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Jeffery J. Puschell
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Introduction

Remote Sensing System Engineering VI was held 31 August - 1 September 2016, at the San Diego Convention Center as a part of the SPIE Optics+Photonics symposium in the Remote Sensing track of Optical Engineering+Applications. The goals of the conference were, first and foremost, to exchange critical and invaluable lessons learned and best practices in the systems engineering of ground-, air-, and space-based remote sensing systems. Additional goals were to share existing and emerging design approaches, engineering methods, tools, and future trends for engineering remote sensing systems.

Chaired by Dr. Jeffery J. Puschell (Raytheon Space and Airborne Systems) and Dr. Philip E. Ardanuy (Innovim), the conference featured remarkably diverse and interesting presentations on environmental remote sensing, advanced concepts, land and ocean remote sensing, space applications and enabling technologies across five oral sessions, plus additional presentations in a poster session. Authors and other participants came from around the world to participate in this conference, with European and Asian engineers and scientists joining their American systems engineering colleagues. Discussion topics included: systems engineering best practices and lessons learned; system architecture and design; requirements, performance metrics, and measures of success; modeling and simulation tools and methods; design and integration of distributed architectures; use of commercial assets in future remote sensing systems; bridging and balancing across the science-to engineering and technologist-to-end-user valleys of "death and lost opportunities"; and the end user, effective data/information/system utilization, and optimum return on investment.

The conference chairs thank the presenters and authors for their fascinating and innovative contributions, which spanned the full diversity of the field. Presentations included the following papers published in these proceedings:

- System engineering of the visible infrared imaging radiometer suite (VIIRS): improvements in imaging radiometry enabled by innovation driven by requirements by Jeffery J. Puschell of Raytheon Space and Airborne Systems
- Airborne 2micron IPDA Lidar for atmospheric CO₂ measurement by Jirong Yu of NASA Langley Research Center
- Close-range photogrammetry in underground mining ground control by Donovan Benton of The National Institute for Occupational Safety and Health
- Distributed fiber-optic sensing in a high temperature solid-oxide fuel cell by Michael P. Buric of the National Energy Technology Laboratory
- Initial results for the vicarious calibration of Landsat 8 using the specular array radiometric calibration (SPARC) method by Stephen J. Schiller of Raytheon Space and Airborne Systems

- SeaHawk CubeSat system engineering by Carl F. Schueler, Schueler Consulting-Santa Barbara
- Coastal water camera system by Jeffery J. Puschell, Raytheon Space and Airborne Systems
- A conjunct near-surface spectroscopy system for fix-angle and multi-angle continuous measurements of canopy reflectance and sun-induced chlorophyll fluorescence by Qian Zhang of Nanjing University
- Trajectory determination of orbital objects using passive and active optical methods by Paul Wagner of Deutsches Zentrum für Luft- und Raumfahrt e.V.
- Areosynchronous weather imager by Jeffery J. Puschell of Raytheon Space and Airborne Systems
- Joint accurate time and stable frequency distribution infrastructure sharing fibre footprint with research network by Josef Vojtech of CESNET z.s.p.o.
- Path loss analysis in millimeter wave cellular systems for urban mobile communications by Ramesh Rajagopalan, University of St. Thomas.

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