

**YAHIA ELHAG AHMED MOHAMEDZEIN**  
**Department of Civil and Architectural Engineering**  
**College of Engineering**  
**Sultan Qaboos University**

**C1. PERSONAL INFORMATION**

Tel: (968) 2414 2577 (Office)  
(968) 2441 3750 (Home)  
e-mail : yahiaz @ squ.edu.om

**Martial Status:**

Married with 3 children

**C2. EDUCATIONAL AND EMPLOYMENT INFORMATION**

**Education:**

- PhD: Civil Engineering (Geotechnical Engineering)  
Purdue University, Indiana, U.S.A., May 1989.  
Title of Thesis: Nonlinear Finite Element Analysis of Soil-Culvert Interaction  
Supervisor: Prof. Jean-Lou Chameau
- MSc: Geotechnical Engineering  
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)

**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).

**Employment History**

1. Teaching Assistant: Department of Civil Engineering, University of Khartoum, Khartoum, Sudan (1982 to 1983).
2. Teaching Assistant: School of Civil Engineering, Purdue University, West Lafayette, Indiana, U.S.A. (1983 to 1989).
3. Senior Staff Engineer: Woodward-Clyde Consultants, U.S.A., (July 1989 to July 1992).
4. Assistant Professor: Department of Civil Engineering, University of Khartoum, Khartoum, Sudan (September 1992 to 2001).

5. Visiting Consultant: Department of Civil Engineering and Architectural, Sultan Qaboos University, Al-Khod, Sultanate of Oman (Jan. 2001 to May 2001).
6. Assistant Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman ( Aug. 2001 to 2007).
7. Associate Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman ( Aug. 2007 to 2009).

### **C3. SCHOLARSHIPS AND HONOURS**

1. David Ross Summer Grant, Purdue University, West Lafayette, Indiana, U.S.A., 1988.
2. David Ross Summer Grant, Purdue University, West Lafayette, Indiana, U.S.A., 1986.
3. PhD scholarship, University of Khartoum, 1985-1989.
4. MSc scholarship, University of Khartoum, 1983-1984.
5. The late Merghani Hamza Prize for best results in the Department of Civil Engineering, University of Khartoum, Khartoum, Sudan, 1982.
6. The Ministry of Irrigation prize for best performance in final year civil Engineering, University of Khartoum, Khartoum, Sudan, 1982.
7. The Lyons prize for best student who shows highest ability in surveying, University of Khartoum, Khartoum, Sudan, 1982.
8. The University Prize for best performance in the semifinal year, Department of civil Engineering, University of Khartoum, Khartoum, Sudan, 1981.

### **C4. TEACHING**

**Associate Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman ( 2007 to Present):**

Taught classes in geotechnical engineering, structures, statistics and computer programming for undergraduate students and for postgraduate students in Civil Engineering. Supervising undergraduate and postgraduate research projects in the areas of soil stabilization, clay liners, expansive soils, application of GIS in geotechnical engineering and finite element analysis of soil-structure interaction.

**Assistant Professor: Department of Civil and Architectural Engineering, Sultan Qaboos University, Al-Khod, Sultanate of Oman ( Jan. 2001 to 2007):**

**Assistant Professor: Department of Civil Engineering, University of Khartoum, Khartoum, Sudan (September 1992 to 2001):**

Taught classes in geotechnical engineering and strength of materials for undergraduate students and numerical computation and finite element analysis for postgraduate students in Civil and Mechanical Engineering. Supervising postgraduate students research in the areas of computer applications and finite element analysis of soil-structure interaction, problems associated with foundations in expansive soils, earthquake engineering and soil liquefaction, and artificial intelligence.

**Teaching Assistant: School of Civil Engineering, Purdue University, West Lafayette, Indiana, U.S.A. (1983 to 1989):**

Taught and assisted in the instruction of classes in soil mechanics, analysis and design of earth retaining structures, groundwater and seepage, and reliability methods in geotechnical engineering.

