

# LECTURES - Room A

Wednesday, February 10, 2016

- 8.00 - 9.00 **REGISTRATION**
- 9.00 - 9.10 **CONFERENCE OPENING**
- 9.10 - 9.30 BAUMERT H. Z., WESSLING B.: Turbulent Mixing in Non-Newtonian Dispersions
- 9.30 - 9.50 ŠIDLOF P., RISS Š., VLČEK V.: Evaluation of Interferograms of Unsteady Subsonic Airflow Past a Fluttering Airfoil
- 9.50 - 10.10 REDONDO J. M., TELLEZ J. D., SANCHEZ M. A., LOPEZ GONZALEZ-NIETO P.: Mixing in Convective Thermal Fluxes in Unsteady Non-Homogeneous Flows Generating Complex Three Dimensional Vorticity Patterns
- 10.10 - 10.40 **COFFEE BREAK**
- 10.40 - 11.00 WILSON J. T., VAN LOON R., MOORE J. E. JR.: Developing Computational Fluid-Structure Interaction Models of the Lymphatic Valve
- 11.00 - 11.20 VALÁŠEK J., HORÁČEK J., SVÁČEK P.: On Influence of Vocal Fold Size To Frequencies of Induced Vibrations
- 11.20 - 11.40 ALTAZIN T., GOLAY F., FRAUNIÉ P.: A 3D Unified Model to Fluid-Structure Interaction with Block-Based Adaptive Mesh Refinement
- 11.40 - 13.30 **LUNCH**
- 13.30 - 14.30 **POSTER DISCUSSION**
- 14.30 - 14.50 BODNÁR T., FRAUNIÉ P.: Numerical Simulation of the Wake Structure Behind Three-Dimensional Hill under Stable Stratification
- 14.50 - 15.10 ROSTAMI M., ZEITLIN V.: Influence of Moist Convection and Precipitation Upon Developing Barotropic Instability of Vortices in the Moist-Convective Rotating Shallow Water Model
- 15.10 - 15.30 RIAHI KHALLOUFI M., HOUICINE H., FRAUNIE P., CHASHECHKIN Y. D., GHARBI A.: Numerical Analysis of Large Scale Stratified Flows Around an Horizontal Strip

- 15.30 - 15.50 CHASHECHKIN Y. D., ZAGUMENNYI I. V.: 2D Fluid Flow Around a Plate: Consistent Analytical, Numerical and Laboratory Investigations
- 15.50 - 16.10 CHASHECHKIN Y. D., DIMITRIEVA N. F.: Dynamics and Structure of Stratified Flows Around Wedge: from Diffusion Induced up to Transient Vortex Regime

16.10 **COFFEE BREAK**

Thursday, February 11, 2016

- 9.00 - 9.20 NEUSTUPA T.: On the Existence of a Weak Solution of a Steady Flow of a Heat Conductive Incompressible Fluid Through a Cascade of Profiles
- 9.20 - 9.40 VARNHORN W.: A Crank-Nicholson Method for Non-Stationary Stokes Flow
- 9.40 - 10.00 ISOZ M.: Modeling Gravity-Driven Rivulet on a Monotonously Varying Incline
- 10.00 - 10.30 **COFFEE BREAK**
- 10.30 - 10.50 RIABININ A., SULEYMANOV A.: Bifurcation of Transonic Flow in a Channel with a Central Body
- 10.50 - 11.10 MORISHITA E.: Biplane Aerodynamics Revisited
- 11.10 - 11.30 HYHLÍK T.: Discussion of Extremal Principles for Turbulent Flow Based on Hypothesis of Maximum Entropy Production
- 11.30 - 13.30 **LUNCH**
- 13.30 - 14.20 **POSTER DISCUSSION**
- 14.20 - 14.40 MERADJI S., ACCARY G., MORVAN D., BESSONOV O., FOUGÈRE D.: Numerical Simulation of Grassland-Fires Behavior Using Firestar 3D Model
- 14.40 - 15.00 GALUSINSKI C.: Problematic of Incompressible Bifluid Navier-Stokes Equations Approached on Non Body Fitted Meshes
- 15.00 - 15.20 LOHRASBI A., LAVAEI A., LOHRASBI K. SHAHLAEI M.: Model of Flow Over Rippled Bed Using Arbitrary Lagrangian Eulerian Approach with Mapping Technique

