International Conference

"Nonlinear Partial Differential Equations"

dedicated to the 95th anniversary
of The National Academy of Sciences of Ukraine

Donetsk, Ukraine
September 9–14, 2013

SCIENTIFIC PROGRAMME

Tuesday, September 10, 2013

MORNING SESSION

9.00 – 9.20   **Opening of the Conference**

9.25 – 10.00   **M. Marcus.** Positive solutions of semi-linear elliptic equations with absorption and boundary value problems with measures

10.05 – 10.40   **C. Bandle.** Elliptic problems with Hardy potentials

10.45 – 11.05   **Break**

11.05 – 11.40   **A. Novick-Cohen.** Coarsening and the deep quench obstacle problem

11.45 – 12.20   **I.D. Chueshov.** Ladyzhenskaya squeezing property in 3D viscous primitive equations

12.25 – 13.00   **A.L. Skubachevskii.** The Vlasov equations in an infinite cylinder

EVENING SESSION

15.30 – 16.05   **N.M. Ivochkina.** On variational ground of m-Hessian operators

16.10 – 16.45   **L. Karp.** On the characterization of global solutions to a free boundary problem

16.50 – 17.10   **Break**

17.10 – 17.30   **M.I. Ivanchov,** N.V. Pabyrivska. An inverse problem for the two-dimensional diffusion equation in a free boundary domain

17.35 – 17.55   **N.V. Filimonenkova.** A variational approach to the theory of m-Hessian equations

18.00 – 18.20   **M.D. Surnachev.** On density of smooth functions in weighted Sobolev spaces with variable exponent

18.25 – 18.45   **P. Miškinis.** Some aspects of the fractional KdV equation

18.50 – 19.10   **Ya.M. Drin.** The investigation of a multipoint on time problem for equations of fractal diffusion type

Wednesday, September 11, 2013

MORNING SESSION

9.00 – 9.35   **V.V. Zhikov.** Passing to the limit in nonlinear elliptic and parabolic problems

9.40 – 10.15   **A.M. Micheletti.** Multiplicity of solutions for coupled elliptic systems on Riemannian manifolds

10.20 – 10.55   **C. Saccon.** Monotonicity methods in singular elliptic problems and some multiplicity results

11.00 – 11.20   **Break**

11.20 – 11.55   **V. Vespri.** Long time behaviour for degenerate/singular parabolic equations

12.00 – 12.35   **M. Fila.** Extinction of solutions of the fast diffusion equation

12.40 – 13.15   **D. Andreucci,** A.F. Tedeev. Optimal decay rate for parabolic equations in noncompact manifolds

EVENING SESSION

15.30 – 16.05   **R.M. Cherniha.** Lie and conditional symmetries for boundary value problems: definitions, algorithms and their application for physically motivated problems

16.10 – 16.45   **A.V. Faminskii.** On well-posedness and decay of solutions to an initial-boundary value problem for the generalized Zakharov-Kuznetsov equation

16.50 – 17.10   **Break**

17.10 – 17.30   **M.M. Bokalo,** H.P. Domanska. Initial-boundary value problems for anisotropic elliptic-parabolic-pseudoparabolic equations

17.35 – 17.55   **Y. Belaud.** Blow-up in a finite time for a class of nonlinear parabolic equations

18.00 – 18.20   **S.P. Degtyarev.** A smooth solution to the multidimensional Stefan problem for a degenerate parabolic equation

18.25 – 18.45   **K.O. Buryachenko.** On kernel dimension of the Dirichlet problem

18.50 – 19.10   **N.P Protsakh.** On the inverse problem for semilinear ultraparabolic equation

Thursday, September 12, 2013

MORNING SESSION

9.00 – 9.35 **L. Véron.** Quasilinear Lane-Emden equations with absorption and measure data

9.40 – 10.15 **I. Shafrir.** Asymptotics of eigenstates of elliptic problems with mixed boundary data set on domains tending to infinity

10.20 – 10.55 **A.E. Shishkov.** Localization effects in semilinear parabolic equations with degenerate absorption potential

11.00 – 11.20 **Break**

11.20 – 11.55 **E.Ya. Khruslov,** A.V. Khrabustovskyi. Periodic Maxwell operators with predefined gaps in spectrum

12.00 – 12.35 **A.G. Sergeev.** Adiabatic limit in hyperbolic Ginzburg-Landau equations

12.40 – 13.15 **E.Yu. Panov.** *H*-measures on spectra of algebras of pseudo-differential operators and some applications

