

Faculty Vitae

Name: Yahia E-A. Mohamedzein

Education:

PhD: Civil Engineering (Geotechnical Engineering)
Purdue University, Indiana, U.S.A., May 1989.

MSc: Geotechnical Engineerin
Purdue University, Indiana, U.S.A., December, 1984.

BSc: Civil Engineering, First Class Honors
University of Khartoum, Khartoum, Sudan, June 1982.

Registration:

Sudan Engineering Council Board (1995).
Professional Engineer (P.E.), Nebraska, U.S.A. (1992)

Employment History

- Associate Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman (Aug. 2007 to Present).
- Assistant Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman (Aug. 2001 to 2007).
- Visiting Consultant: Department of Civil Engineering and Architectural, Sultan Qaboos University, Al-Khod, Sultanate of Oman (Jan. 2001 to May 2001).
- Assistant Professor: Department of Civil Engineering, University of Khartoum, Khartoum, Sudan (September 1992 to 2001).
- Senior Staff Engineer: Woodward-Clyde Consultants, U.S.A., (July 1989 to July 1992).
Teaching Assistant: School of Civil Engineering, Purdue University, West Lafayette, Indiana, U.S.A. (1983 to 1989).
- Teaching Assistant: Department of Civil Engineering, University of Khartoum, Khartoum, Sudan (1982 to 1983).

Societies:

- Member of the American Society of Civil Engineers (ASCE).
- Member of the Sudanese Engineering Society.
- Member of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE).

SCHOLARSHIPS AND HONOURS

- David Ross Summer Grant, Purdue University, West Lafayette, Indiana, U.S.A.,1988.
- David Ross Summer Grant, Purdue University, West Lafayette, Indiana, U.S.A.,1986.

- PhD scholarship, University of Khartoum, 1985-1989.
- MSc scholarship, University of Khartoum, 1983-1984.
- The late Merghani Hamza Prize for best results in the Department of Civil Engineering, University of Khartoum, Khartoum, Sudan, 1982.
- The Ministry of Irrigation prize for best performance in final year civil Engineering, University of Khartoum, Khartoum, Sudan, 1982.
- The Lyons prize for best student who shows highest ability in surveying, University of Khartoum, Khartoum, Sudan, 1982.
- The University Prize for best performance in the semifinal year, Department of civil Engineering, University of Khartoum, Khartoum, Sudan, 1981.

Published Papers in Refereed Journals (Last 5 years):

1. [Mohamedzein, Y., Al Aghbari, M. and Al-Kindi, Z. \(2024\).](#) Cement kiln dust (CKD) as a potential stabilizer to mitigate the swelling of clays. Accepted for publication in UTM Jurnal Teknologi, <https://journals.utm.my/jurnalteknologi/authorDashboard/submission/23243>
2. Hammad, M.A., **Mohamedzein, Y.** E-A., Al-Aghbari, M.Y., and Al-Nuaimi, A. S. (2024). Laboratory Investigation of Deep Soil Mixing for the Improvement of Salt-Cemented Soils. Geotech Geol Eng (2024). <https://doi.org/10.1007/s10706-024-02949-4>
3. Hammad, M.A., **Mohamedzein, Y.**EA. and Al-Aghbari, M. (2024). Improvement of Sabkha Soils Using Cement and Marble Powder. Indian Geotech J (2023). <https://doi.org/10.1007/s40098-023-00799-0>
4. Eldawoody. A/ A., **Mohamedzein, Y.** and Al-Aghbari, M. (2024). Behavior of laterally loaded piles installed in layered soils with a soft clay layer. Transportation Infrastructure Geotechnology. <https://doi.org/10.1007/s40515-023-00292-4>
5. Hammad, M.A., Mohamedzein, Y., Al-Aghbari, M. (2024). Improvement of a Sabkha Soil Employing Waste Marble Powder. In: Hazarika, H., Haigh, S.K., Chaudhary, B., Murai, M., Manandhar, S. (eds) Sustainable Construction Resources in Geotechnical Engineering. IC-CREST 2023. Lecture Notes in Civil Engineering, vol 448. Springer, Singapore. https://doi.org/10.1007/978-981-99-9227-0_18
6. Hammad, M.A.; **Mohamedzein, Y.**; Al-Aghbari, M. (2023). Improving the Properties of Saline Soil Using a Deep Soil Mixing Technique. CivilEng 2023, 4, 1052–1070. <https://doi.org/10.3390/civileng4040057>
7. Mohamedzein, Y., Al Aghbari, M. and Al-Kindi, Z. (2023). Swelling Characteristics of an Expansive Soil before and after Stabilization with Cement- By-Pass-Dust. <https://doi.org/10.21203/rs.3.rs-2751054/v1>.
8. **Mohamedzein, Y.**, Al-Badi, A., Al-Shahri, M. and Adel, M. (2023). Experimental and numerical study of a model strip footing resting on geogrid-reinforced dune sand. International Journal of Innovative Research in Science, Engineering and Technology, Vol. 12, Issue 1, pp. 7-19. <https://doi.org/0.15680/IJRSET.2023.1201002>
9. Al-Aghbari, M.Y., Mohamedzein, Y. EA. (2023). Use of Cement Kiln Dust and Cement for Grouting of Granular Soils. KSCE J. Civ. Eng. 27, 2455–2462 (2023). <https://doi.org/10.1007/s12205-023-0508-z>
10. Al-Aghbari, M., **Mohamedzein, Y.** and Al.Sadrani, K. (2023). Geotechnical Properties of Omani Sabkha-Cement-Marble Mixture. European Chem. Bull. 2023, 12 (Special Issue 4), 16811-16819. [doi: 10.48047/ecb/2023.12.si4.14982023.24/06/2023](https://doi.org/10.48047/ecb/2023.12.si4.14982023.24/06/2023)

