

Dynamics Days US 2014 Schedule

Georgia Institute of Technology, I = Invited, C = Contributed

Thursday, January 2				
9:00 AM	4:00 PM	Registration		
9:45 AM	10:00 AM	Opening Remarks		
10:00 AM	10:40 AM	I	Annalisa Bracco , Georgia Tech	Submesoscale dynamics in the Gulf of Mexico
10:40 AM	11:00 AM	C	Daniel Borrero , Georgia Tech	Finite-amplitude thresholds for transition in Taylor-Couette flow
11:00 AM	11:20 AM	C	John Mahoney , UC Merced	Coherent structures in reacting flows
11:20 AM	12:00 PM	I	Arnd Scheel , Univ. of Minnesota	Patterns in the wake of fronts
12:00 PM	12:20 PM	C	James Hanna , Virginia Tech	Whirling skirts and metrically constrained dynamics
12:20 PM	2:00 PM	Lunch		
2:00 PM	2:20 PM	C	Jeffrey Olafsen , Baylor University	Velocity-dependent coefficient of restitution measurements in an inelastic billiard experiment
2:20 PM	3:00 PM	I	Noah Cowan , Johns Hopkins University	Mutually opposing forces during locomotion can eliminate the tradeoff between maneuverability and stability
3:00 PM	3:20 PM	C	Cédric Beaume , UC Berkeley	Localized convection in a rotating system
3:20 PM	3:40 PM	C	Enkeleida Lushi , Brown University	Hydrodynamics affects self-organization and circulation in a bacterial drop
3:40 PM	4:10 PM	Break		
4:10 PM	4:30 PM	C	Igor Belykh , Georgia State University	Multistable randomly switching dynamical networks: the odds of meeting a ghost
4:30 PM	4:50 PM	C	Maxim Arnold , University of Illinois	Lagrangian coordinates for the mass points of planar Burgers equation
4:50 PM	5:30 PM	I	Elizabeth Cherry , Rochester Institute of Technology	Delay-differential equations in models of cardiac myocytes: An alternative mechanism for alternans
5:30 PM	5:50 PM	C	William Barnett , Georgia State University	Protection against multistability in a half-center oscillator
5:50 PM	6:10 PM	C	Nianqiang Li , Georgia Tech	Chaotic semiconductor lasers for ultrafast random bit generation
Friday, January 3				
8:00 AM	11:00 AM	Registration		
8:30 AM	9:10 AM	I	Jonathan Mattingly , Duke Univ.	Stabilizing by noise
9:10 AM	9:30 AM	C	Keiji Okumura , University of Tokyo	Emergence of strange nonchaotic behavior by external noise
9:30 AM	9:50 AM	C	Luis Mier y Teran , Johns Hopkins University	Stochastic pattern transitions in large scale delay-coupled swarms
9:50 AM	10:20 AM	Break		
10:20 AM	11:00 AM	I	Joshua Socolar , Duke University	Autonomous Boolean models of regulatory networks
11:00 AM	11:20 AM	C	Yen Ting Lin , Max Planck Institute	Noise induced regime shifts in competitive population dynamics
11:20 AM	11:40 AM	C	Lawrie Virgin , Duke University	Experimental Basins of Attraction
11:40 AM	12:20 PM	I	Daniel Koditschek , University of Pennsylvania	Composition of Attractor Basins for Dexterous Robotic Tasks
12:20 PM	2:00 PM	Lunch		
2:00 PM	2:40 PM	I	Leon Glass , McGill University	Evolution and robustness in genetic networks
2:40 PM	3:00 PM	C	Siniša Slijepčević , University of Zagreb	Synchronization in dissipative systems and Aubry-Mather theory
3:00 PM	3:40 PM	I	Yohannes Shiferaw , California State University, Northridge	Calcium alternans as a phase transition in cardiac cells
3:40 PM	5:10 PM	Poster Session A		
5:10 PM	5:30 PM	C	Stefan Falkner , Emory University	Renormalization group for quantum walks

