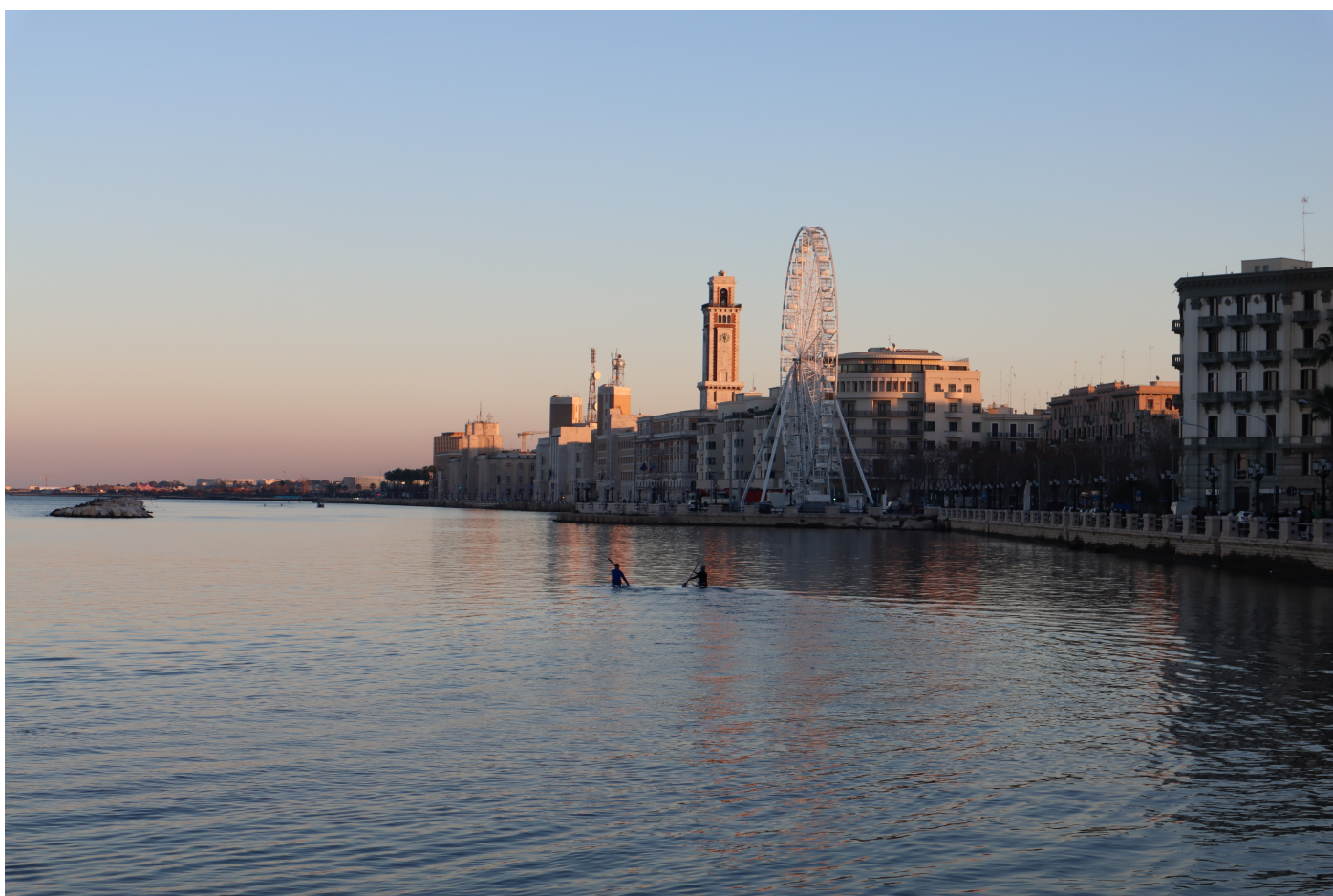
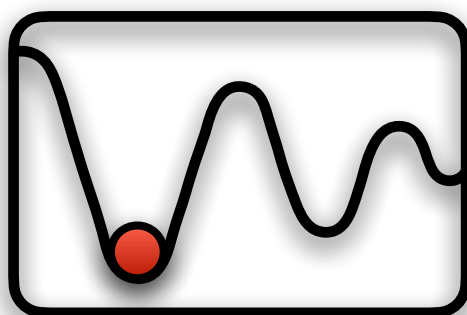


