Differential Equations and Applications

International Conference

In Honour of Mark Vishik

On the Occasion of his 90th Birthday

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Collection of abstracts

April 9, 2012

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Remarks on strongly elliptic systems in Lipschitz domains
M.S. Agranovich
Moscow Institute of Electronics and Mathematics

Relativistic point dynamics and Einstein's formula as a property of localized solutions of a nonlinear Klein-Gordon equation
Anatoli Babin
UC – Irvine
Alexander Figotin
UC – Irvine

To be announced
Claude Bardos
Université Pierre et Marie Curie, Paris, France

An asymptotic of a certain Riemann – Hilbert problem under singular deformation of a domain
Sergey Bezrodnykh
Dorodnicyn Computing Centre of RAS
Vladimir Vlasov
Dorodnicyn Computing Centre of RAS

To be announced
Alexander Bratus
Moscow State University

Nonlinear elliptic equations with measure data
Haim Brezis
Paris 6, Rutgers and Technion

Inertial manifolds for strongly damped wave equations
Natalya Chalkina
Moscow State University

Trajectory attractors for equations of mathematical physics
Vladimir Chepyzhov
Institute for Information Transmission Problems

Quantum dissipative Zakharov model in a bounded domain
Igor Chueshov
Kharkov National University

Vishik–Lyusternik's method and the inverse problem for plasma equilibrium in a tokamak
Alexandre Demidov
Moscow State University

Pseudodifferential operator, adiabatic approximation and averaging of linear operators
J. Brüning
Humboldt Universität zu Berlin
Viktor Grushin
Moscow Institute of Electronics and Mathematics
Sergey Dobrokhotov
Ishlinski Institute for Problems in Mechanics

Statistical Hydrodynamics and Reynolds averaging
Stamatis Dostoglou
University of Missouri

To be announced
Julii Dubinskii
Moscow Power Engineering Institute

Pseudovariational operators and Yang-Mills Millennium problem
Alexander Dynin
Ohio State University

Acoustic and optical black holes
Gregory Eskin
University of California at Los Angeles

Perturbation theory for systems with multiple stationary regimes
Mark Freidlin
University of Maryland

Generic properties of eigenvalues of a family of operators
Leonid Friedlander
University of Arizona

Normal parabolic equation corresponding to 3D Navier–Stokes system
Andrei Fursikov
Moscow State University

To be announced
Vakha Gishlarkaev
Chechen State University

To be announced
Evgeny Gorin
Moscow State Pedagogical University

Negative eigenvalues of two-dimensional Schrödinger operators
Alexander Grigoryan
University of Bielefeld

Incompressible limit of the linearized Navier–Stokes equations
Nikolay Gusev
Moscow Institute of Physics and Technology

On a compactness problem
Alain Haraux
Université Pierre et Marie Curie, Paris, France

Bony and thick attractors
Yu. S. Ilyashenko
Moscow State and Independent Universities, Steklov Mathematics Institute, National Research University Higher School of Economics, Cornell University

Sharp two-term Sobolev inequality and applications to the Lieb–Thirring estimates
Alexei A. Ilyin

Keldysh Institute of Applied Mathematics

On the uniform attractors of finite-difference schemes
Valentina Ipatova
Moscow Institute of Physics and Technology

Structure and regularity of the global attractor of reaction-diffusion equation with non-smooth nonlinear term
Aleksey Kapustyan
Kyiv National Taras Shevchenko University
Pavel Kasyanov
National Technical University of Ukraine
Jose Valero
Universidad Miguel Hernandez de Elche

On the crystal groundstate
Alexander Komech
IITP

Weak attractor for the Klein-Gordon equation with a nonlinear oscillator in discrete space-time
Andrey Komech
IITP and Texas A&M University

Dispersive estimates for magnetic Klein-Gordon equation
Elena Kopylova
Institute for Information Transmission Problems

Disprove of the commonly recognized belief that the foreign exchange currency market is self-stabilizing
Victor Kozyakin
Institute for Information Transmission Problems

The structure of the solution sets for generic operator equations
Alexander Krasnosel'skii
Institute for Information Transmission Problems

To be announced
Sergei Kuksin
Heriot-Watt University

Critical manifold in the space of contours in Stokes-Leibenson problem for Hele-Shaw flow
A.S. Demidov
Moscow State University
J.-P. Lohéac
École centrale de Lyon
V. Runge
École centrale de Lyon

