

Report of the International RILEM Conference on Synergising expertise towards sustainability and robustness of cement-based materials and concrete structures - SynerCrete'23

14, 15 & 16 June 2023 - Milos Island, Greece

The most difficult thing about this Synercrete'23 event to describe in words is the spirit of collaboration, trust, and friendship amongst the members of the organising committee. The organisers, whose average age is only 40, joined forces again after the successful experience of Synercrete'18 to offer another wonderful event which took place in the Greek island of Milos. It was the magic atmosphere of the island, with its beautiful crystal blue Aegean Sea, or maybe the complicity between the organisers, or just simply a natural consequence of the hard work of the organisation of every single detail, that made this event a delightful experience.



The conference organising committee of Synercrete'23. From the left: Miguel Azenha (Chair of the Scientific Committee), Agnieszka Jędrzejewska (Chair of the organizing committee), Fragkoulis Kanavaris (Chair of the organizing committee), Dirk Schlicke (Chair of the Scientific Committee), and Farid Benboudjema (Chair of the Scientific Committee). Image courtesy of D. Ciancio.

The event received 354 abstracts that turned into 236 accepted papers and 225 presentations. 294 delegates registered from 35 countries and 5 continents. The organisers recruited 103 internationally renowned experts for the scientific committee. 45% of the accepted papers had a PhD student as first author! The proceedings of the event ([Vol 1](#) and [Vol 2](#)) have been published by Springer and they were made available by the beginning of the conference.



Some moments during the event. Image courtesy of D. Ciancio.

During its first day, Synercrete'23 hosted 8 RILEM Technical Committee meetings:
[TC 275-HBD: Hygrothermal behaviour and durability of bio-aggregate based building materials](#), chaired by Sofiane Amziane
[TC 281-CCC: Carbonation of concrete with supplementary cementitious materials](#), chaired by Nele de Belie and Susan Bernal Lopez

[TC 283-CAM: Chloride transport in alkali-activated materials](#), chaired by Arnaud Castel
[TC 287-CCS: Early-age and long-term cracking analysis in RC structures](#), chaired by Miguel Azenha and Fragkoulis Kanavaris
[TC 298-EBD: Test methods to evaluate durability of blended cement pastes against deleterious ions](#), chaired by William Wilson
[TC 299-TES: Thermal energy storage in cementitious composites](#), chaired by Jorge Dolado and Antonio Caggiano
[TC MCP: Accelerated mineral carbonation for the production of construction materials](#), chaired by Ruben Snellings
[TC 302-CNC: Carbon-based nanomaterials for multifunctional cementitious matrices](#), chaired by Marco Liebscher.

The second and third day were respectively opened by the key-note presentation of Maria Stefanidou, presenting “*Substituting natural pozzolan with artificial derived from industrial perlite waste for mortar production*” and of Jean-Michel Torrenti presenting “*Fast carbonation of recycled concrete aggregates – the results of the FastCarb project*”.



On the left: Agnieszka Jędrzejewska (Chair of the organizing committee), Nele De Belie (RILEM Vice-President), and Maria Stefanidou (key-note lecturer and RILEM Europe Convener). On the right: Maria Stefanidou, during her key-note presentation. Image courtesy of D. Ciancio.



On the left: Jean-Michel Torrenti (key-note lecturer) and Farid Benboudjema (Chair of the scientific committee). On the right: Jean-Michel Torrenti, during his key-note presentation. Image courtesy of D. Ciancio.

Three awards were issued during the event:

- Best International Collaboration Award, that went to Wenkui Dong, for the paper *“Development of self-sensing cementitious composites with improved water and chloride resistance”*, from Wenkui Dong, Wengui Li, Marco Liebscher and Viktor Mechtcherine
- Best Interdisciplinary Award, that went to Harry Hermawan, for the paper *“Experimental investigation on the novel self-healing properties of concrete mixed with commercial bacteria-based healing agent and crystalline admixtures”*, Harry Hermawan, Virginie Wiktor, Pedro Serna, Elke Gruyaert

and

- Best PhD Research Award, that went to Hanne Vanoutrive, for the paper *“The impact of chloride binding on the resistance to carbonation: from single cycle degradation towards the complexity of multi cycle degradation”*.

The gala dinner took place at the beautiful Kipos restaurant, next to the Kipos beach. The delegates were entertained by the young dancers of the Milos folkloristic dance school and enjoyed the delicious local Greek food.



Some moments during the gala dinner at the Kipos Restaurant. Images courtesy of D. Ciancio.

RILEM was at the event with a desk at the foyer, showcasing the RILEM and Springer publications.



RILEM desk and foyer of the conference venue. Image courtesy of D. Ciancio.

The organisers were thrilled to announce the 3rd edition of Synercrete, taking place in 2027 in France. The exact location is kept secret, for time being!