



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



Support organization:



FNIC



Cement is the main constituent of the most widely used building material and will continue to be largely used in the years to come. Its production generates CO₂ emissions. It is, thus, of primary importance to optimize the use of this cement in the concrete structures, while checking that these structures have lifespan compatible with the stakes of the sustainable development. To take up this challenge, it is essential to use adapted tools of quantification making it possible to justify, in a rigorous and reliable way, the strategic and technical choices adopted.

The numerical methods (finite elements, finite volumes, finite differences ...) constitute a relevant response to this challenge. They potentially allow, due to a best taken into account of the rheological, physico-chemical, and mechanical concrete properties, and of thermo-hydro-mechanics and environmental boundary conditions on the structures, to optimize these structures (optimization with respect to time, money, safety, energy, CO₂ emissions, and, more generally, life cycle), in a way more reliable than the codes and analytical approaches currently used. The control of the concretes placing in the formworks, their durability, their cracking, their shrinkages, and their creeps, with respect to the sustainable development (evaluation of CO₂ emissions, for example) 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 these numerical tools and their contribution with respect to the current stakes of sustainable development.

Following SSCS'2012 in Aix-en-Provence it was decided to organize the second Conference SSCS'2015 in Rio de Janeiro/Brazil. For this second conference we have decided to organize the presentations as following: each day a series of invited presentations in a plenary section during the morning and the beginning of the afternoon followed by submitted papers in parallel sections. This organization has been chosen to privilege the scientific and technical discussions.

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	15/12/2018
Abstract acceptance	01/02/2019
Manuscript submission	01/03/2019
Manuscript acceptance	15/04/2019
Reviewed manuscript	15/05/2019

Conference Secretary

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