

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

Head of the Ph.D course:

Prof. Luca RIZZI

Web site:

[Mathematical Analysis, Modelling, and Applications](#)

Research lines:

- Conservation Laws
- Transport Problems
- Geometric PDEs
- Numerical Analysis of PDEs
- Nonlinear Analysis
- Dynamical Systems
- Hamiltonian and dispersive PDEs
- 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
- Uncertainty quantification
- Shape optimization
- Flow control
- Machine Learning
- Stochastic Analysis
- Rough Paths and Regularity Structures

The research activities of candidates applying and selected for the FSE fellowships will be in the field of applied mathematics, including numerical analysis, scientific computing, continuum mechanics and mathematical modelling.

Fellowships available: 7 funded by SISSA
4 funded by FSE +

Admission: Academic and scientific qualifications + written exam + oral exam (in presence – upon Committee discretion candidates domiciled beyond 200 km from Trieste will be allowed to attend remotely contemporaneously to the other candidates)

Beginning of the Courses: 1st October, 2026

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

To be considered eligible, candidates must pass all the phases (academic qualifications, written test, and interview) with a minimum mark of 7/10 or equivalent.

Deadline for online submission of applications: 25th January, 2026

Written Exam: 2nd March, 2026

Oral Exam: 3rd March, 2026

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

Deadline for online submission of applications: 27th August, 2026

Written Exam: 10th September, 2026

Oral Exam: 11th September, 2026

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