

ACADEMIC CURRICULUM VITAE



Personal Information:

Full Name: Dr. Ahmed Mohammed Hasan

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Education:

- Ph.D in Geotechnical Engineering - Civil Engineering / University of Glasgow, UK (2016).
- M.Sc. in Geotechnical Engineering - Civil Engineering / Duhok University, Iraq (2006).
- B.Sc. in Civil Engineering / College of Engineering/ Salahaddin University-Erbil, Iraq (1997).

Employment:

- Civil Engineering Department, College of Engineering, Salahaddin University-Erbil, Erbil, Iraq since 1998.

Qualifications

- IT qualifications: AutoCAD, PLAXIS 2D & 3D. Geo-studio (seep).
- Language qualifications IELTS (6).
- Attended 40 hours (Sept. to Dec. 2022) PLAXIS 2D & 3D online courses delivered on various Geotechnical aspects including: Dynamic (earthquake - machine foundation - dynamic loading on piles - train movement - liquefaction), Introduction to tunnels, deep foundation, slope stability, seepage and coupled flow model, shoring, retaining structures, Tunnels.
- Participation in one day course on Cone Penetration Test CPT, Sponsored by FUGRO, at Ibrox Stadium, 150 Edmiston Dr, Glasgow, United Kingdom, on 23rd April, 2015.
- Participation in a one day technical sessions on Application of modern limit analysis methods in geotechnical practice, by Professor Matthew Gilbert and Dr Colin Smith from

University of Sheffield, the sessions held in November 2015, 27 Waterloo Place, Edinburgh, United Kingdom.

Teaching experience:

i) Undergraduate:

- Tunnel Engineering, 4th year, Civil Engineering Department, College of Engineering, Salahaddin University-Erbil, Erbil- Iraq.
- Tunnel Engineering, 4th year, Geotechnical Engineering Department, College of Engineering, Koya University, Koya - Iraq.
- Soil Mechanics, 3rd year, Civil and Dam Engineering Departments, College of Engineering, Salahaddin University-Erbil.
- Foundation Engineering, 4th year, Dam Engineering Department, College of Engineering, Salahaddin University-Erbil.
- Strength of Materials (Tutorial), 2nd year, School of Engineering, the University of Glasgow, Glasgow, UK (2015-2016).
- Soil Mechanics laboratory, 3rd year, Civil and Dam Engineering Departments, College of Engineering, Salahaddin University-Erbil.

ii) Postgraduate:

- Constitutive modeling of soils and Geotechnical Software, M.Sc. Students, Civil Engineering Departments, College of Engineering, Salahaddin University-Erbil.
- Engineering Soils, Diploma Students, Civil Engineering Departments, College of Engineering, Salahaddin University-Erbil.

Research and publications

i) Postgraduate Thesis

- PhD Thesis entitled "Small strain elastic behaviour of unsaturated soil investigated by bender/extender element testing". Supervised by Cormack professor Simon J. Wheeler at the University of Glasgow-Glasgow, UK (2016).
- MSc Thesis entitled "Evaluation and Treatment of Expansive Soils using Reinforcements" supervised by Dr.Kamal Ahmed Rasheed at the University of Sulaimani – Sulaimani, Iraq (2006).

