International conference

Mathematics for Life Sciences

Rivne, Ukraine, 15-19 September, 2015

Monday, September 14

12:00-18:00 Registration

Tuesday, September 15

08:30-10:35 Registration

10:40-11:00 Conference Opening

11:00-11:40 Langemann Dirk, *Mathematical models for resistance development: inheritance, metabolism and adaption*

11:45-12:25 Redaelli Alberto, *The role of computational fluid dynamics in the design of cardiovascular devices*

12:30-12:50 Bihun Yaroslav, *Mathematical model of immune response with the influence of external factors*

Lunch

14:40-15:00 Marunkevych Oksana, *Topological stability of averagings*

15:00-15:20 Soroka Yulya, *Non-singular foliations in the plane*

15:20-15:40 Panasiuk Oleksandra, *Regularized ranking by a linear functional strategy*

15:40-16:00 Kriukova Galyna, *RKHS-based linear functional strategy for machine learning*

Coffeebreak

16:20-16:40 Sturla Francesco, *Fluid-structure interaction modeling of a pediatric ventricular assist device*

16:40-17:00 Rigoldi Federica, *Pathological protein deglycation: a new strategy based on an enzyme engineering approach*

17:00-17:20 Dmytruk Veronika, *Computer simulation of anesthetic propagation during epidural anesthesia*

17:20-17:40 Bomba Andriy, *Numerical methods of complex analysis for solving problems of electrical impedance tomography*

18:00 Welcome party

Wednesday, September 16

09:00-09:40 Prestin Jürgen, *Protein docking algorithms*

09:45-10:05 Filimonova Natalia, *Wavelet-transformation of EEG based on the Krawtchouk functions*

10:10-10:30 Semenov Vasyl, *Some properties of orthogonal wavelets based on Jacobi polynomials*

10:45 Conference Photo

Coffeebreak

11:20-11:40 Antoniuk Alexandra, *Least action principle for weighted porous media equation*

11:45-12:05 Shydlich Andrii, *Some extremal problems in Orlicz spaces*

12:10-12:30 Wülker Christian, *Towards a fast Fourier transform for spherical Gauss-Laguerre basis functions*

12:35-12:55 Prysiazhniuk Olena, *Modeling of singularly perturbed processes of heat-mass transfer in nanoporous environments*

Lunch

15:00-15:20 Melnyk Taras, *A mathematical model of the atherosclerosis development in thin blood vessels and its asymptotic approximation*
15:25-15:45 Sadovyi Dmytro, *A homogenized problem for a blood transport through blood vessels*

15:50-16:10 Sandrakov Gennadiy, *Homogenization of hydrodynamics problems*

Coffeebreak

16:30-16:50 Yanchenko Sergiy, *Approximation of functions from the isotropic Nikol'skii–Besov classes*
16:55-17:15 Stasyuk Serhii, *Sparse trigonometric approximation of Nikol'skii-Besov classes of generalized mixed smoothness*

17:20-17:40 Derevianko Nadiia, *Approximation of the classes of periodic functions of several variables by some linear methods*

17:40-18:00 Myroniuk Vitalii, *Trigonometric approximations and Kolmogorov widths of anisotropic Besov classes of periodic functions of several variables*

20:00 International Music Evening

Thursday, September 17

09:00-09:40 Maksymenko Sergiy, *Notion of stability and its applications*

09:45-10:05 Overko Vitalii, *Creation natural-like geometry of the human's aorta*

10:10-10:30 Chupis Dmytro, *Liquid velocity measurement in the channel with diameter typical for blood vessels*

10:35-10:55 Mahno Taisiia, *Evolutionary approach to enhancement of medical ultrasound image processing*

Coffeebreak

11:20-11:40 Shvai Nadiya, *Unitary equivalence criterion for unicellular operators on a separable Hilbert space*

