Call for Contributions

Note: Onsite and Online Options
In order to accommodate a large number of situations, we are offering the option for either physical presence or virtual participation. We would be delighted if all authors manage to attend in person, but are aware that special circumstances are best handled by having flexible options.

Submission:

1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICWMC+2020+Special
Please select Track Preference as **OCTA**

Special track

OCTA: 5G Optical Communications Technologies and Applications

Chair

Sofien Mhatli, ISI Kef, University of Jendouba and SERCOM-LAB University of Carthage, La Marsa, Tunisia

sofiene.mehtlli@isikef.u-jendouba.tn

along with

ICWMC 2020, The Sixteenth International Conference on Wireless and Mobile Communications
https://www.iaria.org/conferences2020/ICWMC20.html
October 18 - 22, 2020 - Porto, Portugal

In this special track, we will focus on 5G optical communication applications and technologies. Indeed, there are many research groups working in different part of the network: Front haul or backhaul or Last meter access networks.

The purpose of this special track to bring together researchers, engineers and practitioners interested on any of the optical communication components of an optical communication system, or the system itself. Optical fiber is currently the main means for high-rate transmission in communication networks, while supporting the needed bandwidth and requirements that are expected to be imposed on the front-haul network to support the 5G vision. While 5G is designed to support a variety of heterogeneous applications such as massive Internet of Things (IoT), mission critical ultra-reliable and low latency machine-type communications and energy-efficient services, optical fiber communications and photonic networking systems are of paramount importance for driving crucial changes in the architecture of our telecommunication networks.

This special track will focus on research works to enhance the 4G system performances in order to fulfill the 5G requirements, by simultaneously acting on the transmitter (TX), the transmission channel, and the receiver (RX).

This track is looking to original papers from both academia and industry on the recent advances in theory, application and implementation of the 5G optical communications, Internet of Things, URLLC and V2X concepts, technologies and applications.

Topics include, but not limited to:

- 5G networks, IoT and Tactile Internet.
- Software Defined Network (SDN) and IoT.
- Industrial Internet of Things.
- Factory of things.
- Edge computing, fog computing and IoT.
- IPv6-based IoT networks.
- IoT protocols such as IPv6, 6LoWPAN, RPL, 6TiSCH, WoT.
- IoT security aspects for massive IoT deployments, e.g., embedded SIM management.
- Ultra-Reliable Low-Latency Communications (URLLC).
- URLLC for mission-critical IoT.
- V2X standards and architectures.
- Private LTE/ 5G networks.
- IoT architecture design options and system optimizations.
- IoT security and privacy of IoT devices and services.
- System optimization to support ultra-low complexity devices.
- Radio access optimizations for ultra-low power devices.
- Standardized semantic data description framework and technologies.
- IoT communication procedure enhancements.
- Experience and lessons learnt from IoT large-scale pilots.
- IoT standards platforms interworking.
- IoT interoperability methodologies.
- IoT standards gap analysis.
- 5G wireless trends and technologies
- cloud radio access networks (C-RAN),
- Massive multiple-input and multiple-output (MIMO) networks
- Coordinated multipoint (CoMP) architecture
- 5G Radio Over fiber architecture
- Intensity Modulation-Direct Detection (IM-DD) architecture
- 5G Optical coding
- VLC communications
- Low-latency metro and access networks
- Industry standard development for 5G-oriented optical networking
- 5G waveforms techniques
- Optical Wireless Channel
- Free Space Optics (FSO)
- Cloud-RAN (C-RAN) technologies
- Spatial Division Multiplexing (SDM) networks
- Orbital Angular Momentum (OAM) networks
- 5G Passive Optical network (PON) applications
- Last meter fiber application
- Network Convergence in 5G Transport
- Wavelength routing
- Energy efficiency
- Flex-grid optical networks
- 5G-enabled optical backhaul architectures.

Important Datelines

Submission: August 24, 2020
Notification: September 13, 2020

Registration: September 23, 2020
Camera-ready: September 23, 2020

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICWMC+2020+Special
Please select Track Preference as **OCTA**

Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

Contact
Chair
Sofien Mhatli: sofiene.mehtlli@isikef.u-jendouba.tn
Logistics: steve@iaria.org