



UNIVERSITÀ DI PARMA

DIPARTIMENTO DI SCIENZE MATEMATICHE, FISICHE E INFORMATICHE

SEMINARIO DI ANALISI MATEMATICA

Giuseppe Maria Coclite (Politecnico di Bari)

Mercoledì 07 Gennaio 2026, ore 15.30

Sala Riunioni e Seminari, Plesso di Matematica

Nonlocal regularization of conservation laws

Nonlocal regularization of conservation laws consists in conservation laws in which the flux function depends on the solution through the convolution with an exponential kernel. We study two singular limits associated to the problem:

- 1) the convergence of the solutions as the nonlocality shrinks to a local evaluation, i.e., when the kernel tends to a Dirac delta distribution;
- 2) the long-time behavior as the time tends to infinity.

This talk is based on works in collaboration with M. Colombo, J.-M. Coron, G. Crippa, N. De Nitti, K. H. Karlsen, A. Keimer, E. Marconi, L. Pflug, N. H. Risebro, L. V. Spinolo, and E. Zuazua.

Organizzatore: Paolo Baroni