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PARIS 2017

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The 2017 International Workshop on Resource Allocation, Cooperation and Competition in Wireless Networks (RAWNET), Paris, France, 15th May, 2017

RAWNET

Call for Papers

(Click [here](#) for a PDF version of the Call for Papers.)

Emerging wireless networking technologies will provide advanced quality of service classes, including very high data rates over millimeter-wave frequencies, low latencies for specific use cases, as well as seamless connections in scenarios with ever increasing mobility. In addition, these emerging technologies will open the door for novel applications such as new social or location-based services, as well as new architectures such as node-centric and information-centric networks.

The workshop will focus on resource management in emerging wireless networking technologies and applications. Approaches to resource management across protocol layers will be considered, ranging from physical layer to application layer issues. Of particular interest are resource allocation mechanisms for wireless networks that allow for the efficient allocation of network resources, the dissemination and exploitation of information, and for distributed computation. The applications can stem from any wireless scenario such as multi-cellular, 5G cloud-RAN, cognitive-radio or ad-hoc networks, and in existing or novel networking architectures, such as node-centric networking, information-centric networking or low-latency networks.

Original contributions are solicited in, but not limited to, the following topics of interest:

- Cooperation in mobile wireless networks
- Spectrum sharing in millimeter-wave frequencies
- Resource tradeoffs in distributed optimization and coordination
- Data dissemination in large-scale wireless networks
- Mobile social networks
- Caching in wireless and mobile networks
- Distributed computation in wireless networks
- Distributed scheduling/resource allocation in large-scale wireless networks
- Physical layer/MAC layer cooperation in millimeter-wave networks
- Diversity/multiplexing trade-offs of cooperation protocols
- Effects of partial and incomplete state information in cooperative systems, and robust designs
- Wireless location-based services and optimization
- Resource allocation in fog/edge/cloud computing for wireless networks
- Resource allocation and optimization in 5G wireless fronthaul and backhaul architectures

Plenary Speaker



Marco Di Renzo

Paris-Saclay University / CNRS, France

On System-Level Analysis and Optimization of Large-Scale Networks

The slides to the talk are available [here](#).

Abstract

This talk is aimed to discuss the critical and essential importance of spatial models for accurate system-level analysis and optimization of emerging ultra-dense and heterogeneous cellular networks. With the aid of stochastic geometry and point process tools, new mathematical methodologies for system-level analysis and optimization will be illustrated. In addition, their application to emerging cellular network concepts will be discussed and validated with the aid of empirical data from publicly available databases.

Biography

Marco Di Renzo received the "Laurea" and Ph.D. degrees in Electrical and Information Engineering from the University of L'Aquila, Italy, in 2003 and 2007, respectively. In October 2013, he received the Doctor of Science degree from the University Paris-Sud, France. Since 2010, he has been a "Chargé de Recherche Titulaire" CNRS in the Laboratory of Signals and Systems of Paris-Saclay University - CNRS, CentraleSupélec, Univ Paris Sud, France. He is an Adjunct Professor at the University of Technology Sydney, Australia, and a co-founder of the university spin-off company WEST Aquila s.r.l., Italy. He serves as an Editor of IEEE COMMUNICATIONS LETTERS, IEEE TRANSACTIONS ON COMMUNICATIONS, and IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS. He is a Distinguished Lecturer of the IEEE Vehicular Technology Society and IEEE Communications Society. He is a recipient of several awards, and a frequent tutorial and invited speaker at IEEE conferences.

Program

09:20-09:30 Welcome

09:30-10:30 Plenary talk
10:30-11:00 Coffee break
11:00-12:30 Session 1: Scheduling and resource allocation
12:30-14:00 Lunch
14:00-15:30 Session 2: Future wireless network architectures
15:30-16:00 Coffee break
16:00-17:45 Session 3: Wireless cognitive and sensor networks

09:20 - 09:30**Welcome**

Room: Amphi Thévenin

Plenary talk

On System-Level Analysis and Optimization of Large-Scale Networks
Marco Di Renzo, L2S, CentraleSupélec, University Paris-Saclay, France

Room: Amphi Thévenin

10:30 - 11:00**Coffee break****11:00 - 12:30****Session 1: Scheduling and resource allocation**

