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Jarmila Müllerová
Dagmar Senderáková
Libor Ladányi
Ľubomír Scholtz
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Introduction

The 20th Slovak-Czech-Polish Optical Conference on Wave and Quantum Aspects of Contemporary Optics (20th SCPOC) was held on 5–9 September, 2016 in the Wellness Grand Hotel, Jasná, located in the Demänovská Dolina Valley, one of the most beautiful valleys in the Low Tatras National Park, Slovakia.

The conference was a continuation of a series of regular meetings of Czech, Slovak and Polish optical communities started in Rusava (the Czech Republic), in 1972. In early 1990s, the meetings have grown to international conferences under the name, "Wave and Quantum Aspects of Contemporary Optics."

For over 40 years, the biennial conference organized in turn in Czechoslovakia and Poland and from 1996 in Slovakia, the Czech Republic and Poland, has become a place to exchange knowledge on the latest optical research, to meet friends and co-workers.

One of the most important aims of scientific conferences is to encourage and promote international collaboration and co-operation. Therefore it was great pleasure for the 20th Slovak-Czech-Polish Optical Conference to host almost 130 participants from 7 countries. The scientific programme comprised 18 invited talks, 52 contributed talks, and 48 poster presentations.

The contributions covered generally all aspects of optics, e.g. quantum and nonlinear optics, quantum information and cryptography, ultrafast optical phenomena, wave optics, interferometry and holography, optical technologies for optical communications and networks, waveguide and optoelectronics devices, laser physics, technology, photonic crystals, photonic nanostructures and integrated optics, biophotonics, design and manufacture of optical components and optical devices, optical materials, their fabrication and characterization, optical data storage and data processing, teaching and training in optics, optical imaging, sensing and metrology, etc.

This volume contains peer-reviewed submitted contributions based on presentations given at the conference, including invited lectures in the current fields of optics.

The International Scientific Committee has rated the scientific level of 20th SCPOC high. In particular, the presence of many young participants was greatly appreciated as the guaranty of the living future of common optical conferences. The 21st Czech-Polish-Slovak Optical Conference on Wave and Quantum Aspects of Contemporary Optics will be held in the Czech Republic in 2018.

Concluding, we would like to express our thanks to the members of the International Scientific Board and to the session chairs. We also would like to express our gratitude to the organizing organizations and sponsors and to the local organizing committee for their attitude and diligent work behind the scenes, resulting in great conference facilities.

The conference is still characterised by a special pleasant atmosphere created by the participants themselves above all. The gratitude belongs to each of them for their individual scientific and human contributions to exchanging ideas and experience, and keeping a warm spirit of friendship.

Jarmila Müllerová