PLENARY LECTURES

A quick tour of variational methods in nonlinear PDE.

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11h - 12h

FT - Auditorium

Abstract.

Many phenomena in physics, engineering, biology, economics, finance, and mathematics itself are described by nonlinear differential equations. A very important class of these, due to the great variety of phenomena they model, are the Euler-Lagrange equations, whose solutions satisfy an optmization criterion, generally given by an integral that represents a certain energy, an action, a cost function, etcs This type of equations are called variational problems.

In a quick tour we will show how these problems are addressed and some of the challenges they present.