



# **ONDM2020 Call for Papers**

## **24<sup>th</sup> International Conference on Optical Network Design and Modelling**

**May 18 – 21, 2020**  
**Castelldefels, Barcelona, Spain**  
**<http://ondm2020.cttc.es>**

Following the tradition of previous editions, ONDM 2020 will address cutting-edge research in established areas of optical networking and their adoption in support of a wide variety of new services and applications. This includes the most recent trends such as 5G and beyond; data-center networking; Internet of things; cloud/edge computing and content delivery; big data, data analytics, network telemetry and real-time monitoring; autonomic networking and artificial intelligence / machine learning assisted networks; visible light networks; quantum secured networks, etc. Such trends drive the need for increased capacity, efficiency, flexibility and adaptability in the functions that the network can perform. In turn, these can be achieved by developing new optical network architectures, based on different optical network disaggregation models, exploiting and integrating novel multidimensional photonic technology solutions as well as adopting open and highly programmable hardware and software platforms such as software defined networking (SDN), and network function virtualization (NFV), to allow supporting new business models and opportunities. The scope of the conference includes but is not limited to the following topics:

- Advances in optical network modelling and optimization
- Routing and spectrum assignment in fixed and flex-grid optical networks
- Optical network availability, resilience, survivability, security and privacy
- Multi-layer (e.g. IP over optical) networking aspects
  
- Optical networks exploiting photonic integrated circuits
- Visible light communications and networks
- Optical and wireless network convergence, including radio-over-fiber access networks
- Optical networks in 5G
- Novel and multidimensional optical network architectures; multi-mode/few-modes optical networks
- Novel optical node designs including disaggregation and open optical line systems
- Optical networks in support of intra- / inter-data center connectivity and cloud/edge computing
  
- Optical network control, management and orchestration including SDN and NFV solutions
- Slicing, service chaining, virtualization and multi-tenancy techniques for optical networks
- Optical networking supporting low latency and high bandwidth network function virtualization
- Orchestration and control of IT and network resources in optical data-center networks
  
- Artificial Intelligence and data analytics techniques for optical networks
- Novel network telemetry and real-time monitoring technologies for optical networks
- Energy efficiency in optical networks
  
- Optical networking in support of vertical industries
- Field trials and interoperability demonstrations of optical networks
- Techno-economic studies of optical networks

## Submission

Authors are encouraged to submit either abstract papers (3 pages) or full papers (up to 6 pages) in standard IEEE conference style, describing original, unpublished research results, not currently under review by another conference or journal, addressing forefront research and development in the area of optical network design and modelling.

## ONDM2020 Chairs

### General Chairs

Raül Muñoz, CTTC, Barcelona, Spain

Ramon Casellas, CTTC, Barcelona, Spain

### TPC Chairs

Marija Furdek, Chalmers University of Technology, Sweden

Zuqing Zhu, University of Science and Technology of China (USTC), Hefei, Anui, P.R China

Salvatore Spadaro, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain

## ONDM Steering Committee

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Raül Muñoz – CTTC, Barcelona, Spain



## Important Dates

Submission Deadline: January 14, 2020

Acceptance Notification: March 17, 2020

Camera Ready Submission: March 31, 2020

## Organized by:



## Technical Co-Sponsors: