

CALL FOR PAPERS

IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing Special Issue on “Remote Sensing Image Interpretation in Heterogeneous Scenarios”

To understand remote sensing images, deep learning has achieved significant success in many fields such as image classification, object detection, change detection and semantic segmentation. However, the earth observation systems provide a large amount of multi-source images such as hyperspectral images, panchromatic images, infrared images, and synthetic aperture radar (SAR) images. These remote sensing images are captured with heterogeneous scenarios (diverse platforms and various sensors), which cause huge variations. The drastic appearance change may lead to incorrect or unexpected interpretations when learning knowledge from the heterogeneous images. In real-world applications, a generalizable model should have the ability to transfer knowledge across heterogeneous scenarios. Furthermore, it is necessary for a robust model to discover unknown samples or integrate the multi-source images. Therefore, this special issue seeks original studies on remote sensing image interpretation in heterogeneous scenarios.

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

- Remote sensing image processing in heterogeneous scenarios
- Remote sensing image classification in heterogeneous scenarios
- Remote sensing object detection in heterogeneous scenarios
- Multi-source image registration, fusion, and quality enhancement in heterogeneous scenarios
- Multi-modal and multi-temporal image interpretation in heterogeneous scenarios
- Co-training and multi-task learning in heterogeneous scenarios
- Few-shot learning, transfer learning, and incremental learning in heterogeneous scenarios
- Deep learning theory and its applications in heterogeneous scenarios
- Earth observation applications in heterogeneous scenarios, e.g., cross-modal retrieval, SAR-optical image matching, remote sensing image captioning, remote sensing visual question answering, etc.

Schedule

01 Oct 2022 Submission system opening

30 Apr 2023 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 “**Remote Sensing Image Interpretation in Heterogeneous Scenarios**” 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 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 to download a template for transactions. Please note that as of Jan. 1, 2020, IEEE J-STARS has become a fully open-access journal charging a flat publication fee \$1,250 per paper.

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