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Hyperspectral/Multispectral Sensing Technologies for Spectral Cameras and Image Sensors

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Message from the Guest Editors

Spectral imaging, enabled by spectral cameras and optical sensors, can detect optical characteristics in objects that are typically unseen by traditional cameras or the human eye. These spectral attributes directly correspond to the chemical composition of an object, facilitating tasks such as object detection, identification, classification, segmentation, and enhanced color characterization.

This special issue tries to address recent advancements in spectral camera technologies, focusing on both hyperspectral and multispectral imaging systems. It covers key aspects such as spectral camera design, spectral imaging, spatial resolution, optical camera communication and signal processing, along with their advantages and limitations. Emphasizing the significance of this technology in environmental monitoring, precision agriculture, medical diagnosis, material characterization and sensing.

Keywords:

- Hyperspectral/Multispectral imaging
- Spatial and spectral resolution
- Optical camera communications
- Imaging modalities
- Optical wireless sensor network
- Spectral Signature Multiplexing
- Spectral cameras



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Special Issue



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Message from the Editor-in-Chief

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