UNIVERSITY OF MASSACHUSETTS LOWELL Personnel Form #6
COMPREHENSIVE CURRICULUM VITAE

John M. TING, ScD, PE, Fellow ASCE **Jan 5th, 2024**

Dept. of Civil & Environmental Engineering john_ting@uml.edu
University of Massachusetts Shah 200S
Lowell, Mass. 01854 (978)-934-2230

College: Engineering
Rank: Professor **Field:** Geotechnical Engineering

A. EDUCATION AND ACADEMIC QUALIFICATIONS

Education:

- Sc.D. in Civil Engineering — Massachusetts Institute of Technology
  Jan. 1981 (Geotechnical) 4.9/5 — Cambridge, Massachusetts
- M.S. in Civil Engineering — California Institute of Technology
  June 1976 (Geotechnical) 3.9/4 — Pasadena, California
- B.Eng. in Civil Engineering — McGill University
  May 1975 (Structural) 3.94/4 — Montréal, Québec
  Ernest Brown Gold Medal for Highest Ability throughout undergrad programs, Faculty of Engineering

Academic Experience:

At University of Massachusetts Lowell (since Sept. 1990)

• Associate Chair for Master's Studies	Civil & Env. Engineering	Sept 2017 - present
• Senior Advisor to the Provost	Office of the Provost	July 2016 - June 2017
• Vice Provost for Enrollment	Office of the Provost	Oct. 2012 - June 2016
• Dean of Engineering	College of Engineering	July 2003 - Sept 2012
• Department Head	Civil & Env. Engineering	Sept 1999 - June 2003
• Professor	Civil Engineering	Sept.1994 - present
• Associate Professor	Civil Engineering	Sept 1990 - Aug 94 tenured 93

At **University of Toronto** (7 years, 1983-1990)

• Associate Professor	Dept. Civil Engineering	July 1987 - Aug 90 tenured
• Assistant Professor	Dept. Civil Engineering	July 1983 - June 87 tenure track

At California Institute of Technology (2½ years, 1981-1983)

• Research Fellow & Lecturer	Div. Eng. & Appl. Sci.	Mar. 1981 - July 1983

Industrial Experience:

• Soils Engineer	Geocon, Montréal QC	Oct. 1976 - Aug. 1977

B. PROFESIONAL ACTIVITIES

Professional Association Participation:

- Registered Professional Civil Engineer No. C35564, State of California, Sept.1983- present
- Fellow, American Society of Civil Engineers (ASCE), 2008-present
- Member, Boston Society of Civil Engineers Section (BSCES)
- Member, American Society for Engineering Education (ASEE)

Professional Honors and Awards

- Elected Fellow, American Society of Civil Engineers, 2008
- President's Public Service Award, University of Massachusetts system, 2006
- Department Teaching Excellence Award, Department of Civil & Environmental Engineering, University of Massachusetts Lowell, 2021

C. RESEARCH

Research Grants

- *Service-Learning Integrated throughout a College of Engineering (SLICE): Implementation;* co-PI w/ J. Duffy (PI) and 3 others, **National Science Foundation, $999,695**, 2005-2008
- *Service-Learning Integrated throughout a College of Engineering (SLICE): Planning grant;* co-PI w/ J. Duffy (PI) and 3 others, **National Science Foundation, $100,000**, 2004-2005.
- *Streamlined Analysis & Des. of Integral Abutment Bridges*, co-PI w/ S. Faraji, **Mass. Highways Dept., $127,851**, 1999-00
- *Force-Displacement Testing for Integral Abutment Bridges,* co-PI *w/* S. Faraji, **Mass. Highways Dept., $77,388**, 1996-97
- *Behavior of Multiphase Granular Media: Modeling the static-to-viscous flow regime,* PI, **US Dept. of Defense AASERT, $55,748**, 1994-96
- *Effect of Particle Shape on the Mechanical Behavior of Granular Materials*, PI, **Air Force Office of Scientific Research, $231,090**, 1991-95
- *Multiphase Discrete Granular Model for Soil Mechanics*, PI, **Natural Sciences and Engineering Research Council of Canada (NSERCC), C$60,300**, 1990-93 (awarded at University of Toronto)
- *Centre for Large Scale Computation*, with W. Peltier (PI) and others, **NSERCC, C$388,000**, at University of Toronto, 1989-90
- *Simulation of the Hydraulic Fracturing Process in Oil Sands,* co-PI w/ J.H. Curran, **Cray Research Inc, C$50,000**, at University of Toronto,1989
- *Centre for Large Scale Computation*, with W. Peltier (PI) and others, **NSERCC, C$194,000**, at University of Toronto, 1988-89
- *Multiphase Discrete Granular Modelling of Soil*, PI, **NSERCC, C$48,960,** at University of Toronto, 1987-90
- *A Discrete Element Model for the Hydraulic Fracturing Process in Oil Sands*, co-PI w/ J.H. Curran, **Cray Research Inc, C$39,600**, at University of Toronto, 1986-87
- *Analysis of Lateral Pile Behaviour*, PI, **NSERCC, C$50,320**, at University of Toronto**,** 1984-87
- *Development of a Discrete Granular Material Model for Geomechanics*, PI, **Connaught Fund, C$35,000,** at University of Toronto, 1984-85
- *Centrifuge Modelling of Frost Heave Phenomena: A Feasibility Study*, co-PI w/ R.F. Scott, **U.S. Army Cold Regions Research and Engineering Laboratory**, **$35,000**, at Caltech, 1983
- *Mechanical Properties of Frozen Soil,* with C.C. Ladd (PI) and R.T. Martin, **U.S. Army Research Office**, **$66,000,** at M.I.T, extension 1980-81

