

CompleNet'18 Schedule

Summary of Special Events

Featured Events:

Art of Networks Reception. The Network Science Institute will host a special reception to showcase a curated installation of network visualizations—the Art of Networks III. Now in its third edition, this exhibition explores the role of aesthetics and design in data representation and effective scientific communication. Visualizations add insight and intuition to the numerical analyses in network science, as well as offer opportunities to disseminate knowledge to a broader audience. Information visualizations can help us make sense of complex phenomena by structuring data in ways that facilitate detection of patterns and trends, and ultimately, transform data into meaningful information. Projects were selected from top visualization research labs and studios around the world that are producing some of the most innovative work in this area. Appetizers will be served, accompanied by an open bar.

For questions about the art, contact (meirelles.isabel@gmail.com); for logistical inquiries, contact Kate Coronges (kcoronges@gmail.com).

March 7, 5:30 pm – 6:30 pm, Network Science Institute Lobby, 177 Huntington Ave, Boston 02115

Poster Session & Welcome Reception. During our first Poster Session, a welcome Reception will offer light dinner and drinks (cash bar). This is a time for scholarly exchange and relaxed conversation. *For questions, contact Joseph Kenny (josephkena@gmail.com) or Alex Gates (ajgates42@gmail.com).*

March 6, 6:00 pm – 8:00 pm, Fenway Center, 77 St Stephen St, Boston 02115

Special community events

Symposium for Young Network Scientist (SYNS) Pre-Event: Paper Unwind. SYNS is hosting a Paper Unwind for PhD students and young network scientists. Speakers will tell the “real story” behind how a recent paper came together: How did the idea come to be? How did the collaboration work? What were the struggles in doing this research? Was there a statistical method that proved to be really useful? How many venues was the work submitted to? These topics will fuel further discussion about developing more realistic expectations about the process of conducting and publishing interdisciplinary research. *For questions, contact (brennanjamesklein@gmail.com)*

March 4, 5:00 pm – 8:00 pm, Network Science Institute, 177 Huntington Ave, Floor 2, Boston 02115

Caucus for Women in Network Science (WiNS) Meeting. The first ever meeting to form of Caucus of Women in stimulates opportunities for education, employment, and career advancement of women (cis, trans, and genderqueer) in Network Science. By leveraging professional and social contacts among its members, the Caucus will promote the increased participation of women in academic conferences and on organizing boards and executive committees in the field. WiNS meetings will also provide a forum for discussing issues concerning women in the field, and encourage the thoughtful development of strategies and solutions. *For questions, contact (b.welles@northeastern.edu).*

March 7, 6:30 pm – 8:00 pm, Network Science Institute, 177 Huntington Ave, Floor 10, Boston 02115

Sunday, March 4th		
5:00 pm – 8:00 pm	Symposium of Young Network Scientists: Paper Unwind	Network Science Institute, 2nd Floor

Monday, March 5th		
8:30 am – 9:00 am	Registration & Breakfast	East Village, 17 th Floor
9:00 am – 9:15 am	Opening Remarks	
9:15 am – 10:00 am	KEYNOTE: David Lazer	
Social Networks I		
10:00 am – 11:00 am	Giovanna Miritello, Manuel Cebrián, César Hidalgo & Esteban Moro <i>Tie strength precedes social embeddedness</i>	East Village, 17 th Floor
	John Ternovski & Taha Yasseri <i>Social influence in music listenership: A natural experiment on 1.3 million Last.fm users</i>	
	Stefano Balietti, Brennan Klein & Christoph Riedl <i>Toward the optimal design of social network experiments</i>	
	Talayeh Aledavood, Sune Lehmann & Jari Saramäki <i>Social network differences of chronotypes identified from mobile phone data</i>	
	Marc Santolini, Abhijeet Krishna, Leo Blondel, Thomas Landrain & Albert-László Barabási <i>Predicting team success in the iGEM scientific competition</i>	
11:00 am – 11:30 am	Coffee break	
Biological Networks I		
11:30 am – 12:30 pm	Megha Padi & John Quackenbush <i>Detecting phenotype-driven transitions in regulatory network structure</i>	East Village, 17 th Floor
	Vrushali Dipak Fangal, Enrico Maiorino & Amitabh Sharma <i>MIDAS : autoMatic translation of Mechanistic rules to DynAmic logic RuleS for modeling biological networks</i>	
	Xiao Gan & Réka Albert <i>A general method to find the attractors of discrete dynamic models of biological systems</i>	
	Chuliang Song, Rudolf P. Rohr & Serguei Saavedra <i>A guideline to study the feasibility of multi-trophic and changing ecological communities</i>	
	Istvan Kovacs & Albert-László Barabási <i>Network-based prediction of biological interactions</i>	
12:30 pm – 2:00 pm	Lunch	On your own

