

73RD RILEM ANNUAL WEEK AND INTERNATIONAL CONFERENCE ON INNOVATIVE MATERIALS FOR SUSTAINABLE CIVIL ENGINEERING (IMSCE): a REPORT (or WHAT DID YOU MISS?)

Nanjing, China, 26-30 August 2019

RILEM Implementation Manager, Dr. Daniela Ciancio

China is big and so was the 73rd RILEM Annual Week and IMSCE event in Nanjing! Our full set of RILEM Standing Committees (DAC, TAC, EAC, Bureau and General Council), 6 TC meetings, a splendid conference with 17 keynote speakers, 6 plenary sessions, 289 delegates, 6-storey and 400,000 m² conference venue connected to a 5-star hotel of 68 stories situated at Nanjing International Youth Cultural Centre designed by the famous architect Zaha Hadid: these are just some numbers and features that might give an idea of the extent of the event.

The first formal gathering of the event was the Welcome Reception on the evening of Monday 26 August 2019, even though many Rilem members initiated their activity the day before attending some of the RILEM Standing Committees and the meetings of the Technical Committees (TMS, SHE, 270-CIM, 244-NUM, FTC and CEC). By 13.30 on Monday, the registration desk was open to the conference delegates. A countless number of PhD students from Southeast University, the local event-host, officially started their volunteering jobs. They played a significant role towards the success of the event that ran smoothly and flawlessly. The volunteers, around 50 of them, were trained to solve problems, give directions, guide you in the maze of the conference venue and read your mind to provide an answer even before your question was posed! They were fantastic!



Local PhD students volunteering at the IMSCE registration desk

The Welcome reception gave the IMSCE delegates and the RILEM members the opportunity to greet old and new friends, create some networking and try the local cuisine.



Some joyful moments at the Welcome Banquet of the 73rd RILEM Annual Week and IMSCE

On Tuesday the opening ceremony was introduced by Prof. Changwen Miao, Southeast University and RILEM Honorary member, Prof. Guangjun Zhang, President of Southeast University and Prof. Ravindra Gettu, RILEM president. The first presentation was from Dr. Augusto Cannone Falchetto, recipient of the 2019 Robert L’Hermite medal. He offered an insight of his numerical model for asphalt mixture materials and his studies on size effect at low temperature. An interview with Augusto is available [here](#). Prof. Scrivener replaced Dr. Cannone Falchetto on the stage to inform the audience about the urgent need of alternative binders to help the planet to solve severe environmental problems. Last presentation was by Dr. Robert Flatt that entertained the room with his presentation made of colourful comics strings and funny comparison between food recipes and concrete mixes with chemical additives.



Conference delegates taking a group photo outside the conference venue



IMSCE opening ceremony

During the coffee break the delegates were accompanied outside for a group photo. This was the only challenging moment of the event as the “yes-we-can” volunteers failed to organise a nice breeze and a mild temperature. The very hot outdoor conditions (actual temperature was 37 degrees, but due to high RH the perceived temperature was much higher) put a strain on the attendants. The rest of the day was organised with a second set of plenary presentations and the conference parallel sessions. The contents of the key-note speakers’ talks were in line with the conference topics, i.e. innovative materials and environmentally-friendly construction practices: Prof. De Schutter presented a review of the active control properties of concrete, Prof. Khayat cost-effective UHPC for sustainable applications and Prof. Plank chemical admixture for eco-friendly cements. In the evening the RILEM members gathered together in one of the magnificent halls of the hotel to celebrate the Honorary Membership of Prof. Karen Scrivener and the RILEM Fellowships of Prof. Pietro Lura, Prof. Takafumi Noguchi, Prof. Mette Geiker and Prof. Manu Santhanam.

On Wed 28 August the TCs that terminated their activities in 2019 shared their work with the IMSCE delegates during a plenary session: Prof. Takafumi Noguchi (TC 255-FRS) discussed the fire resistance of concrete repaired with polymer cement mortar, Dr. Alexandra Bertron (TC 253-MCI) presented the interactions between microorganisms-cementitious materials, Prof. Karen Scrivener (TC 267-TRM) talked about the reactivity of supplementary cementitious materials and its testing procedures and Dr. Lily Poulikakos (TC 252-CMB) deliberated about the chemo-mechanical characterization of bituminous materials. The rest of the day saw more parallel sessions and plenary lectures. The key-note speakers discussed about durable concrete in severe exposures (Prof. Doug



Karen Scrivener receives the RILEM Honorary Membership from RILEM President Ravindra Gettu, Vice-President Nicolas Roussel and Outgoing President Johan Vyncke

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Hooton), high performance concrete and its application in China (Prof. Peiyu Yan), new type of carbon reinforcement (Prof. Viktor Mechtcherine), the use of neutron radiography to characterise cementitious materials (Prof. Jason Weiss), self-prestressing concrete (Prof. Pietro Lura) and Rheology of cement-based materials (Dr. Nicolas Roussel).

