

CURRICULUM VITAE

Marolo Alfaro, PhD, PEng



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DEGREES

<i>Degree</i>	<i>Field</i>	<i>Awarded</i>	<i>Institution / Country</i>
Ph.D.	Civil Engineering	1996	Saga University, Japan
M.Eng.	Geotechnical Engineering	1988	Asian Institute of Technology, Thailand
B.Sc.	Civil Engineering	1984	University of Mindanao, Philippines

EMPLOYMENT HISTORY

<i>Position</i>	<i>Dates</i>	<i>Employer</i>	<i>Province / Country</i>
Professor	2010-present	University of Manitoba	Manitoba
Associate Professor	2005-2010	University of Manitoba	Manitoba
Assistant Professor	2000-2005	University of Manitoba	Manitoba
Postdoctoral Fellow/Sessional Instructor	1996-1999	University of Calgary	Alberta
Postdoctoral Fellow	1996-1996	Royal Military College of Canada	Ontario
Research Engineer	1991-1992	Asian Institute of Technology	Thailand
Geotechnical Engineer	1990-1991	Moh and Associates	Singapore
Research Associate	1988-1990	Asian Institute of Technology	Thailand
Structural Engineer	1984-1985	TECPHIL Consultants	Philippines

RESEARCH

Research Interests

Northern infrastructure impacted by climate change
Stability evaluation of aging earth dams and stabilization of natural and engineered slopes
Geosynthetics for civil engineering applications
Ground improvement techniques
Embankments on soft ground

Research Awards

- 2013 Editor's Choice Paper Award, Canadian Geotechnical Journal
Canadian Geotechnical Society
Citation: Recognition given by the National Research Council (NRC) Press and the Canadian Geotechnical Journal highlighting articles of particularly high caliber and topic importance.
- 2010 Balik-Scientist Program Award
Department of Science and Technology, Philippines
Citation: The 'Balik Scientist' award - coined from Filipino word 'balik' that means to come back and the English word scientist - is a government initiated program wherein selected Filipino science and technology experts residing abroad are given award to return to the Philippines to share their expertise to accelerate the scientific and economic development of the country.
- 2005 First Runner-up for Best Paper Award, Geosynthetics International Journal
International Geosynthetics Society
Citation: The best papers were selected for their contribution to civil engineering discipline in terms of providing significant new insights and/or of being of high potential impact to civil engineering practice.

Research Publications

Chapters in Books and Textbooks:

- 1) Bathurst, R.J., Hatami, K. and Alfaro, M.C. (2012). Geosynthetic Reinforced Soil Walls and Slopes: Seismic Aspects. Chapter 16 in Handbook of Geosynthetic Engineering, (S.K. Shukla - Editor), Institute of Civil Engineers Publishing, UK, 317-363.
- 2) Graham, J., Alfaro, M. and Blatz, J. (2011). Natural Processes and Strength Degradation. Chapter 11 in Bifurcation, Instabilities and Degradations in Geomaterials, Springer-Verlag Berlin Heidelberg, 187-210.
- 3) Bergado, D.T., Chai, J.C., Alfaro, M.C. and Balasubramaniam, A.S. (1994). Improvement Techniques of Soft Ground in Subsiding and Lowland Environment. A.A. Balkema Publishers, Rotterdam, Netherlands, 222p.

Refereed Scientific Journals:

(**Boldface** = Postgraduate Student at the University of Manitoba)

