# Schedule of talks

The invited talks are 50 minutes long plus up to 5 minutes for questions.

The contributed talks are 25 minutes long plus up to 3-4 minutes for questions.

## 1 Monday, June 1

**Morning session - invited talks**

- 9:00-9:50, Alessandra Celletti, *On the dynamics of nearly-integrable, dissipative systems*
- 10:00-10:50, Denis Gaidashev *Dynamics of the Universal Area-Preserving Map Associated with Period Doubling*
- 11:30-12:20, Jean - Philippe Lessard, *Rigorous Computation of Smooth Branches of Periodic Solutions of Delay Equations*

**Afternoon session - contributed talks**

- 15:00-15:25, A. Barari, *Analysis of Blasius Equation for Flat-Plate Flow with Infinite Boundary Value*
- 15:30-15:55, S. Maier-Pappe, *(Re-)definition of connection matrices*
- 16:00-16:25, M. Barakat, *Experiments with the package* `conley`
- 17:00-17:25, L. Piękoś, *Modeling chemical reactions using molecular dynamics*
- 17:30-17:55, H. Koch, *Computer-assisted methods for the study of dissipative PDEs*
- 18:00-18:25, P. Zgliczyński, *Periodic orbits for Kuramoto-Sivashinski PDE*

## 2 Tuesday, June 2

**Morning session - invited talks**

- 9:00-9:50, Peter Ashwin, *Boundedness of orbits for cone exchange transformations*
- 10:00-10:50, Davide Ferrario, *Variational and topological properties of n-body minimizers*
- 11:30-12:20, Marian Gidea, *A shadowing lemma for normally hyperbolic invariant manifolds and applications to the Arnold diffusion problem*

**Afternoon session - contributed talks**

- 15:00-15:25, J. Mireles - James, *Computation of Heteroclinic Branched Manifolds by Parameterization*
- 15:30-15:55, Z. Galias, *Rigorous results on short periodic orbits for the Lorenz system*
- 16:00-16:25, P. Oprocha, *Chaos and semiconjugacy arguments*
- 17:00-17:25, M. Ethier, *Analysis of Singular Zones in Multidimensional Discrete Data*
- 17:30-17:55, M. Juda, $\mathbb{Z}^2$*-homology of p-manifolds may be computed in* $O(n)$ *time*
- 18:00-18:25, P. Dłotko, *Computational homology and cohomology theory in the electromagnetism*

20:00 Garden Party (barbecue)

# 3 Wednesday, June 3

**Morning session - contributed talks**

- 9:00-9:25, J. Galante, *Destruction of High Eccentricity Invariant Curves Through Comparison of Action*
- 9:30-9:55, A.N. Prokopenya, *On Stability of Equilibrium Solutions in the Restricted Many-Body Problems*
- 10:00-10:25, W. Tucker, *A rigorous lower bound for the stability regions of the quadratic map*
- 11:00-11:25, M. Capiński, *Finding Normally Hyperbolic Invariant Manifolds Around L1 in the RC3BP - computer assisted proof*
- 11:30-11:55, P. Roldan, *Arnold's mechanism of diffusion in the spatial circular restricted three-body problem: a semi-numerical argument.*
- 12:00-12:25, A. Gierzkiewcz, *Chaotic dynamics in isolating segments*
- 12:30-12:55, G. Kosiorowski, *Detecting periodic orbits: guiding functions and periodic segments*

14:15 Excursion

# 4 Thursday, June 4

**Morning session - invited talks**

- 9:00-9:50, Patrizio Frosini, *Recent advances in multidimensional persistent topology*
- 10:00-10:50, Luc Jaulin, *Interval methods with applications to robotics*
- 11:30-12:20, Damian Osajda, *Simplicial non-positive curvature*

**Afternoon session - contributed talks**

- 15:00-15:25, M. Kulczycki, *AASP - a new kind of average shadowing*
- 15:30-15:55, V. Vladimirov, *Compactons, solitons, cuspons and all that within the generalized convection-reaction-diffusion model*
- 16:00-16:25, N. Petrov, *Principle of Approximate Combination of Scaling Exponents*
- 17:00-17:25, P.Pilarczyk, *Finite resolution dynamics based on open covers*
- 17:30-17:55, P. Wilczyński, *Topological entropy for local processes*
- 18:00-18:25, T. Johnson, *Constructing planar vector fields with many limit cycles*

19:30 Banquet

# 5 Friday, June 5

**Morning session - invited talks**

- 9:00-9:50, Francis Sergeraert, *Algorithms for Topological Invariants*
- 10:00-10:50, Daniel Wilczak, *The $C^r$-Lohner algorithm and its applications*
- 11:30-12:20, Martin Berz, *Rigorous High-Order Enclosures of Manifolds, Homoclinic Points, and Symbolic Dynamics*

**Afternoon session - contributed talks**

- 15:00-15:25, K. Makino, *High-Order Verified Flow Integrators based on Taylor Models*
- 15:30-15:55, R. Treviño, *On Automated Computer-Assisted Proofs in Dynamical Systems*
- 16:00-16:25, P. Collins, *Computation of Reachable Sets of Hybrid Systems*
- 17:00-17:25, J. Tabor, *Hyperbolic graph-directed IFS: definition and properties*

- 17:30-17:55, T. Kułaga, *C++ application for hyperbolicity verification*
- 18:00-18:25, J-M. Strelcyn, *Isochronicity conditions for some real polynomial systems*

# 6 Saturday, June 6

**Morning session - invited talks**

- 9:00-9:50, Zin Arai, *Development and Applications of an Algorithm for Proving Structural Stability*
- 10:00-10:50, Hans Koch, *Non-Smooth Invariant Tori for Analytic Hamiltonians, and Computer-Assisted Proofs*
- 11:30-12:20, Carles Simó, *Obstructions to integrability of Hamiltonian systems using high order variational equations*