

Curriculum Vitae

DR. MÁRTON KARSAI

Assistant Professor
with INRIA chair of excellence

PERSONAL DETAILS

Affiliation: Ecole Normale Supérieure de Lyon
Computer Science Department
Laboratoire de l'Informatique du Parallélisme
IXXI – Rhône Alpes Complex Systems Institute
INRIA

Address: 46 allée d'Italie
69364 LYON CEDEX 07
France

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Web: perso.ens-lyon.fr/marton.karsai

Date of birth: 12th December, 1981, Szeged (Hungary)
Nationality: Hungarian
Family status: married (1 child)

POSITIONS:

2013-present: **Assistant Professor (tenured) with INRIA chair of excellence**
Co-responsible for the master 2 program “Modeling Complex Systems”
Ecole Normale Supérieure de Lyon (France) – Computer Science Department

2011-2015: **Scientific Consultant**
Skype/Microsoft Labs, STACC (Estonia)

2012-2013: **Postdoctoral research associate**, Northeastern University (USA), MoBS
Group of Prof. Alessandro Vespignani

2009-2012: **Postdoctoral research fellow**, Aalto University (Finland), BECS
Group of Prof. Kimmo Kaski and Prof. Jari Saramäki

EDUCATION

Ph.D.: Statistical and Computational Physics (summa cum laude), 2005-2009
Co-supervised Ph.D. program between
University of Szeged (Szeged, Hungary)
Université Joseph Fourier (Grenoble, France)
CNRS Grenoble-Institut Néel-MCBT (Grenoble, France)
Dissertation: Cooperative behaviour in complex systems
Supervisors: Prof. Dr. Ferenc Iglói and Dr. Jean-Christian Anglès d'Auriac

M.Sc.: Informatics in Physics, 2000-2005
University of Szeged (Szeged, Hungary)
Master's Thesis: Non-equilibrium phase transitions in complex networks
Supervisors: Prof. Dr. Ferenc Iglói

B.Mus.: Trumpet teacher and chamber artist, 2002-2006

University of Pécs (Pécs, Hungary)
Thesis: Physical description of the trumpet sound
Supervisor: Péter Solymosi

Exchange Student, 2004-2005

University of Saarland (Saarbrücken, Germany)
DAAD-MÖB-Erasmus Hungarian-German exchange program
Group of Prof. Dr. Heiko Rieger

Baccalaureate, 1996-2000

Béla Bartók Conservatory (Budapest, Hungary)

RESEARCH INTERESTS

Complex systems: complex networks, sociophysics, temporal networks, data-driven modeling, human dynamics, human mobility, epidemic spreading, ICT enabled human behaviour, social contagion phenomena, data-driven research

Statistical physics: cooperative behavior, non-equilibrium phase transitions, interacting many-body systems, Monte Carlo methods, disordered systems, frustrated systems

Computer science: computational modeling, data-mining techniques, combinatorial optimization, algorithms, parallel computing, high performance computing

RESEARCH EXPERIENCE

2013-: **Assistant Professor with INRIA chair**, Ecole Normale Supérieure de Lyon (France)
Computer Science Department

2014-: **Scientific consultant**, Grandata (Argentina)
Research subjects: Socio-economic stratification, Egocentric networks

2011-2015: **Scientific consultant**, Skype/Microsoft Labs, STACC Oy (Estonia)
Research subjects: Social network analysis, Adoption dynamics

2012-2013: **Postdoctoral research associate**, Northeastern University (USA), MoBS
Research subjects: Complex systems, Computational modeling, Epidemic spreading, Temporal networks, Social contagion phenomena, Data-driven research, Data-driven modeling, Human Dynamics, Human Communication

2009-2012: **Postdoctoral research fellow**, Aalto University (Finland), BECS
Research subjects: Epidemic spreading, Temporally correlated systems, Heterogeneous behaviour, Human dynamics, Human mobility, Temporal networks, Temporal motifs, Community detection, Models of temporal systems, Evolving networks

