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Paul F. McManamon
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Contents

vii	Conference Committee
ix	Introduction

SESSION 1 ACQUISITION AND TRACK PHASE ARRAY OF PHASED ARRAYS DEVELOPMENT

- 8395 04 **Active multi-aperture imaging through turbulence** [8395-03]
N. J. Miller, Univ. of Dayton (United States); J. J. Widiker, MZA Associates Corp. (United States); P. F. McManamon, J. W. Haus, Univ. of Dayton (United States)
- 8395 05 **Real-time coherent phased array image synthesis and atmospheric compensation testing (Invited Paper)** [8395-04]
J. J. Widiker, MZA Associates Corp. (United States); N. J. Miller, Univ. of Dayton (United States); M. R. Whiteley, MZA Associates Corp. (United States)
- 8395 06 **Wavefront control in a spatial heterodyne-based multi-aperture imager** [8395-05]
G. M. Wu, N. J. Miller, P. F. McManamon, Univ. of Dayton (United States); E. A. Watson, Air Force Research Lab. (United States); J. W. Haus, Univ. of Dayton (United States)

SESSION 2 AERO-OPTICAL I

- 8395 07 **The Airborne Aero-Optics Laboratory, AAOL (Invited Paper)** [8395-06]
E. J. Jumper, M. Zenk, S. Gordeyev, D. Cavalieri, Univ. of Notre Dame (United States); M. R. Whiteley, MZA Associates Corp. (United States)
- 8395 08 **The Airborne Aero-Optics Laboratory, recent data (Invited Paper)** [8395-07]
N. De Lucca, S. Gordeyev, E. Jumper, Univ. of Notre Dame (United States)

SESSION 3 AERO-OPTICAL II

- 8395 09 **Spatial and temporal characterization of AAOL flight test data (Invited Paper)** [8395-08]
D. J. Goorskey, R. Drye, M. R. Whiteley, MZA Associates Corp. (United States)
- 8395 0A **AAOL wavefront data reduction approaches (Invited Paper)** [8395-09]
S. Abado, S. Gordeyev, E. Jumper, Univ. of Notre Dame (United States)
- 8395 0B **Receding-horizon adaptive control of aero-optical wavefronts (Invited Paper)** [8395-10]
J. Tesch, S. Gibson, Univ. of California, Los Angeles (United States)
- 8395 0C **Recent measurements of aero-optical effects caused by subsonic boundary layers (Invited Paper)** [8395-11]
A. E. Smith, S. Gordeyev, E. J. Jumper, Univ. of Notre Dame (United States)

8395 0D **Aero-optical analysis of turbulent boundary layer and separated shear layer using large-eddy simulation (Invited Paper)** [8395-12]
K. Wang, M. Wang, Univ. of Notre Dame (United States)

8395 0E **Aero-optical jitter estimation using higher-order wavefronts (Invited Paper)** [8395-13]
M. R. Whiteley, D. J. Goorskey, R. Drye, MZA Associates Corp. (United States)

SESSION 4 OPTICAL BEAM STEERING COMPONENTS AND CONTROL SYSTEMS

8395 0F **Polarization gratings for non-mechanical beam steering applications (Invited Paper)** [8395-14]
J. Buck, S. Serati, L. Hosting, R. Serati, H. Masterson, Boulder Nonlinear Systems (United States); M. Escuti, J. Kim, M. Miskiewicz, North Carolina State Univ. (United States)

8395 0G **Progress on large-area polarization grating fabrication (Invited Paper)** [8395-15]
M. N. Miskiewicz, J. Kim, Y. Li, R. K. Komanduri, M. J. Escuti, North Carolina State Univ. (United States)

8395 0I **High-frame rate Shack Hartmann wavefront sensor based on flexible read-out technique for C-MOS image sensor** [8395-17]
J. Suzuki, T. Ando, Mitsubishi Electric Corp. (Japan)

8395 0J **Refractive beam shaping optics to improve operation of spatial light modulators** [8395-18]
A. Laskin, V. Laskin, AdlOptica Optical Systems GmbH (Germany)

