

Saturday, May 16

8:45-9:00	Opening
9:00-10:30	Session 1: Network algorithms
9:00-9:30	David Gleich , Austin Benson and Lek-Heng Lim <i>Spacey random walks on higher-order Markov chains</i>
9:30-10:00	Ahmet Erdem Sariyuce, C. Seshadhri, Ali Pinar and Umit Catalyurek <i>Finding the Hierarchy of Dense Subgraphs using Nucleus Decompositions</i>
10:00-10:30	Kathleen E. Hamilton and Leonid P. Pryadko <i>Spectral bounds for percolation on directed and undirected graphs</i>
10:30-11:00	Break
11:00-12:30	Session 2: Network topology
11:00-11:30	Matthew Farrell, Timothy Goodrich, Nathan Lemons, Felix Reidl, Fernando Sanchez Villaamil and Blair D. Sullivan <i>Hyperbolicity, degeneracy and expansion of random intersection graphs</i>
11:30-12:00	Aric Hagberg and Lemons Nathan <i>Fast generation of inhomogeneous random graphs</i>
12:00-12:30	Ralf Banisch and Natasa Conrad <i>Cycle flow based module detection in directed recurrence networks</i>
12:30-14:00	Lunch break
14:00-15:30	Session 3: Network Dynamics
14:00-14:30	David Schoch and Ulrik Brandes <i>Stars, Neighborhood Inclusion, and Network Centrality</i>
14:30-15:00	Dane Taylor , Florian Klimm, Heather Harrington, Miroslav Kramar, Konstantin Mischaikow, Mason Porter and Peter Mucha <i>Contagions for Topological Data Analysis of Networks</i>
15:00-15:30	Francesca Arrigo and Michele Benzi <i>Updating and Datedating Techniques for Optimizing Network Communicability</i>
15:30-16:30	Poster session I
16:30-17:30	Invited talk: Danielle Basset <i>Critical Network Science Challenges Posed by Human Neuroscience</i>
17:30-19:30	Dinner break
19:30-20:30	Poster session II

Sunday, May 17

8:30-10:00	Session 4: Applications in Biology
8:30-9:00	David Burstein , Jonathan Rubin and Raghu Vaddempudi <i>The impact of the network topology on a bursting neuronal network</i>
9:00-9:30	Linda Petzold <i>Network Inference of the Mammalian Suprachiasmatic Nucleus</i>
9:30-10:00	Chad Giusti and Vladimir Itskov A no-go theorem for one-layer feedforward networks
10:00-10:30	Break
10:30-11:30	Session 5: Infrastructure networks
10:30-11:00	Anatoly Zlotnik <i>Modeling and Control of Compressible Gas Flow in a Pipeline Network</i>
11:00-11:30	Saleh Soltan and Gil Zussman <i>A Statistical Method for Synthetic Power Grid Generation based on the U.S. Western Interconnection</i>
11:30-11:45	Break
11:45-12:30	SIAM DS15 Joint Event: Adilson Motter <i>Advances on the Control of Nonlinear Network Dynamics</i> Location: Cliff Lodge Ballroom
12:30-14:00	Lunch break
14:00-15:30	Session 6: Networks and Dynamics
14:00-14:30	Samuel Heroy , Dane Taylor, Feng Shi, Peter Mucha and Greg Forest <i>Network Representations of Mechanical Percolation</i>
14:30-15:00	Ferenc Molnar , Takashi Nishikawa and Adilson Motter <i>Stability landscape of power-grid synchronization</i>
15:00-15:30	Jun Zhao , Osman Yagan and Virgil Gligor <i>Applications of Random Intersection Graphs to Secure Sensor Networks – Connectivity Results</i>
15:30-16:00	Break
16:00-18:00	Session 7: Dynamics on Networks
16:00-16:30	Michele Benzi and Isabel Chen <i>Dynamic Communicability and Epidemic Spreading on a Temporal Person-to-Person Contact Network</i>
16:30-17:00	Hsuan-Wei Lee , Nishant Malik, Feng Shi and Peter J. Mucha <i>Social Clustering in Epidemic Spread on Coevolving Networks</i>
17:00-17:30	John Lang and Hans De Sterck <i>A Hierarchy of Linear Threshold Models for the Spread of Political Revolutions on Social Networks</i>
17:30-18:00	Keith Burghardt , William Rand and Michelle Girvan <i>Competing Opinions and Stubbornness: Connecting Models to Data</i>
18:00-18:30	Business meeting
18:30	Dinner

