Special Issue

Innovations in Hyperspectral Image Processing: Advancing Image Generation, Denoising, Fusion Techniques and Beyond

Message from the Guest Editors

Hyperspectral imaging (HSI) can capture hundreds of narrowband spectral responses, providing richer information than traditional imaging. Obtaining high-quality hyperspectral data is key to subsequent applications. Recovering clean data from degraded observations is a classic inverse problem, relying heavily on prior knowledge. Hyperspectral data inherently contain rich spectral and image information. Over the recent two decades, numerous statistical regularization-based models for hyperspectral restoration have emerged, offering good interpretability and transferability. However, such models struggle to capture the data's rich structural and texture features. Meanwhile, deep learning has shown strong feature extraction capabilities and effectiveness in restoration tasks but often faces generalization issues. Thus, effectively integrating model-based approaches and data-driven techniques is key for hyperspectral restoration. This Special Issue aims to identify innovative research that provides deep insights into HSI processing and to provide a community platform for related scholars to share ideas.

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Deadline for manuscript submissions

28 December 2025

Remote Sensing

an Open Access Journal by MDPI

Impact Factor 4.1
CiteScore 8.6

mdpi.com/si/228181

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Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

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