Advanced Numerical Methods in Computational Solid Mechanics

Guest Editors:

Dr. Isabelle Ramiere
CEA, DES, IRESNE, DEC, SESC, F-13108 Saint-Paul-lez-Durance, France

Prof. Dr. Frédéric C. Lebon
CNRS, Laboratoire de Mécanique et d'Acoustique, Université Aix-Marseille, 13007 Marseille, France

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Message from the Guest Editors

Efficient numerical solving of nonlinear solid mechanics problems is still a challenging issue which concerns various fields: nonlinear behavior, micromechanics, contact mechanics, damage, cracks propagation, rupture, etc. Numerical methods dedicated to such topics have been developed for many decades, but many fundamental and important challenges remain. In particular, multiscale methods which bridge different scales in time and space, efficient reduced-order models for variational inequalities or fully scalable nonlinear solvers, to name but a few.

For this Special Issue, we seek contributions which introduce or adapt advanced numerical methods for computational mechanics. Topics of interest include, but are not limited to, the following: adaptive mesh refinement, domain decomposition method, multiscale approaches for heterogeneous materials, reduced order modeling, efficient nonlinear solvers, parallel computing, contact mechanics, and crack initiation and/or propagation.

Special Issue

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester LE1 9BH, UK

Message from the Editor-in-Chief

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