ii) Journals and Conferences

- 1) Chrakhan Amjed Hwayyiz, Ahmed Mohammed Hasan, Rizgar Ali Hummadi, Hawkar Hashim Ibrahim (2022). Comparison Study on the Effect of Different Additives on the Geotechnical Behavior of Expansive Soil. *Yantu Gongcheng Xuebao/Chinese Journal of Geotechnical Engineering*, 44(12), 118–133. Retrieved from <http://ytgxcb.periodicales.com/index.php/CJGE/article/view/237>
- 2) Hasan, A.M. (2022). Isotropic and Cross-Anisotropic Stiffness Parameters for Unsaturated Soils Using Conventional and Bishop's Stress State Variables. In: Karkush, M.O., Choudhury, D. (eds) *Geotechnical Engineering and Sustainable Construction*. Springer, Singapore. https://doi.org/10.1007/978-981-16-6277-5_4
- 3) Abdulhamid, S.N.; Hasan, A.M.; Aziz, S.Q. Solidification/ Stabilization of Contaminated Soil in a South Station of the Khurmala Oil Field in Kurdistan Region, Iraq. *Appl. Sci.* 2021, 11, 7474. <https://doi.org/10.3390/app11167474>.
- 4) Ahmed Mohammed Hasan, Sazan Nariman Abdulhamid & Hawkar Hashim Ibrahim (2021): Preliminary experimental investigation on the inundating-induced collapse in collapsible soils improved by encased sand column, *Geomechanics and Geoengineering*, DOI: 10.1080/17486025.2021.1955154.
- 5) Arsalan Mahmoodzadeh, Mokhtar Mohammadi, Hawkar Hashim Ibrahim, Sazan Nariman Abdulhamid , Hunar Farid Hama Ali, Ahmed Mohammed Hasan, Mohammad Khishe, Hoger Mahmud, 2021. Machine learning forecasting models of disc cutters life of tunnel boring machine. *Automation in Construction* 128. <https://doi.org/10.1016/j.autcon.2021.103779>
- 6) Yousif Mawlood, Ahmed Mohammed, Rizgar Hummadi, Ahmed Hasan, and Hawkar Ibrahim, 2021. Comparison of artificial neural network (ANN) and linear regression modeling with residual errors to predict the unconfined compressive strength and compression index for Erbil City soils, Kurdistan-Iraq. *Arabian Journal of Geosciences* (2021) 14:485. <https://doi.org/10.1007/s12517-021-06712-4>
- 7) Yousif Mawlood, Ahmed Mohammed, Rizgar Hummadi, Ahmed Hasan, and Hawkar Ibrahim, 2021. Modeling and Statistical Evaluations of Unconfined Compressive Strength and Compression Index of the Clay Soils at Various Ranges of Liquid Limit. *Journal of Testing and Evaluation*. DOI: 10.1520/JTE20200505
- 8) Hawkar Hashim Ibrahim, Younis M. Alshkane, Yousif Ismael Mawlood, Krikar M. Gharrib Noori and Ahmed Mohammed Hasan, 2020. Improving the geotechnical properties of high expansive clay using limestone powder. *Innovative Infrastructure Solutions* 5:112.
- 9) Hasan, Ahmed Mohammed, Mawlood, Yousif . I. , Ahmed, Azad, Ibrahim, Hawkar, (2020). Correlation of Shear Wave Velocity with SPT-N for a Tower-Building Site at Erbil City. *Journal of University of Duhok*, Vol. 23, 2 , pp. 235-245.

- 10) Omed Azeez, Rizgar Hummadi and Ahmed Hasan, **2019**. Ultimate capacity of laterally loaded pile foundation in dry and saturated layered soils. International Journal of Engineering Research and Technology, Volume 12, No. 10, pp. 1647-1653.
- 11) Omed Azeez, Rizgar Hummadi, Hasan Ahmed, **2019**. Effect of Embedded Length on Laterally Loaded Capacity of Pile Foundation. American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), Volume 56, pp. 182-192.
- 12) Hasan A. M., **2018**. "An approach for description of elastic parameters cross-anisotropic saturated soils". Eurasian Journal of Science and Engineering- Ishik university- Erbil-Iraq, Vol. 3, no. 3, June.
- 13) Noori, K. M. , Ibrahim, H. H., Hasan A. M., **2018**. "Influence of Upstream Blanket on Earth Dam Seepage". Eurasian Journal of Science and Engineering- Ishik university- Erbil-Iraq, Vol. 4 , No. 1, pp. 123 – 130.
- 14) Hasan, A. M. & Wheeler, S. J., **2016**. Interpreting measurements of small strain elastic shear modulus under unsaturated conditions. 3rd European conference on unsaturated soils, Paris, France.
- 15) Hasan, A. M. & Wheeler, S. J., **2015**. Influence of unsaturated state variables on small strain elastic behavior. 6th Asian-pacific conference on unsaturated soils, Guilin, China.
- 16) Hasan, A. M. & Wheeler, S. J., **2015**. Measuring travel time in bender/extender element test. 16th European Conference on Soil Mechanics and Geotechnical Engineering, ECSMGE, Edinburgh, UK.
- 17) Hasan, A. M. & Wheeler, S. J., **2014**. Influence of compaction procedure on elastic anisotropy. 5th International Conference on Unsaturated Soils, Sydney, Australia.
- 18) Hasan A. M., **2011**. "Stabilization of Erbil Clay Products by Reinforcement with Waste Human Hair Additive". Journal of Pure and Applied Sciences-Salahaddin university-Erbil, Vol.22, No.5.
- 19) Hasan A. M., **2009**. "Behavior of Silty Clay Reinforced with Waste Human Hair as Randomly Fiber Reinforcement". Journal of Pure and Applied Sciences-Salahaddin university- Erbil, Vol.21, No.2.

