Special Issue

Large-Scale Forest Mapping and Monitoring by Synthetic Aperture Radar and Multi-source Remote Sensing Data

Message from the Guest Editors

Global forest inventory data (including forest height, biomass, classification, and volume) is of critical importance for global carbon flux calculations and climate change research. Given the intensification of climate change and human activities in the past few years, it is imperative to develop technologies for rapid and high-precision forest mapping and monitoring at a large scale. Synthetic aperture radar (SAR) provides great opportunities for us to investigate the forest system due to its penetration ability and its ability to acquire information about the forest vertical structure and biophysical properties. Particularly, ESA's BIOMASS (P-band) and NASA-ISRO's NISAR (L-band) mission will be launched in the upcoming years, which opens a new era of long-wavelength SAR remote sensing, characterized by stronger penetration into the forest canopy. This Special Issue aims to delve deep into innovative applications of these techniques for forest inventory, forest system investigation, and monitoring forest dynamics. We also invite research that uses machine learning and deep learning methodologies for forest parameters retrieval across different scales.

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Forests (ISSN 1999-4907) is an international and cross-disciplinary, scholarly forestry journal. The distinguished editorial board and refereeing process ensures the highest degree of scientific rigor and review of all published articles. Original research articles and timely reviews are released online, with unlimited free access. Our goal is to have *Forests* be recognized as one of the foremost publication outlets for high quality, leading edge research in this broad and diverse field. We therefore invite you to be one of our authors, and in doing so share your important research findings with the global forestry community.

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