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Atmospheric Dispersion of Pollutants in Urban Environments

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Since 2014, more than 50% of the world's population is residing in urban areas. Urban areas represent hotspots for air pollution problems, given the presence of different pollution sources, such as traffic, industries, house heating. This is true especially for large and densely populated cities. This Special Issue is devoted to all theoretical. modelling, and observational aspects of atmospheric dispersion of pollutants in urban environments, characterized by distinctive processes due to the interaction of the atmospheric flow with the complex urban geometry. Studies on all scales are of interest, from the street scale to the city and regional scales, including those related to the effects of the urban heat island. The topics of interest of this Special Issue include the investigation and parameterization of all atmospheric processes related to dispersion, numerical modelling with different approaches at various scales, data analysis of observed quantities determining the dispersion of pollutants, in both real urban sites and physical models.

Dr. Silvia Trini Castelli *Guest Editor*









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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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