Curriculum Vitae

Name: Yahya Nazhat

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Nationality: Australian/Canadian

POST-SECONDARY EDUCATION

University or Institution	Degree	Subject Area	Date
The University of Sydney	PhD	Geotechnical Engineering	November 2013
University of Baghdad	MSc	Environmental Engineering	December 1990
University of Mosul	BSc	Civil Engineering	July 1983
University of British Columbia	Certificate	Curriculum & Pedagogy in Higher Education	March 2015

Title of Dissertation and Name of Supervisor

PhD Thesis theme: Behaviour of Sandy Soil Subjected to Dynamic Loading
Supervisor: Professor David Airey, School of Civil Engineering, the University of Sydney, Australia

Continuing Education (attended)

I. Educational Continuing Education

- Workshops by the Canadian Engineering Education Association (CEEA) Conference, June 3rd, 2018:
  - Workshop1: Hands-on activities for large groups in non-lab space
  - Workshop2: Running a continuous improvement process in engineering
  - Workshop3: Supporting blended learning through interactive creativity
  - Workshop4: How to Survive a Canadian Engineering Accreditation Board Visit

- WeBWorK workshop (Mathematical Association of America) - Centre for Instructional Support, The University of British Columbia, June 24th, 2015.

- EPICS workshop: Integrating Design and Service-Learning within the Curriculum - UBC Faculty of Applied Science, and UBC Center for Community Engaged Learning (CCEL), June 7th, 2015.

II. Professional Continuing Education – Geotechnical Specialist

- Deep Foundations Institute Super Pile 19 – Piling Design & Construction Conference, Seattle Washington, May 1 – 3, 2019 including the pre-conference workshop on Impact Testing for Site Characterization on May 1.

- ASCE Grouting 2017- short course on the Control of Construction Induced Settlement by Compensation Grouting, July 9th, 2017. The course covered the following topics:

    - factors behind the generation of surface settlements by tunnelling and deep excavation works, and key aspects of their design and construction to minimize face loss and surface settlement
    - interactions between the tunnelling works and the settlement control measures
    - baseline information required for the estimation of settlement and resulting structural damage
    - multi-discipline design for an effective compensation grouting program for settlement control
    - practical design and physical installation of a compensation grouting system, including the control measures required
    - analysis of the settlements and ground/structure response to the grouting operations
    - practical methods and resources required for safe execution of the grouting and tunnelling works, including the establishment of exclusion zones and pressure limits around existing infrastructure and live excavation
    - selection of materials and mix design for compensation grouting
    - design and installation of structural and geotechnical instrumentation necessary to monitor settlement, slope, and deflection, and to control the grouting works
    - respective roles and responsibilities of client, engineer, general contractor, and specialist

This training helped me with modernizing CIVL410 notes with latest technical remarks from research renovations and industry practices.

Special Professional Qualifications

- UBC International Faculty SoTL Leadership Program: UBC Certificate on Curriculum & Pedagogy in Higher Education, University of British Columbia (2015).

EMPLOYMENT RECORD

University, Company or Organization	Rank or Title	Dates
The University of British Columbia	Lecturer	Sept 2014 - Date
AECOM, Abu Dhabi, UAE	Principle Geotechnical Engineer	2014
The University of Sydney, Australia	Casual Academic	2009-2013
AVOPILING PTY LTD, Sydney, Australia	Engineering Manager	2007-2009
AURECON, Sydney, Australia	Senior Geotechnical Engineer	2004-2007
Douglas Partners (Geotechnics, Environment, Groundwater) Pty Ltd, Australia	Senior Geotechnical Engineer	2003-2004
JK Geotechnics, Sydney, Australia	Senior Geotechnical Engineer	2002-2003
Vibro-Pile (Aust) Pty Ltd, Sydney, Australia	Projects & Design Engineer	1997-2002
The United Nations – UNDP Baghdad - Iraq	Project Engineer	1992-1994
Scientific Research Council, Building Research Centre, Baghdad, Iraq	Research Engineer	1986-1992

TEACHING at UBC

Teaching Interest

My teaching interests are in the area of geotechnical engineering with special emphasis on site characterization, deep foundations and retention systems for deep excavations. I strongly believe that affirming the relevance of course contents to real-world problems is a critical component in the effective conveyance of engineering topics to students. One of the most effective ways of conveying engineering topic is through the presentation of challenges and problems from case histories; in my teaching process, I often draw from case histories related to my own industry design and consulting involvements.