2005-2009: **Co-supervised Ph.D. program:** University of Szeged (Hungary), Université Joseph Fourier and CNRS-Grenoble Institute Néel (Grenoble, France)
supervisors: Prof. Ferenc Iglói and Dr. Jean-Christian Anglès d'Auriac

2008-2009: Critical dynamics in geometrically frustrated systems

2007-2008: Density of critical clusters in conformal invariant strongly disordered systems

2006-2007: Numerical studies of surface mapping between the random bond Potts model and random field Ising model in two dimensions

2005-2006: Optimal cooperation in scale-free networks

2003-2005: **Master program:** University of Szeged, supervisor: Prof. Dr. Ferenc Iglói

2004-2005: Non-equilibrium phase transitions in scale-free networks

University of Saarland (Saarbrücken, Germany), group of Prof. Dr. Heiko Rieger

2003-2004: Selected studies in statistical physics and complex networks

TEACHING EXPERIENCE

- 2013-: **Assistant Professor with INRIA chair**, Ecole Normale Supérieure de Lyon (France)
Computer Science Department
- 2013-: **Co-responsible of the M2 master program** in Modeling of Complex Systems at ENS Lyon
- 2014-: **Guest Lecturer in the M2 program** on Data Science for Complex Economic systems at Collegio Carlo Alberto (Torino, Italy)

ENS Lyon (France)

- Complex Networks, lecturer (2013/14 fall, 2014/15 fall, 2015/16 fall)
- Dynamical Processes on Networks, lecturer (2014/15 fall, 2015/16 fall)
- Modeling Social Systems, lecturer (2013/14 fall, 2014/15 fall, 2015/16 fall)
- Introduction to Complex Networks: an interdisciplinary approach (ENS Lyon alterdisciplinary course) lecturer (2014/15 spring, 2015/16 spring)
- Introduction to Statistical Physics, tutor (2013/14 fall)
- Introduction to Algorithms, lecturer (2013/14 fall)

Collegio Carlo Alberto (Italy)

- Complex Networks, guest lecturer (2014/15 fall, 2015/16 spring, 2016/17 fall)

Northeastern University (USA)

- Introduction to Network Science (undergraduate course), lecturer (2012-2013 spring)

Aalto University (Finland)

- Complex Networks (postgraduate theory course), lecturer (2009-2010 spring)

University of Szeged (Hungary)

- General Physics Seminar (2005-2006 fall)
- Electrodynamics and Special Theory of Relativity Seminar (2005-2006 spring)
- Statistical Physics Seminar (2006-2007 spring)
- Statistical Physics Lecture (2007-2008 spring)
- Statistical Physics Seminar (2007-2008 spring)

SCIENTIFIC ORGANIZATIONS AND MANAGEMENT

Thematic Semester on Complex Networks

- Coordinating PI
- Workshop 1: Network Linguistic and Machine Learning (Lyon, May 2015)
- Workshop 2: Dynamics on and of networks (Lyon, June 2015)
- Workshop 3: Modeling and applications of networks (Marseille, July 2015)

Computational Social Science: from social contagion to collective behaviour

- Satellite meeting of the CCS'16 conference
September 19th- September 22nd, 2016, Amsterdam, The Netherlands

M2TI-2015 Workshop on Modeling and Mining Temporal Interactions

- Satellite of the AAAI-ICWSM'15 conference
May 26th, 2015, Oxford, UK

Computational Social Science: from social contagion to collective behaviour

- Satellite meeting of the CCS'15 conference
September 28th-October 2nd, 2015, Tempe, AZ, USA

Computational Social Science: from social contagion to collective behaviour

- Satellite meeting of the ECCS'14 conference
September 21st-26th, 2014, Lucca, Italy

Computational Social Science: from social contagion to collective behaviour

- Satellite meeting of the ECCS'13 conference
September 16th-20th, 2013, Barcelona, Spain

