Special Issue

High-Precision Calibration and Polarimetric and Interferometric Image Processing Technology

Message from the Guest Editors

Synthetic aperture radar (SAR) plays a vital role in Earth observation. With the launch of new spaceborne SAR missions, SAR data have become increasingly diverse in terms of frequency bands (L/S/C/X/Ku), polarimetric modes (dual, full, and compact polarization), imaging modes (Stripmap, Spotlight, ScanSAR, and TopSAR), satellite orbits (GEO, MEO, LEO), and constellation configurations (single-satellite, dual-satellite, and large-scale multi-satellite constellations). On the other hand, miniaturized and lightweight airborne SAR systems, such as UAV SAR, have become an important technological trend. This diversity brings both challenges and opportunities for developing high-precision calibration and advanced processing techniques to support quantitative SAR data applications. Calibration is the basis of quantitative SAR applications. High-precision calibration methods are essential for ensuring geometric, radiometric, polarimetric, and interferometric accuracy, enabling the generation of high-quality, multi-dimensional SAR datasets.

Guest Editors

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Message from the Editor-in-Chief

Remote Sensing is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

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