personal
Francois	2	Treasurer	Bureau
Franzoni	7	Personal	Personal
Fritz	7	Personal	Personal
Gallico-Estevez	5.3	Corporate Associate	CEDEX-LCEM
Garboczi	7	Other Industry/University	Personal/NIST
Gettu	1	President	President

Gettu	7	Personel	Personal
Ghiassi	4	Colonnetti Medal	Awardee/Personal
Goicoa	5.3	Corporate Associate	AAHES
Goncalves	3	TC Chair	LNEC
Goncalves	7	Personal	Personal
Griffoin	8	RILEM Secretariat	Head, Publication/Communication
Hardy	8	RILEM Secretariat	Secretary General
Herrison	5.3	Corporate Associate	Imerys Aluminates
Hooton	7	Personal	Personal
Hubler	4	Colonnetti Medal	Awardee
Imamoto	2	TAC	TAC/Personal
Jensen	5.1	Corporate Institutional	Technical University Denmark
John	1	Honorary President	University of Sao Paulo
Khayat	7	Personal	Personal/TC Chair
Khrapko	7	Personal	Personal/CBE
Koenders	5.3	Corporate Associate	Technical University Darmstadt
Koenders	7	Personal	Personal
Koenders	3	TC Chair	TC Chair
Kovler	7	Personal	Personal
Kropp	7	Personal	Personal
Leung	2	TAC	TAC/Personal
L'Hostis	1.5	Corporate Institutional	CEA
L'Hostis	3	TC Chair	TC Chair/Personal
Li	7	Personal	Personal/TC Chair
Lima	5.3	Corporate Institutional	UNNOBA
Lima	7	Personal	Personal
Ling	4	L'Hermite Medal	Awardee
Lion	5.3	Corporate Associate	EDF
Liu	7	Personal	Personal/TC Chair
Lourenco	5.1	Corporate Institutional	University of Menho
Martirena-Hernandez	3	TC Chair	TC Chair
Martirena-Hernandez	7	Personal	Personal
Maruyama	7	Personal	Personal
Menendez Mendez	7	Personal	Personal
Meng	5.1	Corporate Institutional	BAM
Meng	7	Personal	Personal
Miao	7	Personal	Personal/TC Chair
Micelli	5.3	Corporate Associate	University of Salento
Midorikawa	5.1	Corporate Institutional	BRI
Mihashi	7	Personal	Personal
Millar	6	International Partner	CIA
Moreno-Navarro	4	L'Hermite Medal	Awardee/Personal
Muller	5.1	Corporate Institutional	VDZ
Muller	6	International Partner	fib
Nilsson	7	Personal	Personal

Nogucci	2	TAC	Bureau/Personal
Ohtsu	3	TC Chair	TC Chair
Papayianni	7	Personal	Personal
Papayianni	3	TC Chair	TC Chair
Partl	7	Personal	Personal
Partl	2	DAC	Bureau/DAC
Partl	3	TC Chair	TC Chair
Pellegrino	3	TC Chair	TC Chair/University of Padova
Peng Kong	5.1	Corporate Institutional	LECM
Pillai	7	Personal	Personal
Plizzari	7	Personal	Personal
Pospisil	5.3	Corporate Associate	ITAM CAS
Poulikakos	3	TC Chair	TC Chair/Personal
Provis	4	L'Hermite Medal	Awardee/Personal
Reinardt	7	Personal	Personal
Reinardt	3	TC Chair	TC Chair
Rengaraju	4	Best Poster	Awardee
Ribas Silva	7	Personal	Personal
Ribas Silva	3	TC Chair	TC Chair
Richner	7	Personal	Personal
Richner	1	President	Past President
Rossi	7	Personal	Personal
Roussel	1	President	Vice President/Personal
Sanchez Montero	3	TC Chair	TC Chair/Personal
Sassoni	4	Colonnetti Medal	Awardee/Personal
Sassoni	2	TAC	Bureau/Personal
Schlangen	5.1	Corporate Institutional	Technical University of Delft
Schlangen	7	Personal	Personal
Schmidt	7	Personal	Personal
Scrivener	7	Personal	Personal
Sellier	5.1	Corporate Institutional	LDMC
Shah	7	Personal	Personal
Shi	4	Fellow	Fellow/Personal
Skarendahl	7	Personal	Personal
Snellings	4	Colonnetti Medal	Awardee/Personal
Snoeck	4	Colonnetti Medal	Awardee/Personal
Sonebi	7	Personal	Personal
Sujjavanich	5.3	Corporate Associate	Kasetsart University
Sylla	8	RILEM Secretariat	Management Assistant
Tartari	5.2	Corporate Industrial	Selinizza
Tian	7	Personal	Personal
Torrent	7	Personal	Personal
Traversa	5.3	Corporate Associate	LEMIT
Valuzzi	7	Personal	Personal
Valuzzi	3	TC Chair	TC Chair

Van Bruegel	3	TC Chair	TC Chair
Van Bruegel	7	Personal	Personal
Van Den Berg	5.1	Corporate Institutional	University of Antwerp EMIB
Van Zijl	7	Personal	Personal
Van Zijl	3	TC Chair	TC Chair
Vazquez-Ramonich	3	TC Chair	TC Chair
Vyncke	1	President	Past President
Weiss	7	Personal	Personal
White	4	Colonnetti Medal	Awardee/Personal
Wistuba/De Lourenzes	5.3	Corporate Associate	T U Braunschweig
Wigum	7	Personal	Personal/TC Chair
Wittmann	7	Personal	Personal/TC Chair
Xing	3	TC Chair	TC Chair/Shenzhen University
Yan	7	Personal	Personal/TC Chair
Ye	7	Personal	Personal
Yoshimura	6	International Partner	Japan Concrete Institute