- 1) **De Guzman, E.M.B.** and Alfaro, M. (2016). Performance of Road Embankments on Seasonally-Frozen Peat Foundations with and without Corduroy Base. *ASCE Journal of Performance of Constructed Facilities*. DOI: 10.1061/(ASCE)CF.1943-5509.0000906
- 2) **Mosallanezhad, M.**, Alfaro, M., Hataf, N. and Sadat Taghavi, S.H. (2016). Performance of the New Reinforcement System in the Increase of Shear Strength of Typical Geogrid Interface with Soil. *Geotextiles and Geomembranes* 44:3, 457-462.
- 3) **Kurz, D.**, Sharma, J., Alfaro, M. and Graham, J. (2016). A Semi-Empirical Elastic-Thermoviscoplastic Model for Clay. *Canadian Geotechnical Journal*. *Canadian Geotechnical Journal* 53:10, 1583-1599.
- 4) **Gholamzade, A.** and Alfaro, M. (2016). Coupled Thermal-Mechanical Behaviour of Highway Embankment on Degrading Permafrost. *ASCE Journal of Cold Regions Eng'g*. (in preparation)
- 5) **De Guzman, E.M.B.**, Alfaro, M., Doré, G. and Arenson, L. (2016). Performance of Reinforced Highway Embankments in Arctic Regions. *Canadian Geotechnical Journal*. (in preparation)
- 6) **Flynn, D.**, **Kurz, D.**, Alfaro, M., Graham, J. and Arenson, L. (2016). Forecasting Ground Temperatures under a Highway Embankment on Degrading Permafrost. *ASCE Journal of Cold Regions Engineering*. DOI: 10.1061/(ASCE)CR.1943-5495.0000106
- 7) **Kurz, D.**, Alfaro, M.C. and Graham, J. (2016). Thermal Conductivities of Frozen and Unfrozen Soil in the Active Layer. *Cold Regions Science and Technology*. (in review)
- 8) **Mosallanezhad, M.**, Sada Taghavi, S.H., Hataf, N. and Alfaro, M. (2015). Experimental and Numerical Studies of the Performance of the New Reinforcement System under Pullout Conditions. *Geotextiles and Geomembranes* 44:1, 70-80.
- 9) Graham, J., Alfaro, M., **Batenipour, H.** and **Kurz, D.** (2015). Warming Climate Damages Northern Roads. *Journal of Student Science and Technology* 8:1, 55-63.
- 10) **Batenipour, H.**, Alfaro, M.C., **Kurz, D.** and Graham, J. (2013). Deformations and Ground Temperatures at a Road Embankment in Northern Canada. *Canadian Geotechnical Journal* 51:3, 260-271. **Editor's Choice Paper Award.**
- 11) Alfaro, M.C. and **Pathak, Y.P.** (2012). Laboratory Performance of Geogrid-Reinforced Soils Subjected to Freezing and Thawing. *ASTM Geotechnical Testing Journal* 35:5, Paper ID GTJ103101.
- 12) Regehr, J., **Milligan, C.**, Montufar, J., and Alfaro, M.C. (2012). Review of Effectiveness and Costs of Strategies to Improve Roadbed Stability in Permafrost Regions. *ASCE Journal of Cold Regions Engineering*. 27:3, 109–131.
- 13) **Thiessen, K.J.**, Alfaro, M.C. and Blatz, J.A. (2011). Measuring the Load-Deformation Response of Rockfill Columns by a Full-Scale Test on Natural Riverbank. *Canadian Geotechnical Journal* 48:7, 1032-1043.

