
Monday 9 of September 2024

08:00 – 09:15 **REGISTRATION**

09:15 – 09:25 **OPENING**

09:25 **Panagiotis Tsoutsanis**

ADDAptive Numerical Framework for iLES of Compressible Flows

10:15 **Elena Gaburro**

A primitive-conservative ADER-DG method for multiphase flows on polygonal meshes

Chair: M. Semplice

10:40 – 11:25 **COFFEE BREAK**

KAM

11:25 **Thomas Izgin**

High-Order Positivity-Preserving Methods for Hyperbolic Balance Laws

11:50 **Philippe Hoch**

Arbitrary high-order [...] composite FV schemes with induced physically admissible reconstruction

12:15 **Irene Gómez-Bueno**

Preserving non-moving steady states for Euler [...] with gravitational forces and the Ripa model

Chair: J. Nordström

MIKIS

Anna Schwarz

Entropy stable shock capturing for high-order discontinuous Galerkin schemes on moving meshes

Vladimir Tomov

Slip Wall BC in Curved Domains for FE ALE Hydrodynamics

Patrick Kopper

A Curvilinear Euler–Lagrange Code on Unstructured Moving Meshes

Chair: P.-O. Persson

12:40 – 14:40 **LUNCH**

KAM

14:40 **Francesco Carlo Massa**

Hybrid High-Order methods with hybrid pressure and improved turbulence modelling capabilities

15:05 **Emanuele Carnevali**

Efficient Compressible Turbulent Flow Simulations: The Impact of Entropy Projection and [...]

15:30 **Ricardo Costa**

Very high-order accurate FV for the streamfunction-vorticity formulation of incompressible [...]

Chair: V. Perrier

MIKIS

Ernesto Pimentel-García

In-cell Discontinuous Reconstruction path-conservative methods for nonconservative hyperbolic [...]

Julie Patela

Arbitrary-order finite volume schemes preserving positivity for diffusion

Nikita Afanasev

Towards a High-Order Conservative-Characteristic CABARET Scheme

Chair: A. Kurganov

15:55 – 16:35 **COFFEE BREAK**

16:35 **Per-Olof Persson**

Half-Closed Discontinuous Galerkin Discretisations

17:00 **Paola Antonietti**

High-order discontinuous polytopal methods for modeling neurodegeneration

Chair: C.-D. Munz

Tuesday 10 of September 2024

09:00 **Dinshaw Balsara**
General Purpose Alternative Finite Difference WENO for Conservative and Non-Conservative [...]

09:50 **Andrés M. Rueda-Ramírez**
A Robust Entropy-Stable Discontinuous Galerkin Scheme for the Multi-Ion MHD System

10:15 – 11:00 COFFEE BREAK

KAM

11:00 **Luca Alberti**
On the high-order implementation of hybrid RANS/LES models for flapping foils

11:25 **Alessandro Colombo**
On the implementation of a wall model for implicit LES in an entropy-stable DG solver

11:50 **Satyvir Singh**
DG for continuum-rarefied gas flows over aerospace blunt body based on regularized 13-moment model

12:15 **Cristian Brutto**
A semi-implicit finite volume scheme for the simulation of floating objects

12:40 – 14:40 LUNCH

KAM

14:40 **Axelle Drouard**
Semi-implicit numerical scheme for hyperbolic problems

15:05 **Katarína Lacková**
High-resolution compact semi-implicit level set methods for the advection equation

15:30 **Peter Frolkovic**
Compact implicit numerical schemes for nonlinear hyperbolic systems

15:55 – 16:35 COFFEE BREAK

16:35 **Alexander Kurganov**
A Well-Balanced Fifth-Order A-WENO Scheme Based on Flux Globalization

17:00 **Matteo Semplice**
QUINPI: going implicit for nonlinear hyperbolic equations

18:00 – 21:00 POSTER PARTY

Chair: C. Klingenberg

MIKIS

Francesco Fambri
Structure Preserving Hybrid Finite Element - Finite Volume for MHD

Enrico Zampa
Compatible FE discretization of time-dependent magnetic advection-diffusion [...] to MHD

José Castillo
Energy Preserving High Order Mimetic Methods For Hamiltonian Systems

Tarik Dzanic
Towards full Boltzmann simulations of complex fluid flows via high-order discretely-conservative [...]