The RILEM General Council, chaired by RILEM president Prof. Ravindra Gettu, assembled in the morning to vote the proposals discussed during the previous days by the RILEM Standing Committees. Prof. Nele De Belie, chair of TAC, announced the closure of some TCs (251-SRT, 253-MCI, 255-FRS, 259-ISR, 263-EEC and 245-RTE) and the approval of new ones (CCS chaired by Dr. M. Azenha, MPA chaired by Dr. Guang Ye and MCC chaired by Prof. B. Mobasher). She also informed the audience that: 1) Prof. Daman Panesar will replace Prof. Barzin Mobasher as Convener of Cluster A; 2) Prof. Pietro Lura and Prof. Daman Panesar will be replaced as TAC experts by Dr. Anya Vollpracht and Dr. Daniel Oliveira and 3) the jury of the Robert L’Hermite and Gustavo Colonnetti medals will have two new experts: Prof. Daman Panesar and Dr. Arun Menon. Prof. Geert de Schutter, chair of DAC, was pleased to announce the stable but slightly growing number of RILEM members and the good functioning of the Regional and National Groups. He also anticipated a few initiatives to be executed by Dr. Daniela Ciancio, RILEM implementation manager, in the following months to strengthen RILEM’s interaction with the industrial sector. DAC experts Prof. Tian Qian and Prof. Marco Di Prisco will be replaced by Prof. Jiaping Liu and Dr. Lei Lei. The General Council was the occasion to thank Geert for his work as DAC chair and welcome Dr. Hans Beushausen in this role. Prof. Doug Hooton, chair of EAC, congratulated the



Prof Gettu presenting at the RILEM General Council meeting

organisers of the doctoral course “Concrete Technology – state of the art and future” held in Nanjing on 21-25 August 2019. He also briefly discussed some plans that aim to engage more students and young researchers, to be implemented by Dr. Daniela Ciancio. The General Council was the occasion to thank Doug for his work as EAC chair and welcome Prof. Scrivener in this role. The attendants voted the following items: 1) Prof. Pietro Lura to replace current RILEM Treasurer Prof. Raoul François; 2) Prof. Pietro Lura to replace current Manager of RILEM Publications Mrs. Pascale Ducornet; 3) Prof. John Provis to replace current Editor in Chief for Materials and Structures Prof. Pietro Lura, 4) Dr. Alexandra Bertron to replace current Editor in Chief for RILEM Technical Letters Dr. Nicolas Roussel, 5) Wolfram Schmidt to replace current Bureau member Hans Beushausen, 6) Prof. John Provis to be RILEM Honorary President for 2020 and 7) Mrs. Anne Griffoin to replace current Head of Publications and Communication Mrs Pascale Ducornet. Towards the end of the meeting, Prof. Raoul François presented the current financial state of RILEM. A short presentation of the future RILEM Spring Conventions and Annual Weeks was also given. More details about these RILEM events can be found [here](#).



Dr. Ravindra Gettu showing the list of upcoming RILEM Spring Conventions and Annual Weeks

for RILEM Technical Letters Dr. Nicolas Roussel, 5) Wolfram Schmidt to replace current Bureau member Hans Beushausen, 6) Prof. John Provis to be RILEM Honorary President for 2020 and 7) Mrs. Anne Griffoin to replace current Head of Publications and Communication Mrs Pascale Ducornet. Towards the end of the meeting, Prof. Raoul François presented the current financial state of RILEM. A short presentation of the future RILEM Spring Conventions and Annual Weeks was also given. More details about these RILEM events can be found [here](#).

The conference dinner on Wednesday night was a tribute to Chinese cuisine and culture. The delegates were entertained by dancers, musicians and artists.



Moments of the IMSCE Banquet and RILEM Presidency at the centre

A special moment during the banquet was dedicated to the projection of pictures and videos in memory of Prof. [Sun Wei](#) who passed away peacefully at her home in Nanjing, China, in February 2019. It was very moving to read the kind words that friends and colleagues sent from all over the world, to pay their tribute to Prof. Wei. Her kindness and collegiality will be sadly missed.



Prof. Wei Sun with some students

The last day of the conference, Thursday 29 August, hosted the “[China Engineering Construction Forum](#)”. All lectures in this session were given in Chinese, but non-Chinese speakers could follow the talks through earphones distributed at the entrance of the venue, transmitting a live English translation. The Forum was the first of its kind, i.e. a RILEM-sponsored Chinese event with speakers coming mainly from the Chinese industrial sector. It was a great occasion to learn from the Chinese chief engineers the challenges and accomplishments of projects dealing with high-speed railway, crossing-sea bridges, nuclear power plants and other mainly concrete-made mega structures. In the afternoon of this final day, the last two plenary lecture sessions were dedicated to Prof. Sun Wei. The speakers were Prof. S.P. Shah (Hybrid nanocomposites for surface treatment of concrete), Prof. P.A.M. Basheer (Multiphase transport processes of the near-surface concrete under combined carbonation-chloride exposures), Prof. O.M. Jensen (Production and storage stability of skin carbonated CaO), Prof. K. Van Breugel (The added value of models in view of sustainable construction), Prof. N. Banthia (Health monitoring of critical infrastructure using sensors, cyber-physical interfaces and long range wide-area networks) and Prof. Zongjin Li (Property enhancement for cement-based materials through incorporation of nano particles).

The 74th RILEM Annual Week will take place in Sheffield, UK, from 31st August to 4th September 2020. The chair of this event, Prof. John Provis, is already losing sleep and working hard to achieve, or even succeed, the quality of the Nanjing Annual Week. Until then... be safe and happy RILEM!

