

Conference reports

International Conference on Geotechnical Engineering, Iraq, 19th – 20th Feb 2020

The International Conference on Geotechnical Engineering-Iraq (ICGE-Iraq 2020) had finished its work successfully in Baghdad, Iraq to discuss the Challenges, Opportunities and Problems of Application of geotechnical engineering in Civil engineering problems. The ICGE-Iraq was organized by Iraqi Scientific Society of Soil Mechanics and Foundation Engineering (ISSSMFE) with the cooperation of Civil Engineering Department (CED)/University of Baghdad (UoB). The ICGE-Iraq hold at University of Baghdad. ICGE-Iraq 2020 themes include, but are not limited to, the following research and development areas/fields (more than 120 manuscripts) classified into 11 sessions: Soil improvement; Sallow and deep foundation; Soil mechanics and dynamics; Unsaturated soils; Soil-structure interaction; Engineering geology; Geoenvironmental engineering; Applications of sustainability in geotechnical engineering; Application of remote sensing in geotechnical engineering; Transportation geotechnique; and Construction management.

ICGE-Iraq 2020 is a forum to bring together scientists, researchers, businesspeople, and industry professionals to discuss innovative ideas and diverse topics on next generation of sustainable Geotechnical and Environmental Engineering. ICGE-Iraq 2020 received 144 research manuscripts, where 120 of these manuscripts accepted and 22 were rejected. The papers submitted to the conference received from Iraq, Iran, Kazakhstan, Russia, Germany, USA, India, Turkey, Oman, Jordan and Algeria. The accepted papers will be handled by the publisher scientific.net (<https://www.scientific.net/>). More than 800 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 in many ways from this conference. More than 120 scientific papers were presented by authors in oral presentations and posters from several countries. Five Invited, Keynote and Tutorial Speakers from different countries addressed to audience and shared knowledge and rich experience of applications of the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering in their universities and companies. Organizing Committee organized also technical tour to Babylon historical site.

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The first day of conference started with Welcoming and Opening Ceremony in the main hall at the University of Baghdad. The following representatives of the president of University of Baghdad, co-organizing and hosting universities and supporting organizations addressed to participants with short welcoming speeches and brief summary about ISSSMFE, ICGE-Iraq, and ISSMGE by: Prof. Imad Alhassany/President of University of Baghdad, Iraq; Prof. Saba Alkhafaji/Dean of College of Engineering, University of Baghdad, Iraq; Assoc. Prof. Mahdi Karkush/President of the Iraqi Scientific Society of Soil Mechanics and Foundation Engineering, Iraq; and Prof. Askar Zhussupbekov/Past Vice-President of ISSMGE for Asia, President of Kazakhstan Geotechnical Society, Kazakhstan.



The president of UoB, the Dean of College of Engineering, and the president of ISSSMFE Assoc. Prof. Mahdi Karkush have handed shield of excellences to the Pioneers in geotechnical engineering in Iraq, organization and Scientific committees, and keynote speakers. Also, shields of excellence were granted from ISSSMFE to the president of UoB, vice-president of UoB, vice-president of university of technology-Iraq, dean of college engineering, and head of CED. Special thanks were extended to the members of ISSSMFE, staff of the CED, University of Baghdad which worked all together and extremely hard to prepare an outstanding conference. Tender thanks were expressed to the reception team and the master of ceremonies and voluntary students who did impressive and dedicated work. After that the conference continued with four keynote lectures:

- 1) **Foundations of Historical Buildings in St. Petersburg (Russia) and Some Examples of Heritage Preservation** by Prof. Rashid Mangushev/Head of Geotechnical Department. Saint-Petersburg State Architectural and Civil Engineering University, Vice-President of Russian Geotechnical Society, Russia
- 2) **Geotechnical Piling Construction and Testing on Problematical Soil ground of Kazakhstan and Russia** by Prof. Askar Zhussupbekov/President of Kazakhstan Geotechnical Society/Kazakhstan.
- 3) **Mosul Dam, Problems and Solutions** by Expert Eng. Riyadh Al-Naemi/Director of Mosul Dam, Iraq
- 4) **Influence of Initial Anisotropy, Stress Path and Principal Stress Rotation on Monotonic Behavior of Clean and Mixed Sands** by Prof. Kazem Fakharian/Amirkabir University of Technology/Tehran, Iran.

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The second day started with three special lectures devoted for study cases in Iraq:

- 1) **Specifications and Scope of Use of Franki Piles in Iraq/Al - Saba' Concrete Piles Co. Ltd.**, Presented by Prof. Taha Yassen and Eng. Muhannad Al-Saba', Baghdad/Iraq.
- 2) **Behavior of Reinforced Ballast Layers of Railway Tracks**, Presented by Prof. Mohammed Yousif Fattah/University of Technology, Baghdad, Iraq.
- 3) **Summary on Geotechnical Aspects of Central Bank of Iraq Project**, Presented by consultants Engineers of Central Bank of Iraq.

After the special lectures, the oral presentation of papers was divided into morning and afternoon sessions, in each four halls were opened. Also, the poster presentation of papers was accompanied for first and second day of conference. At, the end of conference the following recommendations are declared:

- 1) The important role of the geotechnical engineers in the design and execution of different construction projects should be considered and enhanced. This role should not be overridden or substituted by other civil engineers, particularly when the encountered engineering problems are geotechnical ones.
- 2) Extensive efforts should be dedicated to bridging the gap between the scientific research institutions and the industry, in the field of geotechnical engineering. This can be done by carrying out more applied researches dealing with the field problems that emerge during the execution of different construction projects.
- 3) It is noticed that many of the current site investigation works and the resulting reports relevant to important construction projects are done by poorly qualified personals. Such reports may give misleading information about the real soil condition and cause undesirable consequences. 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. It is recommended that all engineering governmental offices should not accept engineering consulting reports and designs unless signed by a geotechnical engineer who is licensed by both the Iraqi Engineers union (IEU) and the ISSSMFE. The IEU and the ISSSMFE shall prepare regulations for giving this license to geotechnical engineers based on the academic qualifications, the professional grade in the IEU, and the importance of the project subject.

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- 4) Due to the variety of problematic soils in Iraq, it is important to enhance the scientific research works that deal with improving such soils and giving the suitable solutions to different geotechnical problems that are expected during the construction on such soils.
- 5) It is important to encourage the Iraqi geotechnical engineers and scientists to write and review the scientific journal and conferences papers that are devoted to exposing and solving the geotechnical problems related to local Iraqi soils.
- 6) The members of ISSSMFE hope to get more roles in the committees of ISSMGE and increase the share of ISSSMFE papers in the International conferences of 20th ISSMGE conference in Australia (Sydney, September, 2021) and Kazakhstan (17th ARC on geotechnical engineering, Nur-Sultan, August, 2023)
- 7) As a result of the appealing success of the ISSSMFE in organizing the 1st International conference on Geotechnical Engineering- Iraq, planning and practical steps should be commenced to achieve the aim of hosting the Asian regional conference of the ISSMGE in Baghdad/Iraq, in real future as soon as possible.



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Mahdi O. Karkush
President of Iraqi Scientific Society for Soil Mechanics and Foundation Engineering