Special Issue

From Pixels to Spectra: Towards Generalizable Large Models for Hyperspectral Remote Sensing

Message from the Guest Editors

In recent years, high-resolution data from space satellites and unmanned aerial vehicles have increased sharply, and hyperspectral remote sensing has gradually become a key means for achieving high-precision Earth observation. Although deep learning has made significant progress in feature extraction and spectral space modeling, most existing methods are targeted at specific tasks and supervised data. Therefore, the emergence of large-scale visual language models and inference models has provided new opportunities for constructing generalizable and reusable representations in various hyperspectral tasks. This Special Issue welcome original research on hyperspectral interpretation based on large-scale pre-training, multi-task learning, spectral space transformation, and general models adapted to hyperspectral data. The topics include but are not limited to hyperspectral feature learning, spectral decomposition, general models, semantic segmentation, and change detection. We also encourage the submission of practical applications in agriculture, urban monitoring, mineral mapping, and environmental assessment.

Guest Editors

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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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