

## DAILY SCHEDULE - COMPLENET 2019 (Last update: 8 Feb)

MONDAY, MARCH 18<sup>th</sup>

8:30 - 9:00	Registration
9:00 - 9:30	Opening Remarks
9:30 - 10:15	INVITED TALK: Mason Porter, <i>Networks, Politics, and Voting</i>
10:15 - 11:00	<u>Joseph D. O'Brien</u> & James P. Gleeson: <i>The Effects of Memory and Innovation on Random Copying Mechanisms</i>
	Piero Mazzarisi, Paolo Barucca, <u>Fabrizio Lillo</u> & Daniele Tantari: <i>A dynamic network model with persistent links and node-specific latent variables, with an application to the interbank market</i>
	<u>Marcos Oliveira</u> , Bruno Requião da Cunha, Jean Fernando Passold & Ronaldo Menezes: <i>Dynamics of child sexual abuse in the dark web</i>
11:00 - 11:30	Coffee break
11:30 - 12:15	INVITED TALK: Manlio De Domenico, <i>Collective behavior in socio-technical systems during exceptional events</i>
12:15 - 12:45	Michele Starnini, <u>Elisenda Ortiz</u> & M. Ángeles Serrano: <i>Geometric randomization of complex networks with prescribed degree sequence</i>
	<u>Ivan Voitalov</u> , Pim van der Hoorn, Remco van der Hofstad & Dmitri Krioukov: <i>Scale-free Networks Well Done</i>
12:45 - 13:15	Ignite Talks
13:15 - 15:15	<u>Gorka Zamora-López</u> & Romain Brasselet: <i>Interpreting and comparing the length of complex networks</i>
	Pablo Piedrahita, <u>Javier Borge-Holthoefer</u> , Yamir Moreno & Sandra González-Bailón: <i>The Contagion Effects of Repeated Activation in Social Networks</i>
	<u>Diego Fregolente Mendes de Oliveira</u> & Kevin S. Chan: <i>Sorting information by quality as a mechanism to hinder the system's discriminative power</i>
	<u>Samuel Heroy</u> , Dane Taylor, Feng Shi, Greg Forest & Peter Mucha: <i>Rigidity Percolation in Disordered Fiber Systems</i>
	<u>Alberto Antonioni</u> & Alessio Cardillo: <i>Coevolution of synchronization and cooperation in costly networked interactions</i>
	Viviana Viña Cervantes, Timoteo Carletti, Michele Coscia, <u>Floriana Gargiulo</u> & Renaud Lambiotte: <i>Political fingerprints in the world trade market.</i>
13:15 - 15:15	Lunch on your own
15:15 - 16:00	INVITED TALK: Philipp Hövel, <i>Understanding trends and popularity in online topics</i>
16:00 - 17:00	Jeehye Choi & <u>Kwang-Il Goh</u> : <i>Majority-vote dynamics on multiplex networks</i>
	<u>Rita Maria del Rio Chanona</u> , Yevgeniya Korniyenko, Manasa Patnam & Mason Porter: <i>The Multiplex Nature of Global Financial Contagion</i>
	Ignacio Morer, Alessio Cardillo, Albert Díaz-Guilera, Luce Prignano and <u>Sergi Lozano</u> : <i>Comparing spatial networks: A 'one size fits all' efficiency-driven approach</i>
	Laura C Carpi, Tiago A. Schieber, Panos Pardalos, <u>Cristina Masoller</u> , Gemma Marfany, Albert Díaz-Guilera & Martin Ravetti: <i>Quantifying diversity in multiplex networks</i>

17:00 - 17:30	Coffee Break
17.30 - 18:30	<u>Samin Aref</u> : <i>Applications of the frustration index in signed networks</i>
	<u>Estefanía Estévez</u> , Sara Teller, Clara Granell, Jordi Soriano & Alex Arenas: Resilience Mechanisms in cultured neuronal networks.
	<u>Adriaan Ludl</u> , Estefanía Estévez & Jordi Soriano: Inference of Directed Networks from Neuronal Activity Patterns
	<u>Matthieu Gilson</u> , Nikos Kouvaris, Gustavo Deco & Gorka Zamora-López: <i>Analysis of complex network dynamics: A new framework based on communicability and flow</i>

