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

Special Issue on
"Forest observation and parameter retrieval from remote sensing data"

Remote sensing, assisted by deep learning and visualization technologies as smart tools to extract forest growth properties and afford more elaborate portrayal of experimental trees, has many advantages in monitoring spatial and temporal variation in tree growth at the regional and global scales and detecting forest responses to various stresses, e.g., natural disturbances and silvicultrual interventions. While the foundations of these technologies have been laid through proof-of-concept studies and inspired by interdisciplinary subjects, the primary intention of this Special Issue is to introduce the latest accomplishments in domains including forestry science, remote sensing and computer graphics, and draw attention to a newly emerging application area regarding forest digital twin in the metaverse. In this issue, the studies that undertake deep learning research and computer graphics algorithms for the analysis of various forest remote sensing data are welcome. Successful case studies which incorporate elements of deep learning framework design, automated forest property acquisition and applications of digital forest recreation based on remote sensing data are also highly encouraged. Meanwhile, the proposed special issue provides an opportunity to review themes, examine previously unaddressed problems and exchange academic perspectives in the related fields.

The broad topics include (but are not limited to):

- Improvement of deep learning models for forest remote sensing data processing.
- Software approaches to forest visualization and modeling based on remote sensing data.
- Processing, enhancing and interpreting forest information derived from remote sensing instruments.
- Augmented reality and virtual reality applications based on forest remote sensing data.
- Computer graphics or machine vision algorithms to calculate forest phenotypic traits.
- Predicting Changes in Forest Composition and Dynamics using deep learning models and remote sensing data.
- Leveraging multi-source remote sensing data and deep learning models for forest carbon stock monitoring
- Sensor-Based perception with deep learning techniques for intelligent forest management systems

Schedule

Apr 1, 2023: Submission system opening
Oct 31, 2023: 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 "**Forest observation and parameter retrieval from remote sensing data**" 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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