Preface

The International Conference on Geotechnical Engineering-Iraq (ICGE-Iraq 2020) was organized by the Iraqi Scientific Society for Soil Mechanics and Foundation Engineering (ISSSMFE) in cooperation with the Civil Engineering Department/University of Baghdad. ICGE-Iraq 2020 is a forum to bring together scientists, researchers and industry professionals to discuss innovative ideas and diverse topics on the next generation of sustainable geotechnical and geoenvironmental engineering. The book contains recent research studies in several themes of geotechnical engineering and sustainability. The research studies include experimental investigations and theoretical analyses for the behavior of soil and foundation under static and dynamic loadings. Generally, the accepted papers are belonging to the main themes of ground improvement, laboratory and field testing, shallow and deep foundations, and advanced soil mechanics. Also, the research themes of this book are extended to include some studies in construction management and structural engineering.

Prof. Mahdi Karkush

Chairman of Organization Committee of ICGE-Iraq President of Iraqi Scientific Society for Soil Mechanics and Foundation Engineering

Committees

Organization Committee

Dr. Mahdi O. Karkush
University of Baghdad/Iraq
Dr. Mohammed A. Mahmoud
University of Technology/Iraq
University of Baghdad/Iraq

Prof. Taha Yaseen Abdul Nabi
Dr. Majeed R. Al-Marsoomi
National Center of Construction Labs/Iraq
Al-Forat Al-Awsat Technical University /Iraq

Dr. Hussein M. Al-Khuzaie Al-Muthana University/Iraq Dr. Ahmed A.A. Al-Obaidi University of Baghdad/Iraq

Dr. Maki J. M. Al-Waily Al-Forat Al-Awsat Techenical University /Iraq

Dr. Yahya K. Hussein Atemimi University of Babylon/Iraq Dr. Mohammed Kadum Fakhraldin University of Kufa/Iraq

Dr. Mohammed Hussein

Dr. Qasim Al-Obaidi

Dr. Shaimaa Hasan Fadhil

Mr. Maher Murad Jebuer

Dr. Mohemmed J. Al-Qaseer

Al-Mustansiriya University/Iraq

University of Baghdad/Iraq

University of Lodz/Poland

Scientific Committee

Prof. Mohammed Yousif Fattah University of Technology/Iraq Prof. Hussein H. Karim University of Baghdad/Iraq Prof. Ala N. Aljorany University of Baghdad/Iraq Isra University/Jordan Prof. Saad F. Ibrahim Prof. Suhail I. Khattab University of Mosul/Iraq University of Baghdad/Iraq Prof. A'amal A. Al-Saidi University of Baghdad/Iraq Prof. Bushra S. Zbar University of Basrah/Iraq Dr. Haider S. Aljubair Dijlah University College/Iraq Dr. Falah H. Raheel Al-Anbar University/Iraq Dr. Khalid R. Al-Janabi University of Diyala/Iraq Dr. Jasim M. Abbas Al-Nahrain University/Iraq Dr. Qassun S. Mohammed Shafiqu Dr. Madhat S. Al-Soud Al-Mustansiriya University/Iraq

Advisory Committee

Prof. Musa J. Al-Musawi Ministry of Higher Education and Scientific Research/Iraq

Prof. Eun Chul Shin ISSMGE Vice President/South Korea

Prof. Yousif J. Al-Shakarchi Canada
Prof. Kais T. Shlash Iraq
Prof. Omar Al-Farouq S. Al-Damluji UAE
Prof. Raid R. Al-Omari Iraq
Prof. Ahmed A. Al-Mufty Canada
Prof. Askar Zhussupbekov Kazakhstan
Prof. Erol Guler Turkey