

STEFANIA PERROTTA

1985-1990: Student in the Degree Course in Mathematics at the University of Modena. Master's Thesis: Approximation of multivalued mappings; Advisors: Prof. M. Boni and Prof. A. Gavioli.

1990-1994: Ph.D. Student in Functional Analysis and Applications at the International School for Advanced Studies (SISSA) in Trieste. Ph.D. Thesis: Some problems in the Calculus of Variations; Supervisor: Prof. Arrigo Cellina.

1994-2024: Teneured Assistant Professor (Ricercatrice a tempo indeterminato) for the Academic Discipline MATH-03/A (Mathematical Analysis) at the Department of Physics, Informatics and Mathematics of the University of Modena and Reggio Emilia.

Research interests.

- **Existence of solutions to variational problems without semicontinuity assumptions.** Existence of minimizers for integral functionals with non-convex (one-dimensional and multidimensional scalar problems) or non-quasiconvex energy density in the gradient.
- **Problems in elasticity.** Existence of solutions to stationary problems (vectorial minimization problems, first-order implicit differential equations, differential inclusions) and qualitative properties of solutions.
- **Necessary conditions and regularity of solutions to minimization problems.** Regularity of minimizers of integral functionals with non-uniformly elliptic integrand. Validity of Euler-Lagrange equations without growth conditions from above (extended real-valued Lagrangian).
- **Semilinear equations.** Existence of solutions and controllability of ordinary differential equations in Banach spaces whose linear part is the generator of a strongly continuous semigroup, with applications to evolution equations, including non-local types.

Author of 21 scientific publications, she has given seminars at Italian and foreign universities.

Teaching activity: Since 1998, lecturer in charge of Mathematical Analysis courses for Bachelor's and Master's degree programs at the University of Modena and Reggio Emilia.

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