

Special Issue

Efficient Representation Learning in Hyperspectral Remote Sensing: Dimensionality Reduction Methods and Intelligent Interpretation Applications

Message from the Guest Editors

This Special Issue focuses on efficient representation learning and intelligent interpretation in hyperspectral remote sensing. It welcomes studies on theoretical methods, model design, algorithm optimization, data fusion, task adaptation, and application validation, with the aim of promoting efficient data representation, intelligent understanding, and practical applications in complex remote sensing scenarios. Topics of interest include, but are not limited to:

- Efficient representation learning for hyperspectral imagery;
- Band selection and feature extraction;
- Spectral-spatial feature modeling and semantic representation;
- Deep learning, self-supervised learning, and foundation models for hyperspectral analysis;
- Domain adaptation, transfer learning, and generalizable hyperspectral interpretation;
- Graph learning, attention mechanisms, and transformer-based methods;
- Lightweight, efficient, and deployable hyperspectral interpretation models;
- Explainable and physically informed hyperspectral learning methods;
- Intelligent applications such as classification, target detection, anomaly detection, unmixing, change detection, and environmental monitoring.

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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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