

World Sustainable Construction Conference Series 2021

Kuantan, Pahang, Malaysia • 15–16 October 2021

Editors • Ramadhansyah Putra Jaya, Khairil Azman Masri,
Putri Zulaiha Razi and Rahimah Embong



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Universiti Malaysia Pahang, Kuantan, Malaysia

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Preface: World Sustainable Construction Conference Series 2021

With great pleasure we are introducing the World Sustainable Construction Conference (WSCC) 2021, yet another series of rewarding conference this year. It has collectively four events organized successfully under the same group of people with a great vision ahead.

- 5th National Conference on Wind and Earthquake Engineering (NCWE)
- 3rd National Seminar on Sustainable Construction Engineering (NSSCE)
- 3rd International Conference on Agricultural Technology Engineering and Environmental Sciences (ICATES)
- 1st Water Symposium (WS)

Due to on-going pandemic, all the events were held through the long distance mode (on-line) only. These proactive measures were taken to minimize the physical contact among participants and to curb the spreading of COVID-19. The decision to hold the virtual conference was made after a mutual consent was received from all the collaborators. Yet WSCC did not fail to draw participants across the region including Indonesia, India, Pakistan, China, Bangladesh, Vietnam, Thailand and Japan. We from the organizing team were overwhelmed and felt privileged when was given the opportunity to organise the World Sustainable Construction Conference (WSCC) which was held virtually at the Chancellery Hall of Universiti Malaysia Pahang (UMP) on the 15th and 16th October 2021.

This virtual conference was organized with the support from Universiti Sains Malaysia, Chongqing University, China, the Tokyo Polytechnic University, Beijing Jiaotong University, Universitas Syiah Kuala, Indonesia and the Arba Minch University. The papers submitted were more than 100 and fellow reviewers have put their heart and soul in making sure only the best quality research and technical papers were selected for virtual presentation and publication. In line with the theme of the conference “*Beat the Odds*”, WSCC 2021 have seen many success in providing a common platform to discuss on issues, challenges, opportunities and technologies relating with the construction engineering, advanced materials, agricultural, environment and water.

This volume of conference proceeding not only has a good selection of refereed papers but there are more to it. You will find a compilation of 4 keynote lectures given by Professor Dr. Yukio Tamura, a prominent professor at the Chongqing University, China, Professor Dr. Shuyang Cao from Tongji University, China, Professor Dr. Guoqing Jing from the Beijing Jiaotong University and finally Dr. Ichwana Ramli, from Universitas Syiah Kuala, Indonesia. Many of the keynote topics discussed here was highly relevant and triggered healthy discussions and sharing of knowledge among participants.

The World Sustainable Construction Conference (WSCC) also served as a new platform to researchers and scholars from different disciplines that have interest in sustainable construction, advanced materials, agricultural technology and environmental sciences to share and discuss their research findings. Finally, on behalf of the organizing committee, I would like to thank all the presenters and participants for their great support. Last but not least, let us join our hands together in supporting and thanking our front liners battling COVID-19 pandemic.

Chairman, WSCC 2021

Assoc. Prof Dr. Mohamad Idris Ali

WORLD SUSTAINABLE CONSTRUCTION CONFERENCE SERIES 2021
BEAT THE ODDS Online via Zoom
 15 – 16 October 2021
 In Collaboration with


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Keynote Speakers

All our keynotes are experts on their own field – bringing you the best of the best.

Professor Dr. Yukio Tamura
 Chongqing University, China
 "Lessons from wind-induced damage to buildings and structures in Asian region"



Professor Dr. Shuyang Cao
 Tongji University, China
 "Wind tunnel and numerical modeling of wind loading on structures"



Dr. Ichwana Ramli
 Universitas Syiah Kuala, Indonesia
 "Flood Vulnerability Model Based on Physical, Social, and Economic Parameters in Krueng Pasee Watershed, Indonesia."



Professor Dr. Guoqing Jing
 "Railway sleeper innovation recycled and green material application"
 Beijing Jiaotong University, China



The Committee



The Participants



