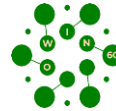


# 9<sup>th</sup> Biennial Colloquium on Optical Wireless Communications

Co-located with 14<sup>th</sup> IEEE/IET International Symposium on COMMUNICATION SYSTEMS, NETWORKS and DIGITAL SIGNAL PROCESSING (CSNDSP'24)

17-19 July 2024, Rome, ITALY - <http://comlab.uniroma3.it/CSNDSP2024.php>



<https://www.newfocus-cost.eu/>

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The 9<sup>th</sup> biennial colloquium on optical wireless communications (OWC) provides a forum for researchers, product and system engineers and systems developers to present and discuss their latest research results in the field of OWC.

**Special Session on: Green and Sustainable Optical Wireless Communication systems for IoT applications**

Papers are solicited on, but are not limited to, the following topics:

### • Indoor OWC

- Visible light and infrared communications; Hybrid VLC/IR/WiFi; Optical camera communications (OCC); Visible light positioning

### • Outdoor and space OWC

- Characterization and modelling of FSO links
- Advances in communication system design
- Atmospheric effects on high-data-rate FSO links
- Diversity schemes in FSO links
- Deep space and inter-satellite, optical LEO-downlinks
- Design of flight- and space-worthy OWC
- Hybrid RF/THz//FSO/OCC systems
- Radio over fibre and FSO systems
- Multi-input-multi-output

### • Underwater OWC

- Channel modelling
- Timing and synchronization
- Interference mitigation and robust signal detection
- Duplexing and multiple access
- Underwater networks
- Water to air communications

### • Integrated technology

- Sensing and OWC
- Localisation and OWC
- Sensing, localization and OWC

### • Experiments, sub-system designs and components in OWC

- Optical components
- Novel optical transceivers and architectures
- Novel techniques for rapid target acquisition, beam pointing and tracking
- Infield or laboratory experimental demonstration, testbeds, and performance characterizations

### • Applications of OWC

- OWC in 5/6G networks; Massive IoT
- Vehicular communications
- Integration of optical links in networking contexts (e.g., inter-UAV communications)
- Optical and RF wireless sensor networks
- Deep and machine learning

### • Others

- Quantum communications in OWC; Quantum key distribution over OWC; Deep and machine learning; AI and machine learning in OWC

Review papers by invitation from established researchers are welcome!

### Important Dates:

- Full paper: 1/03/2024
- Notification of acceptance: 14/04/2024
- Camera ready paper: 31/05/2024

For further information about this colloquium, please contact: **Prof Z. Ghassemlooy** ([z.ghassemlooy@northumbria.ac.uk](mailto:z.ghassemlooy@northumbria.ac.uk)), **A T Pham** ([pham@u-aizu.ac.jp](mailto:pham@u-aizu.ac.jp)) and **S Zvanovec** ([xzvanovec@fel.cvut.cz](mailto:xzvanovec@fel.cvut.cz)). For general information about the CSNDSP2024, please contact: **Dr Anna Maria Vegni**, Roma Tre University, Italy, [annamaria.vegni@uniroma3.it](mailto:annamaria.vegni@uniroma3.it)