Complex Dynamics of Human Interactions

- Satellite meeting of the ECCS'11 conference

September 14th, 2011, University of Vienna, Vienna, Austria

Social networks - from science to technology

ICTeCollective Dissemination meeting

September 9th, 2010, Aalto University BECS, Helsinki Finland

PROGRAM COMMITTEES

DAMN! 2017 - IEEE PerCom 2017

NetSciCom - IEEE INFOCOM 2017

CompleNet'17

COMPLEX NETWORKS 2016

Contagion'16

Computational Social Science: from social contagion to collective behaviour - CCS 2016 Satellite SocInfo 2016

Conference on Complex Systems (2016)

DyNo 2016 - IEEE/ACM ASONAM 2016

D2NetLang 2016 (Data Driven Approach to Networks and Linguistic)

ComplexNetworks2016 (Complex networks: from theory to interdisciplinary applications)

AlgoTel 2016

Do2Net (Dynamics On and Of Networks)

WebSci16 (Web Science 2016)

CompleNet 2016 (7th Workshop on Complex Networks)

IC2S2 2016 - International Conference on Computational Social Science

NetSci-X 2016

Computational Social Science: from social contagion to collective behaviour, CCS 2015 Satellite NetSci 2015

LC2S2 (At the crossroads: lessons and challenges in Computational Social Science)

M2TI ICWSM-2015 (AAAI) Workshop on Modeling and Mining Temporal Interactions

IC2S2 2015- International Conference on Computational Social Science

Computational Social Science: from social contagion to collective behaviour, ECCS 2014 Satellite

Computational Social Science: from Social Contagion to Collective Behaviour, ECCS 2013 Satellite

Contagion'13 - Modeling of Disease Contagious Processes, 2nd Edition

RESPONSABILITIES

Co-responsible for the M2 master program in Modeling of Complex Systems at ENS Lyon (2013 -)

Elected council member of the Complex System Society (2015-)

Member of the Network Science Society (2010 -)

EDITORSHIP

Associate Editor of Advances in Complex Systems (World Scientific Journal)

FELLOWSHIPS AND GRANTS

DyLNet project on children language evolution (Co-PI) – 2016-2020

ANR (France), 650K euros

D3NetSci (PI)

RNSC network grant (France) 2.5K euros – 2015-2016

Thematic Semester on Network Science (PI)

Labex MILYON (France), 90K euros – 2016

SoSweet project on social linguistic (PI) – 2015-2018

ANR (France), 600K euros

AScI visiting fellow grant

Aalto University, Finland (2014, 2015), 5K euros

IXXI research grant

ENS Lyon, France (2014), 5K euros

ICTeCollective (Member of the project coordination and the scientific management group) – 2009-2012

FP7 FETopen project (Project No. 238597), 1.95M euros

Ph.D. Fellowship with joint supervision of the French State

Université Joseph Fourier – CNRS-Institut Néel - 2006-2009

Ph.D. Fellowship of the Hungarian State

University of Szeged - 2005-2008

DAAD-MÖB-Erasmus Hungarian-German exchange program

University of Saarland - 2004-2005

LONG SCIENTIFIC VISITS

2016 (4 weeks Aalto University, Espoo, Finland

Group of Prof. Jari Saramäki

2015 (4 weeks Aalto University, Espoo, Finland

Group of Prof. Jari Saramäki

2015 (2 weeks Northeastern University, Boston, MA, USA)

Group of Prof. Alessandro Vespignani

2014 (4 weeks Aalto University, Espoo, Finland

Group of Prof. Jari Saramäki

2014 (4 weeks Aalto University, Espoo, Finland

Group of Prof. Jari Saramäki

2013 (4 weeks) ISI Foundation, Torino, Italy

Group of Prof. Alessandro Vespignani

2013 (4 weeks) Aalto University, Espoo, Finland

Group of Prof. Kimmo Kaski

2013 (2 weeks) ISI Foundation, Torino, Italy

Group of Prof. Alessandro Vespignani

2012 (4 weeks) MoBS Lab - Northeastern University, Boston, MA, USA

Group of Prof. Alessandro Vespignani

2011-2012 (4 weeks) STACC - University Of Tartu, Estonia

Skype Research collaboration

2009-2011 (1 week) Institute of Physics (Budapest University of Technology and Economics, Hungary