2:00 pm – 2:30 pm	INVITED TALK: Yelena Mejova	East Village, 17 th Floor
2:30 pm – 3:00 pm	INVITED TALK: Kayla de la Haye	
Network Theory I		
3:00 pm – 4:00 pm	Chia-Hung Yang & Sean P. Cornelius <i>Emergence of Laplace-distributed growth rates in complex systems</i>	East Village, 17 th Floor
	Daniel Larremore, Caterina De Bacco & Cris Moore <i>A physical model for efficient ranking in networks</i>	
	Pim van der Hoorn, Dima Krioukov & Gabor Lippner <i>Ensemble of sparse graphs with scale-free degree distribution that maximizes Gibbs entropy</i>	
	Muhammed Abdullah Canbaz, Khalid Bakhshaliyev & Mehmet Gunes <i>Router level topologies of autonomous systems</i>	
	Maksim Kitsak, Alexander A. Ganin, Daniel Eisenberg, Pavel L. Krapivsky, Dmitri Krioukov, David L. Alderson & Igor Linkov <i>Stability of a giant connected component in a complex network</i>	
4:00 pm – 4:30 pm	Coffee break	
Control & Dynamics I		
4:30 pm – 5:30 pm	Kanchan Mopari, Alessio Cardillo, Paolo De Los Rios, Alex Arenas & Jesus Gomez-Gardeñes <i>To vaccinate or not to vaccinate? A coevolutionary dilemma</i>	East Village, 17 th Floor
	Sebastian Ruf, Magnus Egerstedt & Jeff Shamma <i>Herdability of complex networks</i>	
	Juan Carlos Rocha Gordo & Jessica Gephart <i>How far does a shock event spread on a network? Detecting causality on the salmon trade network</i>	
	Bogang Jun, Aamena Alshamsi, Jian Gao & César Hidalgo <i>Relatedness, knowledge diffusion, and the evolution of bilateral trade</i>	
	Joshua Becker, Devon Brackbill & Damon Centola <i>Network dynamics of social influence in the wisdom of crowds</i>	

Tuesday, March 6th		
8:30 am – 9:00 am	Registration & Breakfast	East Village, 17 th Floor
9:00 am – 9:45 am	KEYNOTE: Olaf Sporns	
Brain Networks		
9:45 am – 10:45 am	Emma Towlson, Gang Yan, Petra Vertes, Yee Lian Chew, Denise Walker, William Schafer & Albert-László Barabási <i>Control principles in the Caenorhabditis elegans nervous system</i>	East Village, 17 th Floor
	Ali Faqeeh, Saeed Osat, Filippo Radicchi & James Gleeson <i>Structurally induced noncritical power-laws in neural avalanches</i>	

