

Nonlinearity, Complexity and Foundations in Mathematics

11 September 2024 - 13 September 2024

Wed 11 September

- 14:00- 14:15** Registration
- 14:15- 14:30** Opening by Prof. Antonio Marino
- 14:30- 15:05** Malchiodi, Andrea "Sharp bounds on the Nusselt number in Rayleigh-Bénard convection"
- 15:10- 15:45** Degiovanni, Marco "Critical groups of functionals associated with quasilinear elliptic problems"
- 15:50- 16:25** Grigolini, Paolo "TBA"
- 16:30- 17:00** Coffee Break
- 17:00- 17:35** Mancosu, Paolo "Three applications of Zermelo's theorem on part-whole"
- 17:40- 18:15** Calanchi, Marta "Singularities and the geometry of some elliptic equations"
- 18:20- 18:55** Bellazzini, Jacopo "Compact embeddings for fractional super and sub harmonic functions with radial symmetry"
- 20:00** Dinner

Thu 12 September

- 9:00- 9:35** Pistoia, Angela "On the generic properties of critical points of functions"
- 9:40- 10:15** Masiello, Antonio "Geodesics on singular Finsler metrics"
- 10:20- 10:55** Soresina, Cinzia "Derivation of cross-diffusion models in population dynamics: dichotomy, time-scales and fast-reaction"
- 11:00- 11:30** Coffee Break
- 11:30- 12:05** Di Garbo, Angelo "Dynamical behaviour of a polynomial two dimensional nonlinear oscillator"
- 12:10- 12:45** Forti, Marco "A Euclidean comparison of the sizes of sets"
- 14:30- 15:05** Tanzi, Matteo "Selfconsistent Transfer Operators: Existence and stability of fixed points in presence of strong coupling"
- 15:10- 15:45** Vannella, Giusi "Nontrivial solutions for resonance quasilinear elliptic systems"
- 15:50- 16:25** Ehrlich, Philip "Integration on the Surreals"
- 16:30- 17:00** Coffee Break
- 17:00- 17:35** Clapp, Monica "Limiting profiles for a Schrödinger equation with a shrinking region of attraction"
- 17:40- 18:15** Ianni, Isabella "New solutions for the Lane-Emden problem in planar domains"
- 18:20- 18:55** Ruffo, Stefano "Burgers equation and the Fermi-Pasta-Ulam-Tsingou lattice"
- 20:00** Dinner

Fri 13 September

- 9:00- 9:35** Luperi Baglini, Lorenzo "An overview of ultrafunctions"
- 9:40- 10:15** Abbondandolo, Alberto "Closed characteristics on the boundary of convex bodies"
- 10:20- 10:55** Wenmackers, Sylvia "On the limits of comparing subset sizes within \mathbb{N} "
- 11:00- 11:30** Coffee Break
- 11:30- 12:05** Valenza, Gaetano "Informative Randomness in Complex Neurophysiological Systems"
- 12:10- 12:45** Ruf, Bernhard "A heat equation with exponential nonlinearity and with singular initial data in \mathbb{R}^2 "
- 12:50- 13:20** Terracini, Susanna "Expanding solutions to the N-body problem"