**Courses taught at Sultan Qaboos University:**

**Undergraduate Courses:**

1. Geotechnical Engineering I
2. Geotechnical Engineering II
3. Foundation engineering
4. Environmental Geotechnics
5. Soil Improvement
6. Basic Mechanics
7. Mechanics of Materials
8. Probability and Statistics for Engineers
9. Fortran Programming
10. Numerical Methods in Engineering
11. Final Year Design Project

**Postgraduate Courses:**

12. Advanced Soil Mechanics
13. Advanced Foundation Engineering
14. Slope Stability and Earth Structures
15. Difficult Soils and Ground Improvement
16. Geoenvironmental Engineering

**Courses taught at the University of Khartoum:**

**Undergraduate Courses:**

1. Soil Mechanics I (for civil and agricultural engineering students).
2. Soil Mechanics II
3. Soil Mechanics III
4. Foundation Engineering
5. Practical Aspects of Expansive Soils
6. Strength of Materials I
7. Strength of Materials II
8. Strength of Materials III
9. Strength of Materials IV

**Postgraduate Courses**

10. Finite Element Method
11. Numerical Analysis

**Programs developed at SQU**

1. Development of Master of Construction Engineering Program in the Department of Civil and Architectural Engineering, Sultan Qaboos University (2018 to 2020).

1. Construction Engineering Program in the Department of Civil and Architectural Engineering, Sultan Qaboos University (2003).
2. Participated in early development of Architectural Engineering Program in the Department of Civil and Architectural Engineering, Sultan Qaboos University (2002).
3. Participated in development of Master of Civil Engineering (Geotechnical) Program in the Department of Civil and Architectural Engineering, Sultan Qaboos University (2001-2002)
4. Participated in development of Curriculum for Civil Engineering Program, university of Al-Sharqia University (2007).

**PhD students supervised at Sultan Qaboos University:**

1. Mohammed Adel Maree Hammad (2020 to Present). Experimental and Numerical Studies of Deep Soil Mixed Columns in Sabkha Soils

**MSc students supervised at Sultan Qaboos University:**

1. Abdulaziz Samir Al-Qeisi (2022 to present). Experimental Investigation on the Potential Use of Geothermal Energy Piles Installed in Soils.
2. Ahmed Hamood Said Al Hajri (2021). Study of the quantity and composition of leachate and gases generated from landfills in Oman.
3. Zainab Bashir Ali Bacal (2021). Study of the Swelling and Suction Properties of Al-Khod and Adam Expansive Soils.
4. Amr Mohammad Eldawood (2020). Experimental and Numerical Analysis of Axially and Laterally Loaded Pile Installed in Layered Soils with a Soft Clay Layer.
5. Zuweina Hamdan Said Al Kindi (2019). Stabilization of Expansive Soil from Adam.
6. Mohammed Abdelwahid Hago (2019). Investigation Of Building Damages Due To Expansive Soils.
7. Khalil Ibrahim Mubarak Al-Hashmi (2018). Stabilization of expansive soil from Adam for possible use as a subgrade for pavement.
8. Jamal Al-Falahi (2017). Experimental Study of the Effect of Scour in Laterally-Loaded pile Groups.
9. Abdulraheim Salim Omar Al-Hashmi (2017). Laboratory characterization and numerical modeling of mitigation of expansive soil from Adam.
10. Ammar Al-Sharif (2016). Experimental and Numerical Modeling of the Scouring Effect on the Laterally Loaded Pile in Sand
11. Al Yaqdhan Abdullah Ahmed Al Harthy (2012). Experimental Study of Plastic Pipes in Dune Sand.
12. Sabria Sulaiyam Said Al Aamri (2012). Finite Element Analysis of Plastic Pipes in Dune Sands.
13. Daud Al-Abri (2010): Performance of plastic pipes installed in desert sands.
14. Salem Alhashmi (2010): Investigation of seepage in Al-Fullaj Dam.

**MSc students co-supervised at Sultan Qaboos University:**

1. Ibrahim Al-Beloushi (2010). Reinforcement of Sabkha Soils Using Geogrids
2. Yaqoub Al-Habsi (2005). SQU Soil Mapping Using GIS.

**MSc students Committees at Sultan Qaboos University:**

1. Said Al-Saqri (College of Agriculture and Marine Science (Date of start: Jan. 2012)

#### **PhD students supervised at University of Khartoum**

1. Fath Elrahman Eltayeb Nour Eldaim (2011). Performance of Laterally Loaded Single Piles in Soil.

#### **MSc Thesis Supervised at the University of Khartoum:**

1. Finite Elements Analysis of Piles in Expansive Soils. By Muzamil G. Mohamed (1995).
2. Probabilistic Mapping of Liquefaction in Central Khartoum. By Mahmoud Abdel Jabbar (1995).
3. Geological Engineering Study of Soil Types in East Central Sudan. By Waleed Mohamed Elhassan (1999).
4. Finite Element Analysis of the Effect of Interface on Soil-Pile Interaction in Expansive Soils. By Fath Elrahman Eltayeb Nur Eldayem (1999).
5. Computer-Aided Design of Reinforced Concrete Structures: An Object-Oriented Modeling and Implementation. By Tital Mustafa Eltayeb (2000).
6. Finite Element Analysis of Stone Columns in Soft Clay with Special Reference to the New White Nile Bridge. By Osama Mohamed Ahmed Daud (2000). (At the University of Sudan for Science and Technology).
7. Finite Element Analysis of Group of Stone Columns Loaded by an Embankment. By Igbal Hassan Shibani (2001).
8. The Compressibility and Shear Strength Characteristics of Sandy Clay Soil from Elmulazmin Area in Omdurman. By Mohamed Hassan Aboud (2001).
9. Seismic Micozonation of Bashair-Port Sudan. By Amira Haroun Ahmed Elamin (2001).
10. Prediction of Swelling Soil Pressure Using Artificial Neural Networks. By Rabab Ibrahim Abdel Rahim (2001). (At the University of Sudan for Science and Technology).
11. Computer Aided Structural Analysis and Member Sizing Using Neural Network. By Osama Ahmed Ibrahim (2001).

#### **Curriculum Development and Teaching Management at Sultan Qaboos University:**

- Developed and taught the following undergraduate and postgraduate courses for *the first time at SQU*:  
 CIVL5132 Environmental Geotechnics  
 CIVL6310 Advanced Soil Mechanics  
 CIVL6320 Advanced Foundation Engineering  
 CIVL6340 Difficult Soils and Ground Improvement  
 CIVL6380 Geoenvironmental Engineering
- Developed Moodle (Web) sites for :  
 CIVL3106: Geotechnical Engineering I  
 CIVL4006: Probability and Statistics for Engineers  
 CIVL5132: Environmental Geotechnics  
 CIVL5146: Numerical Methods in Engineering  
 CIVL6380: Geoenvironmental Engineering
- Assisted in the development of a program for Master Degree in Civil Engineering (Geotechnical Engineering Major).
- Developed the course outline for the following graduate courses:  
 CIVL6360 Soil Dynamics

CIVL6300 Special Topics in Geotechnical Engineering

- Assisted in the development of a new track program in geotechnical engineering for undergraduate students.
- Participated in updating the contents of the following undergraduate courses:
  - CIVL3106 Geotechnical Engineering I
  - CIVL4106 Geotechnical Engineering II
  - CIVL4226 Foundation Engineering
  - CIVL5133 Soil Improvement

#### **Curriculum Development and Teaching Management at the University of Khartoum:**

- Developed and taught the following postgraduate courses *at the University of Khartoum*:
  - Finite Element Method
  - Numerical Analysis

#### **Student Advising at Sultan Qaboos University:**

- Academic advisor for more than 25 undergraduate students in every academic year from (2001-2002) to (2009-2010).
- Advisor or co-advisor for four postgraduate students.

