Sapienza Università di Roma
PhD Program in
Structural and Geotechnical Engineering

February 25, 2025 – 11:00am-2:00pm
February 26, 2025 – 3:00pm-6:00pm
February 28, 2025 – 11:00am-2:00pm, 3:00pm – 6:00pm

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Finite Element Method for linear and nonlinear mechanical problems

This class introduces the fundamentals of the Finite Element Method (FEM) to handle the numerical solution of general mechanical problems, with special reference to the structural framework. The most and widely adopted numerical codes rely on the classical displacement-based formulation, then, this is illustrated in detail. Also, two- and three-field mixed FE approaches are briefly introduced. The main FEs adopted to solve 1D, 2D and 3D continuum problems are illustrated, that is truss, frame, solid, plate and shell FEs are described. Some hints concerning nonlinear formulations, numerical pathological issues and solution strategies are finally given.

Program:
https://phd.uniroma1.it/web/course---finite-element-method-for-linear-and-nonlinear-mechanical-problems_nS11960EN_EN.aspx

Registration form:
https://forms.gle/8hBbp25pRMRttiLF6