Group of Prof. János Kertész

2009-2011 (1 month) BarabásiLab - Northeastern University, Boston, MA, USA

Group of Prof. Albert-László Barabási

2004-2005 (6 months) Department of Theoretical Physics, Saarland University, Saarbrücken, Germany

Group of Prof. Heiko Rieger

SUPERVISION

Postdocs:

Dr. Yongjun Liao - ENS Lyon (2015-2016)

Dr. Hadrien Hours - ENS Lyon (2015-2016)

PhD students:

Jacobo Levy Abitbol - ENS Lyon - (expected to defense in 2019)

Thesis: Information diffusion and language evolution on dynamical social networks

Samuel Unicomb - ENS Lyon - (expected to defense in 2019)

Thesis: Spreading processes on temporal networks

Matteo Morini - ENS Lyon - (expected to defense in 2017)

Thesis: Dynamics of social networks

Yannick Leo - ENS Lyon - (expected to defense in 2016)

Thesis: Deep dive into social network and economic data

Qian Zhang - Northeastern University - 2014

Thesis: Contagion and Ranking Processes in Complex Networks

MSc students:

- Sonja Koskelo (M2) - Aalto University, School of Science - 2011
Thesis: Social network analysis on different urbanization levels
- Laura Alessandretti (M2) - ENS Lyon - ISI Torino - 2014
Thesis: Tensor factorization of transportation networks
- Guillaume Laurent (M2) - ENS Lyon - Aalto University - 2014
Thesis: Modeling social tie formation in time-varying networks
- Jordan Cambe (M1) – University of Toulouse – ENS Lyon – 2015
Thesis: Modelling social tie formation in time-varying networks
- Sami Jouaber (M1) – ENS Lyon – 2016
Thesis: Impact of University Admission on Freshmen' Egocentric Network
- Colas Droin (M2) – ENS Lyon – 2016
Thesis: Data-driven characterization of tie heterogeneities in information cascades
- Samuel Unicomb (M2) – ENS Lyon – 2016
Thesis: Modelling complex contagion processes with tie heterogeneities

BSc students

- Hugo Richard - ENS Lyon - IXXI - 2014
Thesis: Structure and evolution of sister city networks
- Quentin Bammey – ENS Lyon – IXXI – 2015
Thesis: Characterization of community structure and linguistic variability on Twitter

JOURNAL PUBLICATIONS (citations: 1208, h: 15, i17: 14 (Scholar – November 25, 2016))

- 1. M. Karsai**, R. Juhász, F. Iglói:
Non-equilibrium phase transition and finite size scaling in weighted scale-free networks
Phys.Rev.E **73**, 036116 (2006)
- 2. M. Karsai**, J-Ch. Anglès d'Auriac and F. Iglói
Rounding of first-order phase transitions and optimal cooperation in scale-free networks
Phys.Rev.E **76**, 041107 (2007)
- 3. M. Karsai**, I. A. Kovács, J-Ch. Anglès d'Auriac and F. Iglói
Density of critical clusters in strips of strongly disordered systems
Phys.Rev.E **78**, 061109 (2008)
- 4. M. Karsai**, J-Ch. Anglès d'Auriac and F. Iglói
Non-equilibrium dynamics of the triangular antiferromagnetic Ising model at zero temperature
J. Stat. Mech. P07044 (2009)
- 5. M. Karsai**
Cooperative behaviour in complex systems (Ph.D. thesis)
University of Szeged and Université Joseph Fourier, e-print: [UJF-TEL](#) (2009)
- 6. M. Karsai**, J-Ch. Anglès d'Auriac and F. Iglói
Interface mapping in two-dimensional random lattice models
J. Stat. Mech. P08027 (2010)
- 7. M. Karsai**, M. Kivelä, R. K. Pan, K. Kaski, J. Kertész, A.-L. Barabási and J. Saramäki
Small But Slow World: How Network Topology and Burstiness Slow Down Spreading
Phys. Rev. E **83**, 025102(R) (2011)
- 8. G. Tibely**, L. Kovanen, **M. Karsai**, K. Kaski, J. Kertész and J. Saramäki
Communities and beyond: mesoscopic analysis of a large social network with complementary methods
Phys. Rev. E **83**, 056125 (2011)

