



## CALL FOR PAPERS

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

#### Special Issue on

#### “AI-Driven Multimodal Remote Sensing for Forestry Monitoring and Management”

Under the global context of climate change, forests—one of the most essential natural resources on Earth—play an irreplaceable role. They serve not only as reservoirs of biodiversity but also as major carbon sinks, contributing significantly to climate regulation, soil and water conservation, and the maintenance of ecological balance. However, in the face of increasingly severe environmental challenges, the protection and sustainable utilization of global forest resources have become more urgent than ever.

Remote sensing technologies, especially when integrated with artificial intelligence (AI) and multimodal data, offer new opportunities for efficient forest monitoring, change detection, and ecological restoration. By fusing data from various remote sensing platforms (including but not limited to hyperspectral, LiDAR, SAR, and optical imagery) and leveraging AI techniques and deep learning algorithms, it is possible to analyze forest dynamics, carbon storage estimation, and ecological processes with greater efficiency and precision, thereby supporting science-based decision-making for forest protection and management. This Special Issue of IEEE JSTARS aims to explore and highlight the innovative applications of AI-driven multimodal remote sensing methods in forestry monitoring, assessment, and management. We invite submissions of original research papers, technical developments, and comprehensive reviews focusing on algorithmic innovation, remote sensing data fusion, and the practical application of AI in forest ecological modeling, wildfire early warning, and sustainable management. This Special Issue seeks to foster interdisciplinary collaboration and innovation, contributing to forest restoration and the harmonious coexistence between humans and nature.

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

- Innovative Methods and Developments in Forest Cover Change Detection and Forest Classification Using Multimodal Remote Sensing Data
- Novel Deep Learning Fusion Algorithms for Multimodal Data Integration (hyperspectral, LiDAR, SAR, and optical imagery, etc.)
- AI Algorithm Innovation and Optimization Methods for Forestry Remote Sensing Analysis
- AI-Based Early Warning and Risk Assessment of Forest Fires
- Forest Species Distribution Prediction and Habitat Restoration Using AI and Multimodal Remote Sensing Data
- AI-Assisted Forest Health Monitoring and Pest/Disease Detection
- AI-Driven Forest Degradation Detection and Restoration Effectiveness Evaluation
- Applications of Large-Scale Deep Learning Models in Forest Ecosystem Modeling and Dynamic Simulation

#### Schedule

Mar. 01, 2026 Submission system opening

Sept. 30, 2026 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 “**AI-Driven Multimodal Remote Sensing for Forestry Monitoring and Management**” special issue manuscript type. Prospective authors should consult the site <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&number=9082768> for guidelines and information on paper 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](http://www.ieee.org/publications_standards/publications/authors/author_templates.html) to download a template for transactions. Please note that since Jan. 1, 2025, IEEE J-STARS, as a fully open-access journal, is charging a flat publication fee of \$1,800 per paper.

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