

LECTURES - Room B

Wednesday, February 19, 2020

- 8.00 - 9.00 **REGISTRATION**
- 9.00 - 9.10 **CONFERENCE OPENING**
- 9.10 - 9.30 **KOŘÍNEK T., TISOVSKÝ T., HUJER J., ZIMMERMAN K.:** Partially-Averaged Navier-Stokes Simulation of the Flow around Circular Cylinder at $Re=3900$: Comparison of Low and High Reynolds Number Approaches
- 9.30 - 9.50 **PECH J.:** Laminar-Turbulent Transition in View of Flow Separation from Isothermal and Heated Cylinder
- 9.50 - 10.10 **MARCHEVSKY I. K., SHCHEGLOV G. A., DERGACHEV S. A.:** On the Algorithms for Vortex Element Evolution Modelling in 3D Fully Lagrangian Vortex Loops Method
- 10.10 - 10.30 **KUZMINA K. S., MARCHEVSKY I. K., RYATINA E. P.:** Flow Simulation around a Circular Cylinder for Low Reynolds Numbers and Determining the Flow Separation Point in VM2D Code
- 10.30 - 11.00 **COFFEE BREAK**
- 11.00 - 11.20 **PIRES M., BODNÁR T.:** On the Influence of Diffusion Stabilization in Oldroyd-B Fluid Flow Simulations
- 11.20 - 11.40 **SCHIAVON M., TAMPIERI F., CAGGIO M., BODNÁR T.:** The Effect of Submeso Motions on Second-Order Moment Budgets in the Stable Atmospheric Boundary Layer
- 11.40 - 12.00 **ZEMACH T.:** On Gravity Currents over a Porous Floor in Power-Law Cross-Section Channels
- 12.00 - 13.30 **LUNCH**
- 13.30 - 14.30 **POSTER DISCUSSION**
- 14.30 - 14.50 **VARNHORN W.:** A Lagrangian Approach for Weak Solutions of the Navier-Stokes Equations
- 14.50 - 15.10 **NEČASOVÁ Š., DEURING P., KRAČMAR S.:** Recent Results on the Problem of Motion of Viscous Fluid Around A Rotating Rigid Body

15.10 - 15.30 **RADULOVIĆ M., MARUŠIĆ – PALOKA E., PAŽANIN I.:** On the Lubrication of a Rotating Shaft with Incompressible Micropolar Fluid

15.30 - 16.00 **COFFEE BREAK**

- 16.00 - 16.20 **GALUSINSKY C., DURIEZ J.:** Level Set Representation on Octree for Granular Material with Arbitrary Grain Shape
- 16.20 - 16.40 **ISOZ M., ŠOUREK M.:** POD-DEIM-Based Model Order Reduction for Four-Way Coupled Fluid-Solid Flows
- 16.40 - 17.00 **ŠOUREK M., ISOZ M.:** Development of CFD Solver for Four-Way Coupled Particle-Laden Flows

Thursday, February 20, 2020

- 9.00 - 9.20 **ŠIDLOF P., LASOTA M.:** Aeroacoustic Simulation of Human Phonation with the Wale Sub-Grid Scale Model
- 9.20 - 9.40 **FEISTAUER M.:** S.: On Numerical Solution of Fluid-Structure Interaction
- 9.40 - 10.00 **MÜLLER B., RINGSTAD K. M., KHALILI M. E.:** High Order Immersed Boundary Method for Fluid-Structure Interaction of Viscous Compressible Flow with a Rigid Body
- 10.00 - 10.20 **CLÉMENT J.-B., GOLAY F., ERSOY M., SOUS D.:** Adaptive Discontinuous Galerkin Method for Richards Equation
- 10.20 - 10.50 **COFFEE BREAK**
- 10.50 - 11.10 **CHASHECHKIN Y. D., ZAGUMENNYI I. V.:** Natural Unsteadiness of the Flow Pattern around a Plate in Numerical Simulation and Laboratory Modeling
- 11.10 - 11.30 **CHASHECHKIN Y. D., PROKHOROV E.:** Hydrodynamics, Energetics and Acoustics of Free Falling Drop Impact at a Motionless Fluid
- 11.30 - 11.50 **ILINYKH A. Yu.:** Fine Structure Distribution of Immiscible Fluid at the Drop Impact to Fluid Surface
- 11.50 - 13.30 **LUNCH**
- 13.30 - 14.30 **POSTER DISCUSSION**
- 14.30 - 14.50 **URUBA V., PROCHÁZKA P., SKÁLA:** On the 3D Dynamics of the Wake Behind a Circular Cylinder
- 14.50 - 15.10 **DUDA D.:** Individual Vortex Searching Algorithm

