

Program Overview

	Mon 18.03	Tue 19.03	Wed 20.03	Thu 21.03	Fri 22.03
9.00-10.00	Registration	Nesteruk	Perepelytsya	Redaelli	Prestin
10.00-10.30	<i>Coffee break</i>	Tkachenko	Zagumennyi	Passoni	Schober
10.30-11.00	<i>Opening</i>	<i>Coffee break</i>			
11.00-11.30	Pereverzyev	Protsakh	Gautieri	Dzhumabaev	Malchykov/ Chertov
11.30-12.00		Gorban	Piatnytskyi	Assanova	Ivanko
12.00-12.30	Kmit	Pleis	Zdorevskyi	Zhumatov	Nikolov
12.30-14.00	<i>Lunch</i>				
14.00-14.30	Semenov	Langemann	<i>Excursion</i>	Kriukova	Voskoboinick
14.30-15.00	Pokutnyi			Siryk	Tereshchenko
15.00-15.30	Verbytskyi	Stepaniuk		Hulianytskyi	Overko
15.30-16.00	<i>Coffee break</i>			<i>Coffee break</i>	
16.00-16.30	Pozharska	Savchuk		Pilipenko	Solodun
16.30-17.00	Veselovska	Shydlich		Vasylyk	Sokolenko
17.00-17.30	Derevianko	<i>Meeting of Coordinators</i>		Stasyuk	Dzyubenko
18.00-	<i>Welcome Dinner</i>		<i>Conference Dinner</i>		

The registration, the Opening of the Conference and all talks will be held in the Conference Hall of the Institute (room #305, 3rd floor).

The coffee-breaks will be served in the room #307 (3rd floor).

Program

Monday Morning

9.00-10.00 **Registration**

10.00 -10.30 ***Coffee break***

10.30-11.00 **Opening of the Conference**

Chair: Alexandra Antoniouk

11.00-12.00 Sergei Pereverzyev

Distance Function and Effective Dimension in a Kernel Analysis of Deep Networks

12.00-12.30 Iryna Kmit

Global Classical Solutions to Boundary Value Problems for Quasilinear Hyperbolic Systems

12.30-14.00 ***Lunch break***

Monday Afternoon

Chair: Nataliya Vasylyeva

14.00-14.30 Vasyl Semenov

A strategy for identifying informative variables: Case study - a prediction of Motor and Cognitive outcomes of Preterm Neonates from Metabolites ratios at MR Spectroscopy

14.30-15.00 Oleksandr Pokutnyi

Haar polinomials as a basis for numerical differentiation with applications in medicine

15.00-15.30 Ievgen Verbytskyi

Optimization of resonances in layered cavities

15.30-16.00 **Coffee break**

Chair: Dirk Langemann

16.00-16.30 Kateryna Pozharska

Best approximations and entropy numbers of the classes of periodic functions

16.30-17.00 Hanna Veselovska

On Stability of the Method of Prony-Type Polynomials

17.00-17.30 Nadiia Derevianko

Mathematical Description of Protein-Ligand Docking Problem

18.00 - **Welcome Dinner at café "Moments" (Khreshchatyk str., 13)**

Tuesday Morning

Chair: Emiliano Votta

9.00-10.00 Igor Nesteruk

On the Criteria for Stenosis Detection in Arteria Vertebralis (AV) and Arteria Carotis Interna (ACI) with the Use of Artery Diameters Estimated from MRI Data

10.00-10.30 Pavlo Tkachenko

Identification of T2D Patient Typologies Susceptible to Artificial Pancreas Usage

10.30-11.00 **Coffee break**

Chair: Iryna Kmit

11.00-11.30 Nataliya Protsakh

Ultraparabolic equations in modeling of biological processes

11.30-12.00 Yuliya Gorban

Equations with L^1 -right-hand sides in mechanics of fluids

12.00-12.30 Jan Pleis

Numerical Solution of Stochastic Delay Differential Equations

12.30-14.00 **Lunch break**

Tuesday Afternoon

Chair: Igor Nesteruk

14.00-15.00 Dirk Langemann

Dominance of mechanisms versus parameter sensitivity in a population model

15.00-15.30 Tetiana Stepaniuk

Hyperuniform point set on flat tori

15.30-16.00 **Coffee break**

Chair: Hanna Veselovska

16.00-16.30 Andrii Shydlich

Approximation theorems for multivariate Taylor-Abel-Poisson means

16.30-17.00 Viktor Savchuk

An exact estimate for the remainder in the Voronovskaya-type theorem for Fejer means of bounded harmonic functions

