

8/Sept

Time

08:00 Registration

10:00 Opening ceremony

High speed wall flows – Mendonça

10:15 Invited: Saric W. - Stability of Hypersonic Boundary Layers: Theory, Computations, Experiments

10:55 Craig, S. A. - Crossflow instability on a yawed cone at Mach 6

11:20 Sivasubramanian, J. - Numerical Investigation of Transition in a Flared Cone Boundary Layer at Mach 6

11:45 Paredes, P. - The non-linear PSE-3D concept for transition prediction in flows with a single slowly-varying spatial direction

12:10

Lunch

High speed wall flows – Alves

13:40 Anatoli, T. - The second mode in high-enthalpy boundary layers in chemical non-equilibrium

14:05 Kosinov, A. D. - Experiments on the artificial disturbance evolution in 2D and 3D spanwise modulated boundary layers at Mach 2 and 2.5

14:30 André, T. - Global mode analysis in the L/T transition of a hypersonic boundary layer forced by wall injection

14:55 Invited: Fedorov A. - Prediction and control of laminar-turbulent transition in high-speed boundary-layer flows

15:35

Break/ Posters

Separation and free stream effects – Davies

16:00 Gungor, A. G. - Transition to turbulence in a separated boundary layer with spanwise perturbations

16:25 Rodríguez, D. - On the secondary instability of forced and unforced laminar separation bubbles

16:50 Gioria, R. S. - Wake of stalled airfoils

17:15 Wu, X. - Entrainment of short-wavelength free-stream vortical and entropy disturbances in compressible boundary layers

17:40 Marensi, E. - Nonlinear response of a compressible boundary layer to free-stream vortical disturbances

18:05

18:15 welcoming cocktail - conference hotel penthouse

9/Sept

Time

Free shear flows – Sipp

- 08:00 Marquet, O. - Global stability of three-dimensional wakes behind short aspect-ratio plates
08:25 Mittal, S. - Global Analysis of Convective Instabilities in Nonparallel Flows
08:50 Sherwin, S. J. - Stabilisation of the absolute instability of a flow past a cylinder via spanwise forcing
09:15 Jiménez, J. - Linear processes in shear turbulence
09:40 Mendonca, M. T. - Stability of compressible mixing layers modified by wakes and jets
10:05

Break/ Posters

Free shear flows – Mittal

- 10:30 Sipp, D. - Discrete frequency selection in noise amplifiers: the case of flow induced by radial wall injection
10:55 Lesshafft, L. - Modal instability analysis of light jets
11:20 Beneddine, S. - Global stability analysis of underexpanded screeching jets
11:45 Oberleithner, K. - Stability analysis of jet flow experiments
12:10

Lunch

Roughness effect on transition – Schmid

- 13:40 Moradi, H. V. - Stability of flow in a channel with drag reducing grooves
14:05 Costantini, M. - Experimental investigation of the effect of forward-facing steps on boundary layer transition
14:30 Kurz, H. B. E. - Discrete-roughness effects in a three-dimensional boundary layer on an airfoil
14:55 Citro, V. - Boundary-layer flows past an hemispherical roughness element: DNS, Global stability and sensitivity analysis
15:20 Robinet, J.-Ch. - Global stability analyses unraveling roughness-induced transition mechanisms
15:45

Break/ Posters

Roughness, particles and corner effect on transition – Jimenez

- 16:10 Brynjell-Rahkola, M. - Global stability analysis of a roughness wake in a Falkner-Skan-Cooke boundary layer
16:35 Ashworth, R. - Modelling three-dimensional effects on cross flow instability from leading edge dimples
17:00 Lashgari, I. - Transition to turbulence in the presence of finite size particles
17:25 Schmidt, O. T. - Numerical investigation of classical and bypass transition in streamwise corner-flow
17:50 Invited: Kloker M. and Rist U. - The DNS faces of boundary-layer transition supported by theory
18:30

- 19:00 scientific committee meeting - meeting point - conference hotel lobby

IUTAM-ABCM LTT2014 Program

10/Sept

conference tour - 8:30 - meeting point - conference hotel lobby

11/Sept

Time

Internal flows – Kachanov

- 08:00 Couliou, M. - New experiments on transitional plane Couette flow: evidence of large scale flows
08:25 Karp, M. - Analytical model for transition in Couette and plane Poiseuille flows
08:50 Cohen, J. - Experimental investigation of the transition in pipe flow
09:15 Eckhardt, B. - Fast and slow transitions in plane Poiseuille flow
09:40 Perez, J. M. - Instability mechanisms in straight-diverging-straight channels
10:05

Break/ Posters

Parallel flows and oscillatory flows – Eckhart

- 10:30 Cherubini, S. - Non-linear optimal perturbations in the asymptotic suction boundary layer
10:55 Pascal, L. - Optimal disturbance in a flow duct with a lined wall
11:20 Hicks, P. D. - A comparison of the laminar streaks above a spanwise oscillating plate and a plate with spanwise wall forcing
11:45 Hack, M. J. P. - Bypass transition in three-dimensional time-dependent boundary layers
12:10

Lunch

Cross flows – Wu

- 13:40 Kachanov, Y. S. - Scenarios of swept-wing boundary-layer transition in presence of various kinds of freestream turbulence and surface roughnesses
14:05 Crouch, J. D. - Influence of surface roughness and free-stream turbulence on cross-flow-instability transition
14:30 Hosseini, S. M. - Effect of freestream turbulence on roughness-induced crossflow instability
14:55 Butler, A. - Non-parallel effects of stationary crossflow vortices at their genesis
15:20 Hein, S. - Linear and nonlinear growth of secondary instabilities of crossflow vortices studied by PSE
15:45 Appelquist, E. - Transition to turbulence in the rotating-disk boundary layer
16:10

Break/ Posters

Reduced order models – Hein

- 16:35 Fosas de Pando, M. - Nonlinear model-order reduction for oscillator flows using POD-DEIM
17:00 Guzman Iñigo, J. - A dynamic observer to capture and control perturbation energy in noise amplifiers
17:25 Souza, D. - Investigation of hydrodynamic instability in the slat noise
17:50 Invited: Theofilis V. - Global linear instability
18:30

19:30 conference dinner - 19:30 - meeting point - conference hotel lobby

12/Sept

Time

Wavepackets in wall flows – Cohen

- 08:00 Medeiros, M. - Nonlinear Spanwise Modulated Waves in Channel Flow
08:25 Kang, K.-L. - The Combined Effects of Wavepacket Frequency, Amplitude and Bandwidth on its Transition Process in a Boundary Layer
08:50 Martinez, A. G. - Wavepackets in boundary layers close to transonic speeds
09:15 Davies, C. - Disturbance development in an oscillatory Stokes layer

09:40

Break/ Posters

Transition control – Luchini

- 10:05 Kosorygin, V. S. - Localized surface heating in boundary layers with pressure gradients
10:30 John, M. O. - Stabilizing a leading-edge boundary layer subject to wall suction by increasing the Reynolds number
10:55 Szulga, N. - Experimental and numerical study of boundary layer transition control over an airfoil using a DBD plasma actuator
11:20 Wartemann, V. - Passive hypersonic boundary layer transition control using an ultrasonically absorptive coating with random microstructure:
Computation analysis based on the ultrasonic absorption properties of carbon-carbon
11:45 Invited: Fransson J. - Transition to turbulence delay using a passive flow control strategy

12:25

Closing

12:45