



Healthy Buildings 2003

Energy-Efficient Healthy Buildings

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Singapore

Editors

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Volume 1

The papers in this book comprise the proceedings of **Healthy Buildings 2003**. They reflect the authors' opinions and are published as presented without change, in the interests of timely dissemination. Their inclusion in this publication does not necessarily constitute endorsement by the editors, the sponsors or the organisers.

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Foreword

The Healthy Buildings conference is, for the first time, convened outside its traditional European-American circuit, and signifies the international recognition that healthy buildings and indoor environments are as much needed and desired in the developed and developing worlds, across all climatic regions. In the aftermath of the first emergence of Severe Acute Respiratory Syndrome (SARS), issues of environmental quality and control have become much more pertinent and important. In an unprecedented way, the linkage between health and environmental quality on the “consumer end” of the chain, and the policies, management and technologies on the “supply end” has been highlighted and articulated beyond the usual platforms of scientific publications to popular media. This presents HB2003, the 7th International Conference in tropical Singapore, as a unique opportunity for scientists, practitioners and policy makers to convene, discuss and share their latest findings and thinking on healthy buildings.

HB2003 continues the excellent work achieved by its predecessors in recognizing emergent issues and focusing on developing practical solutions based on rigorous scientific explorations and information. In recognising the importance, relevance and challenges of both IAQ and energy globally over the past four decades, the thrust of HB2003 is towards Energy-Efficient Healthy Buildings. Keynote addresses provide the state-of-the-art reviews and insights along the following five conference themes:

- Theme 1 : Science of Indoor Air Quality (IAQ) parameters
- Theme 2 : Materials, systems and technologies for healthy buildings
- Theme 3 : IAQ and human response
- Theme 4 : Practice and implementation issues in creating healthy buildings
- Theme 5 : Issues of healthy buildings and energy efficiency in the developing countries

Almost 400 papers from 45 countries documenting the research, thinking, innovative solutions and technologies for the achievement and sustenance of energy-efficient healthy buildings are published in three volumes of proceedings that are organised according to the five themes of the conference. Whilst 40% of the papers presented at HB2003 relate to the study of fundamental issues of indoor contaminants including thermal comfort aspects in THEME 1, 27% of the papers provide an insight into practical solutions across different climatic conditions in THEME 2. Environmental health related studies that impact upon occupant perception and work performance constitute 17% of the papers and are presented in THEME 3. Considerations from practitioners’ viewpoint are addressed in another 14% of the papers in THEME 4. The perspectives of the developing world are presented in a small number of papers in THEME 5.

All the technical papers published in HB2003 proceedings are presented as either ORAL or POSTER mode. To facilitate maximum interaction among authors and delegates, about half the total number of papers is presented as POSTERS, which are displayed throughout the duration of the conference. The poster papers are briefly introduced following oral presentations in a particular theme in each of the 55 parallel sessions that are spread across four days of the conference. Additionally, the technical sessions also incorporate six ISIAQ Task Force Workshops and a special SARS workshop.

A summary of the deliberations at the various Technical Sessions will be consolidated and made available to all delegates (by email) as a Post-Conference document and will also be uploaded on the conference website: www.hb2003.org

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