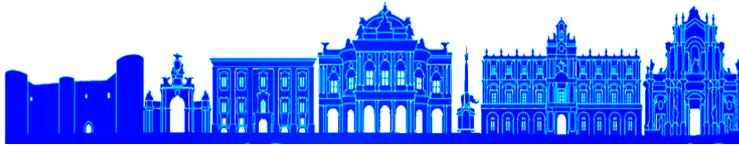


Third International Workshop on COmpetitive and COoperative Approaches for network resource management (COCOA³)



EUROPEAN
WIRELESS
2018

Co-located with European Wireless 2018, 2-4 May 2018, Catania, Italy

Scope of the workshop

Resource management is one of the cornerstone of present and future networks. Next generation networks will allow the coexistence of multiple heterogeneous networks and will heavily rely on Multiple-Input Multiple-Output (MIMO), millimeter wave (mmWave), Device-to-Device (D2D) and Coordinated Multi-Point (CoMP) communications, which promise to drastically increase the overall network throughput. In such a challenging context, both physical-layer approaches to resource allocation, and the emerging technologies of Software Defined Networking (SDN), Network Function Virtualization (NFV), and Network Slicing, will be essential to allow network operators to achieve agile and flexible network monitoring and control. Softwarization, virtualization and sharing of network elements and services will create a new ICT market for an increasing number of new players. Though the above techniques have the potential to provide unprecedented connectivity and performance levels, how to enable energy-efficient and reliable allocation, as well as sharing of network resources in such a complex network is still an open challenge and competitive and/or cooperative behaviors between the network's users and operators should be analyzed. While it is well-known that cooperative approaches such as Virtual Antenna Array (VAA), cooperative MIMO and RAN sharing lead to energy savings and performance improvements, there are some scenarios where cooperation among adversarial entities can not be enforced. This is the case of Telco Operators (TOs) owning multiple network slices which are expected to compete with each other to provide better QoS levels to their customers and improve their revenues. It is clear that these two behavioral paradigms (both of which arise naturally in next generation networks) have strong implications on the network management and control processes of these systems. Accordingly, the scope of the COCOA workshop will be to collect and present new approaches and techniques for the efficient management of resources considering both conflicting and cooperative behaviors among network entities.

Topics of interest are (but not limited to)

- Conflict-aware mechanisms for network slicing and sharing;
- Energy-efficient network and resource sharing;
- Energy-efficient communication design and protocols;
- Distributed and centralized mechanisms for Radio Access Network (RAN) slicing and sharing;
- Game theory for SDN and NFV applications;
- Distributed, decentralized and centralized algorithms for energy-efficiency;
- Economics and market models for programmable networks;
- Power control and allocation for next generation networks;
- Cooperative and competitive service chaining in NFV networks;
- Cooperative and competitive information-centric networking (ICN) for SDN applications;
- Interference-aware resource allocation in multi-tenant networks;
- Cooperative MIMO, massive MIMO and Multi-User MIMO (MU-MIMO) communications;
- Auction and bargaining-based resource allocation;
- Cooperative approaches for VAA formation;
- Relaying-aided efficient and robust communications in wireless SDN networks;
- SDN and NFV approaches for competitive and cooperative resource sharing;
- Cooperative Cloud, Fog and Mobile Edge Computing;
- Cooperative communications for Cloud Radio Access Networks (C-RAN) technologies;
- Learning and predictive models for pro-active network programmability;
- Competitive and cooperative interactions in multi-tenant networks;

Important Dates

Full papers due: February 25, 2018 (**FINAL DEADLINE**)
Acceptance notification: March 10, 2018
Camera ready version: March 17, 2018

Submission Guidelines

The workshop accepts only novel, previously unpublished papers. Prospective authors are encouraged to submit a 6-page IEEE conference style paper (including all text, figures, and references) through EDAS submission system (<https://www.edas.info/>). Papers exceeding the maximum length of six pages will be subject to an over-length charge of 100 euro per additional page (a maximum of two pages can be added). The charge shall be paid as an additional fee to ordinary registration by the reference author of the paper. Accepted papers must be presented at the workshop by one of the authors. All papers selected for publication will be published together with European Wireless 2018 proceedings and available on IEEE Xplore database.

Submission link: <https://edas.info/newPaper.php?c=24282>

Organizers

Salvatore D'Oro, Northeastern University, Boston, USA
Fabio Martignon, University of Bergamo, Italy
Alessio Zappone, Large Networks and Systems Group (LANEAS), CentraleSupélec, Paris, France
Stefano Buzzi, University of Cassino and Southern Lazio, Italy

Contact information

Salvatore D'Oro, s.doro@northeastern.edu
Website: <http://ew2018.european-wireless.org/>