Poster Session I

1. Newton Campbell Jr.. Computing Shortest Paths using A*, Landmarks, and Polygon Inequalities
2. Ali Khanafer, Tamer Basar and Bahman Ghahesifard. Stability and Control of Virus Spread Dynamics
3. Chjan Lim and Weituo Zhang. New Geometric Preferential Attachment Networks
4. Saray Shai and Simon Dobson. Epidemic spreading in adaptive multilayer networks
5. David Bindel and Kun Dong. Modified kernel polynomial method for estimating graph spectra
6. James Wilson, Bruce Desmarais, Skyler Cranmer, Shankar Bhamidi and Matthew Denny. Complex Stochastic Weighted Graphs: Flexible Specification and Simulation
7. Pter Koltai, Natasa Djurdjevac Conrad and Tim Conrad. Revealing structures in networks with node weights: biased random walks and metastability
8. Michael Wolf and Benjamin Miller. Effects of Graph Structure on 2D Partitioning of Scale-Free Graphs with Sampling
9. Jeremie Fish and Jie Sun. Classifying and Constructing Optimal Networks with Arbitrary Sensitivity
10. Juntao Chen and Quanyan Zhu. Interdependent Network Formation Games
11. Jennifer Kile, Gregor Kovacic and David Cai. The Role of Gap Junctions Between Excitatory Neurons in Synchronizing Cortical Dynamics
12. Oleksandr Makeyev, Quan Ding, Steven Kay and Walter Besio. Finite element method modeling to assess and compare Laplacian estimates via novel multipolar concentric ring electrodes
13. Terrence Moore. Generating a sparse cover for a fenced sensor network using Euler characteristic

Poster Session II

1. Alexis Sparko, Dane Taylor and Peter Mucha. Graphipulate: An Interactive Network Visualization Tool
2. Sanjukta Bhowmick, Vladimir Ufimtsev, Tanmoy Chakraborty, Suhansanu Kumar, Animesh Mukherjee and Niloy Ganguly. The Effect of Noise in Networks Communities
3. Miaohua Jiang. Approximating Individual Risk of Infection in a Markov Chain Epidemic Network Model with a Deterministic System
4. Karly Jacobsen and Joseph Tien. Residence time: characterizing weighted graphs with decay
5. Christopher Luna and Marco Janssen. Approximating agent-based models of cooperation on dynamic social networks as advection-diffusion processes
6. Celso B. N. Freitas, Elbert Macau and Ricardo L. Viana. Neighborhood Similarity Effects in Complex Networks of Non-Identical Oscillators
7. Kang-Yu Ni and Tsai-Ching Lu. Network Lattice: A Novel Method to Characterize Dynamical Processes on Time-Varying Graphs
8. Randy Heiland and Von Welch. Analysis of authentication events and graphs using Python
9. David Burstein, Franklin Kenter, Jeremy Kun and Feng Shi. Information Monitoring in Routing Networks
10. Kyle Wedgwood and Daniele Avitabile. Coarse grained analysis of patterned activity in a minimal neural network
11. Danica Vukadinovic Greetham and Ewan Colman. Modelling Twitter Conversations
12. Camille Poinard. Synchronization of highly connected networks by hierarchical couplings
13. Karl Schmitt, Raluca Gera, Linda Eroh, Henry Escudro and Samuel Prahlow. A Method of Approximating Cliques in Networks: K-Dense
14. Nishant Malik, David Spencer and Peter Mucha. The Structure of World Wide Network of Organizations