NOTE: NSERC and Connaught grants **do not** include amounts for salary of PI **or** overhead.

Publications

Full Refereed Journal Articles

J15 • Zhang, X., Gartner, N., Gunes, O. and **Ting**, J. (2007). *"Integrating Service-Learning Projects into Engineering Courses*," Int'l J. for Service-Learning in Engineering. **2**(1), 44-63.

J14 • Faraji, S., Ting, JM, Crovo, DS and H. Ernst (2001). "Nonlinear Analysis of Integral Bridges: Finite Element Model," ASCE J.Geotechnical and GeoEnvironmental Engineering, 127(5):454-

461.

J13 • **Ting**, J.M., Meachum, L.R. and J.D. Rowell (1995). "Effect of Particle Shape on the Strength and Deformation Mechanisms of Ellipse-shaped Assemblages," *Engineering Computations: Int'l Journal of Computer-Aided Engineering and Software,* ed. D.R.J. Owen and K.J. Bathe, **12**(2): 99-108.

J12 • **Ting**, J.M., Khwaja, M., Meachum, L.R. and Rowell, J.D. 1993. "An Ellipse-based Discrete Element Model for Granular Materials," *Int'l Journal for Numerical and Analytical Methods in Geomechanics*, **17**(9):603-623.

J11 • **Ting**, J.M. 1992. "A Robust Algorithm for Ellipse-based Modelling of Granular Materials," *Computers and Geotechnics*, **13**(3):175-186.

J10 • **Ting**, J.M. and B.T. Corkum. 1992. "A Computational Laboratory for Discrete Element Geo-mechanics," ASCE *Journal of Computing in Civil Engineering*, **6**(2):129-146.

J9 • **Ting**, J.M., B.T. Corkum, C.R. Kauffman and C. Greco. 1989. "A Discrete Numerical Model for Soil Mechanics," ASCE *Journal of Geotechnical Engineering*, **115**(3):379-398.

J8 • **Ting**, J.M., C.R. Kauffman and M. Lovicsek 1987. "Centrifuge Static and Dynamic Lateral Pile Behaviour," *Canadian Geotechnical Journal*, **24**(2):198-207.

J7 • **Ting**, J.M. 1987. "Full-scale Lateral Pile Responses," ASCE *Journal of Geotechnical Engineering*, **113**(1):30-45.

J6 • **Ting**, J.M. 1984. "Tertiary Creep Model for Frozen Sands - Closure," ASCE *Journal of Geotechnical Engineering*, **110**(9):1376-1378.

J5 • **Ting**, J.M. 1983. "Geometric Concerns in Slope Stability Analysis," ASCE *Journal of Geotechnical Engineering*, **109**(11):1487-1491.

J4 • **Ting**, J.M., R.T. Martin and C.C. Ladd 1983. "Mechanisms of Strength for Frozen Sand," ASCE *Journal of Geotechnical Engineering*, **109**(10):1286-1302.

