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***Independent Component Analyses,
Compressive Sampling, Wavelets,
Neural Net, Biosystems, and
Nanoengineering XII***

**Harold H. Szu
Liyi Dai**
Editors

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Introduction

Baltimore Maryland, Inner Harbor Convention Center — This year's exciting conference proceeding features frontier S&T research in Human Components - Compressive Sensing, ICA, Nano-engineering, Biomedical Wellness Engineering, and System Biology. The Wavelet 'sensory system' Pioneer Award was folded into a new and emerging category called Large Data Analysis. Through the tremendous contributions from authors, presenters, and attendees, new ideas and technologies can be carried to the world and serve the aging global village.

Historically, our section has been part of the SPIE Defense, Security and Sensing Symposium, and is now highlighted in the brand new Sensing Technology + Applications section (STA). The conference proceedings will serve as a wonderful summary of the work presented this year, but nothing can replace physically attending and interacting with our talented scientists and investigators. The Pioneer Awardees for this year were selected by past recipients, and the nomination and selection committee was chaired by the recipients listed below. The 2014 recipients of the following pioneer awards will serve as the nomination selection committee chair or co-chair for next year's conference:

The 2014 Pioneer Award recipients are:

- Compressive Sampling Pioneer Award, Michael Lustig, University of California, Berkeley
- Large Data Analysis Pioneer Award, John Daugman, University of Cambridge
- Unsupervised Learning ICA Pioneer Award, Jong-Hwan Jay Lee, Korea University
- Nano-engineering Pioneer Award, Chair: Ritesh Agarwal, University of Pennsylvania
- Biomedical Wellness Pioneer Award, Chair: Elisa Konpfigou, Columbia University
- Systems Biology Pioneer Award, Chair: Scott Fraser, University of Southern California

We thank you for making 2014 a successful and memorable year, and encourage past, present, and future associates to participate in the knowledge discovery and sharing through SPIE.

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**Harold H. Szu
Liyi Dai**