Courses I Taught/Teach

I. CIVL311 Soil Mechanics II

One-dimensional compression and stress-strain response of soils with application to estimation of the settlements and capacities of foundations and of retaining walls.

II. CIVL410 Foundation Engineering I

An introduction to the process of foundation engineering. Empirical and analytical approaches used in current professional practice. Topics include site investigation, preloading, liquefaction assessment, ground improvement, design of shallow and deep foundations, and retaining structures. The importance of geology and technical communication are emphasized.

III. CIVL411 Foundation Engineering II

Aspects of Geotechnical Engineering. Design considerations illustrated by case histories pertinent to BC. Topics include: site investigation, terrain analyses, in situ testing, groundwater problems, deep foundations, tie back walls and bracing, tailings impoundments, Northern construction, ground ice, dikes and dams engineering. Many case histories presented in part by prominent consulting engineers in BC.

IV. CIVL445 Civil Engineering Design Project I

Integration and application of previously acquired knowledge and skills to find design solutions for a multi-disciplinary civil engineering project. Focus on conceptual and preliminary design.

V. CIVL 446 Civil Engineering Design Project II

Integration and application of previously acquired knowledge and skills to find design solutions for a multi-disciplinary civil engineering design project. Focus on detailed design.

VI. CIVL592 - Directed Studies in Civil Engineering

Independent studies not related to thesis work.

VII. APSC 100 & APSC101 Introduction to Engineering I:

APSC 100 & APSC101 are team-teaching courses. These courses were designed to improve students' connection with the engineering profession, increase their design and practical engineering experiences, effectively integrate sustainability into their curricula, and better emphasize the human and social connection to engineering design. I helped with developing the

courses curricula in summer 2015 before the courses were first introduced in 2015W1. I also delivered the following lectures during 2015W1:

- How engineers balance trade-offs and design solutions to open-ended problems.
- The role sustainability plays in decision-making by engineers.
- Effective Presentations.
- Professional Communication & Providing Effective Feedbacks.
- Orthographic Drawings.

VIII. APSC150 Engineering Case Studies

APSC150 syllabus comprised (superseded in 2015W by APSC 100 & APSC101): (1) Application of scientific principles and technical knowledge to practical problems. (2) Introduction to the engineering design process and to engineering graphics. My duties in 2014W2 included:

- Coordinated laboratory activities of one of the course sections and helped students working on their laboratory assignments.
- Graded engineering failure case studies reports.

IX. CIVL 235 Plane Surveying:

CIVL235 – Plane Surveying: Theory and application of plane surveying methods. Introduction to and use of compass, transit, tape, and level. Construction and topographic surveys. Reduction of field data and construction of drawings. Demonstration of modern instruments, remote sensing methods and geographical information systems (GIS).

EDUCATIONAL LEADERSHIP

I view my scholarly activities from the perspective of the scholarship of teaching and learning, which is student-focused, and goes beyond scholarly teaching and is driven by a desire to understand how students learn effectively and how teaching influences this process. Equally important, I strongly believe in the scholarship of engagement. Its emergence influenced how educational institutions interact and engage with those outside of the educational system. The scholarship of engagement encompasses university and community collaboration and its effects on social, ethical, and community problems.

Industrial engagement in civil engineering education

I think it is very important for the university to build a platform campaign that illustrates to industry the benefits of industrial engagement in undergraduate education. Events, networking, and

courses that have a strong link with industry will foster relationships between industry and academia. This also plays an important part in preparing students for the industry because it can make students feel part of a community of practice and expose them to role models who may demonstrate the professional behavior the industry wants them to aspire to.

CIVL445/6 provided me with an excellent opportunity to enhance the department engagement with the industry by seeking capstone projects sponsored by industry partners. The industry-sponsored capstone experiences have shown to successfully engage students in real-world engineering problems and provided valuable feedback from the industry about the potential capabilities of graduates. Experiences and outputs from these courses could further help the teaching process by providing information on future curricular changes deemed necessary to improve the capstone design education, the civil engineering degree program and to better prepare graduates to meet the needs of industry.

SCHOLARLY AND PROFESSIONAL ACTIVITIES (2014 – present)

- *I moderated the post-symposium panel discussion. The 25th Symposium of the VGS on Ground Improvement, Vancouver June 1, 2018.*

Conference Participation (Organizer, Keynote Speaker, etc.)

