

# Preface

The 4th ICCASCE 2019 is an annual international conference on Civil, Architectural, Structural and Constructional Engineering. ICCASCE 2019 was taken place in Jeju Island, South Korea during November 15-17, 2019.

The conference program covered invited, oral, and poster presentations from scientists working in similar areas to establish platforms for collaborative research projects in this field. This conference brought together leaders from industry and academia to exchange and share their experiences, present research results, explore collaborations and to spark new ideas, with the aim of developing new projects and exploiting new technology in this field.

The committee of ICCASCE expresses their sincere thanks to all authors for their high-quality research papers and careful presentations. All reviewers are also thanked for their careful comments and advices. Thanks are finally given to Trans Tech Publication as well for producing this volume.

The Organizing Committee of ICCASE 2019

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Recently, various efforts to prevent and prepare are vitally needed for prevention of Disasters and calamities. So we understand the necessity for technology of disaster and we built up the Research Institute of Construction Technology and Planning was built in 1965 in Dong-A University in order to contribute the development of construction industry.

Accordingly, Research Institute of Construction Technology and Planning in Dong-A University has progressed of research on the construction technology and planning through the various seminars, conference and lectures. These research could be conducted cooperation with Dong-A University in various fields structure, soil, hydraulic, environment.

Research Institute of Construction Technology and Planning will try to be a leader in the construction of industry through the various research activities, technical exchanges and global conference.