### **C5. SERVICES**

#### **University Administration and Committees at Sultan Qaboos University:**

##### **University Services:**

1. Member of the Committee for outline of earthquake design procedure in Oman (2009-present)
2. Member of review team for the "Remedial Measures for the College of Agriculture" (2011-present).
3. Review of Geotechnical Report for the Proposed Cultural Centre at SQU (2002).
4. Member of review team for the "Remedial Measures for the College of Agriculture and Marine Sciences" (2001).
5. Reviewer for the Research & Innovation Affairs Department, The Office of Deputy Vice Chancellor for Postgraduate Studies and Research, Sultan Qaboos University (2009).
6. Member of the Committee for Establishment of Oman Earth Sciences Research Center (2008).
7. Member of Review Team for the "The Journal of Engineering Research (TJER)" Sultan Qaboos University
8. Member of Review Team for the " Journal for Scientific Research of Agricultural Sciences" Sultan Qaboos University

##### **College of Engineering Services:**

1. Member, Curriculum Committee (Sep. 2002 to 2017)
2. Member of Student Orientation Group (Aug. 2001, 2006, 2009)
3. Member of Review Team for "The Journal of Engineering Research" College of Engineering, Sultan Qaboos University.

4. Associate Editor for "The Journal of Engineering Research" College of Engineering, Sultan Qaboos University (2008 to Present).

**Department of Civil and Architectural Engineering Services:**

1. Member of Curriculum and Course Equivalence Committee for CAE Department (2019 to present).
2. Member, Accreditation Committee (2002, 2009-to present).
3. Member of laboratory Committee (2020 to present).
4. Member of Postgraduate studies & Research Committee (2019 to Present).
5. Coordinator of Curriculum and Course Equivalence Committee for CAE Department (2002 to 2019).
6. Coordinator of Curriculum and Course Equivalence Committee for CAE Department (2002 to 2019).
7. Member of Curriculum and Course Equivalence Committee for CAE Department (2002 to 2019).
8. Member of Promotion Committee (2008 to 2012)
9. Member of the Scientific Committee: Third Gulf Conference on Roads (TGCR06).
10. Member of Review Team for the "Third Gulf Conference on Roads (TGCR06).
11. Member of Strategic Plan Committee for CAE Department (2003 to present).
12. Member of Graduate Committee for CAE Department (2002 to present).
13. Member of Laboratory Committee for CAE Department (2002 to present).
14. Member of the Committee for selection of CE students track specialization (2005 to present).

**University Administration and Committees at the University of Khartoum:**

1. Head of Soil Mechanics and Foundation Engineering Section, Building and Road Research Institute (BRRI) (1998 to 2001).
2. Representative of BRRI in the Applied and Scientific Council of Graduate School (1998 to 2001).
3. Secretary of Graduate Studies Committee, BRRI (1998 to 2001).
4. Secretary of Editorial Board, Building and Road Research Journal (April 2000 to 2001).
5. Representative of BRRI in the University Academic Research Committee (1999 to 2001).
6. Secretary of Permanent Committee, BRRI (1995 to 2001)
7. Student training supervisor, Department of Civil Engineering, Faculty of Engineering and Architecture (1994).
8. Supervisor of soil mechanics laboratory, Department of Civil Engineering, Faculty of Engineering and Architecture (1994).
9. Examination officer, Department of Civil Engineering, Faculty of Engineering and Architecture (1993).
10. Chairman of the Jebel Aulia Surveying Training Camp, Department of Civil Engineering, Faculty of Engineering and Architecture (1993).

**Professional Services:**

**Consultant: University of Khartoum, Khartoum, Sudan (1994 to 2001).**

Consultant for major geotechnical investigation projects.