- The Canadian Engineering Education Association (CEEA) Conference, University of British Columbia June 3 - 6, 2018.
- The 25th Symposium of the Vancouver Geotechnical Society on Ground Improvement, Vancouver June 1, 2018.
- GROUTING 2017 The 5th International Grouting Conference; Grouting, Deep Mixing, and Diaphragm Walls, Honolulu, Hawaii USA, July 9-12, 2017.
- EESD15 - The 7th Conference on Engineering Education for Sustainable Development, Vancouver, June 9-12, 2015.

SERVICE TO THE UNIVERSITY OF BRITISH COLUMBIA

(a) Memberships on committees, including offices held and dates

1. Member of PIC Ethics & Equity subcommittee - since October 2014
2. Member of the Department of Civil Engineering Curriculum Committee – since October 2014
3. Member of the Department of Civil Engineering Program Improvement Committee (PIC) since January 2017
4. Faculty of Applied Science Design and Innovation Day Steering Committee - since April 2017
5. Department Advisory Committee on Merit & PSA for 2016 Increases.

6. APSC Dean Designate for Academic Misconduct – since November 2017.
7. Civil engineering department rep on the Geological Engineering Board of Study – since October 2018.

(b) Other service, including dates

1. Second-year Undergraduate Advisor since January 2017.

   As a second year advisor (2016 - 2017), I provide students with individual assistance, and dealing promptly with student issues by liaising directly with students, Engineering Student Services, the department associate head and colleagues.

   My Responsibilities as a student advisor involve:

   - Assist students in planning a program consistent with their abilities and interests.
   - Follow up with the advisee on any report of unsatisfactory work (notice of class probation for poor attendance or failing grades, incomplete grades from past terms). I give special attention to students who are placed on academic probation.
   - Inform and, if necessary, refer students to other institutional resources when academic, attendance, or other personal problems require intervention and/or help by other professionals.
   - Proactively contacting and be available for student advisees on a regular basis and provide extended hours during pre-registration advising.

PROFESSIONAL AFFILIATIONS

Memberships on other societies, including offices held and dates

- Member of the Australian Geomechanics Society.
- Chartered Professional Engineer and Fellow of the Institution of Engineers, Australia.
- Registered Professional Engineer- the National Professional Engineers Register of Australia.
- Registered Professional Engineer - the Association of Professional Engineers and Geoscientists of British Columbia.
- Member of the Canadian Geotechnical Society.
- Member of the American Society of Civil Engineers.
- Member of the Canadian Society for Civil Engineers.

SERVICE TO THE COMMUNITY

(a) Editorships (list journal and dates)

Editorial member /reviewer in SPRG Publication Journals - International Journal of Research Innovations in Civil Engineering (since April 2017)

(b) Reviewer (journal, agency, etc. including dates)

I reviewed the following manuscripts:

1. *The book chapter manuscript entitled "Landslide Occurrence in Malaysia" for Faculty of Civil Engineering & Earth Resources of Universiti Malaysia Pahang, for consideration of publication in "Disasters in Malaysia" by UMP Publication. Sept. 2017.*
2. *ASTM Geotechnical Testing Journal. Manuscript ID GTJ-2017-0026 - Study on the Mechanical Properties of Soil Anchorage Body Interface Based on Digital Speckle Correlation Method, March 2017.*
3. *Journal of Mountain Science, Institute of Mountain Hazards and Environment, Chinese Academy of Sciences (CAS). Manuscript ID 16-3870: Particle breakage and the mobilized drained shear strengths of sand, May 2016.*

AWARDS AND DISTINCTIONS

(a) Awards and nominations for Teaching awards (indicate name of award, awarding organizations, date)

- Fourth Year Student Appreciation Award recipient from UBC Civil Engineering Student Society, March 2019.

  https://www.civil.ubc.ca/news-events/2019/05/2019-civil-undergraduate-teaching-award-recipients

(b) Awards for Scholarship (indicate name of award, awarding organizations, date)

- The Australian Postgraduate Research Award - Doctorate Scholarship (2010-2012)
- University of Sydney Grant-in-Aids, James Kentley Memorial Scholarship (2010)
- University of Sydney, Civil Engineering Foundation Governors' Research Scholarship (2010-2012)