8395 0K **Next-generation inductive transducers for position measurement** [8395-19]
M. A. Howard, Zettlex UK Ltd. (United Kingdom)

8395 0M **2-port internal model control for gyro stabilized platform of electro-optical tracking system** [8395-21]
Y. Xia, Institute of Optics and Electronics (China) and Graduate School of the Chinese Academy of Science (China); Q. Bao, Z. Li, Q. Wu, Institute of Optics and Electronics (China)

SESSION 5 IMAGE AND SIGNAL PROCESSING FOR TARGET TRACKING APPLICATIONS

8395 0O **Determination of feature generation methods for PTZ camera object tracking** [8395-23]
D. D. Doyle, J. T. Black, Air Force Institute of Technology (United States)

8395 0P **Autonomous intelligent modular surveillance system (AIM2S)** [8395-24]
V. Markov, A. Khizhnyak, Advanced Systems & Technologies, Inc. (United States); J. Chavez, Air Force Research Lab. (United States); S. Kupiec, Advanced Systems & Technologies, Inc. (United States); D. A. Erwin, The Univ. of Southern California (United States); S. Liu, The Aerospace Corp. (United States)

- 8395 OR **Polynomial fitting adaptive Kalman filter tracking and choice of correlation coefficient**
[8395-26]
K. Ausfeld, Z. Ninkov, Rochester Institute of Technology (United States); P. P. K. Lee,
J. D. Newman, G. Gosian, ITT Exelis Geospatial Systems (United States)

Author Index

Conference Committee

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- 1 Acquisition and Track Phase Array of Phased Arrays Development
Paul F. McManamon, Exciting Technology, LLC (United States)
- 2 Aero-Optical I
Eric J. Jumper, University of Notre Dame (United States)
- 3 Aero-Optical II
Eric J. Jumper, University of Notre Dame (United States)

- 4 Optical Beam Steering Components and Control Systems
 Edward A. Watson, Air Force Research Laboratory (United States)
- 5 Image and Signal Processing for Target Tracking Applications
 William E. Thompson, New Mexico Institute of Mining and Technology
 (United States)

Introduction

The SPIE Acquisition, Tracking, Pointing and Laser System Technologies conference continues a tradition of providing a venue for the presentation of new research and a well-documented annual assessment of on-going, practical acquisition, tracking, and pointing technology. Locating, identifying, locking onto, and maintaining track on dynamic targets is absolutely essential for precision photonic and optical systems to be able to achieve their performance goals. This year, two sessions on aero-optics were added, examining the optical effects of subsonic and transonic aerodynamic flows around the apertures of airborne optical beam control systems. We extend thanks to Professor Eric Jumper, Notre Dame University, and his team, for organizing these sessions and presenting the results of their current research in this field. The conference has focused on both theory and practice and has spanned all aspects of design, analysis, simulation, development, and testing. As a result, the last twenty-six years of proceedings from this conference provide a comprehensive history of the major technical developments within this field. The conference also includes other optics and beam control technologies, such as adaptive optics and precision line-of-sight stabilization, which are needed for many implementations of laser-based acquisition, tracking, and pointing systems in the field.

The specific advancements included in the 2012 conference reported in these proceedings include: acquisition and tracking in phased array optical systems, image and signal processing for target tracking, control systems and components, and finally the sessions on aero-optic effects.

The two and a half decade long-running success of this SPIE conference is clearly dependent on many authors and their sponsoring organizations who freely share their work with others. We extend a sincere appreciation to each of these contributors, as well as our fellow conference organizers who actively encourage their colleagues and professional associates to be a part of this event. We also recognize and appreciate the excellent SPIE staff that makes organizing these conferences such a pleasant experience.

Watch for the call for papers for the 2013 conference: Acquisition, Tracking, Pointing, and Laser Systems Technologies XXVII. We expect to continue the present scope of the conference with only minor changes.

William E. Thompson
Paul F. McManamon