**Senior Staff Engineer: Woodward-Clyde Consultants, U.S.A., (July 1989 to July 1992):**

Conducted geotechnical investigation including planning of the subsurface investigation, assignment and supervision of laboratory testing, engineering analysis and design, recommendations for construction, report writing, review of construction plans and specifications, and management of construction activities for various projects. Projects included moderate and high rise buildings, highway bridges and embankments, pavements, buried structures, small dams, earth retaining structures, and grain storage facilities.

**Community Services (At SQU):**

- 1 Expert witness and consultant for the Sohar Preliminary Court for the case of “ Causes of Distress of Ministry of Housing Building in Ibri”. Oct. 2012 to July 2013.
- 2 Consultant for the Ministry of Transportation and Communication (March to June 2013). Reviewed the proposed remedial measures for Duqum Dry Dock Staff Accommodation Building in Duqum.
1. Prepared professional examinations for the Omani Engineering Society (2009).
2. Member of the consulting team for "Stability of a Rock Slope near Jalali Fort, Muscat " (2002).
3. Member of the consulting team for "Geotechnical Consultation Services for Government Buildings in Al-Qurum" (2005).

**Career and Professional Societies Services:**

1. Secretary of the Sudanese Section of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE ) (1993-2001).
2. Member of the "Scour Committee", International Society of Soil Mechanics and Geotechnical Engineering.
3. Member of the review team for "The Journal of Engineering Research" College of Engineering, Sultan Qaboos University.
4. Member of the review team for the "Journal of Geotechnical and Geological Engineering" Kluwer Academic Publisher.
5. Member of the review team for the Second International Conference in Geotechnical and Geoenvironmental Engineering, Riyadh 2002.
6. Member of the review team for the 9<sup>th</sup> Arab Structural Engineering Conference, Abu Dhabi, UAE.
7. Member of Review Team for the " Journal for Scientific Research of Agricultural Sciences” Sultan Qaboos University
8. Member of Review Team for the “International Journal of Geomechanics”, American Society of Civil Engineers (ASCE)
9. Member of Review Team for the “Journal of Ground Improvement”, Institution of Civil Engineers (ICE).
10. Member of Review Team for the "Journal of Geotechnical and Geological Engineering", SpringerLinkc Publisher.
11. Member of Review Team for the "Journal of Environmental Management”, Elsevier.
12. Member of Review Team for the "Journal of Urban Planning and Design", Institution of Civil Engineers (ICE).
13. Member of Review Team for the "Journal of Environmental and Engineering Geoscience”, Association of Environmental & Engineering Geologists and the Geological Society of America.
14. Member of Review Team for the "Journal of Civil Engineering and Management” Vilnius Gediminas Technical University, Lithuania

15. Member of Review Team for the "University of Sharjah Journal for Pure and Applied Sciences", University of Sharjah, UAE.
16. Member of ISSMGE International Society for Soil Mechanics and Geotechnical Engineering