# WASCOM 2023, 5 - 9 JUNE, BARI

## PROGRAM OF THE TALKS



Politecnico  
di Bari

**GNFM**  
iNSAM

**INFN**  
Istituto Nazionale di Fisica Nucleare



UNIVERSITÀ  
DEGLI STUDI DI BARI  
ALDO MORO

	<b>MONDAY 5 JUNE</b>
8.30 - 9.00	Registration
9.00 - 9.30	Welcome Greetings
9.30 - 10.00	<u>Tommaso Ruggeri</u> <i>"Parabolic Limit of a General Hyperbolic System of Rational Extended Thermodynamics via Maxwellian Iteration"</i>
10.00 - 10.15	<u>Marco Menale</u> <i>"A kinetic theory approach to modeling prey-predator ecosystems with expertise levels"</i>
10.15 - 10.30	<u>Gabriele Grifò</u> <i>"The role of autotoxicity in vegetation patterns: from close-to-onset to far-from-threshold dynamics"</i>
10.30 - 11.00	<u>Giuseppe Saccomandi</u> <i>"Waves in dispersive elastic materials"</i>
11.00 - 11.30	Morning Coffee Break
11.30 - 12.00	<u>Maria Carmela Lombardo</u> <i>"Chemotactic models of plaque formation in Multiple Sclerosis"</i>
12.00 - 12.15	<u>Luca Bellino</u> <i>"Thermomechanical effects in decohesion and damage of double-stranded biological materials"</i>
12.15 - 12.30	<u>Annamaria Pollino</u> <i>"A Three Phase Model for Blood Flow"</i>
12.30 - 13.00	<u>Giancarlo Consolo</u> <i>"Hyperbolic reaction-transport systems in the context of dryland ecology"</i>
13.00 - 15.00	Lunch Break
15.00 - 15.30	<u>Takashi Arima</u> <i>"Analysis of molecular internal-relaxation effects on steady flow through simple channels based on rational extended thermodynamics"</i>
15.30 - 15.45	<u>Giuseppe Ali</u> <i>"Modeling wildland fire propagation with realistic wind and topography data"</i>
15.45 - 16.00	<u>Brull Stéphane</u> <i>"A well suited approach of some relaxation operators to moment methods"</i>
16.00 - 16.30	Afternoon Coffee Break
16.30 - 17.00	<u>Giuseppe Mulone</u> <i>"Squire's theorem for nonlinear monotone energy stability of Couette and Poiseuille flows"</i>
17.00 - 17.15	<u>Carla Perrone</u> <i>"Monotonic energy stability for inclined laminar flows"</i>
17.15 - 17.30	<u>Paolo Falsaperla</u> <i>"Extended hydrodynamic approach to dynamic high-field transport in monolayer graphene"</i>
17.30 - 17.45	<u>Romina Travaglini</u> <i>"A nonlinear reaction-cross diffusion model for gas mixtures deduced from kinetic description"</i>
17.45 - 18.00	<u>Andrea Bondesan</u> <i>"Diffusion limits of the Boltzmann multi-species equation through perturbation of hypocoercivity"</i>
18.00 - 18.15	<u>Shahine Marwa</u> <i>"Fredholm Property of the Linearized Boltzmann Operator for a Mixture of Polyatomic Gases"</i>

