Università degli Studi di Pavia
Computational Mechanics & Advanced Materials Group - DICAr

COMPMECH
Computational Mechanics & Advanced Materials

3D@UniPV
Virtual Modeling and Additive Manufacturing for Advanced Materials

Short Course

Computational Models
for Nonlinear Solid Mechanics

Lectures will focus on theoretical models as well as on simulation models associated with engineering applications in solid mechanics

Abstract for the lectures:
A. Introduction, Engineering Challenges
B. Nonlinear continuum mechanics (finite strains, weak forms, hyperelasticity and plasticity)
C. Advanced numerical simulation techniques for large strain applications based on the finite element method, this includes classical elements as well as mixed forms and related software development based on AceGen and AceFEM being integrated in the lectures.
D. Numerical simulation techniques based on the virtual element method (VEM) for engineering applications.

Time of the lectures:
Tuesday, 18 April, 10-12
Thursday, 20 April 11-13
Wednesday, 26 April 10-12

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