

Schedule of the TPDE-03 International Conference on TRENDS IN PARTIAL DIFFERENTIAL EQUATIONS OF MATHEMATICAL PHYSICS

Saturday, 7 June

- 17:00 – 17:30 **Opening Session** - The work of V.A. Solonnikov by *H. Amann, K. Pileckas and J.F. Rodrigues*
17:40 – 18:30 *O. Ladyzhenskaya*: On some boundary value problems for conducting fluids governed by the MNS equations
18:30 – 19:00 *LI Ta-t sien*(*): Exact boundary controllability for quasilinear wave equations

(*) Lecture read by a member of the Organization Committee

Sunday, 8 June

- 9:00 – 9:50 *A. Fasano*: Temperature driven flows in saturated solutions with deposition
9:50 – 10:20 *V. Pukhnachov*: Justification of the thin layer approximation in one Free Boundary Problem for the Navier-Stokes Equations
10:20 – 10:50 *R. Rautmann*: Quasilinear conditions in Euler flows

10:50 – 11:10 **Coffee Break**

- 11:10 – 11:40 *C. Ebmeyer*: Global regularity in Sobolev spaces for elliptic systems with p-structure
11:40 – 12:10 *L. Saraiva*: Removable singularities of solutions to quasilinear parabolic equations
12:10 – 13:00 *H. Amann*: Nonlinear parabolic equations involving measures

13:00 – 14:30 **Lunch**

- 14:30 – 15:00 *S. Shmarev*: Interfaces in solutions of multidimensional porous medium equation with absorption
15:00 – 15:30 *G. Grillo*: Asymptotics of the porous media equation via Sobolev inequalities
15:30 – 16:00 *M. Bildhauer*: Steady states of anisotropic generalized Newtonian fluids
16:00 – 16:30 *Bun Ja Jin*: Existence of quasi-Stokes flow in a dihedral domain arising from a study of a free boundary problem of viscous fluid in a container
16:30 – 17:00 *E. Frolova*: Solvability of a free boundary problem for the Navier-Stokes equations describing the motion of viscous incompressible nonhomogeneous fluid

17:00 – 17:30 **Coffee Break**

- 17:30 – 18:00 *G. Galdi*: Existence and uniqueness of time-periodic physically reasonable Navier-Stokes flow past an obstacle
18:00 – 18:30 *L. Brandolese*: Weighted L^2 -spaces and strong solutions to the Navier-Stokes equations
18:30 – 19:00 *P. Mucha*: A model of a 2D pump
19:00 – 19:30 *T. Shilkin*: On the derivation of the Navier-Stokes equations with nonlocal viscosities

20:30 **Conference Dinner**

Monday, 9 June

9:00 – 9:50 *J. Heywood*: On a conjectured estimate for solutions of the three-dimensional Stokes equations, with a constant that is optimal and independent of the domain

9:50 – 10:20 *P. Penel*: Regularity criteria for the Navier-Stokes equations

10:20 – 10:50 *A. Tani*: Steady-state solution to the equation of the second grade fluid with slip boundary conditions

10:50 – 11:10 *Coffee Break*

11:10 – 11:40 *M. Padula*: Power and incremental work in the control of rest state for thermoelastic systems

11:40 – 12:10 *V. Starovoitov*: Interaction of fluid and elastic continuums through a fine boundary structure

12:10 – 13:00 *E. DiBenedetto*: Modelling visual transduction by homogenization

13:00 – 14:30 *Lunch*

14:30 – 15:00 *D. Pierotti*: Subcritical motion of a semisubmerged body in a heavy fluid

15:00 – 15:30 *D. Rapoport*: Stochastic differential approach to the Navier-Stokes equations

15:30 – 16:00 *V. Yurinsky*: On Stokes operator in random domain

16:00 – 16:30 *A. Mahalov*: 3D Navier-Stokes and Euler equations with weakly-aligned large initial vorticity in R^3

16:30 – 17:00 *B. Nikolaenko*: 3D Navier-Stokes and Euler equations with weakly aligned large initial vorticity in bounded domains

17:00 – 17:30 *Coffee Break*

17:30 – 18:00 *S. Antontsev*: Stopping a viscous fluid by a feedback dissipative external field: Navier-Stokes equations

18:00 – 18:30 *M. Specovius-Neugebauer*: Optimal convergence results for the Brezzi-Pitkäranta stabilization

18:30 – 19:00 *G. Guidoboni*: The Bènard problem and the Boussinesq limit

19:00 – 19:30 *I. Denisova*: Problem of thermocapillary convection for two incompressible fluids separated by a closed interface

19:30 – 20:00 *I. Moguilevski*: Two stationary problems for quasi-Newtonian fluids

Tuesday, 10 June

9:00 – 9:50 *N. Trudinger*: On Monge-Ampère type equations and geometric invariance

9:50 – 10:20 *K. Pileckas*: Free boundary problem for the Navier-Stokes equations in an infinity layer

10:20 – 10:50 *S. Nazarov*: A novel approach for justification of asymptotics for spectra of singularly perturbed problems

10:50 – 11:10 *Coffee Break*

11:10 – 11:40 *J. Videman*: Reynolds type equation for a thin flow under intensive transverse percolation

11:40 – 12:10 *D. Gomes*: Perturbation theory for Hamilton-Jacobi equations

12:10 – 13:00 *L. Caffarelli*: Some issues in homogenization of non divergence equations