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IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

Special Issue on

"Recent Advances in Remote Sensing Image Super-Resolution for Earth Observation"

High-resolution remote sensing images are crucial for a wide range of earth observation applications, including urban planning, land cover classification, agricultural monitoring, disaster management, and environmental analysis. However, due to limitations in imaging sensors and transmission capabilities, remote sensing images often suffer from low spatial resolution in practical. To overcome the challenge of acquiring high-resolution imagery with sufficient coverage and frequency, remote sensing image super-resolution (SR) techniques have emerged as a promising solution, by enhancing the spatial resolution of the existing remote sensing images to meet the increasing demand for detailed and accurate information. In recent years, significant progress has been made in the field of remote sensing image super-resolution, fueled by advancements in deep learning, image processing, and computer vision. These techniques offer promising solutions to generate high-resolution images from low-resolution inputs, providing valuable insights for earth observation applications.

By exploring the recent advances in remote sensing image super-resolution and their applications in earth observation, this special issue aims to present state-of-the-art techniques, address challenges, and explore novel approaches for enhancing the spatial resolution of remote sensing images, ultimately improving the accuracy and quality of remote sensing data analysis for earth observation applications.

The broad topics include (but are not limited to):

- Deep learning-based super-resolution methods for remote sensing images
- Multi-modal remote sensing image super-resolution techniques
- Fusion of remote sensing data with auxiliary information for super-resolution
- Domain adaptation and transfer learning for remote sensing image super-resolution
- Reconstruction and restoration of multi/hyperspectral remote sensing images
- Integration of super-resolution with object detection and recognition in remote sensing
- Super-resolution for remote sensing video sequences
- Quality assessment and evaluation metrics for super-resolved remote sensing images
- Applications of remote sensing image super-resolution in environmental monitoring, land cover classification, agriculture, urban planning, and disaster management

Schedule

01 Apr 2024 Submission system opening
31 Dec 2024 Submission system closing

Format

All submissions will be peer reviewed according to the IEEE Geoscience and Remote Sensing Society guidelines. Submitted articles should not have been published or be under review elsewhere. Submit your manuscript on http://mc.manuscriptcentral.com/jstars, using the Manuscript Central interface and select the "**Recent Advances in Remote Sensing Image Super-Resolution for Earth Observation**" special issue manuscript type. Prospective authors should consult the site https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9082768 for guidelines and information on submission. All submissions must be formatted using the IEEE standard format (double column, single spaced). Please visit http://www.ieee.org/publications_standards/publications/authors/author_templates.html to download a template for transactions. Please note that as of Jan. 1, 2024, IEEE J-STARS, being a fully open-access journal since 2020, charges a flat publication fee $1,496 per paper.

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