



**CALL FOR PAPERS**  
**IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing**

**Special Issue on**  
**“Cooperative Perception for Computer Vision in Remote Sensing”**

Individual remote sensing platforms and sensors have limited resolution and coverage, whereas many applications often require unprecedented spatiotemporal resolution and coverage. For example, algae blooms in nearshore or inland water usually exhibit the properties of large scale and rapid growth. To observe and predict such phenomena challenges individual remote sensing platforms or sensors. To overcome the intrinsic limitations of individual systems and improve the perception capabilities, cooperative perception based on fusing multi-source and/or multimodal data from networked heterogeneous sensors on satellites, manned and unmanned aerial vehicles (UAVs), in-situ platforms, and citizen sensing equipment, provides promising methods that maximize the potential of individual sensing methods to address some of the most challenging earth observations and phenomena under climate change. To harvest the benefits of cooperative perception in remote sensing, a few key challenges need to be addressed, for example, the diverse and dynamic platforms, and observations with different spatiotemporal resolution and quality. This special issue aims to provide a common platform to discuss the key challenges and recent advances in cooperative perception for remote sensing.

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

- Cooperative Perception for Object Detection in Remote Sensing
- Cooperative Perception for Object Localization in Remote Sensing
- Cooperative Perception for Object Classification in Remote Sensing (Machine/Deep learning based, agent based etc.)
- Cooperative Perception for Object Segmentation in Remote Sensing
- Cooperative Perception for Object Reconstruction in Remote Sensing
- Cooperative Perception for Object Registration in Remote Sensing
- Cooperative Perception for Object Shadow removal in Remote Sensing
- Cooperative Perception for Anomaly/Novelty detection in Remote Sensing
- Cooperative Perception for Visual Search in Remote Sensing

#### **Schedule**

Apr. 1, 2022 Submission system opening  
Nov. 30, 2022 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 “**Cooperative Perception 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](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.

#### **Guest Editors**

Chunbo Luo, University of Exeter, UK ([c.luo@exeter.ac.uk](mailto:c.luo@exeter.ac.uk))  
Peng Ren, China University of Petroleum (East China), China ([pengren@upc.edu.cn](mailto:pengren@upc.edu.cn))  
Christos Grecos, Arkansas State University, Arkansas, USA ([cgrecos@asu.edu](mailto:cgrecos@asu.edu))