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IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
Special Issue on
“Met-Ocean Applications of Remote Sensing”

Weather stations are limited in the quantity and the spatial coverage that they provide. Additionally, numerical weather prediction models have several limitations in assessing various meteorological and oceanographic parameters. On the other hand, remotely sensing systems are great resources for met-ocean applications due to their high temporal frequency and their acquisition capability over inaccessible areas. Moreover, most of remote sensing datasets applicable to both meteorology and oceanography are open-source, which makes them suitable for continuous monitoring and forecasting of met-ocean parameters. There are various remote sensing systems, including optical, SAR, scatterometers, radiometers, altimeters, LiDAR, HF radars, ROV, and AUV, each provides unique opportunities for met-ocean studies. Using the data collected by these sensors, many meteorological and oceanographic information, such as cloud properties, atmospheric profiles, fog, lightning, wind, sea surface temperature, ocean wave, sea state, and sea ice can be extracted. Therefore, it is critical to familiarize users with the high potential of remote sensing in met-ocean applications and exploit the capability of remote sensing in this area to the full using innovative remote sensing techniques. Finally, advanced machine learning algorithms and big geo data processing methods should be considered to effectively utilize these massive remote sensing datasets. This special issue aims to collect novel methods in the areas of met-ocean using various types of remote sensing datasets.

Potential topics for this special issue include, but are not limited to:

- Remote sensing of meteorology (e.g., fog detection and forecasting, wind monitoring, cloud type classification)
- Remote sensing of oceanography (e.g., ocean wave estimation, ocean current estimation, sea surface temperature retrieval, ocean color monitoring, iceberg detection and tracking, sea ice classification, etc.)
- Acoustic remote sensing (e.g., sonar systems) for underwater analysis
- Advanced machine learning algorithms (e.g., deep learning) for met-ocean analyses
- Big remote sensing data processing techniques (e.g., Google Earth Engine and Amazon’s Web Services) for met-ocean applications
- Assessment of newly launched remote sensing systems for met-ocean applications
- Challenges in operational met-ocean studies using remote sensing
- Literature review in met-ocean applications of remote sensing

Schedule

July 1, 2020 Submission system opening
December 31, 2020 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 “Met-Ocean Applications of 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). 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 been a fully open-access journal charging a flat publication fee \$1,250 per paper.

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