Special Issue

Application of Deep Learning in Ambient Air Quality Assessment

Message from the Guest Editors

Recent year, deep learning has been widely applied in many fields. However, in atmospheric sciences, limited monitoring data, monitoring data measured by instruments with varied quality and time and spatial coverage, the complexity of atmospheric processes in the formation of air pollutants, and the heterogeneity of the spatiotemporal distributions of air pollutants make it difficult for deep learning to be directly used to assess air quality, as there tend to be issues of potential inefficiency in learning, overfitting, and bias. This Special Issue aims to promote the publication of original research and reviews that focus on applications of deep learning methods in ambient air quality assessment. These include the extraction and processing of important and/or new covariates such as meteorology, the use of remote sensing observations and other spatiotemporal data, the comparison of different methods to illustrate the effectiveness of deep learning, novel deep learning methods, as well as the interpretation of the models and results to improve model accuracy, efficiency, transparency, and interpretability.

Guest Editors

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Deadline for manuscript submissions

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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!

Editor-in-Chief

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