ECCOMAS Thematic Conference

European Conference on High Order Nonlinear Numerical Methods for Evolutionary PDEs: Theory and Applications

HONOM 2011

April 11 – April 15, 2011
University of Trento and CIRM-FBK, Italy

Preliminary Conference Program

Timetable of the European Conference on High Order Nonlinear Numerical Methods for Evolutionary PDEs: Theory and Applications – HONOM 2011

	Monday, 11.04.2011	**Tuesday, 12.04.2011**	**Wednesday, 13.04.2011**	**Thursday, 14.04.2011**
9:00-10:00	**BASSI**	**CHENG**	**BALSARA**	**TITAREV**
10:00-10:30	FEISTAUER	GROTH	ABGRALL	PARES
10:30-11:00	*Coffee Break*	*Coffee Break*	*Coffee Break*	*Coffee Break*
11:00-12:00	**SCHUSTER**	**DESPRES**	**SHERWIN**	**DIMARCO**
12:00-12:30	HARTMANN	ISKE	PERRIER	CASTRO
12:30-14:00	*Lunch*	*Lunch*	*Lunch*	*Lunch*
14:00-14:30	EKATERINARIS	KOZUBSKAYA	SERNA	NOUSSAIR
14:30-15:00	MUNZ	DMITRIEV	IMBERT-GERARD	CASULLI
15:00-15:30	*Coffee Break*	*Coffee Break*	*Coffee Break*	*Coffee Break*
15:30-16:00	KUMMER	GOETZ	DIOT	DUMBSER
16:00-16:30	ÖZDEMIR	TORO	DERVIEUX	BENMANSOUR
16:30-17:00		MONTECINOS	FJORDHOLM	ABDELFATAH
20:00		*Conference Dinner*		

Monday, 11.04.2011

09:00-10:00 **F. Bassi (University of Bergamo, Italy) – Invited Plenary Lecture**

Title to be announced

10:00-10:30 M. Feistauer (Charles University, Prague, Czech Republic)

DGFEM for the numerical simulation of interaction of compressible flow with elastic structures

10:30-11:00 ***Coffee break***

11:00-12:00 **D. Schuster (NASA Langley Research Center, USA) - Invited Plenary Lecture**

High-order methods in NASA's next generation of computational fluid dynamics tools

12:00-12:30 R. Hartmann (DLR Research Center, Germany)

DG methods for aerodynamic flows: higher order, error estimation and adaptive mesh refinement

12:30-14:00 ***Lunch***

14:00-14:30 J.A. Ekaterinaris (University of Patras, Greece)

A limiting approach for three-dimensional DG discetizations in arbitrary-type meshes

14:30-15:00 C.D. Munz (University of Stuttgart, Germany)

Reconstruction based defect corrections for finite volume and discontinuous Galerkin schemes

15:00-15:30 ***Coffee break***

15:30-16:00 F. Kummer (TU Darmstadt, Germany)

A DG method for flows with discontinuities using a cut-cell approach

16:00-16:30 H. Özdemir (ECN Wind Energy, The Netherlands)

Numerical solution of 2D unsteady integral boundary layer equations with a discontinuous Galerkin method

Tuesday, 12.04.2011

09:00-10:00 **J. Cheng (Inst. of Appl. Physics and Comp. Math., Beijing, China) – Invited Plenary Lecture**

High order conservative ENO/WENO Lagrangian schemes for the compressible Euler equations

10:00-10:30 C. Groth (University of Toronto, Canada)

High-order central ENO finite-volume scheme for multi-block unstructured mesh

10:30-11:00 ***Coffee break***

11:00-12:00 **B. Després (University of Paris VI, France) – Invited Plenary Lecture**

Uniform stability of transport schemes with arbitrary order

12:00-12:30 A. Iske (University of Hamburg, Germany)

Adaptive ADER methods using kernel-based polyharmonic spline WENO reconstruction

12:30-14:00 ***Lunch***

14:00-14:30 T. Kozubskaya (M.V. Keldysh Inst. of Applied Mathematics, Moscow, Russia)