J3 • **Ting**, J.M. 1983. "Tertiary Creep Model for Frozen Sands," ASCE *Journal of Geotechnical Engineering*, **109**(7):932-945.

J2 • **Ting**, J.M. 1983. "On the Nature of the Minimum Creep Rate - Time Correlation for Soil, Ice and Frozen Soil," *Canadian Geotechnical Journal*, **20**(1):176-182.

J1 • **Ting**, J.M. and R.T. Martin 1979. "Application of the Andrade Equation to Creep Data for Ice and Frozen Soil," *Cold Regions Science and Technology,* **1**(1):29-36.

Full Conference Proceedings Articles

C15 • J. Duffy, Kazmer, D., Barrington, L., Ting, J., Barry, C., Zhang, X., Clark, D. and A. Rux (2007). "Service-Learning Integrated into Existing Core Courses throughout a College of Engineering," Proc. Nat'l Conf. ASEE, Honolulu, June 2007

C15 • Zhang, X., N. Gartner, O. Gunes and J. Ting, (2006) "Undergraduate Curriculum Reform in Civil Engineering by Integrating Service-Learning Projects", Proc. Nat'l Conf. ASEE., Chicago, June 2006.

C15 • Paikowsky, S.G., **Ting**, JM, Xi, F. and G. Mischel, 1995. "Numerical and Experimental Comparison of Shear along Granular Material/Solid Interface," Proc. 1996 ASME Mechanics and Materials Conf on *Mechanics and Materials for a New Millenium*, Baltimore, MD, June 1996.

C14 • **Ting,** J.M. and J.D. Rowell, 1995. "Ellipse-based Discrete Element Model for Granular Materials: Validation Testing," Proc. 1995 *ASCE Engineering Mechanics Conference on Discontinuous Materials,* Colorado, May 1995.

C13 • **Ting,** J.M. and L.R. Meachum, 1995. "Effect of Bedding Plane Orientation on the Behavior of Granular Systems," *Mechanics of Materials with Discontinuities and Heterogeneities*, ed. A. Misra and C.S. Chang, ASME AMD Vol 201: 43-58.

C12 • **Ting,** J.M., Rowell, J.D. and Meachum, L.R. 1993. "Influence of Particle Shape on the Strength of Ellipse-shaped Granular Assemblages," Proc. *Second Int'l Conf. Discrete Element Methods*, Cambridge, Mass., pp. 215-225.

C11 • Lin, J.S., **Ting,** J.M., Vuba, B. and Chen, S. 1992. "Computer Simulation of Direct Shear Test,"

Proc. *ASCE Engineering Mechanics Conference*, Texas A&M, Texas, May.

C10 • **Ting**, J.M. 1991. "An Ellipse-based Micromechanical Model for Angular Granular Materials," Proc. ASCE Engineering Mechanics Specialty Conference on *Mechanics Computing in 1990's and Beyond*, Columbus, Ohio, Vol. 2, pp. 1214-1218.

C9 • **Ting**, J.M. and B.T. Corkum 1988. "Discrete Element Models in Geotechnical Engineering," Proc. *3rd International Conference on Computing in Civil Engineering*, Vancouver, Canada, Vol. 2, pp. 587-594.

C8 • **Ting**, J.M. and B.T. Corkum 1988. "Soil-structure Interaction by Discrete Numerical Modelling," Proc. *Canadian Society for Civil Engineering Annual Conference*, Calgary, Canada, Vol. 3, pp. 196-215.

C7 • **Ting**, J.M. and B.T. Corkum 1988. "Strength Behavior of Granular Materials Using Discrete Numerical Modelling," Proc. *6th Int'l Conference on Numerical Methods in Geomechanics*, Innsbruck, Austria, Vol. 1, pp. 305-310.

C6 • Elsworth, D., A.R. Piggott and J.M. **Ting** 1986. "A Hybrid Model for the Transient Hydraulic Response of Fractured and Porous-fractured Media", Proc. *Boundary Element Technology Conf.*, M.I.T., Cambridge, Mass., pp. 721-732.

C5 • **Ting**, J.M., B.T. Corkum and C. Greco 1986. "Application of the Distinct Element Method in Geotechnical Engineering," *Proc. Int'l Symp. Numerical Models in Geomechanics*, Ghent, Belgium, pp. 789-798.

C4 • **Ting**, J.M. and R.F. Scott 1984. "Static and Dynamic Lateral Pile Group Action," Proc. *8th World Conference on Earthquake Engineering*, San Francisco, Calif. Vol 3, pp. 641-648.

