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Manuel F. M. Costa
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Introduction

The Portuguese Society for Optics and Photonics (SPOF - Sociedade Portuguesa para a Investigação e Desenvolvimento em Óptica e Fotónica) successfully organized its Fourth International Conference on Applications of Optics and Photonics (AOP 2019) on 31 May–4 June 2019 at the University of Lisbon in the Portuguese capital of Lisbon.

Since 2011 the Portuguese Society for Optics and Photonics has celebrated optics and photonics and their remarkable contribution to the development of our societies and humankind by organizing the AOP international conferences. Our conferences are designed to foster the establishment of the widest range of cooperation projects and relationships with colleagues and institutions from all around the world while increasing the external visibility of Portugal's optics and photonics research.

8 plenary lectures and 24 keynote lectures covering all fields of optics and photonics delivered by a remarkable selection of world renowned scientists, set the quality level of excellence of an exciting scientific program with 232 presentations that gave a very good overview of the state of the art in optics and photonics research across the world pointing out perspectives of future developments.

The participation of students at AOP2019 was very important, as it was in the previous editions of the conference. More than one third of the 204 participants, which came from 31 countries, were students. Illustrating the vitality and growth potential of the research in optics and photonics in Portugal, over 44% of the Portuguese participants were highly committed and enthusiastic students. The support of the International Commission for Optics to the conference helped the participation of sixteen students. Several prizes were awarded to students.

The SPIE Best Student Paper were award to:

1st prize - Galina Nifontova, "Engineering of fluorescent biomaging tools for cancer cell targeting based on polyelectrolyte microcapsules encoded with quantum dots";

2nd prize - Duarte Viveiros, "Fabrication of periodic structures in optical fibers by femtosecond laser micromachining for sensing applications";

3rd prize - André Gomes, "Enhanced Temperature Sensing with Vernier Effect on Fiber Probe based on Multimode Fabry-Perot Interferometer".

To Catarina Monteiro, Universidade do Porto, (Portugal) "3D Prototyping of a Fiber Bragg Grating Vibration Sensor for Power Transformers", was awarded the Best Student Poster on Optical Communications and Sensors by OSA's Student Chapter of the University of Aveiro (Portugal) and SPOF (Portugal).

The 2016 and 2017 prizes of SPOF's Best PhD Thesis in Portugal in Optics and Photonics were awarded to Celso Manuel de Figueiredo Paiva João, Instituto Superior Técnico, Universidade de Lisboa (Portugal), "Diode-pumped solid-state lasers for optical parametric amplification pumping"; and to Ana Rita da Silva Rodrigues Ribeiro, Faculdade de Ciências da Universidade do Porto (Portugal) "Optical fiber tools for single cell trapping and manipulation", respectively.

The next edition of the AOP conference will be held 6–10 September 2021, at the University of Tras-os-Montes e Alto Douro in Vila Real in the north of Portugal. We are looking forward to welcome you all there!

Manuel F. M. Costa