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COMPUTATIONAL MECHANICS OF CONCRETE

AND CONCRETE STRUCTURES

A SYMPOSIUM IN MEMORY OF NENAD BIĆANIĆ

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ABSTRACT

Computational modelling of concrete and concrete-like materials, as well as concrete structures, is a very active research field, with many scientific difficulties, and is of considerable technical relevance. A better understanding and a better representation of the complex material behaviour, a better overall robustness of the algorithms, and an improved mathematical rigour of the underlying (multi)field formulations are required, in spite of the major steps forward and improvements that we have witnessed in the past. Important is also the multiscale character of deformation and failure processes in concrete, where this complicated material features a cascade of scales that can influence its behaviour and the performance of the structures built of it. This mini-symposium invites contributes on all computational aspects that are related to the modelling of concrete and concrete structures, and welcomes contributions on:

- Computational advances

- Constitutive modelling, including damage, fracture, and multiscale approaches

- Multiphysics phenomena and time-dependent behaviour

- Modelling and assessment of structural performance

- Modelling of cyclic and seismic behaviour