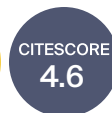




atmosphere



Special Issue Reprint

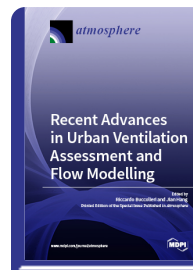
Recent Advances in Urban Ventilation Assessment and Flow Modelling

www.mdpi.com/books/reprint/1264

Edited by
Riccardo Buccolieri
Jian Hang

ISBN 978-3-03897-806-0 (Softback)

ISBN 978-3-03897-807-7 (PDF)



This book contains twenty-one original papers and one review paper published by internationally recognized experts in the Atmosphere Special Issue "Recent Advances in Urban Ventilation Assessment and Flow Modelling", years 2017–2019. The Special Issue includes contributions on recent experimental and modelling works, techniques, and developments mainly tailored to the assessment of urban ventilation on flow and pollutant dispersion in cities.

The study of ventilation is of critical importance, as it addresses the capacity with which a built urban structure is capable of replacing the polluted air with ambient fresh air. Here, ventilation is recognized as a transport process that improves local microclimate and air quality and closely relates to the term “breathability”. The efficiency with which street canyon ventilation occurs depends on the complex interaction between the atmospheric boundary layer flow and the local urban morphology.

The individual contributions to this Issue are summarized and categorized into four broad topics: (1) outdoor ventilation efficiency and application/development of ventilation indices, (2) relationship between indoor and outdoor ventilation, (3) effects of urban morphology and obstacles to ventilation, and (4) ventilation modelling in realistic urban districts. The results and approaches presented and proposed will be of great interest to experimentalists and modelers, and may constitute a starting point for the improvement of numerical simulations of flow and pollutant dispersion in the urban environment, for the development of simulation tools, and for the implementation of mitigation strategies.



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/1264

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.