12th Conference Mathematics in Technical and Natural Sciences

$$\frac{\partial^2 u}{\partial x \partial y}$$

Krynica, 4 – 10.09.2011

Conference Agenda

Sunday, 4.09.2011

16:00   Departure of the conference bus from Kraków (AGH) to Krynica
20:00   Dinner

Monday, 5.09.2011

8:30   Breakfast

9:30   **Opening of the Conference**

Session 1,   9:40 - 12:45
Chairman: Roman Popovych

9:40   **Anatoly Nikitin**, *Symmetries and exact solutions of equations of axion electrodynamics*
10:25   **Artur Sergyeyev**, *Recursion operators in any dimension (co-author: M. Marvan)*
11:15   Coffee break
11:35   **Maxim Pavlov**, *Linearly degenerate hydrodynamic type systems and new solutions of the associativity system (co-author: B. Dubrovin)*
12:20   **Yuri Karadzhov**, *Matrix superpotentials*

13:00   Lunch

Session 2,   15:30 - 18:05
Chairman: Robert Kersner

15:30   **Piotr Zgliczyński**, *Rigorous, computer assisted proofs in the dynamics of dissipative PDE's: Heteroclinic connections between fixed points for Kuramoto-Sivashinski PDE*
16:20   Coffee break
16:40   **Alexander Makarenko**, *Anticipatory systems: models and applications*
17:25   **Vsevolod Vladimirov**, *On the stability of traveling wave solutions to generalized convection-reaction-diffusion equation (co-author: C. Mączka)*

18:30   Dinner

Tuesday, 6.09.2011

8:30   Breakfast

Session 3,   9:30 - 12:15
Chairman: Anatoly Nikitin

9:30   **Roman Popovych**, *Algebraic method of group classification of differential equations*
10:15   **Elena Meshcheryakova**, *Group analysis and exact solutions to the incompressible visco-elastic Maxwell medium equations*
10:40   Coffee break
11:00   **Ivan Tsyfra**, *On Application of Group of Equivalence Transformations to Neutron Diffusion Problem*
11:45   **Ekaterina Kutafina**, *Conservation laws for a certain Hamiltonian system*

13:00   Lunch

Session 4,   15:30 - 18:10
Chairman: Vsevolod Vladimirov

15:30   **Mohammed Guedda**, *Coarsening in an interfacial equation without slope selection revisited: Analytical results*
16:15   **Robert Kersner**, *A hyperbolic system in heat propagation theory*
16:40   Coffee break
17:00   **Brian Gilding**, *The Riemann problem for a forward-backward parabolic equation*
17:45   **Gabriella Bognár**, *On Marangoni convection over a vertical plate*

18:30   Dinner

Wednesday, 7.09.2011

8:30   Breakfast

9:30   Trip - Dunajec river rafting

18:00   Dinner (with a glass of wine)

Thursday, 8.09.2011

8:30   Breakfast

Session 5,   9:30 - 12:30
Chairman: Mohammed Guedda

9:30   **Henryk Leszczyński**, *Useful transforms in certain three component diffusion models?*
        (co-authors: M. Danielewski, A. Majewski, K. Szyszkiewicz-Warzecha)

10:15   **Lucjan Sapa**, *Estimates of solutions and applications to difference methods*

10:45   Coffee break

11:05   **Anna Szafrańska**, *Implicit difference methods for infinite systems of quasilinear*
        hyperbolic functional differential equations on the Haar pyramid

11:35   **Jerzy Stochel**, *On κ-roots of Stieltjes moment sequences (co-author: J. Stochel)*

12:05   **Maria Malejki**, *Asymptotics formulae for eigenvalues of unbounded Jacobi Matrices*

13:00   Lunch

Session 6,   15:30 - 17:55
Chairman: Henryk Leszczyński

15:30   **Sergey Lazarenko**, *About a few weak anticipatory systems (co-author A. Makarenko)*

16:00   **Sergii Skurativskyi**, *Instability of localized wave solutions of a model for the medium*
        of complex structure

16:30   Coffee break

16:50   **Agnieszka Kowalik**, *The note on the groups of homeomorphisms (co-author:*
        T. Rybicki)

17:20   **Ilona Michalik**, *On the universal coverings of the diffeomorphism group (co-author:*
        J. Lech)

18:30   Dinner

Friday, 9.09.2011

8:30   Breakfast

Session 7,   9:30 - 12:15
Chairman: Maxim Pavlov

9:30   **Vladimir Rosenhaus**, *On differential systems with infinite conservation laws*

10:15   **Valeriy Stogniy**, *Group classification of the generalized Kramers equation (co-authors: V. Lagno, M. Kuvika)*

10:40   Coffee break

11:00   **Sergey Zykov**, *Symmetry analysis and hydrodynamical reductions of the Skyrme-Fadeev model (co-authors: L. Martina, M. Pavlov)*

11:30   **Maria Elaeva**, *Mathematical modelling of capillary zone electrophoresis: methods of analyzing nonlinear waves and their interactions*

12:00   **Closing of the Conference**

13:00   Lunch

19:00   Dinner

Saturday, 10.09.2011

8:30   Breakfast

9:30   Departure of the conference bus from Krynica to Kraków