

## Preface

The 2021 annual congress of the European Optical Society (EOS), EOSAM, has been celebrated hybrid, both online and onsite at the same time for the first time in its history. This has been a bold yet necessary movement, forced by the exceptional circumstances of the global pandemic still faced world-wide. The hybrid format has been a great success and the response from the European optical community has risen to the occasion as is shown by the number and quality of the communications presented that are published in this volume.

The conference was held in September 13-17 in Rome Italy, bringing back the highly awaited international in-person events. EOS organized the conference in close co-operation with the Società Italiana di Ottica e Fotonica, SIOF, the Italian optical society Branch member of EOS, and the Università di Roma La Sapienza.

The hybrid conference has been extremely successful in its contribution to the main mission of the EOS: bring together and encourage the cooperation in Europe of all with an interest in optics, photonics and related scientific fields, to make practical use of research results, and to support the industrial exploitation of optics and photonics.

In total, 445 talks and posters were presented at the conference. The five-day onsite and online conference included several plenary talks, tutorials and other invited presentations given by outstanding scientists working in the most important areas of optics and photonics. In addition, submitted contributions were accepted on all topics, as oral and poster presentations.

Each session was held onsite in Rome, and streamed to attendees online. Discussions were held onsite together with online participants and speakers. In addition, a call was made for submission of selected papers for publication in JEOS:RP, the journal of the European Optical Society, covering the latest advances in both theory and applications of optics and photonics grouped on the following TOMs (Topical Meetings):

TOM1 Silicon Photonics and Guided-Wave Optics

TOM2 Computational, Adaptive and Freeform Optics

TOM3 Optical System Design, Tolerancing and Manufacturing

TOM4 Bio-Medical Optics

TOM5 Resonant Nanophotonics

TOM6 Optical Materials: crystals, thin films, organic molecules and polymers, syntheses, characterization and devices

TOM7 Thermal radiation and energy management

TOM8 Nonlinear and Quantum Optics

TOM9 Optics at Nanoscale (ONS)

TOM10 Optical Microsystems (OMS)

TOM11 Waves in Complex Photonic Media

TOM12 Optofluidics

TOM13 Ultrafast Optical Technologies and Applications

TOM14 Advances and Applications of Optics and Photonics

EU Project Session

Early Stage Researcher Session organised by SIOF

Grand Challenges of Photonics Session

We would like to express our gratitude to the European Optical Society, the Italian Optics and Photonics Society (SIOF), Università di Roma La Sapienza, and the chairs of the different TOMs for their support and help in the organization of the Conference. We finally want to acknowledge all the authors that have submitted their work to be included in this volume and very specially thank all those collaborating persons who acted as reviewers of the papers included in this volume for their excellent work.

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