

## Publications

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### Refereed Journal Publications:

1. Fathi A, Hatami K, and Grady BP, **2011**. Effect of carbon black structure on low-strain conductivity of polypropylene and low-density polyethylene composites. *Polymer Engineering and Science*, (In press).
2. Mikola R.G., Hatami, K. and Doolin, D. **2011**. Elastic–plastic discontinuous deformation analysis using Mohr–Coulomb model, *Mining Technology*, (In press).
3. Hatami K, Grady BP and Ulmer MC, **2011**. Closure to: “Sensor-Enabled Geosynthetics: use of conducting carbon networks as geosynthetics sensors”. *ASCE, Journal of Geotechnical and Geoenvironmental Engineering*, 137(4): 435-436.
4. Khoury, CN, Miller, GA, & Hatami, K, **2011**. Unsaturated soil-geotextile interface behavior, *Geotextiles and Geomembranes*, 29(1): 17-28.
5. Huang, B, Bathurst, RJ, Hatami, K, & Allen, TM, **2010**. Influence of toe restraint on reinforced soil segmental walls, *Canadian Geotechnical Journal*, 47(8): 885–904.
6. Huang, B, Bathurst, RJ & Hatami, K, **2009**. Numerical study of reinforced soil segmental walls using three different constitutive soil models, *ASCE, Journal of Geotechnical and Geoenvironmental Engineering*, 135(10): 1386-1398.
7. Hatami K, Grady BP and Ulmer MC, **2009**. Sensor-Enabled Geosynthetics: use of conducting carbon networks as geosynthetics sensors. *ASCE, Journal of Geotechnical and Geoenvironmental Engineering*, 135(7): 863-874 (**Most downloaded paper from JGGE, ASCE Geotechnical Book News, June 2009**).
8. Grayeli R and Hatami K, **2009**. Response analysis of field-scale fully grouted standard cable bolts using a coupled ANN-FDM approach. *ASCE, Journal of Engineering Mechanics*, 135(6): 561-570.
9. Hatami K. & Witthoef, AF, **2008**. A numerical study on the use of Geofoam to increase the external stability of reinforced soil walls. *Geosynthetics International*, 15(6): 452-470.
10. Hatami K. Witthoef, AF & Jenkins, LM, **2008**. Influence of inadequate compaction near the facing on the construction response of wrapped-face MSE walls. *Transportation Research Record*, Journal of the Transportation Research Board, National Research Council, 2045: 85-94 (**Nominated for the best paper award in the Soil Mechanics Section by the TRB Geosynthetics Committee**).
11. Grayeli R and Hatami K, **2008**. Implementation of the finite element method in the three-dimensional discontinuous deformation analysis (3D-DDA). *International Journal for Numerical and Analytical Methods in Geomechanics*, John Wiley, 32(15): 1883-1902 (online: DOI: 10.1002/nag.704).
12. Beyabanaki AR, Grayeli R & Hatami K, **2008**. Three-dimensional discontinuous deformation analysis (3D-DDA) using a new contact resolution algorithm. *Computers and Geotechnics*, Elsevier, 35(3): 346-356.
13. Hatami K and Raymond GP, **2006**. Influence of soil strength on the optimal embedment depth of a geosynthetic reinforcement layer in granular reinforced foundations. *Transportation Research Record*, Journal of the Transportation Research Board, National Research Council, 1975: 155-162.
14. Hatami K and Bathurst RJ, **2006**. Numerical model for reinforced soil segmental walls under surcharge loading, *ASCE, Journal of Geotechnical and Geoenvironmental Engineering*, 132(6): 673-684.
15. Hatami K and Bathurst RJ, **2005**. Development and verification of a numerical model for the analysis

of geosynthetic reinforced-soil segmental walls under working stress conditions, *Canadian Geotechnical Journal*, 42(4), 1066-1085. (**Sir Casimir Gzowski Medal for the Best Refereed Technical Paper in Civil Engineering in 2005**), Canadian Society for Civil Engineering. (Reprinted and presented at the Special Session for the Best Papers Published in the Canadian Geotechnical Journal at GeoAmericas 2008, The First Pan American Geosynthetics Conference & Exhibition, March 2008, Cancun, Mexico).

16. Hatami K, Bathurst RJ & Di Pietro P, **2001**. Static response of reinforced-soil retaining walls with non-uniform reinforcement. ASCE, *International Journal of Geomechanics*, 1(4), 477-506.
17. Hatami K and Bathurst RJ, **2000**. Effect of structural design on fundamental frequency of reinforced-soil retaining walls. *Soil Dynamics and Earthquake Engineering*, 19(3): 137-157. (Also included in: International Workshop on Seismic Performance of Geosynthetic-Reinforced-Soil Structures, Sponsored by National Science Foundation, Columbia University, New York, NY, USA).
18. Bathurst RJ and Hatami K, **1998**. Seismic response analysis of a reinforced-soil retaining wall. *Geosynthetics International (special issue on Earthquake Engineering)*, Industrial Fabrics Association International (IFAI), USA: 5(1-2), 127-166. (Also included in: International Workshop on Seismic Performance of Geosynthetic-Reinforced-soil Structures, Sponsored by National Science Foundation, Columbia University, New York, NY, USA, October 2000).
19. Hatami K, **1997**. Effect of reservoir bottom on earthquake response of concrete dams. *Soil Dynamics and Earthquake Engineering*, 16: 407-415.

