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

Special Issue on
"Target Detection and Recognition in Radar/Sonar Remote Sensing"

Target detection and recognition for radar/sonar remote sensing systems have long been a topic of great interest. The advancements in this area are expected to contribute significantly to the improvement of both theory and practical applications. In the past decades, quantities of researches have been published on the studies of airborne, ground, marine and underwater target detection/recognition and resolution enhancement through advanced remote sensing techniques, such as Synthetic Aperture Radar (SAR), Synthetic Aperture Sonar (SAS), as well as other effective approaches. These studies have contributed to a better understanding of target detection and recognition in terrestrial/underwater environments using remote sensing technologies.

One example of the advancements in target detection and recognition is synthetic aperture imaging, which provides higher resolution and captures more information about both targets and backgrounds. This enhanced imaging capability facilitates easier classification and observation of multiple targets of interest. Additionally, the developments of algorithms that can achieve higher detection probability via remote sensing mediums have proven valuable for target finding in various scenarios. Furthermore, the manipulation of carefully designed waveform properties provide the re-distribution of sidelobes, offering new methods for the suppression of sidelobes, enhancement of detection performance and further developments in this area. Therefore, methods for the aforementioned requirements are necessary to be fully exploited and evaluated, while many challenges still exist on the performance enhancement of imaging quality, detection precision and waveform diversity, etc.

The aim of this special issue is to collect and promote advanced remote sensing approaches including but not limited to the aforementioned aspects, which will achieve a deeper understanding of the new remote sensing theory as well as application requirement, and demonstrate a guideline to solve future problems. The special issue would attract numbers of manuscripts interested in remote sensing methods, as well as applications of remote sensing images.

The broad topics include (but are not limited to):
- Novel radar/sonar synthetic aperture remote sensing concepts and techniques
- Target feature extraction and recognition in SAR/SAS images
- Denoising and normalization of remote sensing images
- Enhancement and super resolution algorithms for remote sensing images
- Chang detection in SAR/SAS images
- Machine learning for synthetic aperture remote sensing
- Advanced array signal processing for target detection and localization
- Waveform design for remote sensing systems

Schedule
Jan. 01, 2024 Submission system opening
Aug. 31, 2024 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 "**Target Detection and Recognition in Radar/Sonar 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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