

US-Japan workshop on Dynamics and Computations

at Shonan International Center

March 8-12, 2004

Program

Mon, March 8

9:00-9:50 **Konstantin Mischaikow** (Georgia Tech., USA)

Computational homology

10:20-11:10 **Hisashi Okamoto** (Kyoto University, Japan)

Crapper's waves and the Benjamin-Ono equation

11:20-11:50 **Tomas Gedeon** (Montana State University, USA)

Convergence of map finding circuits

13:10-13:40 **Paweł Pilarczyk** (Jagiellonian University, Poland)

Cubical approach to the computation of the homology of continuous maps

13:50-14:20 **Takashi Sakajo** (Hokkaido University, Japan)

Transition of global dynamics of a vortex ring on a sphere

14:30-15:00 **Yasuaki Hiraoka** (Osaka University, Japan)

Rigorous numerics for global dynamics in gradient systems

Tue, March 9

9:00-9:50 **Luca Dieci** (Georgia Tech. (USA) , IAC-CNR, Florence (Italy))

Approximation of Lyapunov exponents and Sacker-Sell spectra

10:20-11:10 **Genta Kawahara** (Kyoto University, Japan)

Unstable periodic motion in minimal plane Couette turbulence

11:20-11:50 **Marian Mrozek** (Jagiellonian University, Poland)

The method of topological sections in rigorous numerics of dynamical systems

13:10-14:00 **Thomas Wanner** (George Mason University, USA)

Stochastic Cahn-Hilliard dynamics

16:30-17:00 **Motomasa Komuro** (Teikyo University of Science and Technology, Japan)

A mechanism of chaotic itinerancy in globally coupled maps

17:15-17:45 **Masaharu Nagayama** (Kyoto University, Japan)

A theoretical study on the motion of a camphor disk

19:30-21:30 **Poster session**

Wed, March 10

9:00-9:50 **Stefano Luzzatto** (Imperial College, UK)

Computational, geometric and probabilistic methods for the Lorenz equations

10:20-11:10 **Eiji Yanagida** (Tohoku University, Japan)

Non-convergent solutions for a supercritical semilinear parabolic equation

11:20-11:50 **Jan Bouwe van den Berg** (Vrije Universiteit, Netherlands)

Braids and their Conley index

Thu, March 11

9:00-9:50 **Ichiro Tsuda** (Hokkaido University, Japan)

On the nature of cortical transitory dynamics

10:20-11:10 **Bill Kalies** (Florida Atlantic University, USA)

Polygonal approximation of flows

11:20-11:50 **Sarah Day** (Vrije Universiteit, Netherlands)

Rigorous numerical methods based on the Conley index: a finite-dimensional example

13:10-14:00 **Oliver Junge** (University of Paderborn, Germany)

Rigorous numerical methods for infinite-dimensional discrete dynamical systems

16:30-17:00 **Yutaka Ishii** (Kyusyu University, Japan)

Holomorphic dynamics and interval arithmetic

17:15-17:45 **Zin Arai** (Kyoto University, Japan)

Rigorous computation of homoclinic tangencies

Fri, March 12

9:00-9:30 **Angela Stevens** (Max-Planck Institute for Mathematics in the Sciences, Germany)

Structure and function: Interacting cell systems

9:40-10:10 **Shunsaku Nii** (Kyusyu University, Japan)

Infinite-dimensional Evans function theorem

10:40-11:30 **Björn Sandstede** (Ohio State University, USA)

Dynamics of coherent structures in oscillatory media