



Delft University of Technology

## Preface

Nia, Elham Maghsoudi; Awang, Mokhtar; Aulady, Mohamad Ferdaus Noor; Traykova, Marina; Yola, Lin

**Publication date**  
2025

**Document Version**  
Final published version

**Published in**  
Selected Articles from the 8th International Conference on Architecture and Civil Engineering - ICACE 2024

### Citation (APA)

Nia, E. M., Awang, M., Aulady, M. F. N., Traykova, M., & Yola, L. (2025). Preface. In E. M. Nia, M. Awang, M. F. N. Aulady, M. Traykova, & L. Yola (Eds.), *Selected Articles from the 8th International Conference on Architecture and Civil Engineering - ICACE 2024* (pp. v-vi). (Lecture Notes in Civil Engineering; Vol. 635 LNCE). Springer.

### Important note

To cite this publication, please use the final published version (if applicable).  
Please check the document version above.

### Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

### Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.  
We will remove access to the work immediately and investigate your claim.

**Green Open Access added to [TU Delft Institutional Repository](#)  
as part of the Taverne amendment.**

More information about this copyright law amendment  
can be found at <https://www.openaccess.nl>.

Otherwise as indicated in the copyright section:  
the publisher is the copyright holder of this work and the  
author uses the Dutch legislation to make this work public.

Elham Maghsoudi Nia · Mokhtar Awang ·  
Mohamad Ferdaus Noor Aulady ·  
Marina Traykova · Lin Yola  
Editors

# Selected Articles from the 8th International Conference on Architecture and Civil Engineering

ICACE 2024, 12–13 December, Penang, Malaysia

*Editors*

Elham Maghsoudi Nia  
Department of Management in the Built  
Environment  
Delft University of Technology  
Delft, The Netherlands

Mohamad Ferdaus Noor Aulady  
Civil Engineering Department  
Institut Teknologi Adhi Tama Surabaya  
Indonesia  
Surabaya, Indonesia

Lin Yola  
School of Strategic and Global Studies  
Universitas Indonesia  
Jakarta, Indonesia

Mokhtar Awang  
Mechanical Engineering Department  
Universiti Teknologi Brunei  
Bandar Seri Begawan, Brunei Darussalam

Marina Traykova  
Faculty of Structural Engineering  
University of Architecture, Civil Engineering,  
and Geodesy  
Sofia, Bulgaria

ISSN 2366-2557

ISSN 2366-2565 (electronic)

Lecture Notes in Civil Engineering

ISBN 978-981-96-5653-0

ISBN 978-981-96-5654-7 (eBook)

<https://doi.org/10.1007/978-981-96-5654-7>

© The Editor(s) (if applicable) and The Author(s), under exclusive license  
to Springer Nature Singapore Pte Ltd. 2025

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.  
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

If disposing of this product, please recycle the paper.

# Preface

We are honored to present this comprehensive compilation of selected papers from the **8th International Conference on Architecture, and Civil Engineering (ICACE 2024)**. Held with the theme “*Advancing Towards a More Resilient Future of Architecture and Civil Engineering*,” this conference brought together an exceptional assembly of experts, researchers, and practitioners from across the globe. ICACE 2024 served as a vital forum for exchanging knowledge, fostering innovation, and addressing some of the most critical challenges and opportunities facing our disciplines today.

The papers featured in this volume represent a diverse and insightful array of topics, showcasing the depth and breadth of research in civil engineering, architecture, and environmental technology. These contributions span innovative materials, advanced rehabilitation techniques, sustainable urban infrastructure design, green environment, and cutting-edge approaches to environmental restoration. Collectively, they underscore the ever-evolving nature of these fields and highlight the importance of interdisciplinary collaboration in addressing global challenges.

In an era where the global community is grappling with unprecedented issues such as climate change, resource scarcity, and the need for sustainable development, innovation and rehabilitation play pivotal roles in shaping a resilient and equitable future. The discussions and collaborations facilitated by ICACE 2024 were instrumental in charting new paths forward, emphasizing sustainable solutions and technological advancements that align with global development goals.

This compilation is more than a collection of academic papers; it is a testament to the collective efforts and intellectual contributions of a vibrant and dedicated community. Each paper featured here reflects the authors’ rigorous research, creativity, and commitment to advancing the state of knowledge in their respective areas. Their work has not only enriched the discourse within the conference but also laid the groundwork for future explorations and innovations.

We extend our deepest gratitude to all the authors for their invaluable contributions, the reviewers for their critical insights and constructive feedback, and the session chairs for their leadership and guidance throughout the conference. Their collective efforts were crucial to ensuring the high quality and impact of this conference and its proceedings.

Special acknowledgement is also due to the organizing committee, sponsors, and partner institutions for their unwavering support in making ICACE 2024 a resounding success. Their dedication and hard work behind the scenes were instrumental in creating an engaging and fruitful event for all participants.

It is our hope that this volume will serve as an essential resource for researchers, practitioners, policymakers, and students, inspiring continued exploration and collaboration in the fields of civil engineering, architecture, and environmental technology. We believe that the insights and advancements presented here will contribute meaningfully to the ongoing efforts to create a sustainable and rehabilitated built environment for future generations.

As the ICACE continues to grow, we look forward to the continued exchange of ideas and collaboration among professionals and academics from around the world. Together, we can break boundaries, innovate boldly, and rehabilitate thoughtfully to shape a better future for all.

Elham Maghsoudi Nia  
Mokhtar Awang  
Mohamad Ferdaus Noor Aulady  
Marina Traykova  
Lin Yola