17.00- **Meeting of Coordinators**

Wednesday

Chair: Alfonso Gautieri

9.00-10.00 Sergiy Perepelytsya

Recognition of DNA Sequence Motifs by Polyamines: a Modelling Study

10.00-10.30 Yaroslav Zagumennyi

Study of flow patterns past an unsteady moving solid for biological and technical applications

10.30-11.00 **Coffee break**

Chair: Alberto Redaelli

11.00-11.30 Alfonso Gautieri

Molecular dynamics investigation of self-assembling peptides

11.30-12.00 Dmytro Piatnytskyi

Binding of Hydrogen Peroxide with DNA Phosphate Group

12.00-12.30 Oleksii Zdorevskyi

Competitive interaction of hydrogen peroxide and water molecules with specific DNA recognition sites

12.30-14.00 **Lunch break**

14.00-16.30 **Excursion to St. Sophia's Cathedral (Volodymyrs'ka str., 24)**

Thursday Morning

Chair: Sergiy Perepelytsya

9.00-10.00 Alberto Redaelli

Computational biomechanics: limits, challenges and opportunities

10.00-10.30 Giuseppe Passoni

Blood damage assessment at prosthetic aortic valves: the influence of turbulence modeling

10.30-11.00 **Coffee break**

Chair: Carsten Trunk

11.00-11.30 Dulat Dzhumabaev

A method of solving the nonlinear boundary value problems for ordinary differential equations

11.30-12.00 Anar Assanova

On the solvability of nonlocal problem for impulsive partial differential equation of higher order

12.00-12.30 Sailaubay Zhumatov

On a stability of a program manifold of control systems with variable coefficients

12.30-14.00 **Lunch break**

Thursday Afternoon

Chair: Andrey Pilipenko

14.00-14.30 Galyna Kriukova

On approximation of local solution for infinite stationary system of difference equations

14.30-15.00 Sergii Siryk

Regularized reconstruction of the memory order in semilinear subdiffusion

15.00-15.30 Andrii Hulianytskyi

On weak solvability and convergence of a finite-difference approximation for a variable-order reaction-subdiffusion equation

15.30-16.00 **Coffee break**

Chair: Sergiy Solodkyi

16.00-16.30 Andrey Pilipenko

General Regularization Scheme for Functional Linear Regression Model

16.30-17.00 Vitalii Vasylyk

Regularized collocation method in electrochemical impedance spectroscopy

17.00-17.30 Serhii Stasyuk

Estimates of efficiency for two approaches to stable numerical summation of smooth functions of two variables

18.00 - **Conference Dinner at café Ruta (Volodymyrs'ka str., 54)**

Friday Morning

Chair: Sergei Pereverzyev

9.00-10.00 *Jürgen Prestin*

Multivariate directional uncertainty products

10.00-10.30 *Kevin Schober*

Detection of directional singularities by multivariate periodic wavelets

10.30-11.00 **Coffee break**

Chair: Oleg Chertov

11.00-11.30 *Volodymyr Malchykov / Oleg Chertov*

Automatic Wavelet-Based Stenosis Detection in Internal Carotid and Vertebral Arteries from Lumen Diameters

11.30-12.00 *Kateryna Ivanko*

Action Potential Pattern Recognition in Cardiomyocytes

12.00-12.30 *Nikolay Nikolov*

Technique automated segmentation of CT bone images

12.30-14.00 **Lunch break**

Friday Afternoon

Chair: Giuseppe Passoni

14.00-14.30 Vladimir Voskoboinick

Diagnostic Criteria of Bileaflet Mechanical Heart Valve Operation

14.30-15.00 Lidiia Tereshchenko

Statistical Analysis of Jet Flow Noise across Bileaflet Heart Valve

15.00-15.30 Vitalii Overko

The influence of left ventricle's torsion motion on the reology of blood flow

15.30-16.00 **Coffee break**

Chair: Jürgen Prestin

16.00-16.30 Oleksandr Solodun

On sloshing in a conical containers

16.30-17.00 Igor Sokolenko

Approximation by Fourier sums in metrics of the spaces L_p on the classes of periodic differentiable functions

17.00-17.30 German Dzyubenko

One estimate of three-monotone spline approximation

Closing of the Conference