	<b>TUESDAY 6 JUNE</b>
9.30 - 10.00	<u>Gaetano Napoli</u> <i>"A Thomson-like problem for liquid crystals disclinations"</i>
10.00 - 10.15	<u>Nathalie Bonari Parrilla</u> <i>"Kinetic models for electrons in glow discharge plasmas"</i>
10.15 - 10.30	<u>Ivano Colombaro</u> <i>"Dissipation of energy for Bessel models"</i>
10.30 - 11.00	<u>Shigeru Taniguchi</u> <i>"Shock structure and sub-shocks formation in a mixture of polyatomic gases based on rational extended thermodynamics"</i>
11.00 - 11.30	Morning Coffee Break
11.30 - 12.00	<u>Nicola Pugno</u> <i>"Nanomechanics of Natural, Bioinspired, and Bionic Fibers and Related Composites"</i>
12.00 - 12.15	<u>Carmelo Scuro</u> <i>"2D Numerical Simulation for the Propagation of Elastic Waves in construction brittle material"</i>
12.15 - 12.30	<u>Giorgio Martalò</u> <i>"Pattern formation in a reaction-diffusion model for Multiple Sclerosis with Allee effect"</i>
12.30 - 13.00	<u>Giuseppe Toscani</u> <i>"Social phenomena from the view point of kinetic theory"</i>
13.00 - 15.00	Lunch Break
15.00 - 15.30	<u>Marco Sammartino</u> <i>"Euler and Navier-Stokes equations with data analytic close to the boundary"</i>
15.30 - 15.45	<u>Gaetana Gambino</u> <i>"Emergent structures in a food-web model with intraguild predation"</i>
15.45 - 16.00	<u>Alessandra Rizzo</u> <i>"Solutions to the wave equation for commuting flows of dispersionless PDEs"</i>
16.00 - 16.30	Afternoon Coffee Break
16.30 - 16.45	<u>Gennaro Vitucci</u> <i>"On fundamental flaws in interpreting biaxial tensile tests"</i>
16.45 - 17.00	<u>Davide Riccobelli</u> <i>"Tunable buckling of dielectric-elastomer spherical shells"</i>
17.00 - 17.15	<u>Marzia Bisi</u> <i>"A mixed kinetic model of Boltzmann–BGK type for mixtures of rarefied gases"</i>
17.15 - 17.30	<u>Alberto Tenore</u> <i>"A mathematical model on gene transfer of plasmid-mediated resistance in biofilms"</i>
17.30 - 18.00	<u>Massimiliano Fraldi</u> <i>"Few observations on competitive dynamics in hierarchical living systems"</i>

	<b>WEDNESDAY 7 JUNE</b>
9.30 - 10.00	<u>Florinda Capone</u> <i>"Some Recent Results on Stability Problems in Porous Media"</i>
10.00 - 10.15	<u>Ludovica Fiorentino</u> <i>"Diffusion-driven instability for a Leslie-Gower intraguild model"</i>
10.15 - 10.30	<u>Giuliana Massa</u> <i>"Heat and mass transfer in dual porosity materials"</i>
10.30 - 11.00	<u>Francesca Brini</u> <i>"On the role of dissipation in the dynamics of gas bubbles oscillating in a liquid"</i>
11.00 - 11.30	Morning Coffee Break
11.30 - 12.00	<u>Axel Klar</u> <i>"Kinetic and macroscopic traffic flow equations, instabilities and stop and go waves"</i>
12.00 - 12.15	<u>Francesco Iovanna</u> <i>"Nonlinear stability analysis of a heterogeneous macroscopic traffic flow model"</i>
12.15 - 12.30	<u>Chiara Accarino</u> <i>"Leslie-Gower intraguild predation model"</i>
12.30 - 13.00	<u>Bruno Buonomo</u> <i>"Theory and applications of information index in epidemic models"</i>
13.00 - 15.00	Lunch Break
16.30 - 24.00	<p>GITA ALLE GROTTI DI CASTELLANA e CENA SOCIALE AL RISTORANTE "Taverna degli Amici"</p> <p>Partenza e rientro con Bus da Bari</p>