- 9. K. Zhao, M. Karsai** and G. Bianconi
Entropy of dynamical social networks
PLoS ONE 6(12), e28116 (2011)
- 10. L. Kovanen, M. Karsai, K. Kaski, J. Kertész** and J. Saramäki
Temporal motifs in time-dependent networks
J. Stat. Mech. P11005 (2011)
- 11. H.-H. Jo, M. Karsai, J. Kertész** and K. Kaski
Circadian pattern and burstiness in human communication activity
New. J. Phys. **14** 013055 (2012)
Nature (highlight) **482** 7384 (2012)
- 12. M. Karsai, K. Kaski, A.-L. Barabási** and J. Kertész
Universal features of correlated bursty behaviour
Scientific Reports (Nature) **2**, 397 (2012)
- 13. M. Kivelä, R. K. Pan, K. Kaski, J. Kertész, J. Saramäki** and **M. Karsai**
Multiscale Analysis of Spreading in a Large Communication Network
J. Stat. Mech. P03005 (2012)
- 14. G. Krings, M. Karsai, S. Bernhardsson, V. Blondel** and J. Saramäki
Effects of time window size and placement on the structure of aggregated networks
EPJ Data Science **1**, 4 (2012)
- 15. M. Karsai, K. Kaski** and J. Kertész
Correlated dynamics in egocentric networks
PLoS ONE 7(7), e40612 (2012)
- 16. H.-H. Jo, M. Karsai, J. Karikoski** and K. Kaski
Spatiotemporal correlations of handset-based service usages
EPJ Data Science, **1**,10 (2012)
- 17. R. Kikas, M. Dumas** and **M. Karsai**
Bursty egocentric network evolution in Skype
Soc, Netw. Anal. Min., **3**, 1393 (2013)
- 18. M. Karsai, N. Perra** and A. Vespignani
Time varying networks and the weakness of strong ties
Scientific Reports (Nature) **4**, 4001 (2014)
- 19. S. Liu, N. Perra, M. Karsai** and A. Vespignani
Controlling Contagion Processes in Time-Varying Networks
Phys. Rev. Lett. **112**, 118702 (2014)
- 20. M. V. Tomasello, N. Perra, C. J. Tessone, M. Karsai, F. Schweitzer**
The role of endogenous and exogenous mechanisms in the formation of R&D networks
Scientific Reports (Nature) **4**, 5679 (2014)
- 21. M. Karsai, G. Iniguez, K. Kaski, J. Kertész**
Complex contagion process in spreading of online innovation
J. R. Soc. Interface **11**, 101 (2014)
- 22. D. Mocanu, L. Rossi, Q. Zhang, M. Karsai, W. Quattrociocchi**
Collective attention in the age of (mis)information
Computers in Human Behavior **51**, 1198–1204 (2015)