Room: Amphi Thévenin

- #1 Optimal Distributed Allocation of Almost Blank Subframes for LTE/WiFi Coexistence**
Shubhajeet Chatterjee, Mohammad J. Abdel-Rahman and Allen B. MacKenzie (Virginia Tech, USA)
- #2 Joint Access Point Deployment and Assignment in mmWave Networks with Stochastic User Orientation**
Mehdi Naderi soorki (Virginia Tech); Mohammad J. Abdel-Rahman, Allen B. MacKenzie and Walid Saad (Virginia Tech, USA)
- #3 Optimal Distributed Scheduling for Single-hop Wireless Networks**
Sarath Pattathil and Jayakrishnan Nair (IIT Bombay, India)
- #4 When to Arrive in a Congested System: Achieving Equilibrium via Learning Algorithm**
Parth Thaker (Indian Institute of Technology Madras, India); Aditya Gopalan (Indian Institute of Science, India); Rahul Vaze (TIFR Mumbai, India)

12:30 - 14:00**Lunch****14:00 - 15:30****Session 2: Future wireless network architectures**

Room: Amphi Thévenin

- #0 Memory-aided superfast routing for SDN**
Georgios Paschos (Huawei, France)
- #1 Joint CoMP-Cell Selection and Resource Allocation in Fronthaul-Constrained C-RAN**
Lei You (Uppsala University, Sweden); Di Yuan (Linköping University, Sweden)
- #2 An Examination of the Benefits of Scalable TTI for Heterogeneous Traffic Management in 5G Networks**
Emmanouil Fountoulakis and Nikolaos Pappas (Linköping University, Sweden); Qi Liao (Nokia Bell Labs, Germany); Vinay Suryaprakash (Bell Laboratories & Nokia, Germany); Di Yuan (Linköping University, Sweden)
- #3 Making the Case for Dynamic Wireless Infrastructure Sharing: a Techno-Economic Game**
Alessandro Lieto (Politecnico di Milano, Italy); Ilaria Malanchini (Nokia Bell Labs, Germany); Vinay Suryaprakash (Bell Laboratories & Nokia, Germany); Antonio Capone (Politecnico di Milano, Italy)

15:30 - 16:00**Coffee break****16:00 - 17:30**

Session 3: Wireless cognitive and sensor networks

Room: Amphi Thévenin

#1 Evolutionary Dynamics of Cooperative Sensing in Cognitive Radios Under Partial System State Information

Hajar El Hammouti (INPT, Morocco); Rachid El-Azouzi (University of Avignon, France); Francesco De Pellegrini (Fondazione Bruno Kessler (FBK), Italy); Essaid Sabir (Hassan II University of Casablanca & ENSEM, Morocco); Loubna Echabbi (INPT, Morocco)

#2 Throughput Maximization of Large-Scale Secondary Networks over Licensed and Unlicensed Spectra

Manjesh K Hanawal (IIT Bombay, India); Yezekael Hayel (LIA, University of Avignon, France); Quanyan Zhu (New York University, USA)

#3 Efficient Data Retrieval In Faulty Sensor Networks Using A Mobile Mule

Harel Yedidsion (Ben Gurion University, Israel); Aritra Banik (Indian Institute of Technology, Jodhpur, India); Paz Carmi and Matthew J. Katz (Ben-Gurion University, Israel); Michael Segal (Ben-Gurion University of the Negev, Israel)

#4 Payoff-oriented quantization and application to power control

Chao Zhang (University paris sud, France); Nizar Khalfet (INRIA, France); Samson E Lasaulce (CNRS - Supelec, France); Vineeth S Varma (CRAN & CID, France); Sophie Tarbouriech (LAAS-CNRS, France)

Submission Instructions

Submitted papers consist of 6 pages, double column, IEEE format. Follow the same formatting guidelines as the WiOpt symposium. See the [Information for Authors](#).

Submission

All submissions will be handled by EDAS following this [link](#). The workshop name on EDAS is RAWNET'17.

No-show policy

To guarantee publication of a RAWNET paper, at least one author should 1) have full registration either for the whole WiOpt event or for the workshop and 2) present the work.

Publication

WiOpt-RAWNET is technically co-sponsored by the IEEE Control Systems Society, IEEE Information Theory Society and IFIP. All papers will be published in the **IFIP DL** open library with **Open Access**, as well as on **IEEE Xplore**.

Important Dates

Paper submission: ~~February 3, 2017, 23:59 CET~~ February 19, 2017, 23:59 CET (firm)

Notification of acceptance: ~~March 1, 2017~~ March 8, 2017

Camera ready/registration due: March 17, 2017, 23:59 CET

Workshop: May 15, 2017

Contact

In order to contact the workshop organisers, please write to the email address rawnet17-chairs AT edas dot info.

Workshop Organisers



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