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Arthur J. Davis
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1 Phase Space and Telecentric Optics
R. John Koshel, College of Optical Sciences, The University of Arizona (United States)

Introduction

This year in San Diego, California, we held the seventeenth conference of Novel Optical Systems Design and Optimization. The conference was very well attended and featured oral presentation topic tracks in: Phase Space and Telecentric Optics, Computational Methods: Algorithms and Analysis, Computational Methods: Simulation, Adaptive Optics, Optics and Sound, Instrumentation, Cameras and Camera/Projector Systems, Laser Systems, and Optical Networks. In addition, there was a poster session, a joint Optical Engineering Plenary Session, and Technical Group Events.

The conference started with a session of Phase Space Optics delving into an alternative way to think about rays and wavefronts. Two sessions were devoted to Computational Methods describing new techniques to design and use optical systems. The session on Adaptive Optics looked at ways to reform optical surfaces in dynamic applications. A session of optical Instrumentation covered optical systems for inspection and imaging. Camera and Projector Systems were described in a separate session with designs for zoom lenses, micro optics, and time resolved recording. The session Laser Systems provided talks on laser design, amplification and manufacturing. The final session on Optical Networks discussed methods of efficiently connecting users to data networks.

Three invited papers were presented during the conference;

- Mohamad Asghari of the Univ. of California showed how a technique called the Anamorphic Stretch Transform can help alleviate data growth due to storing images in big data.
- Peter Goldstein of Philips Color Kinetics presented his work LED source modeling and the sampling of Luminance images to generate ray data.
- Cornelius Hahlweg from bbw Hochschule discussed the effects of sound and light stimuli on human behavior. This talk concluded our focus on optics and music.

The Novel Optical Systems Design and Optimization committee continued to explore some new technology niches this year and this seems to have been a successful and positive endeavor. We look forward to continuing this effort next year!

Our thanks go to those who helped make this conference a success, especially the authors, audience, SPIE staff, and program committee. The authors share the credit for making 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. It was composed of Jost Adam,

W. Andrew Cheng, Jyh-Long Chern, Peter I. Goldstein, Cornelius F. Hahlweg, Richard C. Juergens, R. John Koshel, Scott A. Lerner, Paul K. Manhart, Joseph R. Mulley, Jorge Ojeda-Castaneda, Craig Olson, Kevin P. Rolland-Thompson, José Sasián, David L. Shealy, and Haiyin Sun.

Next year we will return for the eighteenth iteration of this conference. The chairs will be G. Groot Gregory and Arthur J. Davis. The planning for Novel Optical Systems Design and Optimization XVIII in 2015 is already underway, so please start planning submissions, questions, and attendance. Focus themes are being decided at this time. If you would like to assist with the 2015 or later conference please contact one of us. We look forward to seeing you in 2015!

G. Groot Gregory
Arthur J. Davis