STEFANIA PERROTTA

1985-1990: student in Mathematics at the university of Modena. Thesis: Approssimazione di multiapplicazioni; thesis advisors: Prof. M. Boni and Prof. A. Gavioli.
1990-1994: Ph. D. candidate in Functional analysis and Applications at International School for Advanced Studies Analisi (ISAS) in Trieste. Thesis: Some problems in the Calculus of Variations; supervisor: Prof. Arrigo Cellina.
1994-2024: Permanent Research Fellow (Ricercatore) in Mathematical Analysis at the Department of Physics, Informatics and Mathematics of the University of Modena and Reggio Emilia.

Scientific interests.

- **Existence of solutions to variational problems without lower semicontinuity assumptions.** Existence of minimizers for integral functionals whose energy density is non convex (unidimensional or multidimensional scalar problems) or non quasiconvex (vectorial problems) in the gradient variable.
- **Problems in elasticity.** Existence of solutions for stationary problems (vectorial minimum problems, first order implicit differential equations, differential inclusions) and qualitative properties of the solutions.
- **Necessary conditions and regularity of solutions to minimum problems.** Regularity of minimizers for integral functionals with non-uniformly elliptic energy density. Validity of the Euler-Lagrange equations for extended valued lagrangian.
- **Controllability of semilinear systems.** Exact controllability for abstrat ordinary differential equations in Banach spaces with applications to semilinear evolution equations.

Author of 20 scientific publications, has given seminars at universities in Italy and abroad.

Teaching activity: since 1998 chairs of Calculus and Mathematical Analysis courses for bachelor and master degree of the University of Modena and Reggio Emilia.

Modena, July 8 2024