Urban Heat Islands, Global Warming and Effects

Message from the Guest Editors

The urban environment is where most of the global population currently lives. The increase in population and the consequent increase in urbanization has led to a surge in urban temperatures compared to the rural environs called urban heat islands.

The present Special Issue is aimed at showcasing advancements both in UHI detection and forecasting, and in the mitigation of UHI effects on building energy use, human health, and societal costs. You are invited to contribute both methodological research and case studies. Furthermore, studies focused on the effect of urban overheating on global warming and on building energy efficiency to decrease the effect of summer urban overheating on buildings’ occupants are also welcome.

Topics of interest include, but are not limited to, the following:

- Advancements in UHI detection and forecasting;
- UHI adaptation;
- Effects of urban overheating;
- Nature-based solutions for UHI adaptation;
- Nature-based solutions for sustainable cities;
- Advancement in nature-based solution modelling;
- Effect of nature-based solution deployment;
- Urban overheating and global warming.
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!