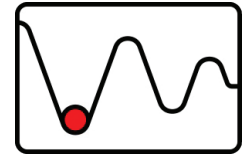


WASCOM 2019



**XX International Conference on
Waves and Stability in Continuous Media**

JUNE 10-14, 2019 - MAIORI (SA) ITALY

Conference Program

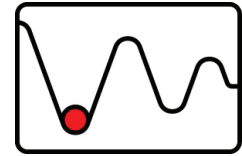
The Conference will take place
in the Convention Room
of the REGINNA PALACE HOTEL – MAIORI,
Via Cristoforo Colombo 1

Registration

SUNDAY June 9th 18.00 - 20.00

MONDAY June 10th 08.30 - 09.00

WASCOM 2019



Sunday, June 9th

18.00 - 20.00 REGISTRATION (Reginna Palace Hotel, Via Cristoforo Colombo 1)

20.00 Dinner (Hotel Pietra di Luna, Via Gaetano Capone 27)

Monday, June 10th

08.30 - 09.00 REGISTRATION

09.00 - 09.30 **Opening**

CHAIRMAN: TOMMASO RUGGERI

09.30 - 09.55 **Constantine M. Dafermos:** *Uniqueness of Zero Relaxation Limit*

10.00 - 10.25 **Salvatore Rionero:** *Hopf Bifurcations in Thermal MHD and Spectrum Instability Driven by Perturbations to Principal Entries*

10.30 - 10.55 **Henri Gouin:** *Membranes and Vesicles*

11.00 - 11.25 COFFEE BREAK

CHAIRMAN: TAI-PING LIU

11.25 - 11.50 **Florinda Capone:** *Recent Results on the Onset of MHD Convection in Porous Media*

11.55 - 12.20 **Stéphane Brull:** *Local Discrete Velocity Grids for Multi-Species Rarefied Flow Simulations*

12.25 - 12.50 **Maurizio Gentile:** *Thermal Convection in a Rotating Horizontally Isotropic Porous Medium with LTNE*

12.55 - 13.10 **Roberta De Luca:** *Onset of Double-Diffusive Convection in Porous Media with Soret Effect*

13.30 Lunch (Reginna Palace Hotel, Via Cristoforo Colombo 1)

CHAIRMAN: MASARU SUGIYAMA

15.30 - 15.55 **Seung-Yeal Ha:** *On the Second-Order Extensions of First-Order Collective Models*

16.00 - 16.25 **Giuseppe Mulone:** *New Nonlinear Stability Results for Plane Couette and Poiseuille Flows*

16.30 - 16.55 **Andrea Giacobbe:** *Inclined Convection in a Porous Brinkman Layer: Linear Instability and Nonlinear Stability*

17.00 - 17.25 COFFEE BREAK

CHAIRMAN: HENRI GOUIN

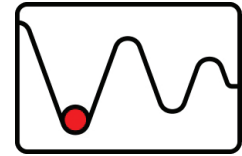
17.25 - 17.50 **Giancarlo Consolo:** *Propagation of Magnetic Domain Walls in Magnetostrictive Materials with Different Crystal Symmetry*

17.55 - 18.10 **Paolo Falsaperla:** *New Stability Results for Hydromagnetic Plane Couette Flows*

18.15 - 18.30 **Monica De Angelis:** *On Solutions Related to FitzHugh-Rinzel Model*

20.00 Dinner (Hotel Pietra di Luna, Via Gaetano Capone 27)

WASCOM 2019



Tuesday, June 11th

CHAIRMAN: SEUNG-YEAL HA

09.00 - 09.25 **Tai-Ping Liu:** *On Well-Posedness of Weak Solutions*

09.30 - 09.55 **Natale Manganaro:** *Generalized Simple Waves for Hyperbolic Systems*

10.00 - 10.25 **Peter Vadasz:** *Instability, Weak Turbulence and Chaos in Porous Media*

10.30 - 10.55 COFFEE BREAK

CHAIRMAN: PETER VADASZ

10.55 - 11.20 **Maria Carmela Lombardo:** *Coherent Structures in a Chemotaxis Model of Acute Inflammation*