C3 • Scott, R.F., J.M. **Ting** and J. Lee 1982. "Comparison of Centrifuge and Full-scale Dynamic Pile Tests," Proc. *Int'l Conf. Soil Dynamics and Earthquake Engineering*, Southampton, England, Vol. 1, pp. 299-309.

C2 • Scott, R.F., C.F. Tsai, D. Steussy and J.M. **Ting** 1982. "Full-scale Dynamic Lateral Pile Tests," Proc. *14th Offshore Technology Conference*, Houston, Texas, OTC Paper #4203.

C1 • Scott, R.F., H.P. Liu and J. **Ting** 1977. "Dynamic Pile Tests by Centrifuge Modeling," Proc. *6th World Conf. Earthquake Engineering*, New Delhi, India, Vol. 4, pp. 199-203.

Research Reports and Abstracts

R15 • Ting, JM and S. Faraji, 1998. Streamlined Analysis and Design of Integral Abutment Bridges, Technical Report, Dept. Civil & Environmental Engineering, UMass Lowell, Lowell, Mass. Also University of Massachusetts Transportation Center Report UTMC 97-13, Amherst, Mass.

R14 • Paikowsky, S.G., **Ting, JM**, Xi, F. and G. Mischel, 1996. “Numerical and Experimental Comparison of Shear along Granular Material/Solid Interface”, abstract in 1996 ASME Mechanics and Materials Conf on Mechanics and Materials for a New Millennium, Baltimore, MD, June 1996, p. 270.

R13 • **Ting**, J.M. 1995. “Effect of Particle Shape on the Mechanical Behavior of Granular Materials: A Discrete Element Study - Final Report,” Technical Report, Dept. Civil & Environmental Engineering, *UMass Lowell*, Lowell, Mass.

R12 • **Ting,** J.M. 1995. "Effect of Particle Shape on the Mechanical Behavior of Granular Materials," in Proc. Particulate Mechanics Contractors' Meeting, sponsored by Air Force Office of Scientific Research, Panama City, FL, Sept.

R11 • **Ting**, J.M. 1993. "Effect of Particle Shape on the Mechanical Behavior of Granular Materials: A Discrete Element Study - Second Annual Report 11/92-10/93," Technical Report, Dept. Civil Engineering, *UMass Lowell*, Lowell, Mass.

R10 • **Ting**, J.M. 1992. "Effect of Particle Shape on the Mechanical Behavior of Granular Materials: A Discrete Element Study - First Annual Report 11/91-10/92," Technical Report, Dept. Civil Engineering, *UMass Lowell*, Lowell, Mass.

R9 • **Ting**, J.M. 1992. "Effect of Particle Shape on the Mechanical Behavior of Granular Materials," abstract in the *Proceedings of AFOSR Particulate Mechanics Contractors' Meeting*, Air Force Office of Scientific Research, Kirtland AFB, NM, Jan. pp. 47-50.

R8 • **Ting,** J.M. 1991. "Modeling Granular Media with Non-Spherical Particles", in *Report of the Discrete Element Modeling/Soil Microstructure Working Group*, ed. J.J. Gill, Phillips Lab., U.S. Air Force, Kirtland AFB, NM, Mar, pp. 122-161.

R7 • **Ting**, J.M., B.T. Corkum, C.R. Kauffman and C. Greco 1987. "Discrete Numerical Modelling of Soil: Validation and Application," Publication 87-03, Dept. of Civil Engineering, *Univ. of Toronto*, Toronto, ISBN 0-7727-7090-5, 137 p.

R6 • **Ting**, J.M. 1987. "Simple Models for Dynamic Lateral Pile Response," Publication 87-04, Dept. of Civil Engineering, *Univ. of Toronto*, Toronto, ISBN 0-7727-7091-3, 33 p.

R5 • Corkum, B.T. and J.M. **Ting** 1986. "The Discrete Element Method in Geotechnical Engineering," Publication 86-11, Dept. Civil Engineering, *Univ. of Toronto*, Toronto, ISBN 0-7727-7086-7, 320 p.

R4 • **Ting**, J.M. 1986. "Modal Analysis of a Nonlinear Soil-Pile System," Publication 86-08, Dept. Civil Engineering, *Univ. of Toronto*, Toronto, ISBN 0-7727-7084-0, 50 p.