The trajectory attractor of the nonlinear hyperbolic equation, contain a small parameter by the second derivative with respect to time
Andrey Lyapin
Russian State Technological University (MATI)

Vishik's approach to general boundary value problems for elliptic operators. Recent development.
Mark Malamud
Institute of Applied Mathematics and Mechanics

New phenomena in large systems of ODE and classical models of DC
Vadim Malyshev
Moscow State University

To be announced
Victor Maslov
Moscow State University

A Cahn-Hilliard model with dynamic boundary conditions
Alain Miranville
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Estimation of the negative spectrum of the Schrödinger type operators
Stanislav Molchanov
UNC – Charlotte

To be announced
Nikolai Nadirashvili
Institute for Information Transmission Problems

To be announced
Louis Nirenberg
Courant Institute

Structure of the minimum-time damping of a physical pendulum
Alexander Ovseevich
Institute for Problems in Mechanics

New results on Inverse Kinematic Problem
Victor Palamodov
Tel Aviv University

On the general theory of multi-dimensional linear functional operators with applications in Analysis
Boris Paneah
Technion

A uniform Gronwall-type lemma with parameter and applications to nonlinear wave equations
Vittorino Pata
Politecnico di Milano

To be announced
Andrey Piatnitski
Narvik Institute of Technology and Lebedev Physical Institute

Critical nonlinearities in Partial Differential Equations
Stanislav Pohozhaev
Steklov Mathematics Institute

Longitudinal correlation functions and the intermittency

Olga Pyrkova
Moscow Institute of Physics and Technology

On global solutions to the Cauchy problem for discrete kinetic equations
Evreny Radkevich
Moscow State University

Branching random motions, nonlinear hyperbolic systems and traveling waves
Nikita Ratanov
Universidad del Rosario

Periodic solutions of some quasilinear evolutionary equations
I.A. Rudakov
Bryansk State University

On the blow up phenomena in differential equations and dynamical systems
Lyudmila Efremova
Nizhniy Novgorod State University
Vsevolod Sakbaev
Moscow Institute of Physics and Technology

Operators with Symbolic Hierarchies on Stratified Spaces
Bert-Wolfgang Schulze
University of Potsdam

On numerical methods and the study of the dynamics inside the attractor
George Sell
University of Minnesota

Control and mixing for 2D Navier–Stokes equations with space-time localised force
Armen Shirikyan
University of Cergy–Pontoise

To be announced
Andrey Shkalikov
Moscow State University

To be announced
Alexander Shnirelman
Concordia University

Non-linear PDE of mKdV type with possibly unbounded coefficients at infinity
M. Shubin, P. Topalov
Northeastern University

Bifurcations of solutions to the Navier–Stokes system
Yakov Sinai
Princeton University

Eigenfunction of the Laplace operator in a tetrahedron
Elena Sitnikova
Moscow State University of Civil Engineering

Classical solutions of the Vlasov–Poisson equations in a half-space
A.L. Skubachevskii

Peoples' Friendship University of Russia

To be announced
Vsevolod Solonnikov
Steklov Mathematical Institute

Homogenization of the elliptic Dirichlet problem: operator error estimates
T.A. Suslina
St. Petersburg State University

Algebra of boundary value problems with small parameter
Nikolai Tarkhanov
University of Potsdam

Pattern formation: The oscillon equation
Roger Temam
Indiana University

Global Well-posedness of an Inviscid Three-dimensional Pseudo-Hasegawa-Mima Model
Chongsheng Cao
Florida International University
Aseel Farhat
UC – Irvine
Edriss S. Titi
UC – Irvine

Estimates on the number of bound states and Lieb-Thirring sums for low-dimensional Schrödinger operators
Stanislav Molchanov
UNC – Charlotte
Boris Vainberg
UNC – Charlotte

Example of equations with nonlinearity of type min[u,v]
N. Vvedenskaya
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Y.M. Suhov
IITP, Cambridge University, Universidade de Sao Paulo

On the Gauss problem with Riesz potential
Wolfgang L. Wendland
Universität Stuttgart, Germany

On a class of degenerate pseudodifferential operators and applications to mixed-type PDEs
Ingo Witt
Universität Göttingen, Göttingen, Germany

Equation of coagulation process of falling drops
Hisao Fujita Yashima
Université 8 Mai 1945 and Università di Torino

Is free surface deep water hydrodynamics an integrable system?
Vladimir Zakharov

University of Arizona

Infinite energy solutions for damped Navier–Stokes equations in $\mathbb{R}^2$

Sergey Zelik
University of Surrey