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Introduction

The 2016 Micro- and Nanotechnology (MNT) Sensors, Systems, and Applications VIII conference during the SPIE Defense and Security Symposium, was held in Baltimore, Maryland, 17-21 April, 2016.

Once again, thanks to the extraordinary efforts of our session chairs, a total of 17 conference sessions were successfully concluded, showcasing the broad and varied vistas in MNT. Cutting-edge sessions captured exciting emerging trends in: Novel Techniques in Image Processing and Detection; Metamaterials/Metasurfaces; Integrated Analog Photonics; Novel Harsh Environment Sensors for Energy Applications; Co-located Sensors, Electronics and Powering Devices for Extreme Environments; Human-Interface Sensors and Electronics; Smart Service Systems for Mobile Health and Telemedicine; Novel Nanophotonic Devices, Sensors, and Concepts Based on 2D Materials; "Killer" Applications for Flexible-Stretchable-Reconfigurable Electronics; Multifunctional Nanoparticles for Biomedical Research; Micro Autonomous Systems Technology: Alternative Navigation & Human in the Loop; Soft Robotics; Standoff Detection with Quantum Cascade Lasers (QCLs); Novel QCL Technology; and THz Imaging.

Successful joint sessions were conducted with the Unmanned Systems Technology conference (9468) and the Open Architecture/Open Business Model Net-Centric Systems and Defense Transformation conference (9479).

It is our sincere hope that the papers within this proceedings volume will provide you, our reader, not only with a snapshot of the programmatic vision behind investments made in each MNT topic area but also its current state of scientific and technological development. Enjoy!

Thomas George
Saif Islam
Achyut Dutta