

## Preface

It is a great pleasure to welcome you to the 2021 3rd International Conference on Civil, Architecture and Urban Engineering (ICCAUE 2021), which was held on June 11-13, 2021 in virtual form. The safety and well-being of participants is always of paramount importance. This year, considering the COVID-19 pandemic and the severe travel restrictions worldwide, after careful consideration and following some participants' suggestions, the organizing committees decided to convert ICCAUE 2021 into a fully virtual conference. It has been a very difficult decision, but it has also given to all of us an opportunity to innovate and to test a new style of conference in a safer and convenient way in this special period.

The conference is an international conference for the presentation of technological advances and research results in the fields of civil, architecture and urban engineering. The conference brings together about 95 leading researchers, engineers and scientists in the domain of interest from around the world. We warmly welcome previous and prospected authors submit your new research papers to ICCAUE 2021, and share the valuable experiences with the scientist and scholars around the world.

During the conference, the conference model was divided into three sessions, including oral presentations, keynote speeches, and online Q&A discussion. In the first part, some scholars, whose submissions were selected as the excellent papers, were given about 5-10 minutes to perform their oral presentations one by one. Then in the second part, keynote speakers were each allocated 30-45 minutes to hold their speeches. In the second part, we invited four professors as our keynote speakers. Prof. Qing Wang, from Shandong University of Science and Technology, China, performed a speech: *Study of superhydrophobic micro/nano functional materials in civil engineering*. And then we had Prof. Xiuxin Wang, from Southeast university, China. He made a wonderful speech: *Assembly construction, connection structures and load design of large linked floating buildings*. In addition, we had Prof. Jun Yang, from Northeastern University, China as our third keynote speaker. He delivered a wonderful speech: *Investigating the diversity of land surface temperature characteristics in different scale cities based on local climate zones*. Visiting professor Olivier Greder, as our finale keynote speaker, from China Academy of Art, China. He performed a speech: *Repairing the City and Protecting Countryside*. Their insightful speeches had triggered heated discussion in the third session of the conference. Every participant praised this conference for disseminating useful and insightful knowledge.

The proceedings are a compilation of the accepted papers and represent an interesting outcome of the conference. Topics include but are not limited to the following areas: Civil Engineering, Architecture, Urban Engineering, Urban traffic management. All the papers have been through rigorous review and process to meet the requirements of international publication standard.

We would like to acknowledge all of those who supported ICCAUE 2021. The help and contribution of each individual and institution was instrumental in the success of the conference. In particular, we would like to thank the organizing committee for its valuable inputs in shaping the conference program and reviewing the submitted papers.

We sincerely hope that the ICCAUE 2021 turned out to be a forum for excellent discussions that enabled new ideas to come about, promoting collaborative research. We are sure that the proceedings will serve as an important research source of references and knowledge, which will lead to not only scientific and engineering findings but also new products and technologies.

Committee of ICCAUE 2021

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