**TUESDAY, MARCH 19<sup>th</sup>**

9:00 - 9:45	INVITED TALK: Susanna Manrubia, <i>On the networked architecture of genotype spaces and the dynamics of molecular evolution</i>
9:45 - 11:00	<u>Joaquin Goñi</u> : Personalized brain connectomics: from maximizing subjects identifiability to disentangling heritability and environment traits.
	<u>Elohim Reis</u> , Mark Viney & Naoki Masuda: <i>Immune state networks of wild and laboratory mice</i>
	<u>Vrushali Dipak Fangal</u> , Seung Han Baek & Amitabh Sharma: <i>Predicting Novel Drug Targets and Resistance Mechanisms in Cancer by Discrete Dynamic Network Modeling</i>
	<u>Giuseppe Mangioni</u> , Giuseppe Jurman & Manlio De Domenico: <i>Multilayer flows in molecular networks identify biological modules in the human proteome</i>
	<u>Francesca Vianello</u> , Mauricio Barahona & Sophia Yaliraki: <i>From Atomistic Descriptions to Protein-Protein Interaction Networks</i>
11:00 - 11:30	Coffee Break
11:30 - 12:15	INVITED TALK: Antoine Allard, <i>Three tales about percolation on real complex networks</i>
12:15 - 12:45	<u>Duan-Shin Lee</u> , Cheng-Shang Chang & Hung-Chih Li: <i>A Generalized Configuration Model with Degree Correlations</i>
	<u>Nahid Azimi-Tafreshi</u> , Saeed Osat and Sergey Dorogovtsev: <i>Generalization of Core Percolation on Complex Networks</i>
12:45 - 13:15	Ignite Talks
	<u>Timoteo Carletti</u> & Malbor Asllani: <i>Patterns of Non-Normality in Networked Systems</i> <u>George Bassel</u> : <i>Network-based analysis of multicellular complexity and evolution</i> <u>Robert Krause</u> & Alberto Caimo: <i>Missing Data Augmentation for Bayesian Multiplex ERGMs</i> <u>Ignacio Tamarit</u> , María Pereda, Jose Cuesta, Robin Dunbar & Anxo Sánchez: <i>Dunbar's numbers, negative relationships, and social structure: Models and experiments</i> Alejandro Martinez, <u>Jordi Nin</u> , Elena Tomás & Alberto Rubio : <i>Graph Convolutional Networks on Customer/Supplier Graph Data to Improve Default Prediction</i> <u>Eugenio Valdano</u> & Alex Arenas: <i>Exact rank-reduction of network models</i>
13:15 - 15:15	Lunch on your own

15:15 - 16:00	INVITED TALK: Eugene Stanley, TBA
16:00 - 17:15	<u>Lucas Lacasa</u> : <i>Can we unfold a multiplex network if only an aggregated projection is observable?</i>
	Jean-Gabriel Young, <u>Laurent Hébert-Dufresne</u> , Edward Laurence, Charles Murphy, Guillaume St-Onge and Patrick Desrosiers: <i>Fundamental limitations of past states inference in complex networks</i>
	<u>Sergio Cobo-López</u> , Antonia Godoy, Jordi Duch, Roger Guimera & Marta Sales-Pardo: <i>Statistical inference in bipartite networks</i>
	Marc Tarrés-Deulofeu, Antonia Godoy-Lorite, <u>Marta Sales-Pardo</u> & Roger Guimerà: <i>Tensorial and bipartite block models for link prediction in layered networks and temporal networks</i>
	Till Hoffmann, <u>Leto Peel</u> , Renaud Lambiotte & Nick Jones: <i>Community detection in networks with unobserved edges</i>
17:15 - 19:00	Poster Session & Beers

WEDNESDAY, MARCH 20<sup>th</sup>

9:00 - 9:45	INVITED TALK: James Gleeson, <i>Mathematical modeling of social spreading phenomena</i>
9:45 - 11:00	<u>Ivan Bonamassa</u> , Bnaya Gross & Shlomo Havlin: <i>Towards a physical theory of interdependent interactions</i>
	<u>Per Sebastian Skardal</u> : <i>Nonlinear Random Walks on Complex Networks</i>
	<u>Hong-Lan Botterman</u> & Robin Lamarche-Perrin: <i>Combining path-constrained random walks to recover link weights in heterogeneous information networks</i>
	Lucia Valentina Gambuzza & <u>Mattia Frasca</u> : <i>Techniques for the control of synchronization of groups of nodes in complex networks</i>
	S. Yoon, A. Goltsev & <u>José F. Mendes</u> : <i>Structural stability of interaction networks against negative external fields</i>
11:00 - 11:30	Coffee break
11:30 - 12:15	INVITED TALK: Sonia Kéfi, <i>The dynamics and resilience of ecological networks</i>
12:15 - 12:45	Albert Solé-Ribalta, Carlo Ferrari, Claudio Juan Tessone & <u>Javier Borge-Holthoefer</u> : <i>High-order nestedness and the structure of site-species-species hypernetworks</i>
	Massimo Stella, <u>Sanja Selakovic</u> , Alberto Antonioni & Cecilia Andreatzi: <i>Ecological multiplex interactions determine the role of species for parasite spread amplification</i>
12:45 - 13:15	Ignite Talks

	<p><u>Juan Fernández-Gracia</u>, Jorge Rodríguez, Lauren Peel, Konstantin Klemm, Mark Meekan &amp; Victor M. Eguiluz: <i>Inferring social relations from presence data. Manta Rays case study</i></p> <p><u>William Grant</u> &amp; Sebastian Ahnert: <i>Systematic identification of protein structure domains using Infomap and GLOSIM</i></p> <p><u>Sergi Valverde</u>: <i>The architecture of mutualistic networks as an evolutionary spandrel</i></p> <p><u>Toshihiro Tanizawa</u>: <i>Constructing directed networks from multivariate time series using linear modeling technique</i></p> <p><u>Benjamin Maier</u>: <i>Tacoma — A C++/Python-package for temporal network analysis</i></p> <p><u>Albert Solé-Ribalta</u>, Sergio Gómez &amp; Alex Arenas: <i>Decongestion of urban areas with hotspot-pricing</i></p>
13:15 - 15:15	Lunch on your own
15:15 - 16:00	INVITED TALK: Raissa D'Souza: TBA
16:00 - 17:00	<u>Jan Nagler</u> & Frank Stollmeier: <i>Unfair and Anomalous Evolutionary Dynamics from Fluctuating Payoffs</i>
	<u>Giacomo Rapisardi</u> , Giulio Cimini, Guido Caldarelli & Alex Arenas: <i>Multiple structural transition in interacting networks</i>
	<u>Andrea Santoro</u> & Vincenzo Nicosia: <i>Information-theoretic complexity of multiplex networks</i>
	<u>Jacobo Aguirre</u> , Javier M. Buldú & Jaime Irazo: <i>Competition among networks highlights the power of the weak</i>
17:00 - 21:30	Social Event

**THURSDAY, MARCH 21<sup>st</sup>**

9:00 - 9:45	INVITED TALK: SPRINGER COMPLEXITY SEMINAR. Chiara Poletto, <i>Multi-pathogen co-circulation on networks: capturing the complexity of pathogen ecology</i>
9:45 - 11:00	<u>David Soriano-Paños</u> , Jesús Gómez-Gardeñes, Laura Lotero & Alex Arenas: <i>Non-trivial phenomena in the spread of diseases across real metapopulations</i>
	<u>Benjamin Maier</u> & Dirk Brockmann: <i>Flockworks: Revealing individual contact activity from face-to-face contact data using a new class of dynamic network models</i>
	<u>Frank Schlosser</u> & Dirk Brockmann: <i>Inference of Disease Outbreak Origins using Human Mobility Data</i>
	<u>Iacopo Iacopini</u> , Giovanni Petri, Vito Latora & Alain Barrat: <i>Simplicial models of social contagion</i>
	Olga Baranov, <u>Clara Jongen</u> & Dirk Brockmann: <i>Context specific role of airports in global disease dynamics</i>
11:00 - 11:30	Coffee break
11:30 - 12:15	INVITED TALK: Roger Guimerà, <i>Bayesian network inference for prediction in network and non-network systems: From human behavior to machine scientists</i>

12:15 - 12:45	<p><u>Giulia Bertagnolli</u>, Claudio Agostinelli &amp; Manlio De Domenico: <i>Statistical Data Depths for Complex Networks</i></p> <p>Irene Sendiña-Nadal &amp; <u>Christophe Letellier</u>: <i>Assessing observability of complex networks using symbolic observability coefficients</i></p>
12:45 - 13:15	Ignite Talks
	<p><u>Nahuel Almeida</u>, Juan Ignacio Perotti &amp; Orlando Vito Billoni: <i>Understanding complex networks fragility through centrality-based attacks</i></p> <p><u>Mattia Mazzoli</u>, Riccardo Gallotti, Filippo Privitera, Pere Colet &amp; Jose J. Ramasco: <i>A network approach to airports mobility and epidemic spreading of airborne viruses</i></p> <p><u>Aleix Bassolas</u>, Jose J. Ramasco, Oliva Garcia Cantu Ros and Ricardo Herranz: <i>Mobile phone records to feed activity-based travel demand models: MATSim for studying a cordon toll policy in Barcelona</i></p> <p><u>Luciano Grácio</u> &amp; Pedro Ribeiro: <i>An efficient approach for counting occurring induced subgraphs</i></p> <p>Harith Hamoodat, Eraldo Ribeiro &amp; <u>Ronaldo Menezes</u>: <i>Social Media Vocabulary Reveals Education Attainment of Populations</i></p> <p><u>Oriol Artime</u> &amp; Manlio De Domenico: <i>Cascade-based attacks on multilayer networks</i></p>
13:15 - 15:15	Lunch on your own
15:15 - 16:00	INVITED TALK: Marta González, <i>Cases of study in Computational Urban Science</i>
16:00 - 17:00	<p>Lluc Font, Ignacio Morer, <u>Albert Díaz-Guilera</u> &amp; Luce Prignano: <i>Infrastructures connecting people. A mechanistic model for terrestrial transportation networks.</i></p> <p><u>Jose J. Ramasco</u>: <i>Scaling in the recovery of cities from special events</i></p> <p><u>Fabian Ying</u>, Mariano Beguerisse Díaz, Sam Howison &amp; Mason Porter: <i>Customer mobility and congestion in supermarkets</i></p> <p><u>Emanuele Cozzo</u>, Luce Prignano, Albert Díaz-Guilera &amp; Antonio Calleja-López: <i>Collective identities in Twitter: a graph-theoretical approach</i></p>
17:00 - 17:30	Coffee break
17:30 - 18:30	<p>Riccardo Silini, <u>Alessio Cardillo</u> &amp; Mario Chavez: <i>Unveiling zebrafish's hindbrain activity during active locomotion: a network perspective</i></p> <p><u>Ali Faqeeh</u>, Saeed Osat &amp; Filippo Radicchi: <i>Characterizing the analogy between hyperbolic embedding and community structure of complex networks</i></p> <p><u>Malbor Asllani</u>, Timoteo Carletti &amp; Renaud Lambiotte: <i>The structure and dynamics of non-normal networks</i></p> <p>Pablo Amil, Fabian Reyes-Manzano, Lev Guzman-Vargas, Irene Sendina-Nadal &amp; <u>Cristina Masoller</u>: <i>Retinal fundus image analysis and classification using complex networks tools</i></p>
18:30 - 19:15	Closing remarks

**POSTER LIST (Posters from the Exceptional Call for Posters will be added soon).**

- Panteleimon Loupos & Alexandros Nathan: *The Structure and Evolution of an Offline Peer-to-Peer Financial Network*
- Ismo Koponen: *Modelling students' thematically associated knowledge: Networked knowledge from affinity statistics*
- Kimitaka Asatani, Fujio Toriumi, Junichiro Mori, Ochi Masanao & Ichiro Sakata: *Interpersonal relationship in large-scale mobility data*
- María Palazzi, Javier Borge-Holthoefer, Claudio Tessone & Albert Solé-Ribalta: *Coexisting Mesoscale Patterns in Complex Networks*
- Erica Metheney: *Improved Efficiency of Generating Graphic Degree Sequences Using Heavy-tailed Distributions*
- Pedro Cisneros-Velarde, Diego F. M. Oliveira & Kevin S. Chan: *Spread and control of misinformation with heterogeneous agents*
- Huajiao Li & Haizhong An: *Structure of Global Energy Investment, Competition and Cooperation: Based on a Heterogeneous Complex Networks Model*
- Nora S. Martin & Sebastian E. Ahnert: *A Coarse-Grained Network Description of Protein Tertiary Structure*
- Qian Liu & Huajiao Li: *A Motif-Based Analysis to Reveal Local Implied Information in Cross-shareholding Networks*
- Yang Li, Huajiao Li, Nairong Liu & Xueyong Liu: *Important institutions of interinstitutional scientific collaboration networks in materials science*
- Quang Nguyen & Ngoc Kim Khanh Nguyen: *Dynamic topology and allometric scaling behavior on the Vietnamese stock market*
- Salva Duran-Nebreda & George Bassel: *Exploring tissue architectural complexity in Arabidopsis thaliana*
- Josep Sardanyés and Tomás Alarcón: *Noise-induced bistability in the fate of cancer phenotypic quasispecies: a bit-strings approach*
- Hiroki Sayama & Junichi Yamanoi: *Diversity of Cultural Tolerance Helps Maintain Culturally Diverse Yet Structurally Connected Society*
- Luce Prignano, Ignacio Morer & Manuela Ritondale: *Chance, biases, and data incompleteness. Uncovering Patterns in Mediterranean Connectivity in Roman Time.*
- Somayeh Sadat Hashemi Kamangar, Fatemeh Bakouie & Shahriar Gharibzadeh: *Personalized Educational Package for L2 Learners Using Their L1 Mental Lexical Network*
- Chakresh Kumar Singh, Ravi Vishwakarma & Shivakumar Jolad: *Exploring the role and nature of interactions between Institutes in a Local Affiliation Network*
- Audrey Wilmet & Robin Lamarche-Perrin : *Multidimensional Outlier Detection in Interaction Data: Application to Political Communication on Twitter*
- Lale Madahali, Lotfollah Najjar & Margeret Hall: *Exploratory factor analysis of graphical features for link prediction in social networks*
- Irene Sendiña-Nadal, Ricardo Sevilla-Escoboza, Victor Vera-Avila, Javier Buldú, Sylvain Mangiarotti & Christophe Letellier: *Observability of an experimental network of electronic circuits*
- Gergely Szlobodnyik: *Reachability analysis of discrete state epidemiological models*
- Zakariya Ghalmane, Mohammed El Hassouni, Chantal Cherifi & Hocine Cherifi: *Ranking the Nodes in Modular Networks*

- Marissa Sumathipala, Marc Santolini & Amitabh Sharma: *Network Medicine Framework for miRNA-based Disease Subtyping*
- Oleg Maslennikov & Vladimir Nekorkin: *Hierarchical transitions in scale-free networks of coupled Stuart-Landau oscillators: Effects of structure-dynamics correlation*
- Mariana Macedo, Lydia Taw, Nishant Gurrupadi, Marcos Oliveira, Diego Pinheiro, Carmelo Bastos-Filho & Ronaldo Menezes: *Swarm Intelligence: the Metaphor Explained by Network Science*
- Barbara Benigni & Manlio De Domenico: *Exploring the interplay between brain and mind in Alzheimer's disease*
- Rodrigo Leal-Cervantes & Renaud Lambiotte: *Revisiting the equivalence between modularity maximization and maximum likelihood methods for community detection*
- Josefine Bohr Brask & Jonatan Bohr Brask: *Evolution of cooperation in networks: degree assortment and initial positions of cooperators*
- Ivan Kryven: *Distribution of cluster sizes in the configuration model with coloured edges*
- Adriana Reyna Lara, David Soriano Paños & Jesús Gómez-Gardeñes: *Explosive behavior in nonlinear random walks on complex networks*
- Francisco Bauzá, David Íñiguez, Alfonso Tarancón & Jesús Gómez-Gardeñes: *Comparison between communities and departamental structure in academic collaboration networks*
- Sergio Faci-Lázaro, Jordi Soriano & Jesús Gómez-Gardeñes: *Synchronization in Spatial Neuronal Networks*

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