



*remote sensing*

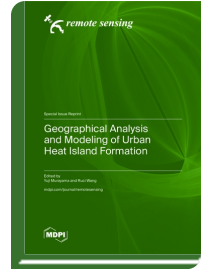


*Special Issue Reprint*

## **Geographical Analysis and Modeling of Urban Heat Island Formation**

[www.mdpi.com/books/reprint/8218](http://www.mdpi.com/books/reprint/8218)

Edited by  
Yuji Murayama  
Ruci Wang



ISBN 978-3-0365-9274-9 (Hardback)  
ISBN 978-3-0365-9275-6 (PDF)

This Special Issue explores the fascinating topic of urban heat islands (UHIs), examining them from temporal and spatial perspectives. We embark on a journey that focuses on the essential impacts of UHI formations, including land use composition, city characteristics, and anthropogenic factors. Our objective is to raise awareness of the many facets of UHIs and their significant effects on urban environments and sustainability. This collective aim is to further strengthen urban sustainability through a deeper understanding of UHI dynamics. This volume includes a wide range of topics related to UHIs, including cutting-edge methods and datasets for capturing UHI phenomena. We investigate the spatial interactions between UHI intensity and land use/cover distribution within metropolitan areas, examine the geographic patterns and processes underlying UHIs in sprawling cities, and analyze the spatial differences in UHI intensity between developing and developed countries. Additionally, we focus on UHI catastrophe mitigation and adaptation measures, which are crucial for setting sail for a sustainable urban future. Finally, we engage in the critical work of prediction and scenario analysis, equipping policymakers and urban planners with the insights necessary for informed decision-making. We express our thanks to the researchers, academics, and contributors who have made this Special Issue possible as we begin this investigation into urban heat islands. We aim to foster a comprehensive understanding of UHIs and contribute to the broader discourse on urban sustainability.



Order Your Print Copy  
You can order print copies at  
[www.mdpi.com/books/reprint/8218](http://www.mdpi.com/books/reprint/8218)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



### **Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



### **Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



### **High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



### **High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



### **Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.