

COUPLED BIO-CHEMO-HYDRO-MECHANICAL MODELLING IN SCIENCE AND ENGINEERING

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ABSTRACT

Real life problems have in general a multidisciplinary character and, therefore, they should be solved using Multiphysics, accounting for the complex couplings involved in their description. This mini-symposium aims to bring together experts and knowledge from a wide spectrum of research disciplines, working on topics in which the consideration of different coupled phenomena is fundamental to understanding different problems. The objectives are to present and discuss state-of-the-art mathematical models, numerical methods, and computational techniques for solving bio-chemo-hydro-mechanical coupled problems or modelling the electro-chemo-hydro-mechanical response of materials. A broad range of applications are welcome, for example biocementation of soils, concrete ageing, piezoelectric materials, soft biological tissues, tumour growth, drug delivery, among others.