**5th US National Congress on Computational Mechanics**

Boulder, Colorado, USA
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# Minisymposium on
# Computational Concrete Mechanics

## Objectives

The objective of this minisymposium is to discuss recent advances in computational modelling of plain concrete and concrete-like materials, reinforced and prestressed concrete and the role of advanced material models in structural analysis. Beyond the aspects of material modelling, reliability, robustness and efficiency of modelling techniques are topics relevant to this symposium.
As far as material modelling is concerned, deformations and deterioration in concrete because of static and dynamic loading, environmental influences, creep, shrinkage, ageing and temperature effects on macro- meso- and micro- scales will be addressed within various theoretical frameworks such as plasticity theory, damage and fracture mechanics. Related issues include parameter identification, coupled phenomena as regards thermal and chemical influences on the mechanical behavior, stochastic aspects, efficiency and robustness of algorithms, modelling of reinforcement and prestressed reinforcement, regularization methods and corrosion-induced damage of reinforcing steel.
Selected topics pertaining to structural modelling of plain and RC concrete structures are adaptive finite element techniques for 2D and/or 3D structures, structural optimization, stochastic modelling of loading conditions, section models and durability aspects.

Organizers : Prof. Herbert A. MANG
Institute for Strength of Materials, TU-Vienna, Austria
Tel: +43-1 58801 3084, Fax: +43-1 5041629
E-mail: herbert.mang@tuwien.ac.at

Prof. Günther MESCHKE
Institute for Structural Mechanics, Ruhr-University Bochum, Germany
Tel: +49-234 700 4965, Fax: +49-234 709 4149
E-mail: guenther.meschke@ruhr-uni-bochum.de