

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

**Special Issue on**  
**“Deep neural networks for handling multisource remote sensing data”**

Remotely sensed data acquired by terrestrial, airborne or drone-borne, and spaceborne sensors (e.g., RGB cameras, multispectral and hyperspectral scanners, SAR, and LiDAR) have become one of the most popular geospatial data sources. Such data sources have been handled mostly by the end users who are not trained in photogrammetry and remote sensing. Traditional methods for processing and interpretation of multisource data are always time-consuming and less robust, therefore, is not realistic for practical tasks such as timely change detection. Deep Neural Networks have achieved success in computer vision and have also become very attractive to the geoscience and remote sensing communities. This special issue aims at promoting Deep Neural Networks for handling multisource remote sensing data towards Earth observation applications, such as environmental monitoring and disaster management.

The topics of interest in handling and using multisource data include (but are not limited to):

- Image matching for multisensor and multiscale datasets
- Sensor calibration and image orientation
- Object counting and localization, e.g., cars, trees, etc.
- Line and centerline extraction, e.g., roads, etc.
- Semantic and instance segmentation
- Real-time object detection, classification and segmentation
- Change detection using time series multisensory data
- Multisensor data fusion using new models, e.g., Generative Adversarial Networks (GANs)
- Novel benchmark multisource dataset
- Novel applicational case studies, e.g., environmental monitoring, disaster management

***Schedule***

Jan. 1<sup>st</sup>, 2020: Submission system opening  
~~July~~ ~~June~~ 31<sup>st</sup>, 2020: Submission system closing  
2020: Publication date

***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 “Deep neural networks for handling multisource remote sensing data” special issue manuscript type. Prospective authors should consult the site <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8855039> for guidelines and information on paper submission. All submissions must be formatted using the IEEE standard format (double column, single spaced). To download a template for transactions, please see [http://www.ieee.org/publications\\_standards/publications/authors/author\\_templates.html](http://www.ieee.org/publications_standards/publications/authors/author_templates.html). Please note that as of Jan. 1, 2020, IEEE J-STARS will become a fully open-access journal charging a flat publication fee \$1,250 per paper.

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