

Novel approaches in computational mechanics

Organizers:

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Numerical simulations are becoming an indispensable tool for a wide range of modern engineering activities, and, accordingly, Computational Mechanics is becoming a primal research field for most engineering branches, in particular for Civil, Mechanical, Aerospace, Naval, Environmental, and Biomedical Engineering. An active and constantly increasing research effort toward innovative and highly efficient computational techniques has led to the development of new advanced numerical methods able to subside the limitations of conventional finite elements, so far the gold standard discretization tool of Computational Mechanics. Examples of innovative methods are Isogeometric Analysis, Mimetic Finite Differences and Virtual Elements, X-FEM, Immersed Methods, SPH and Particle Methods, and others.

The Italian Group of Computational Mechanics – GIMC – organizes this minisymposium with the aim to provide a forum for discussing advantages, drawbacks, new possibilities and applications of the forefront of Computational Mechanics. The minisymposium seeks at gathering researchers and scholars working on conception, development, mathematical analysis, and validation of advanced numerical methods and modern computational techniques. The MS also welcomes researchers devoted to the development of innovative applications of more classical computational techniques.