11.25 - 11.50 **Vincenzo Sciacca:** *Up-Wind Difference Approximation and Singularity Formation for a Slow Erosion Model*

11.55 - 12.20 **Gaetano Fiore:** *On the Impact of Short Laser Pulses on Cold Diluted Plasmas*

13.30 Lunch (Hotel Pietra di Luna, Via Gaetano Capone 27)

CHAIRMAN: NATALE MANGANARO

15.30 - 15.55 **Berardino D'Acunto:** *Mathematical Modelling of Multispecies Biofilms*

16.00 - 16.25 **Sebastiano Pennisi:** *A 16 Moments Model in Relativistic Extended Thermodynamics of Rarefied Polyatomic Gas*

16.30 - 16.55 **Francesco Demontis:** *Reflectionless Solutions for Square Matrix Nonlinear Schroedinger Equation with Vanishing Boundary Conditions*

17.00 - 17.25 COFFEE BREAK

CHAIRMAN: GIUSEPPE MULONE

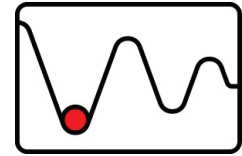
17.25 - 17.50 **Massimo Trovato:** *The Extended Thermodynamics for A.C and D.C. Dynamic High-Field Transport in Graphene*

17.55 - 18.10 **Luigi Frunzo:** *Mathematical Modeling of Dispersal Phenomenon in Biofilms*

18.15 - 18.30 **Andrea Trucchia:** *Uncertainty and Sensitivity Analysis for Bacterial Invasion in Multi-Species Biofilms*

20.00 Dinner (Hotel Pietra di Luna, Via Gaetano Capone 27)

WASCOM 2019



Wednesday, June 12th

CHAIRMAN: SALVATORE RIONERO

09.00 - 09.25 **Tommaso Ruggeri:** *From the Relativistic Mixture of Gases to the Relativistic Cucker-Smale Flocking*

09.30 - 09.45 **Jeongho Kim:** *From the Relativistic Mixture of Gases to the Relativistic Cucker-Smale Flocking: Mathematical Analysis*

09.50 - 10.15 **Francesca Brini:** *On the Hyperbolicity Property of Extended Thermodynamics Models for Rarefied Gases*

10.20 - 10.45 **Elvira Barbera:** *Stationary Flow and Heat Transfer in Extended Thermodynamics*

10.50 - 11.15 COFFEE BREAK

CHAIRMAN: GIUSEPPE TOSCANI

11.15 - 11.40 **Vittorio Romano:** *Mathematical Modeling of Charge Transport in Graphene*

11.45 - 12.10 **Andrea Mentrelli:** *Comparison of Shock Structure Behaviours for Increasing Order of Closures*

12.15 - 12.40 **Bruno Buonomo:** *Optimal Public Health Systems Intervention to Favor Vaccine Propensity for Childhood Diseases*

12.45 - 13.00 **Giovanni Nastasi:** *Numerical Solutions of the Semiclassical Boltzmann Equation for Bipolar Charge Transport in Graphene*

13.05 - 13.20 **Giorgio Martalò:** *Analysis of Evaporation-Condensation Problems for a Binary Gas Mixture*

13.30 Lunch (Hotel Pietra di Luna, Via Gaetano Capone 27)

CHAIRMEN: SALVATORE RIONERO - TOMMASO RUGGERI

15.30 - 15.45 **Session in honour of Masaru Sugiyama**

15.45 - 16.10 **Masaru Sugiyama:** *Rational Extended Thermodynamics of a Rarefied Polyatomic Gas with Relaxation Processes of Molecular Rotation and Vibration*

16.15 - 16.40 **Takashi Arima:** *Dispersion Relation of a Rarefied Polyatomic Gas with Molecular Relaxation Processes Based on Rational Extended Thermodynamics with 15 Fields*

16.45 - 17.10 COFFEE BREAK

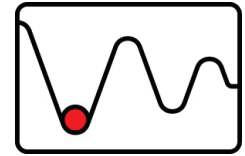
17.10 - 17.25 **Session in honour of Giuseppe Toscani**