- 14) **Abdulrazaq, W.F.**, Alfaro, M.C. and Blatz, J.A. (2010). Evaluating Stability of Riverbanks Reinforced with Rockfill Columns. *Lowland Technology International Journal* 12:2, 1-8.
- 15) **Pathak, Y.P.** and Alfaro, M.C. (2010). Wetting-Drying Behaviour of Geogrid-Reinforced Clay under Working Load Conditions. *Geosynthetics International Journal* 17:2, 144-156.
- 16) Pongchompu, P., Hayashi, S., Suetsugu, D., Du, Y.J. and Alfaro, M.C. (2010). Performance of Raft and Pile Foundation on Soft Ariake Clay Ground. *Lowland Technology International* 12:1, 41-46.
- 17) Alfaro, M.C., **Ciro, G.A.**, **Thiessen, K.J.** and Ng, T. (2009). Case Study of Degrading Permafrost Beneath a Road Embankment. *ASCE Journal of Cold Regions Engineering* 23:3, 93-111.
- 18) Alfaro, M.C., Blatz, J.A., **Abdulrazaq, W.F.** and **Kim, C.S.** (2009). Evaluating Shear Mobilization in Rockfill Columns for Riverbank Stabilization. *Canadian Geotechnical Journal* 46:8, 976-986.
- 19) Graham, J., **Franklin, K.**, Alfaro, M.C. and Worthley, J. (2007). Degradation of Shaley Limestone Riprap. *Canadian Geotechnical Journal* 44:11, 1265-1272.
- 20) Alfaro, M.C., Blatz, J.A. and Graham, J. (2006). Geosynthetic Reinforcement for Embankments Over Degrading Discontinuous Permafrost Subjected to Prestressing. *Lowland Technology International Journal* 8:1, 47-54.
- 21) **Krahn, T.**, Blatz, J.A., Alfaro, M.C. and Bathurst, R.J. (2006). Large Scale Interface Testing of Sandbag Dyke Materials. *Geosynthetics International Journal* 14:2, 119-126.
- 22) Alfaro, M.C. and **Pathak, Y.P.** (2005). Dilatant Stresses at the Interface Between Granular Fills and Geogrid Strip Reinforcements. *Geosynthetics International Journal* 12:5, 239-252. **Runner-up for Best Paper Award.**
- 23) **Garinger, B.**, Alfaro, M.C., Graham, J., Dubois, D. and **Man, A.** (2004). Instability of Dykes at Seven Sisters Generating Station. *Canadian Geotechnical Journal* 41:5, 959-971.
- 24) Graham, J., Alfaro, M.C. and **Ferris, G.** (2004). Compression and Strength of Dense Sand at High Pressures and Elevated Temperatures. *Canadian Geotechnical Journal* 41:6, 1206-1212.
- 25) Graham, J., **Tanaka, N.**, **Crilly, T.** and Alfaro, M.C. (2001). Modified Cam Clay Modelling of Temperature Effects in Clays. *Canadian Geotechnical Journal* 38:3, 608-621.
- 26) Alfaro, M.C. and Wong, R.C.K. (2001). Laboratory Studies on Fracturing of Low-Permeability Soils. *Canadian Geotechnical Journal* 38:2, 303-315.
- 27) Wong, R.C.K. and Alfaro, M.C. (2001). Fracturing in Low-Permeability Soils for Remediation of Contaminated Ground. *Canadian Geotechnical Journal* 38:2, 316-327.
- 28) Alfaro, M.C., Hayashi, S., Miura, N., and Bergado, D.T. (1997). Deformation of Reinforced Soil Wall-Embankment System on Soft Clay Foundation. *Soils and Foundations* 37:4, 33-46.
- 29) Alfaro, M.C., Hayashi, S., Miura, N. and Watanabe, K. (1995). Pullout Interaction Mechanism of Geogrid Strip Reinforcement. *Geosynthetics International Journal* 2:4, 679-698.
- 30) Alfaro, M.C., Miura, N. and Bergado, D.T. (1995). Soil-Geogrid Reinforcement Interaction by Pullout and Direct Shear Tests. *ASTM Geotechnical Testing Journal* 18:2, 157-167.

