Variational Methods in Elasticity

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Timetable: 18 hrs (6 lectures of 3 hrs each). First lecture on March 3rd, 2022, 14:00, (dates already fixed, look at Calendar of Activities on https://dottorato.math.unipd.it/calendar), Torre Archimede, Room 2BC/30.


Examination and grading: Oral examination with presentation of selected research topics

SSD: MAT/07 - MAT/05

Aim: The course aims at introducing the main techniques of the three dimensional Calculus of Variations and at studying some variational problems of Continuum Mechanics in the framework of nonlinear hyperelasticity.

Course contents:

3. Quasiconvexity, Polyconvexity, Rank-one Convexity.
4. An existence result by John Ball.
6. Application to Biological Materials.

References: