

Networks: A framework for cross disciplinary applications

Zaragoza, Spain
February 3-6, 2010

Program

Wednesday, February 3rd.

08:30-09:15/ Registration

09:15-09:45/ Opening Ceremony

09:45-10:45/ A. Vespignani
Predicting the behavior of techno-social systems.

10:45-11:05/ S. Gómez
Probabilistic framework for epidemic spreading in complex network.

11:05-11:25/ F. Radicchi
Explosive percolation in networks.

11:25-11:55/ Coffee Break

11:55-12:40/ M. Boguña
The metric structure of the Internet.

12:40-13:00/ R. Guimera
Missing interactions, bogus interactions, and the reconstruction of complex networks.

13:00-13:20/ J. Gleeson
The unreasonable effectiveness of tree-based theory for complex networks.

13:20-15:30/ Lunch

15:30-16:15/ J.-P. Onnela
Classifying networks using mesoscopic response functions.

16:15-16:35/ G. Baxter
Bootstrap percolation on complex networks.

16:35-16:55/ A. Baronchelli
Glass transition and random walks on complex energy landscapes.

16:55-17:25/ Coffee Break

17:25-17:45/ A. Lancichinetti
Community detection algorithms: A comparative analysis.

17:45- 18:05/ A. P. Masucci
Information flow networks and the meaning of meaning.

18:05-18:25/ A. Robledo
Generalized thermodynamics underlying the laws of Zipf and Benford.

18:25-18:45/ Bernat Corominas Murtra
Randomization of Directed Acyclic Networks.

19:00/ BIFI General Assembly (Only for BIFI Members)

Thursday, February 4rd.

09:15-10:00/ J. García-Ojalvo
Discriminating between functionally analogous genetic circuits.

10:00-10:20/ J. M. Buldu
Topology and evolution of RNA neutral networks.

10:20-10:40/ C. Rodríguez-Caso
When metabolism meets topology.

10:40-11:00/ J. A. Carrodeguas
Presenilin 1- associated protein: a link between mitochondria-mediated cell death and Alzheimer's disease?

11:00-11:30/ Coffee Break

11:30-12:15/ D. James
Animal social network.

12:15-12:35/ D. Vilone
The peace mediators effect.

12:55-12:55/ J. Sienkiewicz
Symmetry breaking in the model of isolation of communities.

12:55-13:15/ J. Borge-Holthoefer
Mapping the modular organization of complex networks.

13:15-15:30/ Lunch

15:30-16:15/ F.C. Santos
Coordinating towards a common good.

16:15-16:35/ M. Salehi
Motif structures and cooperation in real-world complex networks.

16:35-16:55/ S. Lee
Emergence of collective memories.

16:55-17:15/ M. Galazka
The UEFA Cup network.

17:15-17:45/ Coffee Break

18:00-19:30/ POSTER SESSION

19:30/ Get-together Social Event

Friday, February 5th.

09:15-10:00/ J. Kurths
Evolving complex networks: are such approaches useful for earth sciences?

10:00-10:20/ I. Leyva
Identifying functional overlapping communities by synchronization.

10:20-10:40/ G. Zamora-López
Functional integration and segregation in corticocortical networks.

10:40-11:10/ Coffee Break

11:10-11:55/ S. Boccaletti
Optimal regulation of synchronous states in complex networks.

11:55-12:15/ N. Fujiwara
Synchronization of networks of mobile oscillators.

12:15-12:35/ Z. Levnajić
Phase-resetting curves in ensembles of coupled oscillators.

12:35-12:55/ I. Sendiña-Nadal
Conditions for pinning regulation of synchrony in a complex network.

12:55-15:30/ Lunch

15:30-16:15/ S. Battiston
Liaisons dangereuses: how risk diversification leads to systemic risk.

16:15-16:35/ M. Morillo
Stochastic resonance and synchronization in driven arrays.

16:35-17:00/ Coffee Break

17:00-19:00/ COMPUTING TUTORIAL

19:15-21:00/ Visit to the Aljaferia Castle

Saturday, February 6th.

10:00-10:20/ C. Pellicer-Lostao
Networks of economic interactions driven by chaotic dynamics.

10:20-10:40/ R. Yalamova
Traders' Network Topology and Synchronization Dynamics Leading to Crashes.

10:40-11:00/ M. C. Romano
How to infer the topology of a network from time series.

11:00-11:20/ P. C. Marijuán
The making and breaking of social bond.

11:20-11:40/ Coffee Break

11:40-12:00/ R. Criado
Some relationships between metric and centrality measures of a network and its dual.

12:00-12:20/ S. Johnson
Information entropy and natural mixing in complex networks.

12:20-12:40/ T. Pérez
Phase clustering of delay-coupled diffusive phase oscillators on complex networks: functional vs anatomical communities in the C. Elegans.

12:40-13:10/ Conclusions