	<b>THURSDAY 8 JUNE</b>
9.30 - 10.00	<u>Laurent Desvillettes</u> <i>"Large time behavior of reaction-diffusion systems coming out of reversible chemistry: the case when reactions happen only on a subdomain"</i>
10.00 - 10.15	<u>Gaetano Fiore</u> <i>"On maximizing the wakefield acceleration induced by short laser pulses on cold plasmas"</i>
10.15 - 10.30	<u>Fiammetta Conforto</u> <i>"Detonation waves in multi-temperature reacting gas mixtures"</i>
10.30 - 11.00	<u>Michel Destrade</u> <i>"Direct acoustic evaluation of stresses and strains in solids"</i>
11.00 - 11.30	Morning Coffee Break
11.30 - 12.00	<u>Henri Gouin</u> <i>"The effects of lunisolar tides on plant motions"</i>
12.00 - 12.15	<u>Vincenzo Fazio</u> <i>"Constitutive equations for multiscale phenomena: a data modelling approach"</i>
12.15 - 12.30	<u>Salvatore Di Stefano</u> <i>"Multiscale modeling of adhering systems"</i>
12.30 - 13.00	<u>Seung-Yeal Ha</u> <i>"Four episodes of Kuramoto oscillators"</i>
13.00 - 15.00	Lunch Break
15.00 - 15.30	<u>Michael Dumbser</u> <i>"On structure-preserving schemes for continuum mechanics and magnetohydrodynamics"</i>
15.30 - 15.45	<u>Federico Lisi</u> <i>"Circumferential buckling of a hydrogel tube emptying upon dehydration"</i>
15.45 - 16.00	<u>Carmelo Filippo Munafò</u> <i>"A conservative kinetic model with the external actions and its application in epidemiology"</i>
16.00 - 16.30	Afternoon Coffee Break
16.30 - 17.00	<u>Maria Groppi</u> <i>"Kinetic modelling of action potential in neural networks"</i>
17.00 - 17.15	<u>Maria Cristina Carrisi</u> <i>"Relativistic Extended Thermodynamics of Polyatomic gases with a new hierarchy of moments in the Landau-Lifshitz description"</i>
17.15 - 17.30	<u>Shahine Marwa</u> <i>"Fredholm Property of the Linearized Boltzmann Operator for a Mixture of Polyatomic Gases"</i>
17.30 - 17.45	<u>Jacopo Gianfrani</u> <i>"The competing effect of rotation and variable viscosity on LTNE porous convection"</i>
17.45 - 18.00	<u>Vincenzo Luongo</u> <i>"Trace metals precipitation in multispecies biofilm systems"</i>

	<b>FRIDAY 9 JUNE</b>
9.30 - 10.00	<u>Andrea Giacobbe</u> <i>"Stability of streamwise Couette-Poiseuille and spanwise Poiseuille base flows"</i>
10.00 - 10.15	<u>Luigi Frunzo</u> <i>"An upscaled model of multispecies biofilm in homogeneous porous media"</i>
10.15 - 10.30	<u>Maria Luz Gandarias</u> <i>"Exact solutions of partial differential equations by using symmetry-invariant conservation laws"</i>
10.30 - 11.00	<u>Brian Straughan</u> <i>"Thermal convection in a higher gradient Navier Stokes fluid"</i>
11.00 - 11.30	Morning Coffee Break
11.30 - 12.00	<u>Vincenzo Sciacca</u> <i>"Zero viscosity limit of the viscous MHD equations in <math>\mathbb{R}^2</math>"</i>
12.00 - 12.15	<u>Giuseppe Arnone</u> <i>"Density inversion phenomenon in inclined porous media"</i>
12.15 - 12.30	<u>Angela Monti</u> <i>"On the onset of on-off intermittency in the Beddington-Free-Lawton model with a deterministic chaotic driver"</i>
12.30 - 12.45	<u>Luca Santelli</u> <i>"Smoothed-Particle Hydrodynamics simulations of viscoelastic integral fractional models"</i>
12.45 - 13.00	<b>Bye Bye Wascom 2023!</b>
13.00 - 15.00	Lunch Break