R3 • C.F. Tsai, R.F. Scott, D. Steussy and J.M. **Ting** 1981. "Full-scale Pile Vibration Tests: A Report to the National Science Foundation," *Earth Technology Corp.* and *California Institute of Technology*, Long Beach and Pasadena, Calif.

R2 • Martin, R.T., J.M. **Ting** and C.C. Ladd 1981. "Creep Behavior of Frozen Sand," Research Report R81-19, Dept. of Civil Engineering, *Massachusetts Institute of Technology*, Cambridge, Mass. 237 p.

R1 • **Ting**, J.M. "The Creep of Frozen Sands: Qualitative and Quantitative Models," Research Report R81-5, Dept. of Civil Engineering, *Massachusetts Institute of Technology*, Cambridge, Mass. 432 p. Also thesis submitted in partial fulfillment of the requirements of the degree of Doctor of Science.

Technical Presentations

P27 • "Institutionalizing Your Service-Learning Program", invited keynote panel presentation, **National EPICS Conference**, Purdue University, West Lafayette IN, May 21-22, 2008.

P26 • "Perspectives on Incorporating Service Learning in a College of Engineering", invited keynote presentation, Workshop on Integrating Appropriate Sustainable Technology and Service Learning in Engineering Education, **Sustainable Resources 2004**, University of Colorado, Sept 27-29, 2004.

P25 • "Appropriate Applications for Discrete Element Geotechnical Modeling", Invited poster presentation to **Workshop on Computational Exploration of Discrete Media**, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi, Nov. 1999.

P24 • "Force-Displacement Testing of Integral Abutment Bridges", invited presentation at the **Massachusetts Highway Department Research Showcase**, Boston, Mass., April, 1998, with S. Faraji

P23 • "Effect of Particle Shape on the Mechanical Behavior of Granular Materials: A Discrete Element Study", invited presentation to the Air Force Office of Scientific Research **Particulate Mechanics Contractors Meeting**, Tyndall AFB, Panana City, FL, Sept. 1995.

P22 • "Effect of Bedding Plane Orientation on the Behavior of Granular Systems," presented to the **1995 Joint ASME Applied Mechanics and Materials Summer Meeting,** Los Angeles, CA, June 1995.

P21 • "Particle Shape Effects on the Mechanical Behavior of Bedded Granular Systems: A Discrete Element Study", invited presentation to the **Workshop on Mechanics and Statistical Physics of Particulate Media,** La Jolla, CA, June 1994, sponsored by NSF Institute for Mechanics and Materials, AFOSR, ARO and ONR.

P20 • "Influence of Particle Shape on the Strength of Ellipse-shaped Granular Assemblages," presented

to **Second Int'l Conf. Discrete Element Methods,** Cambridge, Mass., Mar. 1993.

P19 • "Effect of Particle shape on the Mechanical Behavior of Granular Materials," invited presentation, **Particulate Mechanics Contractors' Meeting,** Air Force Office of Scientific research, Abuquerque, NM, Jan. 1992.

P18 • "Discrete Numerical Modeling o Soil," invited presentation to the **4th Eastern Region PATRAN Users' Association Meeting,** Boston, Mass., Sept. 1991.

P17 • "An Ellipse-based Micromechanical Model for Angular Granular Materials," presented to **ASCE Engineering Mechanics Specialty Conference,** Columbus, Ohio, May 1991.

P16 • "Modeling Granular Media with Non-Spherical Particles: Statistical Considerations," invited presentation to the **DEM/Soil Microstructure Workshop,** Air Force Office of Scientific Research, Kirtland AFB, New Mexico, Jan. 1991.

P15 • "Discrete Element Models in Geotechnical Engineering," presented at **3rd International Conference on Computing in Civil Engineering,** Vancouver, Canada, August 1988, with B.T. Corkum.

P14 • "Soil-structure Interaction by Discrete Numerical Modelling," presented at the **Canadian Society for Civil Engineering Annual Conference,** Calgary, May 1988, w/ B.T. Corkum.

P13 • "Discrete Element Modelling in Geotechnical Engineering," **CSCE Annual Conference,** Research-in-Progress Session, Toronto, Ont., May 1986, with B.T. Corkum.

P12 • "Research on Dynamic Lateral Pile Behaviour," Civil Engineering seminar, **McMaster University,** Hamilton, Ont., Oct. 1984.

