Special Issue

Identification and Parameter Estimation of Multi-Scale Environmental Pollution Sources

Message from the Guest Editors

Identifying pollution sources and estimating parameters in multi-scale environments are critical due to their direct impact on public health and industrial product quality, especially in the case of atmospheric pollution. The accurate identification of pollution sources enables a more precise forecasting of potential hazards and a better implementation of protective measures. However, despite its importance, research in this area faces several challenges. Most studies rely on numerical simulations, which often struggle with real-world applications due to the noise in sensor measurements and uncertainty in computational models. Overcoming these challenges is essential; thus, they should be studied alongside the integration of novel measurement techniques, computational methods, source identification, and estimation algorithms. Concentrating and publishing relevant research will foster a systematic understanding of these technologies, encouraging further advancements of pollution source identification and estimation.

Guest Editors

Dr. Fei Li

College of Urban Construction, Nanjing Tech University, Nanjing, China

Prof. Dr. Zhuangbo Feng

School of Architecture, Southeast University, Nanjing, China

Prof. Dr. Hao Cai

College of Urban Construction, Nanjing Tech University, Nanjing, China

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Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

mdpi.com/journal/atmosphere





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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

Dr. Daniele Contini

Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

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