



RILEM International conference Strategies for Sustainable Concrete Structures

September 5-7, 2019
Lecco, Lake Como, Italy



Chairmen:

Matteo Colombo, Marco di Prisco
and Liberato Ferrara
Politecnico di Milano

Organized by



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Cement is the main constituent of concrete, the most widely used building material, and will continue to be largely used in the next years. Its production generates around 8% of the total CO₂ emissions and therefore, the optimization of its use in concrete structures, and the extension of structure lifespan play a key role to favor a sustainable development.

Computational methods oriented to evaluate wide strategies to achieve these tools are a new border of civil engineering nowadays. The numerical methods like finite elements, finite volumes, finite differences and many others constitute a relevant response to this challenge. They potentially allow to take into account the rheological, physico-chemical behavior and the improved mechanical concrete properties by considering thermo-hydro-mechanics and environmental boundary conditions acting on the structures, to optimize these structures. The optimization can be carried out with respect to time, money, safety, energy, CO₂ emissions, and, more generally, life cycle, in a more reliable way than that associated to code rules and analytical approaches currently used. The control of the concrete when placed in the formworks, its durability, its cracking, its shrinkage and its creep, with respect to the sustainable development constitute, therefore, the principal topics of this international conference. The objective is to join together researchers, engineers, architects, urbanists, industrials and owners, to exchange and reflect on the use of numerical tools and their contribution with respect to the current stakes of sustainable development.

Following SSCS'2012 in Aix-en-Provence and Rio de Janeiro in 2015, it was decided to organize the third Conference SSCS'2018 at Politecnico di Milano, Lecco campus, located on lake Como. The shifting of one year was decided to prevent the overlapping with an international conference on similar topics (DSCS, Moscow 2018). The organization will try to privilege the scientific and technical discussions because these topics are quite new and deserve a wide discussion

Steering Board

Eduardo M. R. Fairbairn
Romildo Dias Toledo Filho
Pierre Rossi
Jean-Louis Tailhan

Conference topic

- I. Theoretical and Numerical Models
 - I.1. Flowing and Casting
 - I.2. Early age behaviours
 - I.3. Drying, Shrinkages and Creeps
 - I.4. Cracking behaviours (static, fatigue, dynamic)
 - I.5. Chemical aging (chemical reactions and transfers)
 - I.6. Coupling Problems
 - I.7. Durability
- II. Structural applications and Sustainability
 - II.1. Bridges
 - II.2. Buildings
 - II.3. Nuclear structures and storages
 - II.4. Tunnels
 - II.5. Roads and Railways
 - II.6. Hydroelectrical power plants
 - II.7. Others applications

Registration fee

Conference registration fee (in Euro) include welcome reception, lunches, coffee breaks, conference banquet, cultural event and attendance at all sessions and a copy of the conference proceedings (CD-rom).

One author registration is required for each paper submitted.

	Before 30/06/19	After 30/06/19
Registration fee	600 €	700€
Rilem, fib, CTE, AICAP member	540 €	630€
Student (*)	400 €	400€

(*) Student registration does not include cultural event and conference banquet

Key dates and deadlines

Abstract submission	09/03/2019
Abstract acceptance	20/03/2019
Manuscript submission	20/04/2019
Manuscript acceptance	20/05/2019
Reviewed manuscript	15/06/2019

Conference Secretary

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