Implementation of higher-accuracy edge-based scheme on unstructured meshes to turbulent flow simulation

14:30-15:00 M.N. Dmitriev (Novosibirsk State University, Russia)

High accuracy Runge-Kutta WENO schemes for numerical simulation of seismic wave propagation

15:00-15:30 ***Coffee break***

15:30-16:00 C. Goetz (University of Hamburg, Germany)

On the analysis of a solver for generalized Riemann problems by asymptotic expansion

16:00-16:30 E.F. Toro (University of Trento, Italy)

ADER high-order scheme based on time reconstruction: preliminary results

16:30-17:00 G. Montecinos (University of Trento, Italy)

A new solver for the generalized Riemann problem for hyperbolic balance laws with stiff source terms

20:00 ***Conference Dinner at Ristorante Villa Madruzzo***

Wednesday, 13.04.2011

09:00-10:00 **D.S. Balsara (University of Notre Dame, USA) – Invited Plenary Lecture**

Title to be announced

10:00-10:30 R. Abgrall (University of Bordeaux, France)

Compressible MHD simulations via residual distribution schemes

10:30-11:00 ***Coffee break***

11:00-12:00 **S. Sherwin (Imperial College, London, UK) - Invited Plenary Lecture**

From h to p efficiently: implementing finite element discretisations that execute competitively for both high and low order approximations

12:00-12:30 V. Perrier (INRIA Bordeaux, France)

High order method for multiphase compressible flows with RKDG schemes

12:30-14:00 ***Lunch***

14:00-14:30 S. Serna (University of Barcelona, Spain)

High order accurate shock capturing schemes for two-component instabilities in compressible magnetohydrodynamics

14:30-15:00 L.M. Imbert-Gérard (Université Pierre et Marie Curie, Paris, France)

Generalized plane wave numerical methods for magnetic plasma

15:00-15:30 ***Coffee break***

15:30-16:00 S. Diot (University of Toulouse, France)

A very high-order finite volume method on 2D unstructured meshes: Multi-dimensional optimal order detection (MOOD)

16:00-16:30 A. Dervieux (INRIA Sophia-Antipolis, France)

Dissipation and dispersion control of a quadratic-reconstruction advection scheme

16:30-17:00 U.S. Fjordholm (ETH Zürich, Switzerland)

High order accurate entropy stable schemes for hyperbolic conservation laws

Thursday, 14.04.2011

09:00-10:00	**V.A. Titarev (Dorodnicyn Computing Centre of Russian Academy of Sciences, Russia) – Invited Plenary Lecture**
	Efficient deterministic modelling of rarefied gas flows in arbitrary geometries
10:00-10:30	C. Parés (University of Malaga, Spain)
	Entropy-preserving path-conservative numerical schemes
10:30-11:00	***Coffee break***
11:00-12:00	**G. Dimarco (University of Toulouse, France) - Invited Plenary Lecture**
	Numerical methods for stiff kinetic equations and related problems
12:00-12:30	M. Castro (University of Malaga, Spain)
	On the derivation of new WAF type methods
12:30-14:00	***Lunch***
14:00-14:30	A. Noussair (University of Bordeaux, France)
	Nonlinear projection method in Godunov scheme for nonconservative formulation of fluid dynamics
14:30-15:00	V. Casulli (University of Trento, Italy)
	An overview of the 3D numerical method within UnTRIM2
15:00-15:30	***Coffee break***
15:30-16:00	M. Dumbser (University of Trento, Italy)
	A simple two-phase flow model for the simulation of complex free surface flows
16:00-16:30	Ben Mansour (Royal Institute of Technology (KTH) of Stockholm, Sweden)
	Stabilization of two dimensional shallow water equations
16:30-17:00	B. Abdelfatah (University Larbi Ben M'Hidi- Oum El Bouaghi, Algeria)
	Modified Crank-Nicholson method for semilinear diffusion equation with nonlocal boundary conditions