MIKIS

Catherine Mavriplis
Pushing the Geometrical Capabilities of High Order Galerkin Spectral Element Methods

Jens Keim
An Efficient Discontinuous Galerkin Spectral Element Implementation on Heterogeneous Grids

Ketan Mittal
Scalable Interpolation at Arbitrary Points in High-Order Volume and Surface Meshes on GPUs

Chair: S. Chiocchetti

Wednesday 11 of September 2024

- 09:00 **Vincent Perrier**
How to preserve a divergence or a curl constraint in a hyperbolic system with the DG method
- 09:25 **Davide Torlo**
Divergence-free preserving schemes: how to fix stabilization terms in continuous Galerkin
- 09:50 **François Vilar**
Monolithic local subcell DG/FV convex property preserving scheme: is entropy stability really needed?
- 10:15 **Alina Chertock**
Adaptive High-Order A-WENO Schemes Based on a New Local Smoothness Indicator

Chair: W. Barsukow

10:40 – 11:25 COFFEE BREAK

KAM

- 11:25 **Davide Ferrari**
A unified SHTC multiphase model of continuum mechanics
- 11:50 **Daniel Regener Roig**
Entropy-stable DG solution of the multicomponent Euler [...] with entropy balance enforcement
- 12:15 **Susana Serna**
High-Order Shock-Capturing Schemes for Non-Convex Special Relativistic Hydrodynamics
- 12:40 **Juan Cheng**
High order conservative numerical schemes for three-temperature radiation hydrodynamics

Chair: F. Fambri

MIKIS

- Celia Caballero-Cárdenas**
Semi-implicit finite volume schemes for systems of shallow flows: preserving every steady state
- A. González del Pino**
2nd and 3rd order FV for the 2D SWE in spherical coordinates with non-constant Coriolis [...]
- Gaspar Machado**
R-Block structural schemes for ordinary differential equations
- Alexis Tardieu**
A class of high order ADER-DG schemes for [...] nonlinear advection-diffusion equation

Chair: C. Klingenberg

FREE AFTERNOON

Thursday 12 of September 2024

09:00 **Karen Veroy-Grepl**
Challenges for Physics-Based Model Order Reduction in Data Assimilation

09:50 **Georgios Kokkinakis**
Troubled-cell detection for high-order methods on unstructured meshes by convolution neural networks

10:15 – 11:00 COFFEE BREAK

11:00 **Christian Klingenberg**
On a semi-discrete Active Flux method for multi-dimensional conservation laws

11:25 **Lisa Lechner**
A two-dimensional Active Flux method of arbitrarily high order

11:50 **Junming Duan**
On limiting for the Active Flux methods for hyperbolic conservation laws

12:15 **Wasilij Barsukow**
Stability of extensions of Active Flux

12:40 – 14:40 LUNCH

14:40 **Jan Nordström**
An Energy Stable Nonlinear Incompressible Multi-Phase Flow Formulation

15:05 **Firas Dhaouadi**
A first-order hyperbolic reformulation of the Cahn-Hilliard equation

15:30 **Saray Busto**
A semi-implicit hybrid finite volume/finite element method for continuum mechanics

15:55 – 16:35 COFFEE BREAK

16:35 **Simone Chiocchetti**
Hyperbolic viscous flow using quaternion fields

17:00 **Christian Rohde**
Numerics for compressible liquid-vapour flow: sharp-interface and diffuse-interface models

19:15 – 23:30 SOCIAL DINNER

Nykterida Restaurant Bar

EO Aerodromiou Soudas 3, Kounoupidiana 73100, (G38G+PJ) Greece,
25 minutes by bus from the main event venue.

Note: buses to go to the restaurant will leave at 19:15–19:20,

from the city center of Chania, opposite side of the street w.r.t the *Bank of Chania*

Google maps link: [here](#)

Chair: D. Torlo

Chair: J. Cheng

Chair: F. Renac

Chair: F. Dhaouadi

Friday 13 of September 2024

09:25 **Florent Renac**
Positivity preserving time implicit DGSEM for hyperbolic conservation laws

10:15 – 11:00 COFFEE BREAK

11:00 **Lilia Krivodonova**
Limiters for the Discontinuous Galerkin Method on Quadrilateral Meshes

11:25 **Joshua Vedral**
Strongly consistent low-dissipation WENO schemes for finite elements

11:50 **Malte Wegener**
P-Anisotropic H-Isotropic adaptive discontinuous Galerkin methods for turbulent flows

12:15 **Claus-Dieter Munz**
An h-p Adaptive Strategy for Discontinuous Galerkin Schemes

12:40 – 14:00 CONCLUSIVE APERO

Chair: P. Tsoutsanis

Chair: F. Vilar