- 23.** M. Tizzoni, K. Sun, D. Benusiglio, **M. Karsai**, N. Perra
The Scaling of Human Contacts in Reaction-Diffusion Processes on Heterogeneous Metapopulation Networks
Scientific Reports (Nature) **5**, 15111 (2015)
- 24.** G. Laurent, J. Saramäki, **M. Karsai**
From calls to communities: a model for time varying social networks
Eur. Phys. J. B **88**, 301 (2015)
- 25.** P. Jensen, M. Morini, **M. Karsai**, T. Venturini, A. Vespignani, M. Jacomy, J-P. Cointet, P. Mercklé, E. Fleury
Detecting global bridges in networks
Journal of Complex Networks **3**, 4 (2015)
- 26.** Z. Ruan, G. Iniguez, **M. Karsai**, J. Kertész
Kinetics of Social Contagion
Phys. Rev. Lett. **115**, 218702 (2015)
- 27.** L. Weng, **M. Karsai**, N. Perra, F. Menzer, A. Flamini
Attention on Weak Ties in Social and Communication Networks
e-print: arxiv.org/abs/1505.02399 (submitted)
- 28.** L. Alessandretti, **M. Karsai**, L. Gauvin
User-based representation of time-resolved multimodal public transportation networks
R. Soc. Open Sci. **3**, 160156 (2016).
- 29.** **M. Karsai**, G. Iniguez, R. Kikas, K. Kaski, J. Kertész
Local cascades induced global contagion: How heterogeneous thresholds, exogenous effects, and unconcerned behaviour govern online adoption spreading
Scientific Reports (Nature) **6**, 27178 (2016).
- 30.** E. Ubaldi, N. Perra, **M. Karsai**, A. Vezzani, R. Burioni, A. Vespignani
Asymptotic theory for the dynamic of networks with heterogenous social capital allocation
Scientific Reports (Nature) **6**, 35724 (2016).
- 31.** Y. Leo, E. Fleury, J. I. Alvarez-Hamelin, C. Sarraute, **M. Karsai**
Socioeconomic correlations and stratification in social-communication networks
Accepted in J. R. Soc. Interface (2016)
- 32.** E. Ubaldi, A. Vezzani, **M. Karsai**, N. Perra, R. Burioni
Burstiness and tie reinforcement in time varying social networks
e-print: arxiv.org/abs/1607.08910 (submitted)

CONFERENCE PROCEEDINGS:

- 33.** Y. Leo, **M. Karsai**, C. Sarraute, E. Fleury
Correlations of consumption patterns in social-economic networks
IEEE/ACM ASONAM p. 500-507, San Francisco CA, August 18-21 (2016).
- 34.** H. Hours, E. Fleury, **M. Karsai**
Link prediction in the Twitter mention network: impacts of local structure and similarity of interest
16th IEEE International Conference on Data Mining (ICDM) -
DMHAA Workshop, Barcelona 12-15 December (2016).

BOOK CHAPTERS

1. L. Kovanen, **M. Karsai**, K. Kaski, J. Kertész and J. Saramäki
Temporal motifs in communication networks
Temporal Networks, P. Holme and J. Saramäki (Eds.) Springer 2013
2. K. Zhao, **M. Karsai** and G. Bianconi
Models, Entropy and Information of Temporal Social Networks
Temporal Networks, P. Holme and J. Saramäki (Eds.) Springer 2013

INVITED TALKS:

1. Institut Néel, CNRS-Grenoble (December 2007, Grenoble - France)
Title: *Complex Networks*
2. Department of Theoretical Physics – University of Szeged (May 2009, Szeged - Hungary)
Title: *Cooperative behaviour in complex systems*
3. INAC-L_Sim CEA-Grenoble (July 2009, Grenoble - France)
Title: *Nonequilibrium dynamics of the triangular antiferromagnetic Ising model at $T=0$*
4. Helsinki University of Technology (September 2009, Espoo Finland)
Title: *Cooperative Behaviour in Complex Networks*
5. BarabasiLab – Northeastern University (November 2009, Boston, MA, USA)
Title: *Communication sequences and temporal correlations in a mobile communication network*
6. Department of Psychology – University of Warsaw (December 2009, Warsaw, Poland)
Title: *Temporal Correlation Patterns in Mobile Phone Call Networks*
7. Saïd Business School – University of Oxford (March 2010, Oxford, UK)
Title: *Analysis of temporal and spatial patterns in mobile phone data*
8. INFOS - EU Commission (November 2010, Brussels, Belgium)
Title: *Small but slow world*
9. BarabasiLab – Northeastern University (December 2010, Boston, MA, USA)
Title: *Bursty correlations in communication networks*
10. ISI Foundation (March 2011, Torino, Italy)
Title: *Circadian pattern and burstiness in human communication activity*
11. Skype Research (March 2011, Tallin, Estonia)
Title: *Small but slow world*
12. Institute of Physics - Budapest University of Technology and Economics (September. 2011, Budapest, Hungary)
Title: *Correlations in bursty time series: from human communications to earthquakes*
13. MoBS – Northeastern University (February 2012, Boston, MA, USA)
Title: *Correlated Dynamics of human interactions*
14. BECS – Aalto University (January 2013, Espoo, Finland)
Title: *Modelling adoption dynamics of online services*
15. STACC-Microsoft/Skype Labs – University of Tartu (March 2014, Tartu, Estonia)

