Special Issue

Satellite Remote Sensing of Quantifying Greenhouse Gases Emissions

Message from the Guest Editors

Satellite remote sensing plays an essential role in quantifying greenhouse gas (GHG) emissions. The growing availability of satellite data from missions such as GOSAT, OCO-2, TROPOMI, and TanSat provides critical opportunities to track anthropogenic and natural sources and sinks of CO_2, CH_4, and other GHGs. This Special Issue aims to highlight recent advances in satellite-based GHG monitoring, with a particular focus on innovative retrieval algorithms, inversion techniques, and emerging applications. We welcome contributions that introduce novel methods, improve accuracy in flux estimation, or explore underrepresented regions and sectors (e.g., urban, agricultural, wetland, or wildfire emissions). Integration with in situ observations, ground-based networks, model simulations, or AI-driven analysis is also encouraged. We especially invite submissions that showcase new applications, algorithmic improvements, multi-platform data fusion, or the use of machine learning to enhance the interpretation of GHG data. The overarching goal is to foster progress in satellite-based emission monitoring and provide insights to support climate policy and mitigation strategies.

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.

Editor-in-Chief

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