Summer School in Computational Mechanics

Date: 8, 9 and 10 July, 2019
Title: State of the art computational methods for nonlinear solid mechanics
Location:
Audience: ESRs from SEED, AdMoRe & ProTechTion projects, other PhD and MSc students
TOPICS: Pavia, Italy
1. Novel tensor cross product to simplify algebra
2. Principles of solid mechanics, thermo-dynamics, variational principles
3. Development of constitutive laws for coupled problems (i.e. electro-thermo-mechanics)
4. Implicit and explicit time integrators with energy-momentum time integrators
5. Conservation laws, fast dynamics, Riemann solvers.
6. Development of implicit codes and applications: advanced algebra packages and HPC.
7. Development of explicit codes and applications: OpenFoam, SPH/vertex centred FVM, SUPG/FEM

Speakers: Prof. Javier Bonet, Dr. Chun H. Lee, Dr. Roman Poya, Dr. Rogelio Ortigosa, Dr. Jibran Haider and Prof. Antonio J. Gil