- 16.** IXXI – ENS Lyon (May, 2013, Lyon, France)
Title: *Dynamique des interactions humaines*
- 17.** BECS – Aalto University (March 2014, Espoo, Finland)
- 18.** RESCOM Summer School - Invited Lecturer (May 2014, Furiani, Corsica, France)
- 19.** TNetSphys'14 - NetSci'14 Symposium (June 2014, University of California, Berkeley, CA, USA)
- 20.** CITI Lab - INSA Lyon (June 2014, Lyon, France)
- 21.** Complex Networks and Dynamics - ICCSA'14 Satellite meeting (June 2014, Le Havre, France)
- 22.** INRIA UCOOL workshop (October 2014, INRIA Headquarter, Paris, France)
- 23.** Institute of Research and Development (October 2014, Bondy, Paris, France)
- 24.** Center for Network Science - Central European University (November 2014, Budapest, Hungary)
- 25.** Department of Theoretical Physics - University of Szeged (November 2014, Szeged, Hungary)
- 26.** Electronics Engineering Department - Universidad Técnica Federico Santa María (April 2015, Valparaíso, Chile)
- 27.** Laboratoire de Reproduction et Développement des plantes and CBP Centre Blaise Pascal - ENS Lyon (April 2015, Lyon, France)
- 28.** Higher Order Models - NetSci'15 Satellite meeting (June 2015, Zaragoza, Spain)
- 29.** Cecam 2015: Recognizing the relevance of change: Analysis and control of time-evolving networks in epidemiology and evolution - Free University Berlin (July 2015, Berlin, Germany)
- 30.** MARAMI 2015 (October 2015, Nîmes, France)
- 31.** DPCN 2016 (January 2016, Wroclaw, Poland)
- 32.** Mechanisms underlying local to global signals in networks (19 May 2016, Lyon, France)
- 33.** Higher Order Models in Network Science, NetSci'16 Satellite (30 May 2016, Seoul, Korea)
- 34.** Social Connectome, NetSci'16 Satellite (30 May 2016, Seoul, Korea)
- 35.** SocioNet'16 workshop ENS Lyon (8 June 2016, Lyon, France)
- 36.** Coarse-graining of Complex Systems, CCS'16 Satellite (21 September 2016, Amsterdam, The Netherlands)
- 37.** BURSTINESS in human behaviour and other natural phenomena, CCS'16 Satellite (21 September 2016, Amsterdam, The Netherlands)
- 38.** PhD course on Network Science Uppsala University, Department of Information Technology (18 November 2016, Uppsala, Sweden)

CONFERENCE TALKS (peer-reviewed):

