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IEEE Geoscience and Remote Sensing Magazine

Special issue on “UAV remote sensing”

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Recent advancements in UAV technology have revolutionized remote sensing research by providing a cost-effective solution for high-frequency, high-resolution, and on-demand data collection. UAVs are widely used in various remote sensing missions such as surveillance, environmental monitoring, wildlife conservation, ecology research, urban planning, precision agriculture, atmospheric research, marine research, search and rescue, and disaster management. The integration of UAVs with advanced technologies such as artificial intelligence, information geography, and big data analytics has further enhanced the efficiency and accuracy of data processing and interpretation, leading to more informed decision-making. This special issue aims to highlight the latest advancements of UAV technology in remote sensing tasks.

This special issue accepts papers on the following topics (but are not limited to):

- UAV remote sensing data processing and enhancement, including image fusion, noise reduction, shadow removal, and defect repair
- Object detection, classification, and semantic analysis from UAV-acquired imagery
- 3D target reconstruction using UAV remote sensing data
- Quantitative inversion theories, methods, and recent advances using UAV data
- Advanced sensors and monitoring systems for UAV platforms
- Integration of UAV remote sensing with AI, big data analytics, and information geography.
- Applications and case studies: precision agriculture, atmospheric monitoring, disaster management, urban environments, lakes, oceans, glaciers, and natural resource monitoring
- Integrated sensing and communication related to UAVs
- Reliability, safety, and risk assessment in UAV remote sensing operations

Articles submitted to this special issue of the IEEE Geoscience and Remote Sensing Magazine must contain significant relevance to geoscience and remote sensing and should have noteworthy technical/tutorial/review value. Selection of invited papers will be done on the basis of 4-page White papers, submitted in double-column format. These papers must discuss the foreseen objectives of the paper, the importance of the addressed topic, the impact of the contribution, and the authors' expertise and past activities on the topic. Contributors selected on the basis of the White papers will be invited to submit full manuscripts. Manuscripts should be submitted online at http://mc.manuscriptcentral.com/grsm using the Manuscript Central interface. Prospective authors should consult site http://ieeexplore.ieee.org/servlet/opac?punumber=6245518 for guidelines and information on paper submission. Submitted articles should not have been published or be under review elsewhere. All submissions will be peer reviewed according to the IEEE and Geoscience and Remote Sensing Society guidelines.

Special Issue tentative schedule:

White paper submission deadline	August 31, 2025
Invitation notification	September 30, 2025
Full paper submission deadline	November 31, 2025
Review notification	January 31, 2026
Revised manuscript due	March 31, 2026
Final acceptance notification	May 31, 2026
Final manuscript due	June 30, 2026
Publication date	September, 2026