15.00 – 15.50	**POSTER SESSION**

EVENING SESSION

16.00 – 16.35   T.Ya. Azizov**, N.D. Kopachevsky.** Indefinite spectral hydrodynamic problems

16.40 – 17.00   **Break**

17.00 – 17.35   **A.I. Kozhanov.** Conjugation problems for some nonclassical differential equations of higher order

17.40 – 18.00   N.D. Kopachevsky, **Z.Z Sitshaeva.** The problem of equilibrium and stability of capillary fluid with disconnected free surface

18.05 – 18.25   **T. Fastovska.** Long-time behaviour of solutions for a transmission problem of Ginzburg-Landau type

18.30 – 18.50   **O.M. Buhrii.** On a mild solution to the initial-boundary value problem for systems of semilinear parabolic equations of Petrovsky type with variable exponents of nonlinearity

18.55 – 19.15   **I.M. Karabash.** Nonlinear eigenvalue problems and structures producing optimal resonances

Friday, September 13, 2013

MORNING SESSION

9.00 – 9.35   **G.M. Lieberman.** Estimates for solutions of some elliptic and parabolic Keldysh-type equations

9.40 – 10.15   **M.-F. Bidaut-Véron,** H.N. Quoc. Stability properties for quasilinear parabolic equations with measure data and applications

10.20 – 10.55   **Yu.A. Alkhutov.** Degenerate elliptic equations with partially Muckenhoupt weights

11.00 – 11.20   **Break**

11.20 – 11.55   **A.L. Gladkov.** Uniqueness and blow-up of solutions of nonlocal initial boundary value problem for semilinear parabolic equation with absorption

12.00 – 12.35   **J.M. Rakotoson.** Very weak solutions from Dirichlet to Neumann problem

12.40 – 13.15   **A.A. Kovalevsky.** On the sets of boundedness of solutions to degenerate anisotropic elliptic variational inequalitites with L^1-data

EVENING SESSION

15.00 – 15.35   **T.A. Mel'nyk.** Homogenization of semi-linear parabolic problems in thick fractal junctions

15.40 – 16.20   **M.V. Voitovich.** On the boundedness of generalized solutions for a class of nonlinear fourth-order elliptic equations

16.25 – 16.45   **Ya.M. Dymarskii,** Yu. Evtushenko. Manifolds of periodic eigenvalue problems with selected double eigenvalues

16.50 – 17.10   **Break**

17.10 – 17.30   **A.L. Pavlov.** Solvability of general boundary value problems in a half-space for differential equations with constant coefficients

17.35 – 17.55   **N.R. Pinigina.** Estimates of solutions for a class of degenerate elliptic equations with a complex parameter

18.00 – 18.20   **D.K. Potapov.** Optimal control of elliptic equations with a spectral parameter and discontinuous nonlinearity

18.25   **Closing of the Conference**

POSTER SESSION

1. A.Yu. Ananieva. Bessel operator on the finite interval

2. E.L. Gaziev. Spectral problem corresponding to eigenoscillations of system "fluid-barothropic gas" in cylindrical vessel

3. Yu.S. Gorban. A nonweighted condition of summability of *T*-solutions for a class of degenerate anisotropic variational inequalities

4. S.O. Gorbonos. Example of non-variational solutions of the optimal control problem with unbounded coefficients

5. I.V. Orlov**, Z.I. Khalilova.** K-subdifferentials theory and its application to variational problems

6. M.V. Krasnoschok. On a free boundary problem modelling solid thin films

7. Ye.V. Lesina. Third boundary value problem for second-order improperly elliptic equation

8. V.A. Markasheva. Regularity and asymptotic bahaviour of solutions to the Cauchy problem for degenerate parabolic equations with Baouendi-Grushin type operator

9. A.A. Miroshnikova. On the eigenvalues of the Dirichlet problem for the wave equation in *n*-dimensional ball

10. O.A. Rudakova. On the varying variational problems with integral constraints and degeneration

11. E.V. Stiepanova. Extinction of solutions for quasilinear parabolic equations with degenerate absorption potentials

12. N.D. Kopachevsky, **E.V. Syomkina.** Complete Volterra integro-differential second-order equations

13. A.V. Tsygankova. The sufficiency of the strengthened Legendre condition for variational problems in Sobolev spaces under restriction on the domain measure

14. D.K. Potapov, **V.V. Yevstafyeva.** The Lavrent'ev model for separated flows with an external perturbation

15. V.P. Burskii, **A.A. Zaretskaya.** Unique solvability of a boundary value problem for general systems of first-order differential equations