

# The program of Kacov 2017

The program can be changed during the conference.  
Please see the posted information at the conference place.

KÁCOV 2017	8:00	9:00-10:10	10:10	10:30-11:40	11:40	11:50-12:50	13:00	FREE	15:30	16:00-17:10	17:10	17:30-18:40	18:45 + ...	
		70'	20'	70'	10'	60'				70'	20'	70'		
SUN 28.5.										17:30 - Departure from Prague	19:00 - Arrival to Kácov	19:00 +, Dinner, Welcome Session		
MON 29.5.	Breakfast from 8:00	Brenier	Coffee	Rohde	Break	Short Comm's 1 *)	Lunch at 13:00		Coffee	Breit	Break	Jabin	18:45 Dinner + Pub visit	
TUE 30.5.	Breakfast from 8:00	Breit	Coffee	Jabin	Break	Lunch at 11:45	ORGANIZED TRIP (or FREE AFTERNOON)					19:00 Dinner		
WED 31.5.	Breakfast from 8:00	Rohde	Coffee	Breit	Break	Short Comm's 2 *)	Lunch at 13:00		Coffee	Jabin	Break	Brenier	18:45 Dinner	20:15 Short C's 3 *)
THU 1.6.	Breakfast from 8:00	Brenier	Coffee	Rohde	Break	Short Comm's 4*)	Lunch at 13:00		Coffee	Jabin	Break	Breit	18:45 Barbecue	
FRI 2.6.	Breakfast from 8:00	Rohde	Coffee	Brenier	Break	Lunch at 11:45	13:00 Departure from Kácov		cca 14:30 Arrival to Prague					

ESSAM SCHOOL ON MATHEMATICAL ASPECTS OF FLUID FLOWS,  
KÁCOV, CZECH REPUBLIC, MAY 28 – JUNE, 2 2017

## Monday, May 29

08:00-09:00 BREAKFAST

09:00-10:10 **Y. Brenier** *Concepts of generalized solutions in incompressible fluid mechanics*

10:10-10:30 COFFEE, TEA

10:30-11:40 **C. Rohde** *Diffuse interface modelling for two-phase flow*

11:40-11:50 BREAK

11:50-12:00 **Š. Axmann** *Steady solutions to the Navier-Stokes system for dense compressible fluid*

12:00-12:10 **M. Galić** *Analysis of the nonlinear 3D fluid-stent-shell interaction problem*

12:10-12:20 **O. Kreml** *(Non)uniqueness of solutions to the Riemann problem for compressible Euler system*

12:20-12:30 **M. Michálek** *Entropy equality for hyperbolic conservation laws*

12:30-12:40 **S. Schwarzacher** *On compressible fluids interacting with a linear-elastic Koiter shell*

12:40-12:50 **A. Wróblewska-Kamińska** *Weak solutions to the full Navier-Stokes-Fourier system with slip boundary conditions in time dependent domains*

13:00-15:30 LUNCH & BREAK

15:30-16:00 COFFEE, TEA

16:00-17:10 **D. Breit** *An introduction to stochastic Navier-Stokes equations*

17:10-17:30 BREAK

17:30-18:40 **P.-E. Jabin** *Quantitative regularity estimates for compressible transport equations*

18:45- DINNER & PUB VISIT

## Tuesday, May 30

08:00-09:00 BREAKFAST

09:00-10:10 **D. Breit** *An introduction to stochastic Navier-Stokes equations*

10:10-10:30 COFFEE, TEA

10:30-11:40 **P.-E. Jabin** *Quantitative regularity estimates for compressible transport equations*

11:45-12:45 LUNCH

13:00-18:40 ORGANIZED TRIP (or FREE AFTERNOON)

18:45- DINNER

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KÁCOV, CZECH REPUBLIC, MAY 28 – JUNE, 2 2017**

## **Wednesday, May 31**

08:00-09:00 BREAKFAST

09:00-10:10 **C. Rohde** *Diffuse interface modelling for two-phase flow*

10:10-10:30 COFFEE, TEA

10:30-11:40 **D. Breit** *An introduction to stochastic Navier-Stokes equations*

11:40-11:50 BREAK

11:50-12:00 **M. Caggio** *Regularity criteria for the Navier-Stokes equations based on one component of velocity*

12:00-12:10 **P. Kaplický** *On divergence of measures*

12:10-12:20 **M. Lanzendörfer** *On multiple solutions to the steady Navier-Stokes equations subject to constant traction or do-nothing boundary conditions on artificial boundaries*

12:20-12:30 **K. Łyczek** *Measure solutions to perturbed transport equation*

12:30-12:40 **V. Mácha** *Hölder regularity of velocity gradients for shear-thinning fluids*

12:40-12:50 **Š. Nečasová** *On the problem of the motion of rigid body in viscous fluid*

13:00-15:30 LUNCH & BREAK

15:30-16:00 COFFEE, TEA

16:00-17:10 **P.-E. Jabin** *Quantitative regularity estimates for compressible transport equations*

17:10-17:30 BREAK

17:30-18:40 **Y. Brenier** *Concepts of generalized solutions in incompressible fluid mechanics*

18:45- 20:00 DINNER

20:15-20:25 **R. Hošek** *Excluding vacuum zones in numerical schemes for compressible Navier-Stokes*

20:25-20:35 **P. Kumar** *Numerical analysis of non-equilibrium heat transfer in tissues during thermal therapy applications*

20:35-20:45 **B. Raita** *Analysis of  $BV^A$  &  $W^{A,1}$ -spaces*

20:45-20:55 **B. She** *Stabilized finite volume-finite element method for compressible Navier-Stokes-Fourier*

20:55-21:05 **K. Tůma** *Viscoelastic rate-type fluid model with temperature dependent material coefficients*

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KÁCOV, CZECH REPUBLIC, MAY 28 – JUNE, 2 2017**

## **Thursday, June 1**

08:00-09:00 BREAKFAST

09:00-10:10 **Y. Brenier** *Concepts of generalized solutions in incompressible fluid mechanics*

10:10-10:30 COFFEE, TEA

10:30-11:40 **C. Rohde** *Diffuse interface modelling for two-phase flow*

11:40-11:50 BREAK

11:50-12:00 **M. Bathory** *Relation of the outflow boundary conditions and the rate of the dissipation*

12:00-12:10 **A. Boldyrev** *Attractors for one class of viscoelastic fluids with memory*

12:10-12:20 **T. Debiec** *Energy conservation for the Euler-Korteweg equations*

12:20-12:30 **K. Hajduk** *Energy equality for the 3D critical convective Brinkman-Forchheimer equations*

12:30-12:40 **E. Maringová** *On a Navier-Stokes-Fourier-like system capturing a transition between viscid and inviscid fluid regimes and between no slip and perfect slip boundary conditions*

12:40-12:50 **M. Turbin** *Existence of weak solution for the optimal feedback control problem for Bingham fluid on the 3D torus*

13:00-15:30 LUNCH & BREAK

15:30-16:00 COFFEE, TEA

16:00-17:10 **P.-E. Jabin** *Quantitative regularity estimates for compressible transport equations*

17:10-17:30 BREAK

17:30-18:40 **D. Breit** *An introduction to stochastic Navier-Stokes equations*

18:45- CONFERENCE DINNER

## **Friday, June 3**

08:00-09:00 BREAKFAST

09:00-10:10 **C. Rohde** *Diffuse interface modelling for two-phase flow*

10:10-10:30 COFFEE, TEA

10:30-11:40 **Y. Brenier** *Concepts of generalized solutions in incompressible fluid mechanics*

11:45-12:45 LUNCH

13:00 BUS DEPARTURE