P11 • "Static and Dynamic Lateral Pile Group Action," presented at the **8th World Conference on Earthquake Engineering,** San Francisco, Calif., Aug. 1984.

P10 • "Problems with Frozen Soils," invited presentation at the Industrial Affiliates Conference on Engineering Aspects of Offshore Structures, **California Institute of Technology,** Pasadena, Calif., Feb. 1984.

P9 • "Liquefaction, Settlement and Landslides," invited presentation at the Earthquake Research Affiliates Conference on a Replay of the 1857 Fort Tejon Earthquake, **California Institute of Technology,** Pasadena, Calif., Jan. 1983.

P8 • "Dynamic Lateral Testing of Piles: Comparison of Full-scale and Centrifuge Models," Civil Engineering seminar, **University of Toronto,** Jan. 1983.

P7 • "Dynamic Lateral Testing of Piles: Comparison of Full-scale and Centrifuge Models," invited presentations at **Earth Technology Corp.,** Long Beach, Calif. Oct. 1982.

P6 • "Dynamic Lateral Testing of Piles: Comparison of Full-scale and Centrifuge Models," Civil Engineering seminar, **California Institute of Technology,** May 1982.

P5 • "Creep of Frozen Sand: Qualitative and Quantitative Models," Civil Engineering seminar, Civil Engineering seminar, **California Institute of Technology,** Pasadena, Calif., May 1981.

P4 • "Creep of Frozen Sand: Qualitative and Quantitative Models," Civil Engineering seminar, **Massachusetts Institute of Technology,** Cambridge, Mass., Jan. 1981.

P3 • "Mechanisms of Strength in Frozen Sand, Part 2: Quantitative Methods for Prediction of Creep in Frozen Sands," invited seminar at **U.S. Army Cold Regions Research and Engineering Laboratory,** Hanover, N.H., Sept. 1980.

P2 • "Mechanisms of Strength and Deformation of Frozen Sands," invited seminar at **U.S. Army Cold Regions Research and Engineering Laboratory,** Hanover, N.H., Oct. 1979.

P1 • "Use of the Andrade Equation in the Creep of Ice and Frozen Soil," Civil Engineering seminar, **Massachusetts Institute of Technology,** Cambridge, Mass., Nov. 1978.

D. INSTRUCTION RELATED ACTIVITY

updated as of Jan. 17, 2023

Number	Level	Title	School	Dates	# times
CIVE.5310	4, Grad	Advanced Soil Mechanics	UMass-Lowell	2022 - 2024	3
CIVE.3300	3	Soil Mechanics	UMass-Lowell	2019 - 2023	8
CIVE.2860	2	Prob. & Statistics for Engineers	UMass-Lowell	2017 – 2023	7
CIVE.3330	3	Geotechnical Lab	UMass-Lowell	2017 – 2019	3
25.108	1	Intro to Engineering II (Civil)	UMass-Lowell	2003 – 2004	2
14.203	2	Statics	UMass-Lowell	1996	1
14.286	2	Prob. & Statistics for Engineers	UMass-Lowell	1998 – 2004	7
14.330	3	Soil Mechanics	UMass-Lowell	1990 - 1999	5
14.331	3	Soil Mechanics Lab	UMass-Lowell	1993 - 1998	6
14.431	4	Foundations and Soils	UMass-Lowell	1993 - 1996	3
14.507	4, Grad	Engineering Computation (new)	UMass-Lowell	1991 - 1995	2
14.531	4, Grad	Advanced Soil Mechanics (new)	UMass-Lowell	1990 - 1996	5
14.532	4, Grad	Theoretical Soil Mechanics (new)	UMass-Lowell	1990 - 2003	4
14.534	4, Grad	Soil Dynamics (new)	UMass-Lowell	1993 - 2002	4
14.538	4, Grad	Soil Behavior (new)	UMass-Lowell	1992 - 2001	4
APS100s	1	Computer Programming	U of Toronto	1983 - 1985	2
CIV260f	2	Computer Programming	U of Toronto	1983 - 1986	3
CIV261f	2	Engineering Computation (new)	U of Toronto	1986 - 1989	4
CIV274s	2	Public Speaking (shared)	U of Toronto	1989	1
CIV324s	3	Geotechnical Analysis	U of Toronto	1985 - 1989	3
CIV525f	4, Grad	Subsurface Exploration	U of Toronto	1983 - 1984	1
CIV1400	Grad	Applied Mathematics in Civ. Eng	U of Toronto	1985 - 1986	1
CIV1410	Grad	Soil and Rock Dynamics	U of Toronto	1983 - 1985	2
CIV1420	Grad	Soil Properties and Behaviour	U of Toronto	1987 - 1988	1
CE150c	Grad	Foundation Analysis	Caltech	1981 - 1983	3