5:30 PM	5:50 PM	C	Tony Lee , ITAMP, Harvard-Smithsonian Ctr. for Astrophysics	Quantum synchronization of quantum van der Pol oscillators with trapped ions
5:50 PM	6:30 PM	I	James Meiss , Univ. of Colorado	Breakup of invariant tori in volume-preserving maps
Saturday, January 4				
8:00 AM	9:00 AM	Registration		
8:30 AM	9:10 AM	I	Peter Mucha , UNC Chapel Hill	Coevolving voter models on networks
9:10 AM	9:30 AM	C	Paul Park , Northwestern Univ.	Mixing and piecewise isometries on a hemisphere
9:30 AM	9:50 AM	C	Behnam Kia , University of Hawaii at Manoa	Noise robustness in coupled map lattice systems with applications
9:50 AM	10:20 AM	Break		
10:20 AM	11:00 AM	I	Itamar Procaccia , Weizmann Institute of Science	Analytic solution of the dynamics of quantum vortex reconnection
11:00 AM	11:20 AM	C	Jakob Löber , TU Berlin	Controlling the position of traveling waves in reaction-diffusion systems
11:20 AM	11:40 AM	C	David Rosin , Duke University	Experimental signatures of chimera states in non-locally coupled Boolean phase oscillators
11:40 AM	12:20 PM	I	Eva Kanso , University of Southern California	From fish swimming to cell motility
12:20 AM	2:00 PM	Lunch		
2:00 PM	2:20 PM	C	Lou Pecora , Naval Research Lab	Symmetries, cluster synchronization, and isolated desynchronization in complex networks
2:20 PM	2:40 PM	C	Kunio Ishida , Toshiba Corporation	Mutation of the Franck-Condon state into embryonic nuclei at the earliest stage of photoinduced nucleation
2:40 PM	3:00 PM	C	Madhura Joglekar , University of Maryland, College Park	Periodic windows within windows within windows
3:00 PM	3:40 PM	I	Joshua Weitz , Georgia Tech	The dynamics of phage-bacteria communities: from ecology to evolution (and back again)
3:40 PM	5:10 PM	Poster Session B		
5:10 PM	5:30 PM	C	Ned Corron , US Army	Simple communications waveforms are chaotic
5:30 PM	5:50 PM	C	Alberto Munuzuri , University of Santiago de Compostela	Chemo-Hydrodynamic patterning in reaction-diffusion advection systems
5:50 PM	6:30 PM	I	Cristel Chandre , Centre National de la Recherche Scientif.	Electron dynamics in atoms subjected to intense laser pulses
Sunday, January 5				
8:30 AM	9:10 AM	I	Igor Aronson , Argonne National Laboratory	Living Liquid Crystals
9:10 AM	9:30 AM	C	Andrey Shilnikov , Georgia State University	Key bifurcations of bursting polyrhythms in 3-cell central pattern generators
9:30 AM	9:50 AM	C	Bryan Daniels , University of Wisconsin, Madison	Criticality and information flow in an adaptive system
9:50 AM	10:10 AM	C	Nishant Malik , UNC Chapel Hill	Fluctuation of similarity (FLUS) to detect transitions between distinct dynamical regimes in short time series
10:10 AM	10:40 AM	Break		
10:40 AM	11:20 AM	I	Erin Rericha , Vanderbilt University	Tumor Models Constrained by Noninvasive Imaging for Cancer Forecasting
11:20 AM	11:40 AM	C	Gilou Agbaglah , University of Michigan	Growth and instability of the liquid rim in the crown splash regime
11:40 AM	12:00 PM	C	Valentina Shevtsova , University of Brussels	Instabilities of a horizontal boundary separating two miscible liquids caused by vibrations
12:00 PM	12:40 PM	I	Ilya Nemenman , Emory University	Inferring phenomenological model of regulatory dynamics from data
12:40 PM	12:50 PM	Ending Remarks		