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

Special Issue on
"Cloud Computing in Google Earth Engine for Remote Sensing"

Earth observation satellites have been collecting remote sensing data for decades, enabling us to map, monitor, and study Earth's systems and environments. The massive volumes of satellite data have brought us both opportunities and challenges. Nowadays, it is impractical to download, manage, and analyze a large volume of time-series satellite images using desktop computing resources. The advent of cloud computing platforms, such as Google Earth Engine (GEE), makes it possible to access and analyze large volumes of analysis-ready geospatial datasets without having to download them to local computers. The GEE data catalog contains a large repository of publicly available datasets acquired from various satellite platforms and aerial imaging systems (e.g., Landsat, Sentinel, MODIS, NAIP), which are being updated and expanded on a daily basis. In addition, GEE cloud platform provides a set of efficient algorithms for analyzing and visualizing satellite images, such as compositing, cloud masking, mosaicking, supervised and unsupervised classifications. Last but not least, users can upload their own datasets to this cloud computing platform and develop algorithms using JavaScript or Python. This special issue aims to collect the most recent research works related to different aspects of cloud computing within GEE platform for remote sensing.

Potential topics for this special issue include, but are not limited to:
- Recent developments in GEE cloud computing for remote sensing
- Cloud storage and big remote sensing data management in GEE
- New machine learning algorithms for cloud computing in GEE
- Deep Learning in GEE cloud computing platform
- Cloud computing for land cover/land use mapping
- Change detection using big data in cloud
- Cloud-based hydrology and water resource management
- Cloud-based climate and weather analyses
- GEE for oceanographic applications
- Global-scale analyses using big data processing and cloud computing in GEE

Schedule
January 1, 2020:   Submission system opening
~~June 30~~October 31, 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 "Cloud Computing in Google Earth Engine for Remote Sensing" 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. Please note that as of Jan. 1, 2020, IEEE J-STARS will become a fully open-access journal, charging a flat publication fee of $1,250 per paper.

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