



CALL FOR PAPERS

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

Special Issue on

“NISAR Mission: L-band and S-band SAR Observations for Ecosystem Science and Applications”

Global ecosystems are experiencing unprecedented stress from large-scale human-induced land conversions and climate change impacts such as droughts, wildfire, floods and other extreme events. The NASA–ISRO Synthetic Aperture Radar (NISAR) mission, a collaboration between the National Aeronautics and Space Administration (NASA) and the Indian Space Research Organization (ISRO), is designed to provide systematic observations of global ecosystem dynamics and responses to human and climate pressures. NISAR measurements include SAR imagery at L-band and S-band frequencies with multiple polarizations and repeat-pass interferometry at very high spatial and temporal resolutions for a variety of ecosystem science and applications including mapping vegetation above ground biomass, forest disturbance and recovery, wetland inundation, cropland extent and classification, freeze/thaw, and soil moisture monitoring. The aim of this special issue is to present advances in theoretical and experimental approaches related to NISAR ecosystem science and applications but also welcomes synergistic studies and comparisons with other remote sensing observations

The topics of interest include, but are not limited to, the following:

- Forests: structure: biomass, disturbance and recovery with applications in carbon cycle, forest management, habitat structure and diversity, forest water stress and fire risk
- Agriculture: crop area and classification, crop yield and water content
- Wetlands and Inundation: inundation cycles, forest and nonforest wetlands, coastal ecosystems
- Soil moisture and freeze/thaw: soil moisture for agriculture and forestry, freeze/thaw monitoring across forests and nonforests
- Theory and simulations: advances in algorithms for different science and applications, performance modeling
- Calibration and validation: experiment results, NISAR performance
- Multi-mission synergism: NISAR and GEDI synergism for forest structure and biomass, L-band and P-band (BIOMASS mission) for global ecosystem dynamics, passive and active data fusion for soil moisture monitoring

Schedule

July 1, 2021: Submission system opening

June 30, 2022: New 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 “**NISAR Mission Ecosystem Science**” 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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