11:45-12:05 Petrov Evgeniy, *On spaces extremal for the Gomory-Hu inequality*

12:10-12:30 Dovgoshey Oleksiy, *Local strong porosity and its application to the theory of pretangent spaces*

12:35-12:55 Gorodetskyi Viktor, *Identification of process model using experimental time series*

Lunch

15:00-15:20 Ugolini Stefano, *Control and characterization of strain fields and oxygen transport in cell culture microdevices*

15:25-15:45 Fiore Gianfranco Beniamino, *Mock loops for laboratory simulation of heart surgery procedures*

15:50-16:10 Piatti Filippo, *4D flow MRI: a clinical oriented platform for the evaluation of cardiovascular pathologies*

Coffeebreak

16:25-16:45 Tereshchenko Igor, *Methodology of Petrov-Galerkin weighting functions choice with usage of neural networks and GMDH for convection-diffusion problem*

16:45-17:05 Sinchuk Alesia, *Numerical method quasiconformal mapping modeling filtration processes for the effect of hydraulic fracturing cracks*

17:05-17:25 Masiuk Sergii, *Statistical methods in radiation epidemiology*

17:30-18:30 Poster Session

19:00-22.00 Conference Dinner

Friday, September 18

09:00-09:40 Kukush Alexander, *Estimation of radiation risk in the presence of classical and Berkson errors in exposure doses*

09:45-10:05 Pokutnyi Oleksander, *Turing bifurcation for boundary value chemical problems*

10:10-10:30, Semenova Evgeniya V., *Informational efforts for solving exponentially ill-posed problems*

10:30-10:50 Janchuk Petro, *Quasispectral polynomials and their applications*

Coffeebreak

11:10-11:30 Stepaniuk Tetiana, *Order estimates of the best m–term trigonometric approximations of classes of analytic functions*

11:30-11:50 Veselovska Anna, *Pad´e type approximants for some special power series of two variables*

11:50-12:10 Kolomoitsev Yurii, *On approximation of periodic functions in Hölder and Sobolev spaces*

12:10-12:30 Lomako Tetiana, *On approximation of functions by algebraic polynomials in Hölder spaces*

Lunch

14:30-19:30 Excursion to Ostrog Academy

Saturday, September 19

09:00-09:40 Keller Karsten, *Entropies in data analysis*

09:45-10:05 Stolz Inga, *Evaluating time series: an ordinal pattern approach*

10:10-10:30 Solodun Alexander, *Nonlinear liquid sloshing in a truncated conical tank*

Coffeebreak

11:20-11:40 Voskoboinick Alexandr, *Hydroacoustics of the prosthetic bileaflet mitral valve*

11:45-12:05 Nesteruk Igor, *Can the low drag shapes of aquatic animals be applied in technology? Testing a special shaped body of revolution*

12:10-12:30 Voskoboinick Vladimir, *Generation features of the coherent vortex structures by cavities and bumps on a streamlined surface*

Lunch

15:00-15:20 Rudnytskyi Oleksandr, *Heart sound cancellation from lung sound recordings using empirical mode decomposition technique*
15:20-15:40 Verbytskyi Ievgen, *Nonlinear eigenvalues calculation for optimal resonances in one-dimensional optical cavities*

15:40-16:00 Karabash Illia, *When we can hear tones through a noise?*

Coffeebreak

16:30 Conference Closing

POSTER SESSION

1) Grushka Yaroslav, *Evolutional extensions and analogues of the operation of union for kinematic changeable sets*
2) Hulianytskyi Andrii, *Weak solvability and Galerkin discretization of a variable-order diffusion equation*
3) Kudybyn Igor, *The use of vegetation to enhance erosion at the coast*
4) Kyselova Anna, *Tool for accumulation and classification of experimental anatomical data*
5) Martynyuk Petro, *About existence and uniqueness of a solution of a free boundary-value problem for a system of quasilinear parabolic equations*
6) Tereshchenko Lidiia, *Application of solutions to magneto-elasticity problem in medical diagnostics*