

Conference reports

2nd International Conference on Geotechnical Engineering Iraq (2ICGE-Iraq 2021)

The Second International Conference on Geotechnical Engineering-Iraq (2ICGE-Iraq 2021) finished its work successfully in Akre Technical Institute at Akre, Duhok, Iraq. The conference provided an excellent opportunity to share the latest development in geotechnical engineering in particular discussing the challenges, opportunities and problems of geotechnical engineering. The 2ICGE-Iraq was organized by the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering (ISSSMFE) in cooperation with Akre Technical Institute (ATI)/Duhok Polytechnic University (DPU), College of Engineering/University of Baghdad, and Civil Engineering Department/University of Technology. The 2ICGE-Iraq themes included, but were not limited to the following research and development areas/fields:

- 1) Geotechnical Engineering
- 2) Soil-Structure Interaction
- 3) Structural Dynamics and Earthquakes
- 4) Geoenvironmental Engineering and Sustainability
- 5) Transportation Geotechnique and Materials
- 6) Construction Management
- 7) Remote Sensing and Surveying Engineering
- 8) Environmental Engineering
- 9) Architectural Engineering
- 10) Water Resources Engineering

The 2ICGE-Iraq 2021 was considered as a forum to bring together worldwide scientists, academics, researchers, government officials, and construction industry professionals to discuss innovative ideas and diverse topics on the next generation of sustainable applications in civil engineering and especially in geotechnical and environmental engineering. 2ICGE-Iraq 2021 received 204 research manuscripts, where 174 of these manuscripts were accepted while other 30 of manuscripts were rejected. The papers submitted to the conference were received from Iraq, Iran, Kazakhstan, Russia, USA, India, Turkey, Oman, Jordan, England, Taiwan, China, South Korea and Nigeria. The accepted papers will be handled by three publishers, Scopus indexed journals: Springer, Scientific.net, and IOP Conference Series. More than 400 participants attended the conference in the opening ceremony and plenary session. Hundreds of attendees, paper presenters, keynote speakers, exhibitors and tutorial participants, students have benefited them in many ways from this conference. More than 176 scientific papers were presented by authors by oral presentations and posters from several countries. Six invited keynote speakers and five special lecture speakers from different countries addressed the audience to share knowledge and rich experience of applications of the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering from their universities and companies. The 2ICGE-Iraq supported hybrid presentations: by either online presentation for overseas persons or offline presentation for locals. The offline presentation included oral and poster presentation.



Fig. 1. Opening ceremony

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The first day of the conference started with a welcoming speech and opening ceremony in the main hall at Akre Technical Institute. The representatives of Duhok Polytechnic University (Prof. Adnan Abdullazeez/President of DPU), Akre Technical Institute (Prof. Manhal Abdal/Dean of ATI), Iraqi Scientific Society of Soil Mechanics and Foundation Engineering (Prof. Mahdi Karkush/President of ISSSMFE), and International Society for Soil Mechanics and Geotechnical Engineering (Prof. Charles Wang Wai NG/President of ISSMGE), and American Institute of Civil Engineers (Prof. Jean-Louis Briaud/President of ASCE) addressed to participants short welcoming speeches and brief summary about ISSSMFE, 2ICGE-Iraq, ISSMGE, and ASCE.



Photo 2. Prof. Mahdi Karkush/President ISSSMFE (left) and Prof. Adnan Abdullazeez/President of DPU (right) delivering a speech

The president of Duhok Polytechnic University, the dean of Akre Technical Institute, the representative of Minister of Higher Education and Scientific affairs in Kurdistan region/Iraq, the president of ISSSMFE, and the vice-president of ISSSMFE were handed in shield of excellences to the organization and scientific committees, and keynote speakers. Moreover, shields of excellence were granted from ISSSMFE to the president of Duhok Polytechnic University, dean of Akre technical institute, dean of college engineering/university of Baghdad, and head of civil engineering department/university of technology. The significant authors and reviewers of 2ICGE-Iraq awarded the medal of conference with certificates. Special thanks were extended to the members of ISSSMFE, staff of Akre technical institute/Duhok polytechnic university who worked all together and extremely hard for preparing an outstanding successful conference. Tender thanks were expressed to the reception team and the master of ceremonies and voluntary students who did impressive and dedicated work.



Photo 3. Prof. Mahdi Karkush with Manhal Abdal (left) and Prof. Mohammed Fattah with Mohamed Al-Neimi (right) in the ceremony of awarding shields and certificates

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After that the conference continued with six keynote lectures:

- 1) Prof. Charles Wang Wai NG/President of ISSMGE (Hong Kong): Deformation Mechanisms of Piled Foundation Due to Normal Faulting: 3D Geotechnical Centrifuge and Numerical Modelling (Online).
- 2) Prof. Askar Zhussupbekov/President of Kazakhstan Geotechnical Society (Kazakhstan): Comparative Analysis of Static and Dynamic Pile Tests at the Site of the Astana Medical University Hospital in Nur-Sultan, Kazakhstan (Offline).
- 3) Prof. Harry Poulos (Australia): Foundation Design Challenges for Tall Buildings (Online).
- 4) Prof. Mohammed Y. Fattah (Iraq): Creep Characteristics, Long-Term Deformation and Relaxation of Stress in Clays (Offline).
- 5) Prof. Jean-Louis Briaud/President of ASCE (USA): Design of Deep Soil Mixing Walls Support for Excavation (Online).
- 6) Prof. Deepankar Choudhury (India): Solutions for Foundations of Various Structures Subjected to Earthquake Events (Online).

