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Introduction

This year in San Diego, California, we held the twelfth conference of Novel Optical Systems Design and Optimization. The conference was well attended and began with a session on Design in Computed Imaging and ended in a joint session with Current Developments in Lens Design and Optical Engineering. This year there were seven oral sessions and one poster session. The primary focus of the conference was the field of optical design for computed imaging sessions. The seven oral sessions had titles of: Design in Computed Imaging I and II, Illumination, Modeling, Systems, Education, and the Invited (joint) Session. These oral sessions covered one-and-a-half days of the entire Optics + Photonics 2009 meeting. Note that the joint session proceedings papers are contained in the Current Developments in Lens Design and Optical Engineering X volume.

The Design in Computed Imaging sessions predominately focused on coding methods to address defocus, depth of field, and image artifacts. The Illumination session presented investigations of lighting, source measurement, and day-lighting. The Modeling session tackled new methods of designing imaging optics, while the Systems session looked at the optics in a number of optical systems. The Education session, which may be spun out into its own conference in the near future, looked at optics from the primary to college levels. The joint session had three invited speakers to introduce the audience to new ways that optical design is and can be a factor in our daily lives.

There were a number of invited papers over the duration of the conference:

- A discussion by Tom Vettenburg from Heriot-Watt University (United Kingdom) using phase masks to increase defocus tolerance in digital imaging systems
- A paper given by Dirk Robinson, Guotong Feng, and David Stork about spherically coded imaging to improve lens performance
- Jay Enoch of the University of California, Berkeley gave a paper on the history of imaging optics, showing their use thousands of years ago
- Ken Rockwell presented insights from the non-optical design community on what is practical and what is not
- Yongtian Wang gave a talk about display systems for mixed (i.e., real and virtual concurrently) applications.

As can be seen, the invited topics covered a large breadth of the field of optical design and engineering. It indicates that the optical design community is still working on challenging problems and also that the range of fields calling on optical engineering is increasing. This breadth led to lively and interesting discussions following each paper. Additionally, these discussions were carried into the hallways following each session. In conclusion, the Novel Optical Systems

Design and Optimization conference continues to build upon previous years. It is expected that next year's conference will maintain this growth.

Our thanks go to those who helped make this conference a success, especially the authors, audience, SPIE staff, and program committee. The authors on their own made this conference an unqualified success. The audience built upon this success by being active and asking engaging questions. The SPIE staff ensured that everything ran smoothly before, during, and after the meeting. The program committee provided excellent assistance to ensure the quality of the content while also presiding over a number of the sessions.

Next year, we will return for the thirteenth iteration of this conference. The chairs will remain for as Groot Gregory and John Koshel. The planning for Novel Optical Systems Design and Optimization XIII in 2010 is already under way, so please start planning submissions, questions, and attendance. Focus themes are being decided at this time. If you would like to assist with the 2010 or later conference, please contact one of us. We look forward to seeing you in 2010!

R. John Koshel
G. Groot Gregory