Selected Conference Publications:

(**Boldface** = Postgraduate Student at the University of Manitoba)

- 1) **Kaluzny, S., De Guzman, E.M.B.** and Alfaro, M. (2016). Pullout Resistance of Geotextiles With and Without Wicking Function. 69th Canadian Geotechnical Conference, Vancouver, BC. (*Proceedings in CD*)
- 2) **Kurz, D.,** Sharma, J., Alfaro, M., Graham and Maghoul, P. (2016). A Numerical Elastic Thermoviscoplastic Model for Clay Behaviour. 69th Canadian Geotechnical Conference, Vancouver, BC. (*Proceedings in CD*)
- 3) **De Guzman, E.M.B., Piamsalee, A.,** Alfaro, M., Arenson, L., Doré, G. and Haley, D. (2016). Geotextile-Reinforced Fill Slope along a Highway to Canada's Arctic Coast. 3rd Pan-American Conference on Geosynthetics, Miami, USA. (*Proceedings in CD*)
- 4) **De Guzman, E.M.B., Piamsalee, A.,** Alfaro, M., Arenson, L., Doré, G. and Haley, D. (2015). Initial Monitoring of Instrumented Test Sections along the Inuvik-Tuktoyaktuk Highway. 68th Canadian Geotechnical Conference, Quebec City, QC. (*Proceedings in CD*)
- 5) **Flynn, D.,** Alfaro, M., Graham, J. and Arenson, L. (2015). Observed Deformations of an Existing Highway on Degrading Permafrost. 68th Canadian Geotechnical Conference, Quebec City, QC. (*Proceedings in CD*)
- 6) **Flynn, D.,** Alfaro, M., Graham, J., **Kurz, D.** and Arenson, L. (2015). Observed and Predicted Thermal Regime under an Existing Highway on Degrading Permafrost, 68th Canadian Geotechnical Conference. Quebec City, QC. (*Proceedings in CD*)
- 7) **De Guzman, E.M.B.,** and Alfaro, M. (2014). Utilization of Local Timber Logs in Highway Embankment Construction. 1st International Symposium on Wood Utilization, Saga, Japan, 51-57.
- 8) **De Guzman, E.M.B.** and Alfaro, M.C. (2014). Numerical and Physical Modelling of Road Embankments on Seasonally-Frozen Peat. 67th Canadian Geotechnical Conference, Regina, SK. (*Proceedings in CD*)
- 9) **Flynn, D.,** Alfaro, M.C. and Graham, J. (2014). Numerical Modelling of Thermal Regime Beneath Highway Embankment on Degrading Permafrost. 67th Canadian Geotechnical Conference, Regina, SK. (*Proceedings in CD*)
- 10) **Flynn, D.,** Alfaro, M., Graham J. and **Fiebelkorn, J.** (2013). Four-Year Performance of an Instrumented Highway Embankment on Degrading Permafrost. Proc. 66th Canadian Geotechnical Conference, Montreal, QB (*Proceedings in CD*).
- 11) **De Guzman, E.M.** and Alfaro, M. (2013). Performance of Highway Embankment on Peat Deposits Constructed Under Winter Conditions. Proc. 66th Canadian Geotechnical Conference, Montreal, QB (*Proceedings in CD*).
- 12) **Batenipour, H.,** Alfaro M.C. and Graham J. (2012). Segregation Potential from a Highway Embankment on Thawed Permafrost. Proc. 2012 Cold Regions Engineering Conference, Quebec City, QB, 114-123.