15.10 - 15.30 **SHMIGIRILOV R., RYABININ A.:** Influence of End Plates on Rotational Oscillations of a Rectangular Cylinder

15.30 - 16.00 **COFFEE BREAK**

- 16.00 - 16.20 **CRHA J., KAŠPAR O., BASAŘOVÁ P.:** CFD Simulation of a Sub-Millimeter Rising Bubble in a Stagnant Liquid
- 16.20 - 16.40 **LEVÝ T., VIMMR J.:** Developing Fully-Coupled Density-Based Solver for Turbulent Compressible Fluid Flows in OpenFOAM
- 16.40 - 17.00 **ČÍŽEK M., VAMPOLAT T., POPELKA L.:** Comparison of Labyrinth Seal Calculation and Real Aircraft Turbine Engine Measurement
- 17.00-17.20 **DEURING P.:** Exponential Factors in Stability and Error Bounds of a Finite Element -- Finite Volume Discretization of Convection-Diffusion-Reaction Equations
- 17.20 **CONFERENCE CLOSING**

Friday, February 21, 2020

Possibility of excursions to the Institute's laboratories

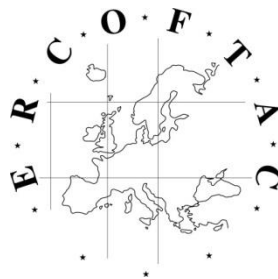
Note:

Timing includes a short discussion (approx.5min)

POSTERS – Room A

1. **DIMITRIEVA N., F.:** Calculation of Non-uniform Fluid Flows in a Gravity Field
2. **FLÍDR E., KLADRUBSKÝ M., JELÍNEK T.:** Unsteady Pressure Measurement in an End-Wall Region of a Linear Blade Cascade
3. **HLAVATÝ T., ISOZ M., PLACHÁ M., ŠOUREK M., KOČÍ P.:** Geometrically Realistic Macro-Scale Model for Multi-Scale Simulations of Catalytic Filters for Automotive Gas Aftertreatment
4. **KOUBA J., NOVOTNÝ J., NOŽIČKA J.:** Laser-Induced Kernel Visualisation by OH* Chemiluminescence Method
5. **KUZMINA K., MARCHEVSKY I., SOLDATOVA I.:** The High-Accuracy Numerical Scheme for the Boundary Integral Equation Solution in 2D Lagrangian Vortex Method with Semi-Analytical Vortex Elements Contribution Accounting
6. **LOUDA P., PŘÍHODA J.:** Study on Performance of Various Turbulent Heat Transfer Closures
7. **STRAKA P., PŘÍHODA J.:** Modification of the Algebraic Transition Model for Wall Roughness Effect Including a Rough Strip
8. **SVÁČEK P.:** Simulation of Interaction of the Airflow with Vocal Folds Vibration Considering the Vocal Folds Contact

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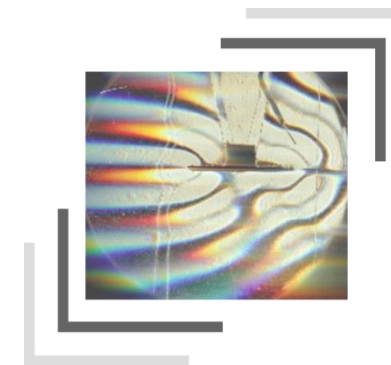
ORGANISING COMMITTEE

Ing. David Šimurda, Ph.D.
Institute of Thermomechanics AS CR, v.v.i.
&
Ing. Mgr. Tomáš Bodnár, Ph.D.
*CTU in Prague, Facult. of Mechanical Engineering,
Dept. of Technical Mathematics;
Czech Pilot Centre ERCOFTAC*
&
Prof. Philippe Fraunié
MIO Université de Toulon - AMU - CNRS - IRD



INSTITUTE OF THERMOMECHANICS AS CR, v.v.i.

Dolejškova 5, 182 00 Prague 8



Programme of the Conference

TOPICAL PROBLEMS OF FLUID MECHANICS 2020

ORGANISED BY

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