ICTON2023
23rd International Conference on Transparent Optical Networks
2-6 July 2023, Bucharest, Romania

Workshop on Broadband Access and Edge Networking
former FRONT-EDGE Colloquium, now with ICTON
3-4 July 2023, Bucharest

Colloquium organizers

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VENUE:
Library of University Politehnica Bucharest, Romania.
https://icton2023.upb.ro/venue/

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Prof. Werner Rosenkranz *(Kiel University)*
Prof. Darko Zibar *(Denmark Technical University)*

Future generations of fixed networks will require major advancements in many areas of optical network technologies. This Colloquium is dedicated to identifying technologies that enable the evolution towards the next generations, while also investigating changes in architecture required to handle future needs and use cases. The goal being to enable a revolution of fixed network technology, towards massive Fiber-To-The-Everywhere/Everything (FTTE), expanding to new markets and applications. Our goal in this time of changes is to rekindle our academic discourse in a relaxed atmosphere, openly discussing about future communications technologies and reconnect with colleagues, in a kind of Academic Salon as we may call it. Renowned academics and industry experts in the field are invited to participate at this research colloquium.

After the previous editions, in 2021 in Barcelona and in 2022 in Porto, now we are happy to join the major academic event of the International Conference in Transparent Optical Networks (ICTON) to held the 3rd Front-Edge edition on July 3rd-4th in Bucharest.

According to the above, the topics of primary interest include:

- Innovative Point-to-Multipoint and LAN architectures.
- Core-edge convergent applications.
- FMC (Fixed and Mobile Convergence): transparent wideband Radio-over-Fibre.
- Optical wireless and free space optics, millimetre and THz wave backhauling.
- Fiber-to-the-Room solutions.
- Edge computing and smart industrial IoT architectures.
- Network autopilot, AI based network automation for optical access.
- Application-driven edge networking use cases.
- "Lite" and/or low power consumption digital signal processing.
- Low cost coherent transceivers.
- New fibre, Si-Photonics, MultiChip Modules for access.
- International Standardization activities and other forums.

Organized in 3 groups:

1. **NEW EDGE APPLICATION USE CASES AND NETWORKING.**
2. **TRANSMISSION IN EDGE/ACCESS.**
3. **ENABLING TECHNOLOGIES.**

Invited Speakers:

Marcus Brunner, *Huawei Technologies Switzerland AG, Zurich, Switzerland:* The 6th generation fixed network (F6G): Vision and direction
Nicola Calabretta, *IPI-ECO Research Institute, Eindhoven University of Technology, The Netherlands:* Transparent photonically interconnected edge computing networks with fast control plane

Behnam Shariati, *Fraunhofer Heinrich Hertz Institute, Berlin, Germany:* F5G OpenLab: Enabling twin transition through ubiquitous fiber connectivity

Roberto Gaudino, *Dipartimento di Elettronica e Telecomunicazioni, Politecnico di Torino, Italy:* Experimental demonstration and scalability study of a 400 Gb/s full coherent transmission in a deployed metro-access scenario

Ivan Cano, *Huawei Technologies Düsseldorf GmbH, Germany:* FDMA in point to multipoint fibre access systems for non-residential applications.

Maria Medeiros, *Department of Electrical and Computer Engineering, Univ Coimbra, Portugal:* ML-based optimization of geometric constellation shaping for unamplified coherent optical systems.

Josep Segarra, *Universitat Politècnica de Catalunya, Barcelona:* Band evaluation of coherent udWDM-PON with paired lasers.

Moshe Nazarathy, *Faculty of Electrical and Computer Engineering, Technion, Israel Institute of Technology, Haifa, Israel:* Optical DACs for ultra-high-speed green photonic interconnects.

Francisco Rodrigues, *PICadvanced SA, Ílhavo, Portugal*: PIC based transceiver for access networks: package and functionalities verification towards a commercial solution.

Chris Vagionas, *Aristotle University of Thessaloniki, Greece:* Multi-RAT fiber-wireless technologies towards 6G networks.

Carmen Vázquez Garcia, *The Carlos III University, Madrid, Spain:* Performance evaluation of high data rate transmission and optically powered IoT ecosystem over SI-POF for smart home applications.

Website

In ICTON: https://www.gov.pl/web/instytut-lacznosci/13th-workshop-on-broadband-access-and-edge-networking

In UPC: https://gco.upc.edu/en/research/optical-access-networks/front-edge-workshop

For further information about this Workshop, please contact: Prof. Josep Prat *(josep.prat@upc.edu)*