

Localization Results for Elliptic Systems with Intrinsic Operators

Roberto Livrea, Dumitru Motreanu, Angela Sciammetta

The aim of this talk is to study a class of elliptic problems and systems characterized by the presence of intrinsic operators acting on the solutions. The main goal is to establish existence and localization results for solutions in settings where the nonlinearities depend on the solution, its gradient, and intrinsic operators acting on the solution.

References

- [1] R. Livrea, D. Motreanu, A. Sciammetta, *Quasi-linear elliptic systems with intrinsic operators*, Discrete and Continuous Dynamical Systems - Series S (2025).
- [2] R. Livrea, D. Motreanu, A. Sciammetta, *Existence and location of solutions for a general elliptic system with intrinsic operators*, Ann. Acad. Rom. Sci. Ser. Math. Appl., Vol. 18, No. 1/2026.

First Author: Roberto, Livrea

Affiliation: *Department of Engineering, University of Messina
98166 Messina, Italy*

e-mail: roberto.livrea@unime.it

Second Author: Dumitru, Motreanu

Affiliation: *Department of Mathematics, University of Perpignan
66860 Perpignan, France*

e-mail: motreanu@univ-perp.fr

Third Author: Angela, Sciammetta

Affiliation: *Department of Mathematics and Computer Science, University of Palermo
90123 Palermo, Italy*

e-mail: angela.sciammetta@unipa.it