- 13) **Kurz, D.**, Alfaro, M.C., Graham, J. and **Batenipour, H.** (2012). Thermal Modeling of an Instrumented Highway Embankment on Degraded Permafrost, Proc. 65rd Canadian Geotechnical Conference, Winnipeg, MB (*Proceedings in CD*).
- 14) **Kurz, D.**, Alfaro, M.C., **Bartley, G.** and Graham, J. (2012). Thermal Conductivity of Clay and Peat Samples from Northern Manitoba, Proc. 65rd Canadian Geotechnical Conference, Winnipeg.
- 15) **Batenipour H.**, Alfaro M.C., Graham J. and Kalynuk K. (2011). Deformations of a Highway Embankment on Degraded Permafrost. Proc. 64th Canadian Geotechnical Conference, Toronto, ON.
- 16) **Batenipour H.**, **Kurz D.R.**, Alfaro M.C., Graham J. and Kalynuk K. (2010). Results from an Instrumented Highway Embankment on Degraded Permafrost. Proc. 63rd Canadian Geotechnical Conference and 6th Canadian Permafrost Conference, Calgary, 512-519.
- 17) **Batenipour H.**, Alfaro M.C., Graham J. and Kalynuk K. (2011). Deformations of a Highway Embankment on Degraded Permafrost. Proc. 64th Canadian Geotechnical Conference, Toronto, ON.
- 18) Alfaro, M.C., **Batenipour, H.**, **Kurz, D.R.**, Graham, J. and Ng, T.N.S. (2009). Highway Embankments on Degrading and Degraded Permafrost. Proc. 17th International Conference on Soil Mechanics and Geotechnical Engineering, Alexandria, Egypt (*Proceedings in CD*).
- 19) **Batenipour, H.**, **Kurz, D.R.**, Alfaro, M.C., Graham, J. and Ng, T.N.S. (2009). Highway Embankment on Degrading Permafrost. Proc. 4th Conference on Cold Regions Engineering, Duluth, Minnesota, 512-521.
- 20) **Kurz, D.R.**, Alfaro, M.C. and Bannister, K. (2009). Thermal Numerical Modeling of Transmission Tower Foundations in Northern Manitoba. Proc. 62nd Canadian Geotechnical Conference, Halifax, NS, 1028-1034.
- 21) **Batenipour, H.**, **Kurz, D.R.**, Alfaro, M.C. and Graham, J. (2009). Effect of Temperature on the 1-D Behaviour of Plastic Clay. Proc. 62nd Canadian Geotechnical Conference, Halifax, NS, 47-52.
- 22) Alfaro, M.C., Blatz, J.A., and Graham, J. (2008). Refining Geotechnical Engineering Education. Proc. 61st Canadian Geotechnical Conference, Edmonton, AB (*Proceedings in CD*).
- 23) **Thiessen, K.J.**, Alfaro, M.C. and Blatz, J.A. (2008). Monitoring Results from a Full-Scale Field Test of Rockfill Columns. Proc. 61st Canadian Geotechnical Conference, Edmonton, AB (*Proceedings in CD*).
- 24) Graham, J., Alfaro, M.C. and Blatz, J.A. (2008). Natural Processes and Strength Degradation. Proc. 8th International Workshop on Bifurcation and Degradation in Geomechanics, Lake Louise, Alberta, Canada.
- 25) Alfaro, M.C., **Pathak, Y.P.** and Ng, T. (2007). Assessing the Effect of Environmental Loading on Geogrid-Reinforced Slope with Expansive Clay. Proc. 60th Canadian Geotechnical Conference, Ottawa, ON (*Proceedings in CD*).

