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

Special Issue on
"2021 Gaofen Challenge on Automated High-Resolution Earth Observation Image Interpretation"

The interpretation of earth observation data is of great importance for its wide range of applications, such as ocean development, land-cover analysis, disaster monitoring, etc. Especially with the advances of different earth observation missions, massive volumes of high-resolution data have become widely accessible, providing diverse information of the earth, and further encouraging the application to cope with societal needs. However, the automated interpretation of high-resolution earth observation data is very challenging due to the complicated image background and insufficient annotated data. Even though deep learning methods have made great progress in this field recently, it still has difficulty in some specific tasks and requires highly advanced techniques. To promote the research in this field, the 2021 Gaofen Challenge on Automated High-Resolution Earth Observation Image Interpretation, serves to bring together researchers from both Earth Observation and Computer Vision communities to discuss cutting-edge topics on fine-grained object recognition, multi-object tracking, change detection, etc. and their applications in realistic application scenarios.

This special issue intends to report the innovative methods emerged in 2021 Gaofen Challenge. It aims at boosting the interpretation of high-resolution earth observation data towards more accurate, autonomous, and cost-effective quality levels.

The broad topics include (but are not limited to):
- Fine-grained object recognition in high-resolution optical images
- Airplane detection and recognition in high-resolution SAR images
- Building extraction and change detection in optical images
- Sea ice segmentation in optical images
- Marine farms segmentation in SAR images
- Object tracking in optical video satellite images
- Automated image interpretation for high-resolution earth observation data, including other categories of geo-spatial object detection, semantic segmentation and so on

Schedule
March 1st, 2022: Submission system opening
September 30th, 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 "**2021 Gaofen Challenge on Automated High-Resolution Earth Observation Image Interpretation**" 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 will become a fully open-access journal charging a flat publication fee $1,250 per paper.

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