



## WORKSHOP CO-CHAIRS

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## KEYNOTE SPEAKERS

(TBA)

## IMPORTANT DATES

**Paper Submission**  
April 15, 2023

**Notification of Acceptance**  
May 22, 2023

**Camera ready and registration**  
May 30, 2023

## SUBMISSION INSTRUCTION

All papers for OWC workshop should be submitted via **EDAS** through the following link

<https://edas.info/N30883>

## WEBPAGE LINK

<https://yamazato.nuee.nagoya-u.ac.jp/owc2023/>

or scan the QR code



## SCOPE AND MOTIVATION

Optical wireless communication (OWC) systems over terrestrial, space or underwater links are gaining much attention as cost-effective, sustainable and energy efficient candidates to meet the ever-increasing demand for capacity and quality for B5G/6G networks. Besides the compelling advantages of the high-power solid-state laser diodes for medium to long range applications, remarkable advances have been achieved in semiconductor sources such as light emitting diodes (LEDs) in visible light and ultraviolet wavelengths, multi-array light sources and detectors, tracking and steering. These advances provide huge potential for short/medium range wireless communication applications at low power and cost.

Despite the conspicuous advantages of OWC-based systems, their design and implementation are still facing several challenges due to the properties of the optical beam propagation through the atmosphere. In fact, different distortions may be experienced due to susceptibility to weather conditions, channel impairments, and compatibility and integration with existing radio frequency networks. In order to circumvent these challenges, further research on the OWC channel and the different system components, and innovative and more efficient techniques are still required to further facilitate the wide-scale implementation of OWC systems.

## TOPICS OF INTEREST

The workshop on OWC aims to bring together researchers and developers from both academia and industry to present, share and discuss their latest work on OWC systems for terrestrial, space or underwater applications. The workshop cordially invites high-quality contributions covering the following topics based on original research. Topics of interest in the field of OWC include, but are NOT limited to, the following:

- Transceiver design and optimization
- OWC modulation, coding, and detection
- Optics design (lenses, concentrators, diffusers, etc.)
- Physical layer security for OWC
- Beam steering and alignment techniques for OWC
- Reconfigurable intelligent surfaces (RIS) for OWC
- Fading mitigation in FSO links: spatial, temporal, polarization, coding, and adaptive approaches
- Mobile-to-infrastructure and mobile-to-mobile optical communication
- Vehicle-to-vehicle and vehicle-to-traffic light optical communication
- OWC for satellite communication
- OWC transceiver design and optimization
- OWC link duplexing and multiple access techniques
- OWC interconnect in the datacenter
- Optical wireless sensor networks
- OWC for B5G/6G networks
- OWC for positioning
- Hybrid RF/THz/OWC links
- Underwater optical communication
- Ultraviolet communications