

MEETINGS

**Fractional Calculus  
& Applied Analysis**  
An International Journal for Theory and Applications  
VOLUME 12, NUMBER 4 (2009) ISSN 1311-0454

**Report on 5th International Conference  
“Analytic Methods of Analysis and Differential Equations”  
(AMADE-2009)**

The 5th International Conference “Analytic Methods of Analysis and Differential Equations” took place on September 14-19, 2009 in Minsk, Belarus. It continues the tradition of the International Conferences “Boundary Value Problems, Special Functions and Fractional Calculus”, dedicated to 90th birthday of academician F.D. Gakhov (Minsk, Feb. 15-20, 1996), “Analytic Methods of Analysis and Differential Equations” (AMADE-99; Minsk, Sept. 14-18, 1999), (AMADE-2001; Minsk, Feb. 15-19, 2001), (AMADE-2003; Minsk, Sept. 4-9, 2003) and (AMADE-2006; Minsk, Sept. 13-19, 2006, dedicated to centenary of academician F.D. Gakhov).

The “AMADE-2009” was organized by Belarusian State University together with Institute of Mathematics of Belarusian National Academy of Sciences and Moscow State University. It was held at the Olympic Sport Center “Staiki” situated in 10 km from Minsk, the capital of Belarus. The Conference was organized under the guidance of the International Society for Analysis, its Applications and Computation (ISAAC) and was included into the calendar of the events of the European Mathematical Society. Information on the conference was published in the journal “*Fract. Calc. Appl. Anal.*”, and currently updated on the Web-site: [www.amade-bsu-info.na.by](http://www.amade-bsu-info.na.by)

306 mathematicians from Europe, Africa, America and Asia confirmed interest in the Conference. The booklet of 185 abstracts of 235 scientists was published before the Conference. 128 representatives of Armenia, Belarus, Czech Republic, Germany, India, Italy, Lithuania, Poland, Russia, Serbia, Turkmenistan and Ukraine took part in AMADE-2009.

Six sections were working at the conference: 1. Integral Transforms and Special Functions; 2. Differential Equations; 3. Integral, Difference, Functional Equations and Fractional Calculus; 4. Real and Complex Analysis; 5. Applied Questions of Analysis and Differential Equations; 6. Modern Problems of Mechanics.

The conference was open by the Vice-chairman of AMADE-2009, Vice-rector of Belarusian State University Professor M.A. Zhuravkov.

Plenary invited lectures were given by the following mathematicians:

- Glaeske H.-J. (Jena, Germany) On a set of orthogonal polynomials; - Izobov N.A., Prokhorova R.A. (Minsk, Belarus) On extreme indexes of solutions to differential systems with asymptotically stable Koppel-Conti linear approximation; - Jerbashian A.M. (Erevan, Armenia) Functions of omega-bounded type; - Kalitvin A.S. (Lipetsk, Russia) On Barbashin integro-differential equations in spaces of functions defined on a strip or semi-strip; - Kilbas A.A. (Minsk, Belarus) Fractional differential equations. Method of integral transforms; - Laurincikas A. (Vilnius, Lithuania) Mellin transforms in the theory of the Riemann zeta-function; - Lyakhov L.N., Raikhelgaus L.B. (Voronezh, Russia) Odd and even Fourier-Bessel transforms and certain singular integral equation; - Mityushev V.V. (Krakow, Poland) A new boundary value problem and its applications to porous media; - Pekarskii .. (Minsk, Belarus) Estimates of the growth of the geometric mean of a rational function; - Radkevich E.V. (Moscow, Russia) On the Maxwell problem; - Rogosin S.V. (Minsk, Belarus) Discrete foliation of functional spaces at the study of strongly nonlinear boundary value problems for analytic functions; - Rutkauskas S. (Vilnius, Lithuania) On the Dirichlet type problem to degenerate at a line elliptic systems; - Silvestrov V.V. (Moscow, Russia), Antipov Y.A. (Louisiana, USA) Supercavitating flow in a multiply connected domain; - Uchaikin V.V. (Ulyanovsk, Russia) Probabilistic interpretation of the fundamental solution to the differential equation with partial fractional derivatives; - Yurchuk N.I., Baranovskaya S.N. (Minsk, Belarus) Problems for hyperbolic equations with depending on time oblique derivative in the boundary condition.

The proceedings of AMADE-2009 are planning to be published in "Proceedings of Institute of Mathematics" of the Belarusian National Academy of Sciences. A part of the reports was recommended to publication in the journal "Integral Transforms and Special Functions". Selected papers based on plenary lectures and sectional talks will be published at a special volume by Cambridge Scientific Publishers.

The participants of the conference pointed out its high scientific level. At the final meeting the participants suggested to organize the next AMADE-Conference in 2012. On behalf of Organizers:

I.V. Gaishun, M.V. Dubatovskaya,  
A.A. Kilbas, S.V. Rogosin, M.A. Zhuravkov