	Ari Kahn, Elisabeth Karuza, Jean Vettel & Danielle Bassett <i>Network constraints on learnability of probabilistic motor sequences</i>	
	Nima Dehmamy, Soodabeh Milanlouei & Albert-László Barabási <i>Structural phase transition in physical networks embedded in 3D</i>	
	Farnaz Zamani Esfahlani & Hiroki Sayama <i>A percolation-based thresholding method with applications in functional connectivity analysis</i>	
10:45 am – 11:15 am	Coffee break	
Network Applications I		
11:15 am – 12:30 pm	Albert Solé-Ribalta, Sergio Gómez & Alex Arenas <i>Decongestion of urban areas with hotspot-pricing</i>	East Village, 17 th Floor
	Tarik Roukny <i>Compressing networked markets</i>	
	Luiz G. A. Alves <i>Statistical physics of crime: From scaling laws to complex networks</i>	
	Stefano Balietti & Christoph Riedl <i>The market structure for innovation</i>	
	Ieke De Vries & Brennan Klein <i>Firm responses to illicit market dynamics</i>	
	Luca Pappalardo, Paolo Cintia, Dino Pedreschi, Fosca Giannotti & Albert-László Barabási <i>Understanding human perception of performance</i>	
12:30 pm – 2:00 pm	Lunch	On your own
2:00 pm – 2:30 pm	INVITED TALK: J.-P. Onnela	East Village, 17 th Floor
2:30 pm – 3:00 pm	INVITED TALK: Sam Scarpino	
Epidemics & Spreading		
3:00 pm – 4:00 pm	Dina Mistry, Ana Pastore Y Piontti, Maria Litvinova, Marcelo Ferreira Da Costa Gomes, Syed Haque, Kungpeng Mu, Xinyue Xiong, Quanhui Lui, Laura Fumanelli, Stefano Merler & Alessandro Vespignani <i>A data-driven computational approach to infer social contact networks in the context of infectious disease modeling</i>	East Village, 17 th Floor
	Joan T Matamalas, Alex Arenas & Sergio Gómez <i>Epidemic extinction driven by link conductance</i>	
	Flavio Iannelli, Manuel Sebastian Mariani & Igor M Sokolov <i>Network centrality based on reaction-diffusion dynamics reveals influential spreaders</i>	
	Michele Coscia <i>Popularity spikes hurt the future implementations of protomemes</i>	
	Vittoria Colizza <i>Demographic and biological drivers of rabies persistence in a large dog population in Africa</i>	

4:00 pm – 4:30 pm	Coffee break	East Village, 17 th Floor
4:30 pm – 5:15 pm	Poster Slam A	
5:15 pm – 6:00 pm	Free time	
6:00 pm – 8:00 pm	Poster Session A & Cocktail Reception	Fenway Center

Wednesday, March 7th		
8:30 am – 9:00 am	Registration & Breakfast	East Village, 17 th floor
9:15 am – 10:00 am	KEYNOTE: Fernanda Viégas & Martin Wattenberg	
Network Applications II		
10:00 am – 11:15 am	Jesus Gomez-Gardeñes <i>Characterization of hunter-gatherer networks and implications for cumulative culture</i>	East Village, 17 th floor
	Philipp Lorenz & Philipp Hoewel <i>Modeling the rise and fall of online topics</i>	
	Takashi Isogai <i>Dynamic correlation network analysis of financial asset returns with network clustering</i>	
	Lorenzo Gabrielli, Daniele Fadda, Giulio Rossetti, Mirco Nanni, Leonardo Piccini, Fosca Giannotti, Dino Pedreschi & Patrizia Lattarulo <i>Discovering mobility functional Areas: A mobility data analysis approach</i>	
	Patrick Gildersleve & Taha Yasseri <i>Inspiration, captivation, and misdirection: Emergent properties in networks of online navigation</i>	
	Alec Kirkley, Hugo Barbosa-Filho, Marc Barthelemy & Gourab Ghoshal <i>Structural invariants in street networks: modeling and practical implications</i>	
11:15 am – 11:45 am	Coffee break	East Village, 17 th floor
11:45 am – 12:30 pm	Poster Slam B	
12:30 pm – 2:30 pm	Lunch (provided) & Poster Session B	Curry Center, Ballroom
2:30 pm – 3:00 pm	INVITED TALK: James Evans	East Village, 17 th floor

3:00 pm – 3:30 pm	INVITED TALK: Aaron Clauset	
3:30 pm – 3:45 pm	Coffee Break	
Social Networks II		
3:45 pm – 5:00 pm	Felipe Montes, Roberto C. Jimenez & J.-P. Onnela <i>Connected but segregated: Social networks in rural villages</i>	East Village, 17 th floor
	Balazs Vedres and Ancsa Hannak <i>Networks, gender, and success in video games development</i>	
	Alfredo J Morales, Leila Hedayatifar & Yaneer Bar-Yam <i>US social fragmentation</i>	
	David Lazer, Jason Radford & Briony Swire-Thompson <i>Deliberation in groups and networks: overcoming the hidden profile problem</i>	
	Bence Sagvari & Balazs Lengyel <i>Social networks and economic disparities in cities</i>	
	Sanjay Guruprasad & César Hidalgo <i>The Influence of Collaboration Networks on Programming Language Acquisition</i>	
5:30 pm – 6:30 pm	Art of Networks Reception	Network Science Institute, lobby
6:30 pm – 8:00 pm	Caucus for Women in Network Science (WiNS)	Network Science Institute, 10 th Floor