- 26) **Abdulrazaq, W.F.**, Alfaro, M.C. and Blatz, J.A. (2007). A Study on Soil-Cement Columns for Stabilizing Riverbanks. Proc. 60th Canadian Geotechnical Conference, Ottawa, ON (*Proceedings in CD*).
- 27) **Thiessen K.J.**, Alfaro, M.C. and Blatz, J.A. (2007). Design of a Full-Scale Field Test Rockfilled Columns. Proc. 60th Canadian Geotechnical Conference, Ottawa, Ontario (*Proceedings in CD*).
- 28) **Abdulrazaq, W.F.**, Alfaro, M.C. and Blatz, J.A. (2006). Effects of Rockfill Column Geometry and Layout for Stabilizing Natural Riverbanks. Proc. 59th Canadian Geotechnical Conference, Vancouver, BC (*Proceedings in CD*).
- 29) **Ciro, G.A.** and Alfaro, M.C. (2006). Adaptation Strategies for Road Embankments on Permafrost Affected by Climate Change. Proc. 2nd EIC Climate Change Conference, Ottawa, ON (*Proceedings in CD*).
- 30) **Pathak, Y.P.** and Alfaro, M.C. (2006). Deformation of Geosynthetic-Reinforced Clay Subjected to Wetting-Drying. Proc. 8th International Conference on Geosynthetics, Yokohama, Japan (*Proceedings in CD*).
- 31) Watanabe, K., Kumada, T., Ogata, T. and Alfaro, M.C. (2006). Use of Geogrid for Surface Protection of a Reinforced Slope. Proc. 8th International Conference on Geosynthetics, Yokohama, Japan (*Proceedings in CD*).
- 32) **Abdulrazaq, W.F.**, **Kim, C.S.**, Alfaro, M.C. and Blatz, J.A. (2006). Effects of Low Level Cementation in Rockfill Columns for Riverbank Stabilization. Proc. 2006 International Symposium of Lowland Technology, Saga, Japan (*Proceedings in CD*).
- 33) **Pathak, Y.P.** and Alfaro, M.C. (2006). Numerical Analysis of Geosynthetic-Reinforced Clay Slope Subjected to Wetting. Proc. 2006 International Symposium of Lowland Technology, Saga, Japan (*Proceedings in CD*).
- 34) Hino, T., Alfaro, M.C., Shimoyama, S., Yamanaka, T. and Imamura, K. (2006). Physico-Chemical Investigation on Soft Clay Foundation Improved with Deep Mixing Method. Proc. 2006 International Symposium of Lowland Technology, Saga, Japan (*Proceedings in CD*).
- 35) **Pathak, Y.P.** and Alfaro, M.C. (2005). Laboratory Simulation of the Behaviour of Geosynthetic-Reinforced Clay under Seasonal Wetting-Drying Cycles. Geo-Frontiers 2005 Conference, Austin, Texas.
- 36) Alfaro, M.C. and Becker, D.E. (2005). Limit States Design for Geotechnical Engineering: A Canadian Perspective (*Keynote Paper*). Proc. 11th International Convention of the Association of Structural Engineers of the Philippines, Manila, Philippines. (*Proceedings in CD*).
- 37) Graham, J., **Man, A.**, Alfaro, M.C., Blatz, J.A., and Van Gulck, J. (2005). Gypsum Cementation and Yielding in Plastic Clay. Proc. 16th International Conference in Soil Mechanics and Geotechnical Engineering, Osaka, Japan.
- 38) **Pathak, Y.P.** and Alfaro, M.C. (2005). Behaviour of Geogrid-Reinforced Clay Under Wetting-Drying Cycle. Proc. 58th Canadian Geotechnical Conference, Saskatoon, SK (*Proc. in CD*).

