



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

HORIZON EUROPE
PROJECTS FUNDED AT THE UNIVERSITY OF PADUA

RISE - REGULARITY AND SINGULARITY OF SOLUTIONS TO GEOMETRIC VARIATIONAL PROBLEMS

The study of Geometric Variational Problems constitutes one of the oldest subjects in the Calculus of Variations. Examples include classic problems such as the isoperimetric problem, the Plateau problem, and the Wulff problem, as well as the study of crystals, soap bubbles, capillary surfaces, and extremizers in geometric and functional inequalities. Solutions to Geometric Variational Problems may represent equilibrium configurations in physical systems or serve as preferred representatives in homology and homotopy classes. For minimizers or critical points of Geometric Variational Problems, singularities are often inevitable and intricately linked to the physical system being modelled, concentration phenomena, or topological limitations. This project aims to leverage a series of novel techniques introduced by the PI in recent years to study the structure of singularities (or their absence) in solutions to these problems.

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Department: Department of Mathematics

Coordinator: Università degli Studi di Padova

Total EU Contribution: Euro 1.655.000,00

Call ID: ERC-2024-CoG

Project Duration in months: 60

Find out more: <https://cordis.europa.eu/project/id/101169953>