(c) Other Awards

Peer-reviewed paper: The kinematics of granular soils subjected to rapid impact loading was featured by Advances in Engineering Series as a Key Scientific Article contributing to excellence in engineering, scientific and industrial research. March 2015.
https://advanceseng.com/civil-engineering/the-kinematics-of-granular-soils-subjected-to-rapid-impact-loading/

Professional Engineering Experience

- Thirty years of experience in geotechnical engineering design and implementation, providing oversight for construction, geotechnical testing, forensic engineering investigations, supervising field investigations, preparing detailed geotechnical reports for complex projects and developing efficient work plans to maintain project schedule and budget demands.
- Planned and provided guidance and overall assistance for complex geotechnical engineering projects.
- Extensive experience in detailed gerotechnical investigation and geotechnical studies (such as retaining walls, batter stability, shoring and shoring supports, secant piles and contiguous piled walls, rock bolts and anchors, and deep excavations in rock) associated with major infrastructure projects including highways, high-rise buildings, airports and rail projects.
- Years of experience in piling and deep foundation (bored pile, bored pile in bentonite slurry, concrete injected CFA piles, driven piles and sheet piles) including design, construction, pile testing.
- Sound experience in geotechnical instrumentation and monitoring for embankments and underground structures
- Excellent theoretical background of dynamic compaction & ground improvement techniques.

PUBLICATIONS

1. Nazhat, Y & Airey, D (2015), 'The Kinematics of Granular Soils Subjected to Rapid Impact Loading', Granular Matter, Vol. 17, Issue 1, pp. 1-20.
2. Airey, D., Nazhat, Y., Moyle, R., Avalle, D. (2012). Dynamic compaction - Insights from laboratory tests. Ground Improvement & Ground Control: Transport Infrastructure Development and Natural Hazards Mitigation ICGI-2012, Chennai: Research Publishing. (ICGI 2012), 30 Oct. – 2 Nov., Wollongong, Australia.
3. Nazhat, Y., Airey, D. (2012). The Effect of Different Tamper Geometries on the Dynamic Compaction of Sandy Soils. International Symposium on Recent Research, Advances & Execution Aspects of Ground Improvement Works IS-GI Brussels 2012, Brussels: International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE-SIMGS)
4. Nazhat, Y., Airey, D. (2011). Applications of high speed photography and X-ray computerised tomography (Micro CT) in dynamic compaction tests. 5th International Symposium on Deformation Characteristics of Geomaterials (IS-Seoul 2011), Amsterdam, Netherlands: IOS Press.
5. Nazhat, Y & Airey, D (2011), 'Validation of high speed photography and PIV in large strain measurements of granular materials', 9th International Symposium on Particle Image Velocimetry – PIV11, Kobe University, Japan, July 21-23.
6. Chow, SH, Nazhat, Y & Airey, DW (2010), 'Applications of high speed photography in dynamic tests', 7th International Conference on Physical Modelling in Geotechnics ICPMG 2010, London: CRC Press, 28 June - 1 July, Zurich, Switzerland, pp. 313-318.
7. Slav Tchepak, Yahya Nazhat (2000), 'Cast insitu piling for King's Wharf Project, Sydney, Australia', NYC2000 International Conference & Exposition. Deep Foundation Institute, N.Y. 2000, USA.

8. Charles P. Vuillier, Felix Cheng, Ravi Nadesan and Yahya Nazhat (2000), ‘Deep Foundation for the Extension of the Sydney International Airport’.

9. Al-Omari, R.R., Al-Dobaissi, H.H., Nazhat, Y.N. and Wadood, B.A. (1989), 'Sheer Strength of Geomesh Reinforced Clay', International Journal of Geotextiles and Geomembranes, 8, pp. 325-336.

10. Sirwan, K., Al-Omari, R.R., & Nazhat, Y.N. (1989), 'Sheer Behaviour of Gypsiferous Soils: Proceeding of the 2nd International Symposium on Environmental Geotechnology, Shanghai, China. Envo Publishing Co., Inc., Bethlehem, Pennsylvania, USA, pp. 124-135.

11. Al-Omari, R.R., Nazhat, Y.N. and Al-Dobaissi, H.H. (1995), 'Effect of Stiffness and Amount of Reinforcement on the Strength of Sand', the Quarterly Journal of Engineering Geology. 28, pp. 363 - 367.