International conference
"Modeling and Experimental Investigation of the Complex Systems Dynamics"
15.10.2025 – 18.10.2025

HSE University – Nizhniy Novgorod
25/12, Bolshaya Pecherskaya Street

15 October, Wednesday

09.00-09.45	Registration	**Hall, 1st floor**
09.45-10.00	Opening	**305**
10.00 – 13.30	**Section "Applications of Dynamical Systems Theory"**	**305**
10.00-10.45	**Semenov V.V.** Delayed-feedback oscillators as complex spatiotemporal systems	
10.45-11.15	**Smirnov L.A.** Higher-order reduction of the Kuramoto model with time delay	
11.15-11.30	**Ryabov A.A.** Coherent resonance in an ensemble of excitable oscillators with nonlocal coupling	
11.30-11.45	Coffee-Break	
11.45-12.15	**Bolotov M.I.** Heterogeneity Induces Cyclops States in Oscillator Network with Higher-Mode Coupling	
12.15-12.45	**Barabash N.V.** Sufficient conditions for synchronization in a finite-dimensional swarmalator model on a ring	
12.45-13.15	**Kurovskaya M.K.** Analysis of the characteristics of intermittent generalized synchronization based on experimental data of unidirectionally coupled Chua oscillators with different attractor topologies	
13.15-13.30	**Syundyukova E.V.** Heteroclinic cycles and networks in the Lotka-Volterra ensemble of elements	

16 October, Thursday

09.45-10.00	Coffee-Break	
10.00 – 13.30	**Section "Analysis of experimental data"**	**305**
10.00-10.30	**Kudryavtsev D.S.** Measuring the membrane potential of human neurons derived from induced pluripotent stem cells	
10.30-11.00	**Guyo G.A.** Effects of brain rhythm coordination during sleep-wake cycles	
11.00-11.30	**Takaishvili L.V**. Radiophysical models of neural activity: an ensemble of uncoupled oscillators	
11.30-12.00	**Salmiyanov V.O.** Spectral characteristics of glaucoma dynamics based on digital optical coherence tomography images of the eye	
12.00-12.30	**Burmistrov S.E.** Classification methods based on cardiac rate variability parameters using neural networks technology and machine learning	
12.30-13.00 on-line	**Burtsev A.A.** Data storage and processing devices based on nanostructures of phase-change materials	
13.00-13.30	**Garanin F.E.** Analysis of spin wave propagation in a cross-shaped demultiplexer with magnetite on the surface	
13.30 – 14.00 on-line	**Kulikov D.A., Kulikov A.N.** "Plane" traveling waves of the convective Cahn-Hilliard equation	

17 October, Friday

09.45-10.00	Coffee-Break	
10.00 – 13.30	**Section "Complex behaviour of dynamical systems"**	**305**
10.00-10.30 on-line	**Santalov S.M.** Distributed blockchain as a dynamical system	
10.30-10.45 on-line	**Gromyko A.A.** The impact of removal on the development scenarios of protandrous populations	
10.45-11.00 on-line	**Lyutar V.P.** Complex dynamic regimes in a two-age population dynamics model with dense-dependent regulation of survival	
11.00-11.15	**Rassadin A.E.** The method of cutting off a power series and some of its applications	
11.15-11.45 on-line	**Zhusubaliev Zh.T.** Closed invariant curves in discontinuous mappings	
11.45-12.30	**Gonchenko S.V.** Universal bifurcation patterns in the unfolding of a pair of homoclinic tangencies	
12.30-13.00	**Stankevich N.V.** On chaos with additional Lyapunov zero exponents and related effects. Overview and illustrations	
13.00-13.30 on-line	**S. L.T. de Souza.** Dynamics of Quasi-Periodic Shrimp-Shaped Domains: Emergence and Metamorphosis	

18 October, Saturday

09.45-10.00	Coffee-Break	
10.00-11.30	**Poster session**	**Hall, 3rd floor**
11.30 – 13.00	**Section "Theory of dynamical systems"**	**305**
11.30-12.00	**Sarukhanyan S.K.** A cellular automaton for in silico study of biofilm growth under varying nutritional conditions	
12.00-12.30 on-line	**Shevkun I.A.** A model for the development of antibiotic resistance in evolving bacterial colonies: a reaction-diffusion approach	
12.30-12.45	**Pisarev M.A.** Application of Galilean invariance to the solution of Burgers' equation	
12.45-13.00	Closing	

Poster session

Shcherbakov P.A. Coherent-incoherent-gradient state in a system of deterministic particles with an internal degree of freedom

Bagautdinova E.R. Mixed dynamics in a circuit model of a radiophysical generator in the presence of noise

Olenin S.M. Extreme events in a small ensemble of Rulkov neurons with chemical synaptic coupling

Konnova M.A. Quasi-periodic bifurcations and chaos in coupled genetic oscillators

Khamkov M.M. Rotobreathing cyclops states in Kuramoto networks with higher-mode Coupling

Nikitin D.S. Testing the universal Feigenbaum constants in the formation of chaos as a result of a cascade of bifurcations of doublings of invariant curves

Shilov O.M. On various types of hyperbolic chaotic sets arising from perturbations of the Anosov map on a two-dimensional torus

Sukharev D.M. About a new criterion for the birth of the Lorenz attractor

Panyushev A.A. Destruction of quasi-periodic attractors in the Chialvo map