Special Issue

Remote Sensing and GIS Technology in Atmospheric Research

Message from the Guest Editors

The Earth's atmosphere is profoundly influenced by natural processes and human activities. Innovative approaches integrating remote sensing and Geographic Information Systems (GIS) have emerged as transformative tools in atmospheric research. Remote sensing technologies provide unparalleled spatial and temporal resolution for monitoring atmospheric parameters, while GIS enables robust data integration and analysis. This Special Issue seeks to showcase advancements and applications of these technologies to advance our understanding of atmospheric dynamics, environmental sustainability, and climate resilience. We invite original research articles, reviews, and case studies that explore:

- Atmospheric composition analysis (e.g., greenhouse gases, aerosols, and pollutants);
- Climate change monitoring and modeling (e.g., temperature trends and carbon flux);
- Extreme weather prediction and disaster risk reduction (e.g., hurricanes and droughts);
- Urban climate studies (e.g., heat islands and air quality in megacities);
- Integration of machine learning/AI with remote sensing and GIS;
- Multi-source data fusion for atmospheric process analysis;

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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