



Urban Air Quality Analysis and Prediction Using Remote Sensing and Machine Learning

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Deadline for manuscript
submissions:

closed (30 September 2022)

Message from the Guest Editors

Atmospheric aerosols have harmful effects on climate, human health, and even plant growth and industry. It is necessary to provide accurate and useful information on air quality to policymakers to establish efficient plans for better air quality. Various aerosol retrieval studies have been conducted using satellite and remote sensing data by applying various machine learning and deep learning algorithms. However, this discipline still requires more accurate air quality information in near-real time on the urban scale. In this context, it is necessary to develop more improved algorithms for aerosol retrieval and forecasting from multiple satellite or remote sensing data with both conventional and state-of-the-art machine learning and deep learning methods.

The open-access journal Atmosphere is hosting a Special Issue to bring together the most recent findings related to air quality prediction and analysis in urban areas. This topic encompasses machine learning and deep learning-based prediction and forecasting, multi-sensor remote sensing data, multivariate data analysis, including spectral information and environmental data, etc., focusing in particular on urban areas.





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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!

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Journal Rank: CiteScore - Q2 (*Environmental Science (miscellaneous)*)

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