## C6. SCHOLARLY ACHIEVEMENTS

### Published Papers in Refereed Journals:

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](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/10.15680/IJIRSET.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-Shereiqi, Amira (2019). Polymers for stabilisation of Wahiba dune sands, Oman. roceedings 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.
  17. **Mohamedzein**, Yahia E-A, Al-Hashmi, Salem M. and Al-Rawas, Amer A. (2016). Investigation of Excessive Seepage from Al-Fulaij Recharge Dam, Oman. Journal of Engineering Research, College of Engineering, Sultan Qaboos University, Vol. 13, No. 2, pp. 124-136.
  18. **Mohamedzein**, Yahia E-A., Ahmed Al-Ghaithi, Mohamed Al-Aghbari and Bakhit Tabook (2016). Assessment of Dune Sand-Bentonite Mixtures for Use as Landfill Liners. Journal of Solid Waste Technology and Management Vol. 42, No. 1, pp. 25-34.
  19. **Mohamedzein**, Yahia E-A. and Mohammed Y. Al-Aghbari (2016). Experimental Study of the Performance of Plastic Pipes Buried in Dune Soil. International Journal of Geotechnical Engineering, Vol. 10, No. 3, pp. 236-245.
  20. **Mohamedzein**, Yahia E-A., Nour Eldaim, Fath Alrahman E. and Abdelwahab, Abu Bakr (2013). Laboratory Model Tests on Laterally-Loaded Piles in Plastic Clay. International Journal of Geotechnical Engineering, Vol. 7, N0. 3, pp. 241-250.  
<https://doi.org/10.1179/1938636213Z.000000000030>
  21. **Mohamedzein**, Y. E-A. and Al-Aghbari, M. Y. (2012). The use of municipal solid waste incinerator ash to stabilize dune sands. Journal of Geotechnical and Geological Engineering (Springer), 30:1335-1344. <https://doi.org/10.1007/s10706-012-9548-8>
  22. **Mohamedzein**, Y. E-A. and Al-Rawas, A. A. (2011). Cement-stabilization of sabkha soils from Al-Auzayba, Sultanate of Oman. Journal of Geotechnical and Geological Engineering, Springer, Vol. 24, pp. 1767–1780.
  23. **Mohamedzein**, Yahia E-A. and Al-Shibani, Igbal H. (2011). Performance of An Embankment Supported on Soft Soil Reinforced by Stone Columns. Journal of Ground Improvement, Vol. 164, No. GI4, The Institution of Civil Engineers, pp. 213–224.
  24. Al-Aghbari, Mohamed Y., Dutta, R. K. and **Mohamedzein**, Yahia E-A. (2011). Effect of Diesel and Gasoline on the Properties of Sands – A Comparative Study.

Accepted for publication in the International Journal of Geotechnical Engineering, J. Ross Publishing.

25. Taha, R. , **Mohamedzein, Yahia E-A.**, Al-Rawas, A. and Al-Suleimani, Y. (2009). Solidification of Tank Bottom Sludge. Accepted for Publication in the Journal of Geotechnical and Geological Engineering, SpringerLink Publisher.
26. Al-Aghbari, Mohammed Y.; **Mohamedzein, Yahia E-A.** and Taha, Ramzi (2009). Stabilization of desert sands using Portland cement and cement-by-pass dust. Journal of Ground improvement, Thomas Telford, Vol. 162, No. GI3, pp. 145-151.  
<https://doi.org/10.1680/grim.2009.162.3.145>
27. **Mohamedzein, Yahia, E-A.**; Al-Aghbari, Mohammed and Taha, Ramzi (2006). Stabilization of desert sands using municipal solid waste incinerator ash. Journal of Geotechnical and Geological Engineering, Springer, Vol. 24, pp. 1767–1780.  
<https://doi.org/10.1007/s10706-006-6806-7>
28. **Mohamedzein, Yahia, E-A.**; Abdalla, Jamal A. and Abdel Wahab, Abubakr (2006). Site response and earthquake design spectra for central Khartoum, Sudan. Bulletin of Earthquake Engineering, Springer, Vol. 4, No. 3, pp. 277-293.
29. Al-Aghbari, Mohammed Y. and **Mohamedzein, Yahia E-A.** (2006). Improving the performance of circular foundations using structural skirts. Journal of Ground Improvement, Thomas Telford, Vol. 10, No. 3, pp. 125-132.
30. **Mohamedzein, Yahia E-A.** and Aboud, Mohammed H. (2006). Compressibility and shear strength of a residual soil. Journal of Geotechnical and Geological Engineering, Springer, Vol. 24, No. 5, pp. 1385-1401.
31. Al-Rawas, Amer A.; **Mohamedzein, Yahia E-A.**; Al-Shabibi, Abdulaziz S. and Al-Katheiri, Salem (2006). Sand-Attapulgitic clay mixtures as a landfill liners. Journal of Geotechnical and Geological Engineering, Springer, Vol. 24, No. 5, pp. 1365-1383.
32. **Mohamedzein, Yahia E-A.**; Al-Rawas, Amer A.; Al-Aghbari, Mohammed Y.; Qatan, Ahmed and Al-Rawas, Abdul-Hamid (2005). Assessment of crushed shales for use as compacted landfill liners. Journal of Engineering Geology, Elsevier, Vol. 80., No. 3-4, pp. 271-281.
33. Al-Aghbari, Mohammed Y. and **Mohamedzein, Yahia E-A.** (2004). Model testing of strip footings with structural skirts. Journal of Ground Improvement, Thomas Telford, Vol. 8, No. 4, pp. 171-177.
34. Al-Aghbari, Mohammed Y. and **Mohamedzein, Yahia E-A.** (2004). Bearing capacity of strip foundations with structural skirts. Journal of Geotechnical and Geological Engineering, Kluwer Academic Publisher, Vol. 22, No. 1, pp. 43-57.
35. **Mohamedzein, Yahia. E-A.** and Daoud, Osama M. A. (2003). Finite Element Analysis of Stone Columns. Building and Road Research Journal, University of Khartoum, Vol. 5, pp. 30-36.
36. Abdalla, J. A.; **Mohamedzein, Yahia E-A.** and Abdel Wahab, Abubakr (2001). Seismic hazard assessment of Sudan and its vicinities. Journal of Earthquake Spectra, Vol. 17, No. 3, pp. 399-414.
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2. Al-Jabri, K., Mohamedzein, Y., Al Alawi, M., Hago, M. and Al-Hooti, K. (2024) . Determination of Soil Characteristics and Water Profile Beneath a Damaged Building using Geophysical Investigation Techniques. Arab ICT Conference (AICTC), Manama, Kingdom of Bahrain, February, 27-28, 2024.
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#### Grants and Research Contracts:

##### Active Research Grants

1. Mohammed Al-Aghbari (P.I.) and Yahia Mohamedzein (Co-Investigator): Stabilization of Sabkha soils in Al-Seeb area using deep soil mixing techniques. Internal Grant, Sultan Qaboos University . (2023 to Present). (Value: 7700 OMR).
2. Khalifa Al-Jabri ( P.I.); (Co-Investigators: Ali Al-Nuami, Ali Al-Harti; Abdul Wahid Hago,. Yahia Mohamedzein and Ahmed Sana). Investigation of seepage and cracks in Duqm Dry Dock” . For Drydock Company Board of Directors. (Nov. 2014-Present). (Value: 150000 OMR).
3. Ali Al-Maktoumi (.P.I). ( Co-Investigators: A. Kacimov, O. Abdalla, T. Al-Hosni, S. Al-Ismaily, R. Al-Yahyai, A. Izady, S. Zekri, A. Al-Nuaimi, Y. Mohamedzein, T. Etri, R. Al-Abri, M. Al-Balushi). Rise of Groundwater and Its Mitigation at SQU Campus. For SQU. Project No.: IG/VC/WRC/20-01, (2020 to Present). (Value: 59000 OMR)
4. Mohammed Al-Aghbari (P.I.) and Yahia Mohamedzein (Co-Investigator): Stabilizing Problematic Soils Using New Cement Binders. Geosol Engineering Co. L.L.C ), Oman. (2020 to Present). (Value: 5000 OMR).

