Special Issue

Interaction between Urban Microclimates and the Buildings

Message from the Guest Editors

From urban atmosphere and air pollution fields over the last 50 years, an increasing number of studies have focused on urban heat island (UHI) effects. The urban microclimate is strongly linked to modified urban surfaces, including the design or the use of buildings and districts. Indoor and outdoor space design impact thermal stress, especially in the context of increasing heatwave risks. This Special Issue will present new tools or knowledge to better assess the coupling effects between buildings and the urban atmosphere, and include innovative UHI mitigation strategies. The proposed papers could cover, but are not limited to, various spatial scales from city to street or building zones, energy and environmental challenges, urban cooling techniques from the district layout to the building component or material design, as well as key performance indicators or decision support criteria for better urban design.

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Deadline for manuscript submissions

closed (4 September 2020)

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/41691

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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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