- 39) **Ciro, G.A.** and Alfaro, M.C. (2005). Modeling of Ground Thermal Regime in Degrading Permafrost Beneath Road Embankments. Proc. 58th Canadian Geotechnical Conference, Saskatoon, SK (*Proceedings in CD*).
- 40) **Abdulrazaq, W.F., Kim, C.S.,** Alfaro, M.C. and Blatz, J.A. (2005). Shear Mobilization of Rockfill Columns for Riverbank Stabilization. Proc. 58th Canadian Geotechnical Conference, Saskatoon, SK (*Proceedings in CD*).
- 41) Rahman, M. and Alfaro, M.C. (2004). Degradation of Polyester Geotextiles in Alkaline Solutions under Applied Loading. Proc. 57th Canadian Geotechnical Conference, Quebec City, Quebec (*Proceedings in CD*).
- 42) Blatz, J.A., **Krahn, T.,** Bathurst, R.J. and Alfaro, M.C. (2004). Interface Friction Test Using a Large Scale Direct Shear Apparatus. Proc. 57th Canadian Geotechnical Conference, Quebec City, Quebec (*Proceedings in CD*).
- 43) Bathurst, R.J., Alfaro, M.C. and Hatami, K. (2004). Pseudo-Static Seismic Design of Geosynthetic-Reinforced Soil Retaining Walls. Asian Conference on Earthquake Engineering, Manila, Philippines, Vol. 2, 149-159.
- 44) **Pathak, Y.P.,** Alfaro, M.C., and Detournay, C. (2003). Wetting-Induced Deformation of Geosynthetic Reinforced Slopes with Expansive Soils. 56th Canadian Geotechnical Conference, Winnipeg, Manitoba, Vol. 1, 266-273.
- 45) **Armstrong, R.** and Alfaro, M.C. (2003). Reduction of Seismic-Induced Pressures on Rigid Retaining Structures Using Compressible Inclusions: A Numerical Study. 56th Canadian Geotechnical Conference, Winnipeg, Manitoba, Vol. 2, 500-505.
- 46) **Franklin, K.,** Graham, J., Alfaro, M.C., and Wortley, J. (2003). Assessment of Degradation of Shaley Limestone Riprap. 56th Canadian Geotechnical Conference, Winnipeg, Manitoba, Vol. 2, 762-769.
- 47) **Man, A.,** Graham, J., Alfaro, M.C., and Goh, T.B. (2003). Changes in Clay Behaviour Produced by Seepage Under a Water Retention Dyke. 56th Canadian Geotechnical Conference, Winnipeg, Manitoba, Vol. 2, 770-707.
- 48) **Man, A., Garinger, B.,** Alfaro, M.C., Graham, J., and Goh, T.B. (2003). Effect of Pore Fluid Chemistry on the Triaxial Behavior of a High Plastic Clay. Symposium on Geotechnical Engineering for Geoenvironmental Applications, Vancouver, British Columbia, 39-46.
- 49) Alfaro, M.C. and Wong, R.C.K. (2003). Correlation between Air Permeability and Biodegradation in Hydrocarbon-Contaminated Soil Columns by X-Ray Computerized Tomography (CT). International Workshop on X-Ray CT for Geomaterials, Kumamoto, Japan, 165-171.
- 50) Wong, R.C.K. and Alfaro, M.C. (2003). Fractal Dimension Analysis of Shales using X-Ray Computerized Tomography (CT). International Workshop on X-Ray CT for Geomaterials, Kumamoto, Japan, 239-243.

- 51) Alfaro, M.C., Blatz, J.A. and Graham, J. (2003). Environmental Processes, Groundwater, and Slope Instability. 12th Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Boston, MA, USA, 2451-2458.
- 52) Alfaro, M.C., **Garinger, B.**, Graham, J. and Dubois, D. (2002). Water Retention Dikes on Plastic Clay in Manitoba, Canada. International Symposium on Lowland Technology, Saga, Japan, 133-138.
- 53) **Hillius, P.** and Alfaro, M.C. (2002). Numerical Investigation of the Effects of Vertical Drains on Thawed Foundation Soil. International Symposium on Lowland Technology, Saga, Japan, 205-210.
- 54) **Garinger, B., Man, A.**, Alfaro, M.C., Graham, J., Goh, T.B. and Dubois, D. (2002). Physicochemical Investigation of the Foundation at Seven Sisters Dykes. 55th Canadian Geotechnical Conference, Niagara Falls, Ontario, 1293-1300.
- 55) **Garinger, B.**, Alfaro, M.C., Graham, J. and Dubois, D. (2001). Stability of Dykes at Seven Sisters Generating Station. 54th Canadian Geotechnical Conference, Calgary, Alberta, 259-265.
- 56) Graham, J., **Ferris, G.** and Alfaro, M.C. (2001). Elastic-Plastic Deformation of Dense Sand at High Pressure and Elevated Temperature. 54th Canadian Geotechnical Conference, Calgary, Alberta, 298-605.
- 57) Alfaro, M.C. and Wong, R.C.K. (2001). Some Applications of Computerized Tomography (CT) in Experimental Geotechnics. 15th International Conference in Soil Mechanics and Geotechnical Engineering, Istanbul, Turkey, 1, 337-342.
- 58) Graham, J., Blatz, J., Alfaro, M.C. and Sivakumar, V. (2001). Behavioural Influence of Specimen Preparation Methods for Unsaturated Plastic Compacted Clays. 15th International Conference in Soil Mechanics and Geotechnical Engineering, Istanbul, Turkey, 1, 633-638.
- 59) Alfaro, M.C. (1998). Behavior of Reinforced Soil Structures. Short Course on Soft Ground Improvement: Design, Analysis, and Current Researches (Bergado and Miura - Editors), Bangkok, Thailand, 75-90.
- 60) Bathurst, R.J., Cai, Z., Alfaro, M.C. and Pelletier, M. (1997). Seismic Design Issues for Geosynthetic Reinforced Segmental Retaining Walls (*Keynote Paper*). International Symposium on Mechanically Stabilized Backfill (Wu - Editor), Denver, CO, USA, 79-97.
- 61) Bathurst, R.J. and Alfaro, M.C. (1997). Review of Seismic Design, Analysis and Performance for Geosynthetic Reinforced Walls, Slopes and Embankments (*Keynote Paper*). International Symposium on Earth Reinforcement (Ochiai et al - Editors), Fukuoka, Japan, 887-918.
- 62) Alfaro, M.C., Hayashi, S. and Miura, N. (1997). Effects of Reinforcement Rigidity on the Behavior of Reinforced Wall-Embankment System on Soft Ground. International Symposium on Earth Reinforcement (Ochiai et al - Editors), Fukuoka, Japan, 185-190.

TEACHING

Undergraduate Courses

- CIVL 3730 Geotechnical Materials and Analysis¹
CIVL 4220 Geotechnical Design¹
CIVL 4230 Geotechnical Engineering²
CIVL 4050 Engineering Economics¹ (not taught since 2005)

¹ Core Course ² Elective Course

Graduate Courses:

- CIVL 7430 Cold Regions Engineering (Reading Course)
CIVL 7450 Soil Behaviour and Properties
CIVL 7460 Geotechnical Design with Geosynthetics
CIVL 7680 Soil/Ground Improvement Techniques (not taught since 2011)

Training of Highly Qualified Personnel

	<i>Current</i>	<i>Past</i>	<i>Total</i>
Undergraduate	1	16	17
Master's	6	9	15
Doctoral	4	5	9
Postdoctoral		1	1
Total	11	31	42

SERVICE

Academic Committees

<i>Name</i>	<i>Position</i>	<i>Tenure</i>
<u><i>Department</i></u>		
Curriculum	Member	2004 - present
Administration	Associate Head	2010 - 2015
Undergraduate	Chair	2012 - 2015
Postgraduate	Member	2008 - 2011
<u><i>Faculty</i></u>		
Academic Regulations and Curriculum	Member	2011-present
Core Courses/Computer Use	Member	2008 - 2011
Standing and Appeals	Member	2006 - 2008
Engineering Endowment Fund	Member	2004 - 2006
Scholarships, Bursaries and Awards	Member	2000 - 2004

Professional and Technical Societies

<i>Name</i>	<i>Position</i>	<i>Tenure</i>
North American Geosynthetics Society (NAGS)	Vice-President for Canada	2008 - 2012
Canadian Geotechnical Society (CGS) Executive Committee	Board Member	2010 - 2011
Canadian Geotechnical Society (CGS) – Manitoba Section	Director	2007 - 2010
International Association of Lowland Technology (IALT)	Council Member	2009 - present
International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)	Member	2003 - present
Technical Committee on Ground Improvement: TC17 of ISSMGE	Member	2002 - present
Geosynthetics Division of CGS	Secretary	2003 - 2005
International Geosynthetics Society (IGS)	Member	2001 - present
Canadian Geotechnical Society (CGS)	Member	2000 - present
Engineers Geoscientists Manitoba	Member	2000 - present