##### Completed Research Grants

1. Ali Al-Nuami ( P.I.); (Co-Investigators: Sobhi Nasser, Hossam Hassan, Yahia Mohamedzein, Mubarak Al-Alawi). Collapse of the rocky inclination in the 32+650 km of A Sharqayah Highway Project- Technical Reports analysis. Ministry of Transport. (2020 to 2021), (value: 17500 OMR).
2. علي النعيمي (الباحث الرئيسي)، يحيى محمد زين (باحث مشارك) ومحمد الأغبري (باحث مشارك) (2020). استشارة فنية لهيئة التحكيم في موضوع الخلاف بين شركة الغربية وشركة تكنيلد فيما يخص عمل لخوازيق بمشروع خفر السواحل بمنطقة دبا- محافظة مسندم . (5000 ريال عماني).
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4. Mahad Baawain (P.I.), Yahia Mohamedzein (Co-Investigator and P.I. after June 2020) and Abdullah Al-Mamun (Co-Investigator): Slope Stability of Vale Iron Ore

- Piles. Vale Company, Sultanate of Oman. Project No. CR/ENG/CAED/19/05. (2019 to 2020) (Value: 40200 OMR).
5. Mahad Baawain (P.I), Yahia Mohamedzein (Co-Investigator and P.I. after June 2020) and El-Said El-Shafey (Co-Investigator): Development of Dust Suppression for Dust Alternatives for Iron Ore Stock Pile. Vale Company, Sultanate of Oman. Project No.. CR/ENG/CAED/18/05. (2018 to 2020). (Value: 67900 OMR).
  6. Ali Al-Harhi, P.I., (Co-Investigators: Yahia Mohamedzein, Mohammed Al-Aghbari, Hossam Hassan). Review of site investigation report, Abu Tubul Block-60 Project\_Bisat-Shuaiba Field. Oman Oil Company Exploration & Production LLC (OOCEP). (2018-2019). (Value: 2000 OMR).
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  8. Al-Jabri, K., Hago, A. Mohamedzein, Y. (2014-2015). Investigation of Water Leak in Basement Floor of Ibri Courts Complex (CR/ENG/CIVIL/14/10).
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  10. **Mohamedzein, Yahia E-A.**, Al-Rawas, Amer A. and Al-Aghbari, Mohammed Y. (2005). Characterization and Improvement of Sabkha Soils in Oman. Internal Research No. IG/ENG/CAED/05/04, Sultan Qaboos University. Total Budget 3148 RO.
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  15. **Mohamedzein, Yahia E-A.**; Al-Rawas, Amer A.; Al-Aghbari, Mohammed Y. and Taha, Ramzi (2002-2005). Assessment of Omani Clays for Use in Landfill Liners. Internal Research No. IG/ENG/CIVL/02/03, Sultan Qaboos University. Total Budget 5310 RO.
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### Technical Report

1. Ali Al-Nuami ( P.I.); (Co-Investigators: Sobhi Nasser, Hossam Hassan, Yahia Mohamedzein, Mubarak Al-Alawi). Collapse of the rocky inclination in the 32+650 km of A Sharqeyah Highway Project- Technical Reports analysis. Ministry of Transport. (2020 to Present),
2. Mahad Baawain, Yahia Mohamedzein, El-Said El-Shafey, Hamada Shoukry, Tahereh Jafari, Mohammed Adel Maree (2020). Development of Dust Suppression for Dust

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3. Mahad Baawain and Yahia Mohamedzein (2020). Slope Stability of Vale Iron Ore Piles. Final Report Submitted to Vale Company, Sultanate of Oman Project No.. CR/ENG/CAED/19/05 Department of Civil and Architectural Engineering, College of Engineering, SQU.
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  9. Mahad Baawain, Ahmed Sana, Yahia **Mohamedzein** and B.S. Choudri (2016). Assessment of Sustainable Remediation Options for Contaminated Soil Stockpiles (Phase 1: Characterization of the Contamination Level. Submitted to: Petroleum Development Oman (PDO).
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  11. Al-Jabri, K., Hago, A. Mohamedzein, Y. (2015). Investigation of Water Leak in Basement Floor of Ibri Courts Complex. Submitted to The Council of Administrative Affairs For The Judiciary-Appealing Court.
  12. عبد الواحد هجو محمد ( باحث مشارك) و يحيى محمد زين ( باحث مشارك) . تقرير اللجنة الفنية المكلفة بدراسة التشققات بمبنى وزارة الإسكان بعبري