



Name: Dr. Rodaina Aboul Hosn

Rank: Assistant Professor - Civil Engineering

Personal Information

Nationality:	French
AU Joining Date:	20 Aug 2023
E-Mail Address:	r.aboulhosn@au.edu.kw

Professional Information

Education:	- Ph.D. in Materials, Mechanics and Civil Engineering.....2017 Grenoble Alpes University, France - M.Sc. in Civil Engineering2014 Lille1 Science and Technology University, France Lebanese University, Faculty of Engineering, Lebanon - B.Sc. in Civil Engineering2014 Lebanese University, Faculty of Engineering, Lebanon
Specialization:	Geotechnical engineering and Smart construction sites
Current Academic Position:	Assistant Professor - Civil Engineering
Current Professional Positions:	Adjunct Research Fellow, Faculty of Science and Engineering at Curtin University, Australia Member of Lebanese Orders of Engineers, Beirut, Lebanon Member of GeoWorld Group: Numerical Methods in Geomechanics (TC103) Member of GeoWorld Group: Deep Foundations (TC212)

Previous Administrative Position Held:	NA
Previous Academic Positions Held:	2018-2023: Researcher, Lecturer and Coordinator at ESTP-Paris
Fellowships And Honors:	• 2014: PhD Research Scholarship - Grenoble University, France • 2013: Master Research Scholarship - OMJ (Office Meditteranean de la Jeunesse), France
Teaching Experience:	2018-2023: Teaching and Coordination at ESTP-Paris, France • Soil Mechanics and Geotechnical Engineering • Numerical analysis • Fluid Mechanics • Programming and Data Analysis • Numerical modeling
Industrial And Technical Experience:	• 2013: Trainee, Khatib & Alami, Beirut - Lebanon • 2013: Trainee, Resources and Environmental Department, Dar Al-Handasah, Beirut-Lebanon • 2012: Trainee, Khatib & Alami, Beirut - Lebanon
Research Interest:	Ensure safe, optimized, innovative and sustainable design of geotechnical structures through: • Numerical modeling (such as Discrete element modeling and Finite element modeling) • Laboratory and Field tests • Using advanced technologies, Artificial Intelligence and Machine learning, IoT-based monitoring, and Automation
Research Grants:	• 2023: Internal Research Grant, Abu Dhabi University, United Arab Emirates • 2020: PhD Research Grant: Grenoble University, France • 2020: PhD Research Grant: ESTP-Paris Foundation, France • 2020: Master Research Grant: ESTP-Paris Foundation, France • 2019: Master Research Grant: ESTP-Paris Foundation, France
Research and Publications including Journal and Books:	• Al Tfaily, B., Sibille, L., Aboul Hosn, R., Bennabi, A. (2024) Prediction ability of discrete element model of loose granular media subjected to complex loadings. Powder Technology. https://doi.org/10.1016/j.powtec.2023.119251 • Abdallah, A., Aboul Hosn, R., Al Tfaily, B., Sibille, L.(2022) Identifying parameters of a discrete numerical model of soil from a geotechnical field test. European Journal of Environmental and Civil Engineering, https://doi.org/10.1080/19648189.2022.2119283

	- Sibille, L., Villard, P., Darve, F., Aboul Hosn, R. (2019) Quantitative prediction of discrete element models on complex loading paths, Numerical and analytical methods in geomechanics, 43:858-887, https://doi.org/10.1002/nag.2911 Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B.(2018), A discrete numerical model involving partial fluid-solid coupling to describe suffusion effects in soils, Computers and Geotechnics; 95:30-39, http://doi.org/10.1016/j.compgeo.2017.11.006 Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B. (2017), Discrete numerical modeling of loose soil with spherical particles and interparticle rolling friction, Granular Matter, 19:4, DOI: 10.1007/s10035-016-0687-0 - Smith., I. Smith's elements of soil mechanics, 10th Edition, Chapter 16: An introduction to constitutive modelling in Geomechanics, John Wiley & Sons, 2021, 627-640.
Paper Presentations at Professional Conferences:	- Al Tfaily, B., Sibille, L, Aboul Hosn, R., Bennabi, A. (2023) A 3D discrete element model for studying soil-structure interaction of shallow foundations subjected to seismic load. In the proceeding of 17th International conference on Computational Plasticity, Complas, Spain, Barcelona Aboul Hosn, R. (2022) Artificial intelligence in geotechnical engineering. Keynote speaker. The Big 5 : Geotechnical webinars Aboul Hosn, R. (2022) Artificial intelligence in geotechnical engineering. DFI Middle East : Geotechnical webinars - Al Tfaily, B., Sibille, L, Aboul Hosn, R., Bennabi, A. (2021) Improving the prediction ability of simplified discrete element models on complex loading paths. VII International Conference on Particle-Based Methods, Hannover, Germany Aboul Hosn, R., Benahmed, N., Nguyen, C.D., Sibille, L., Phillipe, P., Chareyre, B. (2018) Effects of suffusion on the soil's mechanical behavior: experimental investigations. In the proceedings of EWG-IE 26th annual meeting, Milan, Italy Aboul Hosn, R., Nguyen, C.D., Sibille, L., Benahmed, N., Chareyre, B. (2017) Microscale analysis of the effect of suffusion on soil mechanical properties. In proceedings of the 11th international workshop on bifurcation and degradation in geomaterials, Limassol, Cyprus. Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B. (2016). Description of the mechanical response of soils subjected to internal erosion by suffusion. Alert Geomaterials workshop- Oral presentation. Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B. (2016). A discrete numerical description of the mechanical response of soils

	subjected to degradation by suffusion, In proceedings of the 8th International Conference on Scour and Erosion, Oxford, UK. • Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B (2016). Description of the mechanical behavior of soils subjected to Internal erosion by suffusion, Poster in the 4th International Workshop on Modern trends in Geomechanics, Assisi, Italy. • Aboul Hosn, R., Sibille, L., Benahmed, N., Chareyre, B. (2015). Definition of a discrete numerical model to describe the mechanical response of soils subjected to suffusion, Poster in Alert Geomaterials workshop, Aussois, France.
College Service including committee Membership:	Member of several committees: Validation and Moderation committee, Curriculum committee, Credit Transfer committee, PBL committee, Research and Faculty Development committee, Quality Management Committee, Departmental Disciplinary committee
National Service:	NA
College Committees:	NA