



CALL FOR PAPERS

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

Special Issue on

“Few-shot Learning for Computer Vision in Remote Sensing”

Remote Sensing Images from various platforms (e.g., airplanes, satellites, UAVs) with different types of sensors (e.g., multispectral, hyperspectral, synthetic aperture radar) can be used for land cover monitoring, forest cover monitoring, grass cover monitoring, crop pests and diseases monitoring, crop yield prediction, etc. Recently, the involved technique is mainly deep learning, which is a typical learning method driven by big data. However, it is difficult, even unrealistic, to collect sufficient remote sensing images in many specific application scenarios in remote sensing, namely the few-shot case. The few-shot learning, as an important supplement to typical deep learning, has gained more and more attention in recent years. It is devoted to learning the generalization ability of models based on limited labelled data to complete the computer vision tasks such as classification, detection, and segmentation. Considering the development of remote sensing imaging and advanced few-shot learning methods, the efficient remote sensing data mining and pattern recognition are becoming possible.

This special issue seeks novel studies on advanced few-shot learning for computer vision tasks in remote sensing, focused on learning from limited data, on the aspects of methodologies and applications.

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

- Multi-source remote sensing data fusion for few-shot learning
- Few-shot learning for object detection in remote sensing
- Few-shot learning for classification in remote sensing
- Few-shot learning for segmentation in remote sensing
- Few-shot learning for domain adaptation in remote sensing
- Data analysis and data quality assessment for few-shot learning
- Model compression and deployment for observation applications
- Remote sensing images augmentation and evaluation
- Earth observation applications based on few-shot learning in remote sensing, e.g., agriculture, forestry, wet-land, ocean, city, etc.

Schedule

01 Aug 2022 Submission system opening

31 Mar 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 “**Few-shot Learning for Computer Vision in Remote Sensing**” 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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