17.25 - 17.50 **Giuseppe Toscani:** *Kinetic Modeling of Alcohol Consumption*

17.55 - 18.20 **Laurent Desvillettes:** *About a Class of Cross Diffusion Systems Arising in Chemotaxis*

20.00 **SOCIAL DINNER (Reginna Palace Hotel, Via Cristoforo Colombo 1)**

WASCOM 2019



Thursday, June 13th

CHAIRMAN: VITTORIO ROMANO

- 09.00 - 09.25 **Marco Sammartino:** *Viscous MHD Vorticity-Current Equations with Data in $L^1(\mathbb{R}^2)$*
09.30 - 09.55 **Wendi Wang:** *Global Analysis of Mathematical Models for Nonlocal Epidemic Diseases*
10.00 - 10.25 **Maria Groppi:** *Consistent BGK Models for Gas Mixtures and Hydrodynamic Equations*
10.30 - 10.55 COFFEE BREAK

CHAIRMAN: CONSTANTINE M. DAFERMOS

- 10.55 - 11.20 **Marzia Bisi:** *Maxwell-Stefan Equations for a Reactive Mixture of Polyatomic Gases*
11.25 - 11.50 **Francesco Mainardi:** *On the Evolution of Fractional Diffusive Waves*
11.55 - 12.20 **Gaetana Gambino:** *Spatial Patterns and Bistability in a Cross-Diffusive FitzHugh-Nagumo System*
12.25 - 12.40 **Gianfranco Rubino:** *Resonant Turing Patterns in the FitzHugh-Nagumo Model with Cross Diffusion*
12.45 - 13.00 **Francesco Gargano:** *Transition to Turbulence in the Weakly Stratified Kolmogorov Flow*

13.30 Lunch (Reginna Palace Hotel, Via Cristoforo Colombo 1)

20.00 Dinner (Hotel Pietra di Luna, Via Gaetano Capone 27)

Friday, June 14th

CHAIRMAN: LAURENT DESVILLETES

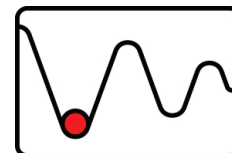
- 09.00 - 09.25 **Shigeru Taniguchi:** *On the Similarity Solution of Strong Spherical Shock Waves Based on Extended Thermodynamics*
09.30 - 09.55 **Paolo Maremonti:** *Weak Solutions To The Navier-Stokes Equations With Non Decaying Data*
10.00 - 10.25 **Raffaele Vitolo:** *Linearly Degenerate Systems of PDEs and Interacting Waves*
10.30 - 10.55 COFFEE BREAK

CHAIRMAN: FLORINDA CAPONE

- 10.55 - 11.20 **Michele Sciacca:** *Extension of the Auxiliary Equation Method by Means of Hyperelliptic Functions*
11.25 - 11.40 **Qinghua Xiao:** *The Riemann Problem of Relativistic Euler Equations*
11.45 - 12.00 **Maria Rosaria Mattei:** *Modeling Cell Motility in Biofilms*
12.05 - 12.20 **Vincenzo Luongo:** *Biosorption of Heavy Metals in a Nitrifying Biofilm*
12.25 - 12.40 **Vittorio De Falco:** *The General Relativistic Poynting-Robertson Effect: Non-Linear Dissipative System in General Relativity*
12.45 - 13.00 **Alberto Tenore:** *Modelling of Ecology in a Phototrophic-Heterotrophic Biofilm*
13.05 - 13.20 **Daniele Bernardo Panaro:** *Anaerobic Digestion in Plug-Flow Reactors: a Mathematical Model*
13.25 - 13.30 CLOSING

13.30 Lunch (Reginna Palace Hotel, Via Cristoforo Colombo 1)

WASCOM 2019



GNFM iNSAM



UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II

**Dipartimento di Matematica e Applicazioni
"Renato Caccioppoli"**

Dipartimento di
Matematica e
Informatica



UNIVERSITÀ
degli STUDI
di CATANIA