- Jean-Luc Thiffeault (U of Wisconsin, USA)
- Giuseppe Toscani (Pavia, Italy)
- Pavel Winternitz (Montreal, Canada)

## List of Talks

- Elvira Barbera, Università di Messina: *Stationary heat transfer in ideal gas mixtures: a comparison between classical and extended thermodynamics.*
- Marzia Bisi, Università di Parma: *Multitemperature Euler equations from a kinetic model for reactive mixtures.*
- Francesca Brini, Università di Bologna: *Thermal diffusion effects in ideal gas mixtures described through a continuum model with single-temperature assumption.*
- Maria Bruzón, University of Cadiz: *Self-adjoint and conservation laws for a $K(m, n)$ equation with generalized evolution term.*
- Diletta Burini, Università di Perugia: *Nonlinear Heat Diffusion Under Impulsive Forcing.*
- Roberto Camassa, University of North Carolina: *Stability of internal-wave self-induced shears.*
- Florinda Capone, Università di Napoli "Federico Secondo": *New trends in porous media convection: the influence of anisotropic permeability and thermal diffusivity.*
- Sandra Carillo, Università di Roma "La Sapienza": *Hierarchies of Non-commutative Evolution Equations: Bäcklund Transformations and Bäcklund Charts.*
- Maria Cristina Carrisi, Università degli Studi di Cagliari: *A generalized kinetic approach for the study of relativistic electron beams.*
- Alessandra Celletti, Università di Roma "Tor Vergata": *Stability of nearly-integrable systems with dissipation.*
- Vito Cimmelli, Università della Basilicata: *Weakly Nonlocal Thermodynamics of Anisotropic Rigid Heat Conductors Revisited.*

- Fiammetta Conforto, Università di Messina: *Kinetic approach to deflagration processes in a recombination reaction.*
- Giancarlo Consolo, Università di Messina: *Traveling wave solutions of the domain wall motion in magnetic nanowires with crystallografic defects.*
- Robert Conte, Ècole Normale Supérieure de Cachan: *A new elliptic travelling wave to the cubic-quintic complex Ginzburg-Landau equation.*
- Carmela Currò, Università di Messina: *Wave Solutions to 2x2 Quasilinear Hyperbolic Systems via Differential Constraints.*
- Constantine Dafermos, Brown University: *Maximal Dissipation in Equations of Evolution.*
- Monica De Angelis, Università di Napoli "Federico II": *On exponentially shaped Josephson junctions.*
- Maria Grazia De Giorgi, Università del Salento: *CFD study for wind turbine aerodynamic noise prediction and minimization.*
- Silvana De Lillo, Università di Perugia: *Elastic Rod Models of Polymeric Chains: Static and Travelling Wave Solutions.*
- Roberta De Luca, Università di Napoli "Federico II": *Permanence and nonlinear stability for a predator-prey model with mutual interference.*
- Giovanni De Matteis, Università di Milano-Bicocca: *Nematoacoustic Waves.*
- Francesco Demontis, Università di Cagliari: *Exact Solutions to the modified Korteweg-de Vries equation.*
- Michel Destrade, University of Ireland Galway: *Large Acousto-Elastic Effect.*
- Laurent Desvillettes, CMLA Cachan: *Coupling fluid mechanics and kinetic equations: the case of sprays.*
- Vincenza Di Stefano, Università di Catania: *Thermoelectric transport in nanometric silicon semiconductors.*
- Paolo Falsaperla, Università di Catania: *Convective instability in a porous medium under general boundary conditions.*
- Gaetano Fiore, Università di Napoli "Federico II": *Existence, uniqueness and stability properties for a class of time-dependent 3rd order dissipative problems with various boundary conditions.*

- Gaetana Gambino, Università di Palermo: *Double Hopf bifurcation in a hyperchaotic system.*
- Maria Luz Gandarias, University of Cadiz: *Weak self-adjointness of a porous medium equation.*
- Alain Goriely, OCCAM Mathematical Institute, Oxford: *Localized Waves on Elastic Rods: Instance, Existence, Persistence.*
- Henri Gouin, University of Aix-Marseille & C.N.R.S. U.M.R. 6181, France: *Interaction between liquids and solids. Fluid motions at nanoscales.*
- Suren Khachatryan, American University of Armenia: *Integration of Hyperbolic Partial Differential Equations along Characteristics on an Adaptive Mesh.*
- Boris Konopeltchenko, Università del Salento-INFN: *Integrable systems of hydrodynamycal type:gradient catastrophes, Thom's catastrophes and Euler-Poisson-Darboux equations.*
- Andrey Konyukhov, Russian Academy of Sciences: *On instability of converging shock waves in a hard-sphere fluid.*
- Deborah Lacitignola, Università di Cassino: *On the control of infectious diseases through multiple interventions.*
- Chiara Lelli, Politecnico di Milano: *DAD occurence in generalized Fitz-Hugh-Nagumo models.*
- Decio Levi, Università di Roma Tre: *Lambda symmetries for the reduction of continuous and discrete equations.*
- Tai-Ping Liu, Academia Sinica, Taipei and Stanford University: *Multi-Dimensional Gas Flows.*
- Damir Madjarević, University of Novi Sad: *Shock structure in He-Ar mixture and its comparison with experimental results.*
- Natale Manganaro, Università di Messina: *A reduction procedure for generalized Riemann problems.*
- Luigi Martina, Università del Salento: *The Generalized* 2*-component Ginzburg-Landau model the pure* $SU(2)$ *Yang-Mills Theory.*
- Giovanni Mascali, Università della Calabria: *A hydrodynamic subband model for semiconductors based on the Maximum Entropy Principle.*