The organizing committee invited all participants and their guests for lunch in Sipe Waterfall at Akre city, followed by a tour in the resorts of Akre city.

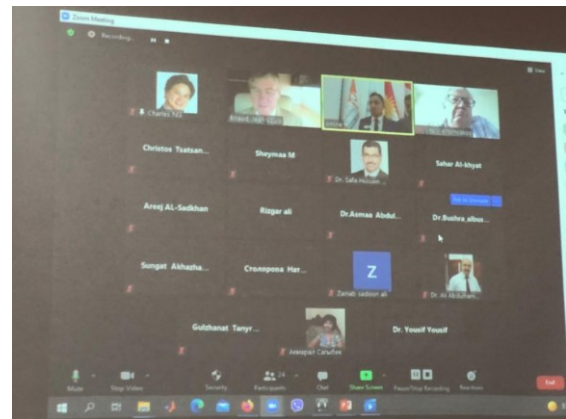


Photo 4. (left) Dr. Ahmed Najemaldeen with Prof. Suhail Kattab in the conference and (right) online conference attendee

The second day of the conference started with five special lectures given by professors from outside of Iraq (online). Prof. E. C. Shin/Vice president of ISSMGE for Asia from South Korea talked about the activities of ISSMGE during the last four years of his work as vice president for Asia and the effect of pandemic of Covid-19 on the activities organized by ISSMGE. He also presented his thanks ISSMFE for organizing two international conferences during the pandemic of covid-19:

- 1) Prof. Yoshinori Iwasaki (Japan): The Authenticity and Integrity of Soil and Foundation of Bayon Temple in Angkor, Cambodia (Online).
- 2) Prof. Keh-Jian Shou (Taiwan): Groundwater Analysis Based on the Hydrogeological Model of Taichung Basin, Taiwan (Online).
- 3) Prof. Reza Imam (Iran): Bearing Capacity of Model Footing on Unsaturated Very Loose Sand (Offline).
- 4) Prof. Ankit Garg (China): Exploring Biochar as Stable Carbon Material for Suppressing Erosion in Green Infrastructure (Online).
- 5) Prof. Eun Chul Shin/Vice-President of ISSMGE for Asia (South Korea): Soft Ground Improvement for Wastewater Pipeline by Using HDCM (Online).

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After ending of the special lectures, the oral presentation of papers was divided into morning and afternoon sessions, in which 12 halls were opened. The poster presentation of papers was also accompanied for the first and second days of the conference. At the end of second day of the conference, the ISSSMFE invited all participants with their guests to launch at one of the natural scenes, Bejil waterfall at Akre city. All participants were also invited at the evening to Gala dinner in one of the famous restaurants in Erbil city/Iraq.



Photo 5. Minutes of activity of conference attendees

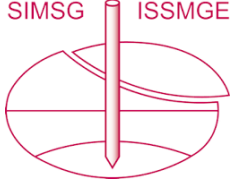

At, the end of conference the following recommendations are declared:

- 1) The role of the geotechnical engineers in the design and execution of different construction projects should be emphasized especially in the design of foundations and soil improvement and remediation. This role should not be overridden or substituted by other civil engineers, particularly when the encountered engineering problems are geotechnical ones.
- 2) Efforts should be dedicated to bridging the gap between the scientific research at scientific and academic institutions and the field of construction industry especially in the field of geotechnical engineering. Attention should be also paid to solve field problems faced by geotechnical engineers such as soil improvement and remediation.
- 3) It is recommended that ISSSMFE should play a major role in conducting of soil investigation reports and design of foundations for different types of projects, especially those requiring highly qualified people for introducing consultant works for solving problems facing geotechnical engineers in the field. The role of the ISSSMFE is therefore very important in evaluating and enriching these reports. The ISSSMFE should move toward the professional agencies and other related governmental offices to get a role in accrediting and issuing the licenses for the site investigation parties.
- 4) The diversity of problematic soils in Iraq encourage ISSSMFE to support the Iraqi researchers and scientist to build a comprehensive database about the distribution of such soils and their geotechnical properties to be useful in the preliminary evaluation of soil.
- 5) The ISSSMFE encourage the Iraqi researchers and scientist to use remote sensing and geomatic in geotechnical engineering to build thematic maps showing the variation of soil profile and geotechnical properties of soil with geographic coordinates.
- 6) The success of the ISSSMFE in organizing the 1st and 2nd international conferences on geotechnical engineering-Iraq, encourage ISSSMFE to organize the 3rd International conferences on Geotechnical Engineering-Iraq in 2022 with the support of ISSMGE.
- 7) The members of ISSSMFE hope to get more roles in the committees and activities of ISSMGE. The administration board of ISSSMFE also hope to get more support from ISSSMGE for activities organized by ISSSMFE such as next 3rd international conference on geotechnical engineering-Iraq-2022.


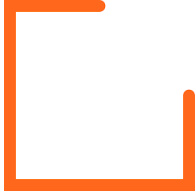



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The conference supported by

	
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