Special Issue

Remote Sensing Applications for Trace Gases and Air Quality

Message from the Guest Editors

Air pollution represents a persistent threat to both public health and environmental sustainability. Major air pollutants comprise particulate matter and trace gases (e.g., nitrogen dioxide, ozone, and formaldehyde), which make up less than 1% of Earth's atmosphere by volume. Despite their minimal concentration, trace gases have significant societal impacts, like respiratory and cardiovascular diseases, premature death, and even impairment of terrestrial carbon uptake. Earth observations offer large-coverage and frequent monitoring capabilities for trace gases, leveraging remote sensing applications to enhance our understanding of air quality. New satellites and payloads (e.g., MethaneSat and FengYun series) and advancements in retrieval algorithms (e.g., artificial intelligence) are revolutionising our techniques for trace gas remote sensing. The growth of cloud computing platforms like Google Earth Engine is transforming our capacity to analyse biosphere–atmosphere interactions. Contributions covering these scopes, encompassing the latest technological advances and their applications in air quality monitoring and policymaking, are highly welcomed.

Guest Editors

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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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