

International Conference "Shilnikov Workshop-2023"

Lobachevsky State University of Nizhny Novgorod (NNSU)

Schedule of lectures

15 December.

Venue: NNSU, Mathematical Center, building 2, room 331

13.45-14.00 **Opening**

Chairman **S. Gonchenko**

14.00 — 14.45 Belykh V.N., From 1-D endomorphism to invertible multidimensional Henon map: persistence of bifurcation structure

14.45 — 15.25 Lerman L.M., Trifonov K.N., Symplectic partially hyperbolic automorphisms of T^6

15.25 — 15.50 Morozov K.E., Morozov A.D., Parametric perturbations of two-dimensional Hamiltonian systems with nonmonotonic rotation

15.50 — 16.10 N.V. Barabash, V.N. Belykh, I.V. Belykh. Smale horseshoe chains reveal the true complexity of the double scroll attractor.

16.10 — 16.40 **Coffee-break**

Chairman **K. Morozov**

16.40 — 17.00 Emelyanov N.A., Kocharovskiy V.I.V., The problem of particle acceleration in chromospheric solar plasma. Propagation of the Alfvén wave in footpoints of magnetic loops.

17.00 – 17.20 Kuznetsov A.A., Nechaev A.A., Garasev M.A., Kocharovskiy V.I.V., Quasilinear approach to the nonlinear stage of Weibel instability in collisionless plasma.

17.20 – 17.40 Mishin A. V., Kocharovskaya E. R., Kocharovskiy V.I. V., Polariton modes of a superradiant laser with combined Fabry-Perot cavity equipped with distributed feedback.

17.40 – 18.00 Rassadin A.E., Double-sided bound of the solution of the Dirichlet problem for the Laplace equation on a circle.

18.00 – 18.20 Saraev I., On Embedding of two-dimensional Separatrices of Saddle Equilibria in Four-dimensional Manifolds

16 December.

Venue: NNSU, Mathematical Center, building 2, room 331

Chairman **L. Lerman**

10.00 — 10.40 Malkin M.I., Safonov K.A., Estimates of the chain recurrent sets for generalized Henon maps.

10.40 — 11.20 Efremova L.S., Introduction to completely geometrically integrable maps.

11.20 — 12.00 Zelik S.V., Instability and non-uniqueness for Navier-Stokes-Brinkman-Fornheimer equations

12.00 — 12.30 Davydov A., Plakhov A., Dynamics of a pendulum in a rarefied flow.

12.30 — 13.00 **Coffee-break**

Chairman A. Gonchenko

13.00 — 13.30 Stankevich N.V., Multidimensional chaos with impulse impact.

13.30 — 13.50 Zaichikov K., Kazakov A., Murillo A., Vieiro A., On genuinely discrete Lorenz attractors in 3D maps.

13.50 – 14.10 Bobrovskii A., Kazakov A., Safonov K., Shilnikov A., On nonorientable Lorenz attractors.

14.10 — 15.00 **Lunch**

Online session

Chairman M. Malkin

15.00 — 15.40 D. Turaev, Reversible homoclinic implies chaos.

15.40 — 16.00 Kulikov A.N., Kulikov D. A., Local bifurcations in the convective Cahn-Hilliard-Oono equation

16.00 — 16.40 Bernold Fiedler and Hannes Stuke, Entire PDE orbits are not complex entire: a nonlinear example.

16.40 — 17.10 **Coffee-break**

Chairman A. Kazakov

17.10 — 17.40 I.A. Korneev, I.R. Ramazanov, A.V. Slepnev, T.E. Vadivasova, V.V. Semenov, Route to chaos via a cascade of period-doubling bifurcations without parameters.

17.40 — 18.00 Lubchenko D.O., Savin A.V., Coexistence of Strange Attractors in Unidirectionally Coupled Maps.

18.00 — 18.20 Semenova N., Influence and suppression of noise in deep and echo state neural networks

18.20 – 18.40 Nikishina N., Dynamical regimes in networks of FitzHugh-Nagumo oscillators under noise influence

Closing