GRADUATE THESES SUPERVISED

At the University of Massachusetts · Lowell

G10 • "Validation of an Ellipse-based Discrete Element Model with Application to Granular Material Pressures in Storage Silos," G. Mischel, M.S. thesis, Jan. 1998.

G9 • "Discrete Element Method: Micro-Mechanical and Large Scale Modeling," M. Khwaja, M.S. thesis, May 1996.

G8 • "Evaluation of Lateral Pile Response *p-y* Design Criteria Using Discrete Element Modeling," J. Sanchez, M.S. project, May 1994.

G7 • "Validation of Ellipse-Based Discrete Element Modeling in Soil Mechanics," J.D. Rowell, M.S. thesis, May 1994.

G6 • "Effect of Particle Shape on the Mechanical Behavior of Granular Materials, L.R. Meachum, M.S. thesis, Dec. 1994.

G5 • "Experimental Project using Geogrid in a Road Base," P.E. MacDonald, M.S. project, 1991.

At the University of Toronto

G4 • "A Three Dimensional Discrete Element Model for Soil," P.J. Hassan, M.A.Sc. 1990.

G3 • "An Angular Discrete Element Model for Geomechanics," M.W. Grabinsky, M.A.Sc. 1989.

G2 • "The Discrete Element Method in Geotechnical Engineering", B.T. Corkum, M.A.Sc. 1986.

G1 • "A Numerical Procedure for the Analysis of Steady State Fluid Flow in Systems of Finite Discontinuities," A.R. Piggott, M.Eng. 1986 (with D. Elsworth, Penn State University; Thesis won 1987 Student Research Award, U.S. Nat'l Comm. Rock Mechanics).

E. SERVICE ACTIVITIES

At University of Massachusetts Lowell:

As faculty in Department of Civil & Environmental Engineering (2017-present):

- Associate Chair for Graduate Programs (Master's) (9/17-present)
  - Major co-author of AQAD Self-Study Report for department (along with Pradeep Kurup and Ed Hajduk), May 2022; including presentations and tours to external reviewers, June 2022.
  - Promoted remotely-accessible offerings in department including HyFlex offerings Fall 2022-present and ICX (UMass system Intercampus Exchange) 2022-present.
  - Comprehensive review & update of all MS options during spring & fall 2020 including readiness for remote/online offerings; updates approved by GPAC and Faculty Senate April 2021.
  - Drafted and proposed expanded BS/MS for College of Engineering; approved 2019-20
  - Review all admissions applications for Master's programs in Civil & Environmental Engineering
  - Established common admissions standards and undergraduate prerequisites for applicants with non-Civil Engineering backgrounds Aug. 2017
  - Previously coordinated GPAC and Faculty Senate approval of revised Master's curricula for all options in Civil & Environmental Engineering Dec 2017
  - Attend all meetings of Graduate Coordinators for College of Engineering (meets monthly) and University (meets monthly)
  - Verify and approve all student graduate academic petitions
  - Verify and approve all student Declarations of Intent to Graduate for Master's students
- College Personnel Committee 1/2018 to 8/2020
  - appointed as Civil & Environmental Engineering departmental representative
- Department Personnel committee 9/2017 to present
  - Elected Chair 9/2020 to present
- Geotechnical faculty search committee, Chair Jan – March 2020, Chair Dec. 2022 – April 2023, Chair Dec. 2023 – present
  - Coordinated phone and virtual interviews, campus visits for each search
- Department student recruiting and outreach events since Sept 2017
  - Represented Civil Dept. at undergraduate Open Houses 10/1/17, 10/29/17, 10/14/18, 10/28/18 9/ 21/19, 10/3/21 (Tsongas Center)
  - Represented Civil Dept at Welcome Day for accepted students 4/6/19, 4/7/18; virtual 4/24/20, 3/27/21, 4/2/22,
  - Attended Graduate Open House 4/8/18, 10/29/18, 9/28/19, 3/28/20, 4/13/20
  - Attended Graduate recruiting webinar, 2/22/18, 2/12/19, 2/11/20, 9/26/20, 2/11/21, 9/25/21, 2/10/22, 9/24/22, 3/25/23, 6/22/23
  - Represented Civil Dept. Career day, Chelmsford HS, 1/31/18
  - Represented UML @ STEM HUB day, Chelmsford HS, 11/8/18
  - Met with Wellesley HS Intro to Engineering class, 11/16/20
- University Student Success Strategic Planning Committee (2017-2020)
  - subcommittee on Experiential Learning (established 10/18)

