18th International Conference on Transparent Optical Networks (ICTON) 2016

COMANDER-FiWiN5G Workshop on "Fiber-Wireless Network Technologies and Architectures towards 5G and Beyond"

Fiber-wireless networks that rely on the collaborative use of both fiber-based and wireless communication technologies are currently turning into a highly important research area in view of the forthcoming era of 5G mobile networks. The FiWi communication paradigm aims to equip future networks with Very High-Throughput (VHT) wireless services offered to the end-users, supporting the tremendous bandwidth requirements at the front- and/or backhaul network segments via fiber-based technology solutions. This necessity has brought a range of different research topics like Radio-over-Fiber, Radio-and-Fiber, Microwave Photonics, mm-wave wireless, Medium Access Control (MAC) protocol design, Cloud Radio Access Network (C-RAN) design, green networking and optical access network integration, in the need to synergize and converge towards a commonly defined application-driven target in order to be able to fully exploit the properties of the intertwined media. Respective FiWi technologies for data generation, processing and transportation will be required to fulfill certain network architectural and protocol requirements in order to meet the challenging 5G targets for VHT mobile communications down to the end-user offering at the same time dramatic reductions in end-to-end network delay and in energy consumption.

The FiWi workshop organized jointly by the International Conference on Transparent Optical Networks (ICTON) the FP7 EU Marie-Curie project COMANDER and the Horizon 2020 EU Marie-Curie Project FiWiN5G is soliciting papers concerning technologies, protocols and architectures for Fiber-Wireless networks, including (but not limited to) topics like:

1. Novel Fiber-Wireless network architectures for broadband wireless services
2. Hybrid fiber-wireless access networks
3. Fiber-wireless network architectures and technologies for 5G front- and/or backhauling
4. Fiber-Wireless over PON and metro networks
5. Performance analysis of fiber-wireless networks
6. Network protocol, admission control algorithms and management for fiber-wireless networks
7. Optical generation, distribution, and control of broadband fiber-wireless signals

8. Optical devices and systems for Fiber-Wireless signal generation, processing and transmission
9. Photonic transceivers for Fiber-Wireless network applications
10. Integrated Photonic technologies for Fiber-Wireless network applications
11. Photonic Systems for antennas and beamforming
12. Optoelectronics in ultra-wideband and spread-spectrum systems
13. Millimeter-wave/Microwave Fiber-Wireless systems for indoor and/or outdoor applications
14. Ultra-wideband networking via Fiber-Wireless networks
15. Integration of wireless communication and sensing

Workshop Organization Committee

Prof. Nikos Pleros

Department of Informatics,
Aristotle University of Thessaloniki,
Thessaloniki, GREECE
npleros@csd.auth.gr

Prof. Antonella Bogoni

Integrated Research Center for Photonic Networks Technologies
TeCIP-Institute of TEchnologies for Communication, Information and Perception
Scuola superiore Sant'Anna
Pisa, ITALY
antonella.bogoni@cnit.it

Prof John Mitchell

Department of Electronic and Electrical Engineering
University College London,
Torrington Place, London, WC1E 7JE, UK
j.mitchell@ucl.ac.uk