- 1. *Non-equilibrium phase transitions on complex networks***
Day of Statistical Physics 2006 (22 March 2006, Budapest, Hungary)
- 2. *Ferromagnetic Random Bond Potts model on scale-free network in the limit of an infinite number of state***
Journées de Physique Statistique 2007 (25-26 January 2007, Paris, France)
- 3. *Rounding of first-order phase transitions and optimal cooperation in scale-free networks***
The 32nd Conference of the Middle European Cooperation in Statistical Physics (16-18 April 2007, Ladek Zdrój, Poland)
- 4. *Non-equilibrium phase transitions and finite-size scaling in weighted scale-free networks***
Journées de Physique Statistique 2008 (24-25 January 2008, Paris, France)
- 5. *Density of critical clusters in strips of strongly disordered systems***
Day of Statistical Physics 2008 (19 March 2008, Budapest, Hungary)
- 6. *Density of critical clusters in strips of strongly disordered systems***
The 33rd Conference of the Middle European Cooperation in Statistical Physics (14-16 April 2008, Puchberg/Wels, Austria)
- 7. *Rounding of first-order phase transitions and optimal cooperation in scale-free networks***
International Workshop on Challenges and Visions in the Social Science (18-23 August 2008, ETH-Zürich, Switzerland)
- 8. *Non-equilibrium dynamics of the triangular antiferromagnetic Ising model at zero temperature***
Day of Statistical Physics 2009 (16 April 2009, Budapest, Hungary)
- 9. *Dynamics and temporal correlations in mobile phone based social networks***
NetMob-NetSci 2010 - International School and Conference on Network Science (11 May 2010, MIT Cambridge, Boston, MA, USA)
- 10. *Timescales in evolving mobile networks***
NetMob-NetSci 2010 - International School and Conference on Network Science (11 May 2010, MIT Cambridge, Boston, MA, USA)
- 11. *Small but slow world***
Physics Days 2011 - Annual meeting of the Scandinavian Physics Society (29-31 March 2011, Helsinki, Finland)
- 12. *How network topology and burstiness slow down spreading***
Conference on Applications of Network Theory (7-9 April 2011, Stockholm, Sweden)
- 13. *Correlated bursty behaviour on human communication***
NetSci2011 - Spreading, Influencing and Cascading in Social and Information Networks Satellite (6-10 June 2011, Budapest, Hungary)
- 14. *Correlated dynamics in egocentric communication networks,***
Aalto Complex Networks Factory - (4-8 June 2012, Porvoo, Finland)
- 15. *Spatiotemporal correlations of handset-based service usage***
Connections 2012 (December 17, 2012, MIT Media Lab, Cambridge, MA, USA)

- 16. *Time-varying networks and the weakness of strong tie***
NetMob 2013 (May 1-3, 2013, MIT Media Lab, Boston, MA, USA)
- 17. *Adoption Dynamics of Online Communication Networks***
TDNet 2013 (June 3-4, 2013, Technical University of Denmark, Copenhagen, Denmark)
- 18. *Time-varying networks and the weakness of strong tie***
NetSci 2013 (June 5-7, 2013, Technical University of Denmark, Copenhagen, Denmark)
- 19. *A new measure to detect global bridges***
TopoNets'14 - NetSci'14 Satellite (June 2, University of California, Berkeley, CA, USA)
- 20. *Data-driven spreading for the detection of weak ties***
ECCS'14 (23 September, Lucca, Italy)
- 21. *Socioeconomic correlations in communication networks***
NetMob'15 (8 April, MIT MediaLab, Cambridge, MA, USA)
- 22. *The anatomy of online adoption spreading***
NetSci'15 (5 June, Zaragoza, Spain)
- 23. *Complex contagion process in spreading of online innovation***
ICCSS'15 (9 June, Helsinki, Finland)
- 24. *Socioeconomic correlations in social communication networks***
ICCSS'15 (11 June, Helsinki, Finland)
- 25. *Structure and dynamics of online service adoption spreading***
COMPLENET'16 (30 March 2016, Dijon, France)
- 26. *Socioeconomic Correlations and Stratification in Social Communication Networks***
NetSci'16 (1 June 2016, Seoul, Korea)
- 27. *Kinetics of Social Contagion***
STATPHYS26 (22 June 2016, Lyon, France)
- 29. *Correlations of consumption patterns in social-economic networks***
IEEE/ACM ASONAM (21 August 2016, San Francisco CA)
- 30. *Higher-order correlations of consumption patterns in social-economic networks***
CCS 2016 (19 September 2016, Amsterdam, The Netherlands)

PROFESSIONAL ACTIVITIES:

Referee for Nature Communications, PNAS, PRL, PRX, PRE, Scientific Reports, EPJ Data Science, SNAM, EPL, EPJ B, PLoS One, Journal of Statistical Mechanics, Physics Letter A, Advanced in Complex Systems, Journal of Physics: Condensed Matter, Complex Networks, New Journal of Physics, Physica Scripta, Network Science, ANR