

## **II. Sensor & Systems Applications**

### **(D) Imaging Data Processing and Display Technologies**

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There is intense research in the fields of novel imaging and display technologies. The incorporation of new materials has enabled portable, light-weight, and energy efficient high performance imagers and displays. The advent of nanomaterials and nanocomposites such as 2D, 1D and 0D quantum confined structures, nanotubes, and carbon and diamond films have shown potential in revolutionizing these technologies and enabling display interface technology. Moreover, display technologies based on OLED, quantum-dot light-emitting devices, miniature cathode ray tubes, and microCRTs are well-suited for portable and personal battery-powered consumer products. Display interface technology can include touch screens, soft buttons, and related display peripheral technology. The session invites abstracts covering related nanomaterials for displays, thin film transistors, flexible color filters, flexible transparent conductors, and human interfaces such as touch screens. In addition to novel hardware imaging technologies, this session also invites abstracts of work on data, image and information processing techniques, especially those that are relevant to emerging imaging technologies. Topics of interest include data-processing algorithms for the purpose of (1) enhancing image and video quality and (2) enabling efficient extraction of information from the data for the sake of image analysis and/or data compression. Techniques relevant to this session include but are not limited to: noise modeling and compensation, motion estimation and compensation, resolution enhancement, image compression and coding, novel feature-extraction methods, pattern recognition, multi-scale signal analysis, classification, and projection techniques. Finally, abstracts are also invited in the area of novel imaging methodologies. Abstracts on the subject of nanomaterials as enablers of new modes of functionality as well as improved operating characteristics of imagers are encouraged.