Special Issue

Advances in Air Quality Spatio-Temporal Mapping

Message from the Guest Editor

The development of real-time and time-averaged air pollutants concentration maps is a crucial step in identifying hotspot exposure areas and designing control and mitigation plans on sources to reduce the public health risk. However, all concentration maps are subject to uncertainties. Recently, advances in computer techniques to obtain larger dataset, such as those offered by machine learning and artificial intelligence, application of drone-based sensors to facilitate sampling from any terrain, and rapid growth in development of low-cost sensors, to establish denser air-quality monitoring networks have set the stage to visualize reliable spatio-temporal concentration maps. These new tools have reduced both the uncertainty and cost of data acquisition. Therefore, this Special Issue seeks advances in the above-mentioned approaches leading to improved resolution in air-quality concentration mapping or reduction of the computational cost, as well as more accurate estimation of the health end-points, health hazards, and exposure risks.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2023)

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/156072

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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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