11. **Mohamedzein**, Yahia, Hassan, Hossam and Al-Hashmi, Khalil (2022). Effect of cement-by-pass dust stabilized-expansive soil subgrade on pavement rutting. *Journal of Innovative Infrastructure Solutions*, 7:63.
<https://doi.org/10.1007/s41062-021-00663-1>
12. Al-Jabri, K. S., Hago, A., Tavakoli, D., Waris, M. B., Hassan, H. F. and **Mohamedzein**, Y. (2022). Investigating thermal cracking in mass concrete of a bridge abutment: field measurements and numerical modelling, *Australian Journal of Civil Engineering*.
<https://DOI: 10.1080/14488353.2022.2145031>
13. Mohammed Y. Al-Aghbari and Yahia E.-A. **Mohamedzein** (2020). The use of skirts to improve the performance of a footing in sand. *International Journal of Geotechnical Engineering*, Vol. 14, Issue 2, 134-141.
<https://doi.org/10.1080/19386362.2018.1429702>
14. **Mohamedzein**, Yahia, Al-Hashmi, Abdulaziz, Al-Abri, Aisha, and Al-Shereiqli, Amira (2019). Polymers for stabilisation of Wahiba dune sands, Oman. *proceedings of the Institution of Civil Engineers - Ground Improvement*, Volume 172, Issue 2, pp. 76-84.
<https://doi.org/10.1680/jgrim.17.00063>
15. Mohammed Yousuf Al-Aghbari, Yahia **Mohamedzein** and Hammad Al-Nasseri (2019). Potential use of structural skirts towards improving the bearing capacity of shallow footings exposed to inclined loadings, *International Journal of Geotechnical Engineering*. DOI: [10.1080/19386362.2019.1617477](https://doi.org/10.1080/19386362.2019.1617477)
16. N. Sundararajan, Issa El-Hussain , Adel M. E. Mohamed , Ahmed Deif , Sheref El-Hady, Khalifa Al-Jabri , Ghazi Al-Rawas , Yahia **Mohamedzein** , Andy Kwarteng , Mohammed Al-Wardi (2019). Shear wave velocity characteristics in parts of Muscat, Sultanate of Oman – A measure of earthquake hazard assessment, *Journal Geological Society Of India* , No. 93, pp. 515-522.

Published Papers in Conference Proceedings (Last 5 years):

1. Hammad, M. A., **Mohamedzein**, Y. E-A. and Al-Aghbari, M. Y., (2023). Improvement of a Sabkha Soil Employing Waste Marble Powder. 2nd International Conference on Construction Resources for Environmentally Sustainable Technologies Fukuoka International Congress Center, Fukuoka, Japan, 20-22, Nov. 2023.
2. Al-Aghbari, M. Y., **Mohamedzein**, Y. E-A. and Al-Sadrani, K. A. (2022). Improvement geotechnical properties of salt-encrusted desert flats utilizing cement kiln dust. *International geoengineering Conference (GEOFIESTA 2022)*, Putrajaya, Malaysia, July 20-21, 2022.
3. Hammad, M. A., **Mohamedzein**, Y. E-A. and Al-Aghbari, M. Y., (2022). Sabkha soil geotechnical properties improvement utilizing cement and marble powder. *International geoengineering Conference (GEOFIESTA 2022)*, Putrajaya, Malaysia, July 20-21, 2022.
4. Al-Jabri, K., Hago, A. **Mohamedzein**, Y. (2019). Forensic investigation of deterioration and damage of RC building in Oman: Causes and recommended remedial measures. In: *Proceedings of the First International Conference on Sustainable Infrastructure*, Kuwait City, Kuwait, April 23 – 25.
5. Mohammed ,Ammar A. and **Mohamedzein**, Yahia (2018). Scour effects on laterally loaded piles in sand and potential remedial measurements. Accepted, *DFI-India 2018: 8th Conference on Deep Foundation Technologies for Infrastructure Development in India* on November 15-17, 2018.
6. Mohammed ,Ammar A.; **Mohamedzein**, Yahia; Al-Jabri, Khalifa and Al-Aghbari, Mohammed (2018). Experimental and Numerical Modeling of the Scour Effects on the

Laterally Loaded Piles in Sand. The 1st National Conference on Civil & Architectural Engineering, March 26-28, 2018, Sultan Qaboos University, Muscat.

7. Al-Hashmi , Abdulrahim and **Mohamedzein** ,Yahia (2018). Laboratory Characterization of Expansive Soil from Adam. The 1st National Conference on Civil & Architectural Engineering, March 26-28, 2018, Sultan Qaboos University, Muscat