Optics and Photonics Days 2026 - Academic program

The academic program consists of plenary talks, four thematic sessions with selected oral presentations and two poster sessions covering all aspects of photonics. All topics are targeting presentation of novel research results covering fundamental science, technology aspects, and applications. The decision criteria for oral talks are novelty, relevance, and impact.

When submitting your work in Conftool, please select the topic(s) from the list below that best suits your submission. This is to assist with the review process. The final division in four oral sessions will be made based on the quality and amount of the submitted contributions. Submission topics are:

1. Materials and processing

This session explores one of the key building blocks of modern optics: the materials we use and the techniques required to fabricate them. We invite submissions detailing the synthesis, characterization, and structuring of optical materials that enable new functionalities. Topics include: metamaterials and metasurfaces, 2D materials (graphene, TMDs), nonlinear optical materials, plasmonic materials, and nanofabrication techniques. Hybrid integration methods to combine different materials are also included in this category.

2. Sensing and imaging

This session focuses on the applications of light to measure, detect, and visualize the world around us, from macro-scale remote sensing to nano-scale and quantum microscopy. We invite submissions in topics including spectroscopy, hyperspectral imaging, photonic sensors for physical and biochemical monitoring, super-resolution microscopy, biomedical imaging, LiDAR, and remote sensing. Also, the latest advancements in photonics-enabled data processing, machine learning and artificial intelligence are included in this session as are the utilization of quantum states for enhanced sensitivity (quantum sensing) and metrology.

3. Fundamental photonics (classical and quantum)

This theme covers all aspects of theoretical and experimental research dealing with fundamental understanding of both classical and quantum properties of light. The topics include studies on spatiotemporal fields, coherence, ultrafast optics, topological photonics, and light-matter interaction including opto-mechanics. This topic also covers photonics aspects where quantum phenomena play a significant role, such as, quantum entanglement, single-photon sources, cavity QED, and quantum information processing protocols.

4. Novel photonic devices

Novel active and passive photonic materials and structures are key elements in the development of components with enhanced performance or new functionalities. The topics on devices cover, for example, advancements concerning light modulators, detectors and solar cells, photonic integrated circuits (PICs), silicon photonics, micro-resonators, advanced laser sources, optical interconnects, and on-chip optical signal processing.