Thursday, March 8th		
8:30 am – 9:00 am	Registration & Breakfast	
9:00 am – 9:45 am	KEYNOTE: Jon Kleinberg	East Village, 17 ^h floor
Community Detection		
9:45 am – 10:45 am	Amir Ghasemian, Homa Hosseinmardi & Aaron Clauset <i>Evaluating and comparing overfit in models of network community structure</i>	East Village, 17 th floor
	Michael Schaub & Leto Peel <i>Efficient detection of hierarchical block structures in networks</i>	
	Philip Chodrow & Peter Mucha <i>Dynamics of community formation in an adaptive voter model</i>	
	Tsuyoshi Murata & Naveed Afzal <i>Modularity optimization as a training criterion for graph neural networks</i>	

	Javier Borge-Holthoefer, Albert Solé-Ribalta, Manuel Sebastian Mariani & Claudio Juan Tessone <i>Revealing in-block nestedness in social and ecological networks</i>	
10:45 am – 11:15 am	Coffee break	
Control & Dynamics II		
11:15 am – 12:15 pm	Yang Yang, Takashi Nishikawa & Adilson Motter <i>Vulnerability and co-susceptibility determine large network cascades</i>	East Village, 17 th floor
	Jaewoo Kim, Kyu-Min Lee & Kwang-Il Goh <i>Threshold cascade dynamics on signed networks</i>	
	Giovanni Francesco Massari, Ilaria Giannoccaro & Giuseppe Carbone <i>The effect of contrarians on the decision making performance of groups</i>	
	Christopher Lynn, Lia Papadopoulos, Daniel Lee & Danielle Bassett <i>Collective human activity emerges from simple pairwise interactions</i>	
	Alfredo Morales, Vaibhav Vavilala, Rosa M. Benito & Yaneer Bar-Yam <i>Global Patterns of Synchronization in Human Communications</i>	
12:15 pm – 2:00 pm	Lunch	On your own
Network Theory II		
2:00 pm – 3:15 pm	Philipp Hoevel, Andreas Koher & Hartmut Lentz <i>Estimating epidemic thresholds in temporal networks</i>	East Village, 17 th floor
	Andrew Mellor <i>The temporal event graph</i>	
	Dane Taylor, Rajmonda Caceres & Peter Mucha <i>Theoretical foundations for temporal network preprocessing and community detection</i>	
	Ronald Robertson, David Lazer & Christo Wilson <i>Modeling suggestion networks for algorithm auditing</i>	
	Timothy Larock, Timothy Sakharov, Sahely Bhadra & Tina Eliassi-Rad <i>Learning to complete partially observed networks</i>	
	Xindi Wang, Onur Varol, Tina Eliassi-Rad & Albert-László Barabási <i>Learning to place objects: A network-based approach</i>	
3:15 pm – 3:45 pm	Coffee break	
3:45 pm – 4:15 pm	INVITED TALK: Milena Tsvetkova	East Village, 17 th floor
4:15 pm – 4:45 pm	INVITED TALK: Jessika Trancik	
4:45 pm – 5:00 pm	Closing Remarks & Poster Awards	

Conference Locations (Boston 02115)

- * **Main Conference:** East Village, 17th Floor, 4 Speare Commons
- * **Art of Networks Reception:** Network Science Institute, 177 Huntington Ave, Lobby
- * **Poster Session I:** Fenway Center, 77 St Stephen St
- * **Poster Session II:** Curry Student Center Ballroom, 346 Huntington Ave
- * **Caucus for Women in Network Science:** Network Science Institute, 177 Huntington Ave, 10th FL
- * **Society for Young Network Scientists:** Network Science Institute, 177 Huntington Ave, 10th FL