- Roberto Monaco, Politecnico di Torino: *Stability analysis and bifurcation phenomena in landscape ecology.*
- Giuseppe Mulone, Università di Catania: *Does a linear symmetric operator of a dynamical system help stability?*
- Concepcion Muriel, University of Cadiz: *Equivalent problems on the treatment of ordinary differential equations.*
- Jerry Murphy, Dublin City University: *Infinitesimal stability of the equilibrium states of a pre-stressed, incompressible, hyperelastic tube under pressure.*
- Gaetano Napoli, Università del Salento: *Periodic Fréedericksz transition for nematics confined between two concentric cylinders.*
- Francesco Oliveri, Università di Messina: *Classical and approximate symmetries of quasilinear first order systems of PDEs.*
- Francesco Paparella, Università del Salento: *The Dihedral Logarithmic Potential: Global Dynamics and McGehee regularization.*
- Maksim Pavlov, P.N. Lebedev Physical Institute, Russia: *Nonlocal kinetic equation for a soliton gas. Integrability.*
- Sergej V. Prants, Pacific Oceanological Institute of the Russian Academy of Sciences: *Chaotic diffraction of atoms at a standing light wave.*
- Giuseppe Puglisi, Politecnico di Bari: *Electromechanical instabilities in eletro-active polymeric thin films.*
- Angela Ricciardello, Università di Messina: *Simulations of Seismic Wave Propagation.*
- Salvatore Rionero, Università di Napoli: *Global stability of multi-component convection-diffusion in a porous medium.*
- Colin Rogers, Hong Kong Polytechnic University: *On a Non-Isothermal Rotating Gas Cloud System Integrable Structure and Hamiltonian-Ermakov Connection.*
- Tommaso Ruggeri, Università di Bologna: *Can constitutive relations be represented by non-local equations?*
- Raffaele Ruggio, Università del Salento: *Three-dimensional trajectories of spheroidal particles in two-dimensional flow fields.*

- Giuseppe Saccomandi, Università di Perugia: *Solitary waves with compact support.*
- Marco Sammartino, Università di Palermo: *Vortex layers of small thickness.*
- Paolo Maria Santini, Università di Roma "La Sapienza": *Commuting vector fields, integrable PDEs of hydrodynamic type, and the gradient catastrofe of multidimensional waves.*
- Michele Scaccia, Università di Palermo: *Turbulent superfluid profiles and vortex density waves in a counterflow channel.*
- Vincenzo Sciacca, Università di Palermo: *High Reynolds number Navier-Stokes solutions and boundary layer separation induced by a rectilinear vortex.*
- Antonio Sellitto, Università della Basilicata: *A phonon hydrodynamic approach for the pore-size dependence of the thermal conductivity of porous silicon.*
- Vishnu D. Sharma, Indian Inst. of Tecnology of Bombay: *Finite amplitude waves in non-equilibrium flows of a relaxing gas.*
- Yulii Shikhmurzaev, University of Birmingham: *Some classes of free-boundary problems.*
- Srboljub Simic, University of Novi Sad: *Shock structure problem in multitemperature gaseous mixtures.*
- Alberto Soria, Universidad Autònoma Metropolitana: *Assessing significant phenomena in linear perturbation multiphase flows.*
- Maria Paola Speciale, Università di Messina: *Equivalence transformations of quasilinear first order systems.*
- Brian Straughan, Durham University: *Thermal convection in nanofluids.*
- Masaru Sugiyama, Nagoya Institute of Tecnology: *Fluctuating hydrodynamics based on extended thermodynamics.*
- Merab Svanadze, Ilia State University: *Plane waves and boundary value problems in the theory of elasticity for solids with double porosity.*
- Mahdhivan Syafwan, University of Nottingham: *Travelling solitons in the advance-delay nonlinear Schrödinger equation with saturable nonlinearity.*

- Shigeru Taniguchi, Nagoya Institute of Technology: *Shock-induced phase transitions from gas phase to solid phase.*
- Jean-Luc Thiffeault, University of Wisconsin-Madison: *Topological methods for stirring and mixing.*
- Luigi Vergori, Università del Salento: *Stability analysis of Rayleigh-Bénard convection in a porous medium.*
- Raffaele Vitolo, Università del Salento: *On the relationship between differential operators related to integrability of PDEs and generalized symmetries.*
- Pavel Winternitz, Universite of Montreal: *Symmetry preserving discretization of differential equations and numerical solutions.*
- Sergey Zykov, Università del Salento: *Application of the hydrodynamic reduction method for the Skyrme-Faddeev system.*

## Scientific Committee

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