Special Issue

Advanced Hyperspectral Imaging: Techniques, Data Analysis, and Applications

Message from the Guest Editor

Hyperspectral imaging (HSI) is an effective technique for identifying targets in cluttered backgrounds across industrial, agricultural, environmental, and defense sectors. Recent research integrates deep learning (DL) and artificial intelligence (AI) for enhancing imaging hardware, including snap-shot multispectral and hyperspectral imagers, and for detecting subpixel targets in complex backgrounds. While conventional methods like compressive sensing, multivariate analysis, and likelihood approaches have been successful, AI-based techniques combined with traditional methods show great promise in target detection. This Special Issue focuses on DL and AI in solving real-world problems, especially for long-range target detection. Topics of interest include multiplex image acquisition, super-resolution, supervised/unsupervised target detection, transfer learning, band selection, network optimization, and self-organized DL. Comparisons of AI and conventional methodologies are also welcome.

Guest Editor

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Message from the Editor-in-Chief

The imaging term, specific with journal, is to be considered in its broadest sense. Image processing, image understanding and computer vision are all terms related to imaging acquisition, its processing and the extraction of relevant information from the scene to obtain the underlying knowledge. All tasks related to the above items are oriented toward specific applications in a broad range of areas and topics. The *Journal of Imaging* is conceived as an efficient vehicle in the scientific community for the communication and transmission of the progress and research results in the topics covered.

Editor-in-Chief

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