As Vice-Provost for Enrollment (Oct 2012- June 2016):

- oversaw Office of the Registrar:
  - assisted with prioritized course scheduling to optimize classroom utilization
- oversaw Office of Institutional Research:
  - developed analytical models to assist with enrollment modeling; impact of admissions and retention strategies on national rankings
- worked closely with Dean of Enrollment Management, Director of Undergraduate Admissions & Director of Financial Aid on setting and meeting increased enrollment and selectivity targets;
- supported test-optional admissions policy and raise.me. microscholarship program;

- served on University's Strategic Planning Commission including Co-Chair of Facilities Renewal Committee & Co-chair of Academic Integrity Subcommittee for NCAA Division I Institutional Performance Plan (2016); Campus Space Committee; Title IX/VAWA Compliance Committee;
- member of management contract negotiation team to adjunct faculty union;
- Campus NCAA Faculty Athletic Representative March-June 2013
- University rep to Educational Advisory Board Enrollment Management Forum (2014-16);
- completed successful applications for Higher Education in Excellence in Diversity awards 2015
- spearheaded or assisted with successful applications for individual recognitions for campus leadership including Provost (NEBHE 2015), Vice-Chancellor (NACUBO 2016)
- university representative to UMass President's "UMass Performance" assessment initiative
- member of Deans Council
- Served as Provost's designee including Faculty Salary Review & University Professor selection.

As Dean of Engineering (July 2003 – Sept 2012):

- member of Deans Council
- established an integrated Service-Learning program (with NSF funding)
- established several interdisciplinary Minors such as Robotics, Biomedical Engineering and Business Administration for Engineers
- established an innovative research co-op program to help attract high-merit students
- obtained approval for research doctoral PhD programs in all engineering disciplines
- doubled the size of the incoming freshman class and improved academic selectivity

- Department Head, Department of Civil & Environmental Engineering1999-2003
- Faculty Senate, 1995-1999
- Technology Review Panel of Fatal Occupational Accidents, Dept. Work Environment 1993-95

At the University of Toronto (1983 – 1990):

- Supercomputer Users Group at Univ. of Toronto, Member 1986-87, *Chair-elect* 87, *Chair* 88-89
- Departmental Task Force on Computing, *Chair* 1984-88, Member 88-89
- Faculty of Engineering Decanal Advisory Committee on Computing, Member 86-88, *Chair* 88-89
- Ontario Inter-University Supercomputer Advisory Board, University rep. 1987-89
- Faculty of Engineering Computing Facility Advisory Committee, Dept rep. 1985-86
- Faculty Decanal Committee on Computing, Dept rep. 1985-86

Service to Profession:

- **External program review:** Civil Engineering and Mechanical Engineering programs, Merrimack College, Andover MA (4/2014)
- **Journal Reviewer**: ASCE J. Geotechnical & GeoEnvironmental Engineering, Geotechnical Testing J., ASTM, ASCE J. Engineering Mechanics, Int'l J. Numerical & Analytical Methods in Geomechanics, Int'l J Solids & Structures, Canadian Geotechnical J., Computers & Geotechnics, Computers & Geosciences
- **Book Reviewer**: Wiley & Sons; Elsevier Science
- **Research proposal reviewer**: National Science Foundation: panel for Geomechanical, Geotechnical & GeoEnvironmental Engineering, and Siting & Geotechnical Systems; US Army Research Office; US Department of Energy
- **Judge**: American Council of Engineering Companies (ACEC) Excellence Awards Program 2001
- **External faculty reviewer for promotion & tenure**: including Jordan (2 previous); North Carolina (previous); South Africa 2021

Service to Community:

- **Lowell Arena and Stadium Commission:** University-appointed member (one of 3 University members), 1995-2007