Ph.D course in Mathematical Analysis, Modelling, and Applications

Head of the Ph.D course: **Prof. Gianluigi Rozza**

Web site: **Mathematical Analysis, Modelling, and Applications**

Research lines:

- Conservation Laws
- Transport Problems
- Geometric PDEs
- Numerical Analysis of PDEs
- Nonlinear Analysis
- Dynamical Systems
- Calculus of Variations
- Gamma-Convergence and Multiscale Analysis
- Rate independent evolution problems
- Geometric Control Theory
- Sub-Riemannian Geometry
- Inelastic behavior of solids: plasticity, damage, fracture
- Mechanobiology of the cell and cell motility
- Mechanics of soft and active materials
- Reduced basis methods
- Boundary integral methods and isogeometric analysis
- Fluid-structure interaction problems
- Computational Fluid and Solid Mechanics
- Machine learning
- Uncertainty quantification
- Shape optimization
- Flow control

Fellowships available: **8**

Admission: **Academic and scientific qualifications + written exam + oral exam**

Beginning of the Courses: **1 October, 2020**

Evaluation of academic and scientific qualifications: 10 points

Access to Written Exam: minimum mark of 7/10 on academic and scientific qualifications

Evaluation of Written Exam: 40 points

Access to Oral Exam: minimum mark of 28/40 in the written exam evaluation

Evaluation of Oral Exam: 50 points

Total Evaluation: 100 points

Eligibility: 70 points

First Session

Deadline for online submission of applications: 3 March, 2020

Written Exam: **18 March, 2020**
Oral Exam: **19 March, 2020**

Second Session (only if there should still be places available after the first one)

Deadline for online submission of applications: ~~**15 July, 2020**~~ 20 August, 2020

Written Exam: **10 September, 2020**
Oral Exam: **11 September, 2020**

Admission to the written exam and results of all evaluations will be notified by email.