- 15.20 - 15.40 REZA-ZADEH N., REIHANY O.: Two-Dimensional Modeling of Particle Trajectory in Electrohydrodynamic (EHD) Fluid Using Finite Elements

15.40 - 16.00 **COFFEE BREAK**

- 16.00 - 16.20 JISS J. S., SANDEEP E. J., REJI R. V., SURYAN A., KIM H. D.: Study of Hypersonic Flow Past Spiked Blunt Body Using Direct Simulation Monte Carlo Method
- 16.20 - 16.40 KOŽIŠEK M., FÜRST J., PŘÍHODA J.: Modeling of the Laminar/Turbulent Transition on a Heated Flat Plate Using the  $k-k_L-\omega$  Model
- 16.40 - 17.00 PÁTÝ M., HALAMA J.: Simulation of Transonic Flow with a Non-Equilibrium Phase Change

**CONFERENCE CLOSING & COFFEE BREAK**

Friday, February 12, 2016

Possibility of excursions to Institute laboratories

**Note:**

*Timing includes a short discussion (approx.5min)*

## POSTERS – Room B

1. FIALKA M., CHARVÁTOVÁ H. : A Diffusion Model of Bath Washing Extraction of a Porous Material and an Evaluation of Its Conformity with The Real Process
2. FURMÁNEK P., REDONDO J. M., CARILLO A., TELLEZ J., ARELLANO R.: Experiments and Simulations of Maximal Sculling Propulsion: Vorticity Impulse in Human Biomechanics
3. HRIC V., HALAMA J.: Performance of Simple Condensation Model in High-Pressures
4. JONÁŠ P. : Preliminary Study on Correlation between the Shape Parameter and the Skin Friction Coefficient in Transitional Zero Pressure Gradient Boundary Layer
5. KOUBA J., NOVOTNÝ J., NOŽIČKA J.: Design of Combustion Chamber for Flame Front Visualisation and First Numerical Simulation
6. LALAOUA A., CHAIEB Z.: Flow Patterns in a Combined Taylor-Couette Geometry
7. REDONDO J. M., VILA T., TELLEZ J., GONZALEZ-NIETO P. L., SANCHEZ M. A.: Richtmyer-Meshkov and Rayleigh-Taylor Fractal Mixing
8. STRAKA P., PŘÍHODA J., BOBČÍK M.: Simulation of Compressible Flow Through the Tip-Section Turbine Blade Cascade with the Unsteady Interaction of the Shock Wave with Shear Layers
9. SVÁČEK P.: On Verification of Numerical Solution of Fluid-Structure Interaction Problems

### ORGANISING COMMITTEE

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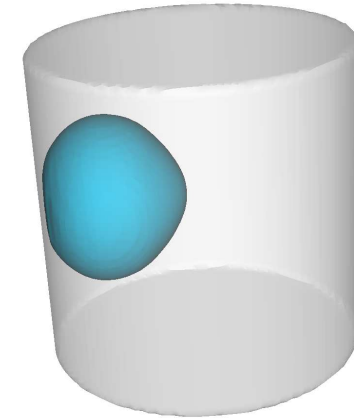
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Programme of the Conference

## TOPICAL PROBLEMS OF FLUID MECHANICS 2016

### ORGANISED BY

Institute of Thermomechanics AS CR, v.v.i.,Prague

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CTU in Prague, Faculty of Mechanical Engineering,

Dept. of Technical Mathematics,

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**February 10-12, 2016**