

PROCEEDINGS OF SPIE

# ***Novel Optical Systems Design and Optimization XVI***

**G. Groot Gregory**  
**Arthur J. Davis**  
*Editors*

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## Introduction

This year in San Diego, California, we held the 16th conference of Novel Optical Systems Design and Optimization. The conference was very well attended and featured oral presentation topic tracks in: Micro Optics, Novel Systems, Telecommunications, Optics and Music, Computational Tools, and Remote Sensing. In addition, there was a poster session, a joint Optical Engineering Plenary Session, and Technical Group Events.

This year's session on Music and Optics explored the effects of optics components in music with audio demonstrations and included research on the effects of sounds and light that may be encountered by audience members at clubs and concerts. The session on Telecommunications shared ideas on encrypted communications to improving the power and cost effectiveness in optical networks.

Two invited papers were presented during the conference;

- Dr. John Koshel from Photon Engineering and the College of Optical Sciences at the Univ. of Arizona presented his work on tolerancing freeform optical systems with extended sources using ray targeting.
- Dr. Jim Schwiegerling from the College of Optical Sciences at the University of Arizona discussed the relationship between transverse ray errors and light fields in plenoptic cameras.

The Novel Optical Systems Design and Optimization committee wanted 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 Andrew Cheng, Jyh-Long Chern, Peter Goldstein, Frank Grochocki, Andrew Harvey, Cornelius Hahlweg, Richard Juergens, John Koshel, Scott Lerner, Rongguang Liang, Paul Manhart, Rubén Mohedano, Jorge Ojeda-Castañeda, Craig Olson, Andrew Rakich, Michael Robinson, Kevin Rolland-Thompson, José Sasián, David Shealy, Andrew Sparks and Marija Strojnik Scholl.

Next year we will return for the 17th iteration of this conference. The chairs will be Groot Gregory and Arthur Davis. The planning for Novel Optical Systems Design and Optimization XVII in 2014 is already underway, so please start planning submissions, questions, and your attendance. Focus themes are being decided at this time. If you would like to assist with the 2014 or later conference please contact one of us. We look forward to seeing you in 2014!

**G. Groot Gregory**  
**Arthur J. Davis**