Conferences and courses attended

- Participation in the 3rd annual International Engineering Conference on Developments in Civil & Computer Engineering Applications (IEC2017) which held in Erbil on February 26-27, 2017.
- Participation in three days training course on personality type conducted according to the standards and guidelines established by Leader Development Organization LDO in Erbil from 18th to 20th of September 2016. The course led by Sardar Azad Omer. A certificate was given.

- Attending 55th Rankine Lecture, repeated. Hazard, Risk and Reliability in Geotechnical Practice, by Professor Dr Suzanne Lacasse (Norwegian Geotechnical Institute), on 15th March 2016, IET Teacher Building, 14 St Enoch Square, Glasgow, United Kingdom.
- Attending 54th Rankine Lecture. Interactions in Offshore Foundation Design, by Professor Guy Houlsby, the University of Oxford on 19th March 2014, The Great Hall, Sheffield Building, Imperial College London, London, United Kingdom.
- A two days' workshop on Wave Propagation and Soil Stiffness: Particle-Continuum Duality, The workshop held at the Clifton Hill House, University of Bristol, Bristol, UK, on 20th and 21th March 2014.
- Attending 52nd Rankine Lecture, repeated. Performance-Based Design in Geotechnical Engineering, by Professor Malcolm Bolton, Cambridge University on Tuesday 12th March 2013, Fulton Building, University of Dundee, Dundee, UK.
- A one day workshop on An Introduction to Offshore Geophysics and Geotechnical Engineering, Sponsored by Scottish Geotechnical Group SGG on 4th November 2015 at the University of Aberdeen, Aberdeen, United Kingdom. The workshop covered:
 - o Site Investigation Planning and Geohazard assessment.
 - o Introductory Seismic Principles.
 - o Swathe Bathymetry/ Multibeam sonar.
 - o Geotechnical Systems.
 - o Data Integration and Geographical Information Systems.
 - o Geotechnical Analysis for Pipelines.
 - o Shallow Foundations, Suction Caissons and GBS Design.
 - o Pile Design for Offshore Structures.

Postgraduate student supervision

One MSc student was co-supervised entitled "Ultimate capacity of laterally loaded pile foundation in unsaturated layered sandy soils" in 2018-2019.

Civil Engineering experience:

I also worked concurrently as a Design Engineer at the following projects from 1999 to 2004:

1. Structural design of building of the Medical Department (Koya Institute) Project in Koya, supervised by (UNESCO).
2. Structural design and renovation of 4 food quarantine building projects in Erbil, Dohuk and Sulaimania governorates, supervised by Food and Agricultural Organization (UN FAO).
3. Complete Design of 10 irrigation projects in Sidakan, Mergasor and Sherwanmazz districts supervised by (UNFAO).
4. Supervising Bawakhalan irrigation project as a UN FAO Site Engineer.

5. Construction of two Student Health Care centers in Iskan and Khanzad Quarter in Erbil city as a site engineer, which supervised by (UN-HABITAT- UNCHS).
6. Construction of four staff houses in Shaqlawa district as a site engineer, which supervised by (UN-HABITAT).
7. Surveying irrigated areas in Kore, Hujran, Tawska and Kawanian villages in Erbil by GPS instrument. Drawing precise maps using Grafer & AutoCAD softwares from the (GPS) data.
8. Drawing and submitting more than (20) projects by AutoCAD software FAO as a Draftsman.

Professional memberships

- 2019 to present, Reviewer Board for Arabian Journal of Geosciences (AJG) (IF=1.827). Springer Publishers.
- 2019 to present, Reviewer Board for International Journal of GEOMATE (cite score=1.7). GEOMATE International Society Publishers.
- Kurdistan Engineer Union, Erbil, from 1997 to date.
- Iraqi Geotechnical Engineers, Baghdad, Iraq from 2021.

Professional Social Network Accounts:

- Google scholar link: [Ahmed Mohammed Hasan - Google Scholar](#)
- ResearchGate link: [Ahmed Mohammed Hasan \(researchgate.net\)](#)
- University link: [Ahmed Mohammed Hasan | Biography \(su.edu.krd\)](#)
- LinkedIn link: [\(22\) Ahmed Mohammed Hasan | LinkedIn](#)