#### Books/Book Chapters:

1. Bathurst RJ, Hatami K & Alfaro MC, **2011**. Geosynthetic reinforced-soil walls and slopes: Seismic Aspects. (Shukla SK Editor): *Geosynthetics and Their Applications*, Thomas Telford Ltd., London, UK, (In press).
2. Bathurst, R.J., Huang, B. and Hatami, K. **2009**. Numerical modeling of geosynthetic reinforced soil walls. Chapter 4 in *Linear and Non Linear Numerical Analysis of Foundations*, (J. Bull editor), Taylor & Francis, New York, NY, 131-157.
3. Bathurst RJ, Hatami K & Alfaro MC, **2002**. Geosynthetic reinforced-soil walls and slopes: Seismic Aspects. Chapter 14 in (Shukla SK Editor): *Geosynthetics and Their Applications*, Thomas Telford Ltd., London, UK, 14: 327-392.
4. Bathurst RJ, Hatami K, Walters DL, Taleb B & Simac MR, **2001**. Geosynthetic reinforced-soil segmental retaining walls: A New Technology”, *Jubilee Volume, 75<sup>th</sup> Anniversary of K. Terzaghi’s “Erdbaumechanik” (“Soil Mechanics”)*, Vienna Technical University, Vienna, Austria: 5: 175-204.

#### Special Volume/Keynote/Invited Papers:

1. Bathurst, RJ, Huang, B & Hatami, K, **2008**. Numerical modeling of geosynthetic reinforced retaining walls. Invited Paper, *12<sup>th</sup> International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG)*, Goa, India, October 2008, 4071-4080.
2. Bathurst RJ & Hatami K, **2006**. Physical to computational modeling of reinforced soil walls under static loading. Keynote Paper, *International Conference on Physical Modeling in Geotechnics, ICPMG 2006*, Hong Kong, China, August 2006, 1: 3-17.
3. Hatami K, Bathurst RJ, El-Emam MM, **2005**. Validation of numerical models for static and seismic analysis of reinforced soil walls. Special Volume Paper for the Symposium on Geosynthetics and Geosynthetic-Engineered Structures Honoring Robert M. Koerner, *McMat 2005, ASME/ASCE/SES*

*joint Conference on Mechanics and Materials*, Louisiana State University, Baton Rouge, Louisiana, USA, June 2005, Published by Columbia University, 171-202.

4. Bathurst RJ, Walters DL, Hatami K & Allen TM, **2001**. Full-scale performance testing and numerical modeling of reinforced-soil retaining walls. Special Keynote Lecture, *International Symposium on Earth Reinforcement (IS-Kyushu 2001)*, Fukuoka, Kyushu, Japan, November 2001, Keynote Lectures Volume, 3-28.
5. Bathurst RJ & Hatami K, **2001**. Review of numerical modeling of geosynthetic reinforced-soil walls. Invited Theme Paper, *10<sup>th</sup> International Conference on Computer Methods and Advances in Geomechanics*, Tucson, AZ, USA, January 2001, 2: 1223-1232.

Peer-reviewed and Specialty Conference Papers:

1. Varnier JB and Hatami K, **2011**. Seismic Response of Reinforced Soil Retaining Walls: Is PGA-Based Design Adequate? *GeoRisk 2011*, ASCE/Geo-Institute, Atlanta, GA, June 2011, Paper #107.
2. Hatami K, Fathi A and Grady BP, **2011**. Development of Sensor-Enabled Geosynthetics (SEG) for Health Monitoring of Reinforced Soil Structures. *GeoFrontiers 2011*, Dallas, TX, March 2011, Paper #1425.
3. Hatami K, Garcia LM and Miller GA, **2011**. A Moisture Reduction Factor for Pullout Resistance of Geotextile Reinforcement in Marginal Soils. *GeoFrontiers 2011*, Dallas, TX, March 2011, Paper #1210.
4. Hatami K, Wang Z, Mahmood T, Ghabchi R and Zaman M, **2011**. In-Aggregate Testing of Unitized and Woven Geogrids for Base Reinforcement Applications. *GeoFrontiers 2011*, Dallas, TX, March 2011, Paper #1211.
5. Hatami K, Ghabchi R, Mahmood T and Zaman M, **2011**. In-Aggregate Performance of Unitized and Woven Geogrids in Open-Graded and Dense-Graded Aggregates. *90<sup>th</sup> TRB Annual Meeting*, Paper No. 11-4078, January 2011, Washington, DC, USA.
6. Hatami K, Garcia LM & Miller, GA, **2010**. Influence of moisture content on the pullout capacity of geotextile reinforcement in marginal soils. *61<sup>st</sup> Highway Geology Symposium*, Oklahoma City, OK, August, 2010.
7. Khoury, CN, Miller, GA and Hatami, K, **2010**. Shear Strength of Unsaturated Soil-Geotextile Interfaces. *GeoFlorida 2010, ASCE Geotechnical Special Publication 199*: Geo-Institute, West Palm Beach, Florida, February 2010, 307-316.
8. Hatami K, Khoury CN & Miller, GA, **2008**. Suction-Controlled Testing of Soil-Geotextile Interfaces. *GeoAmericas 2008*, The First Pan American Geosynthetics Conference & Exhibition, March 2008, Cancun, Mexico, Paper No. 1236, pp. 262-271.
9. Bathurst, RJ, Huang, B & Hatami, K, **2008**. Numerical study of the influence of reinforcement length and spacing on reinforced soil segmental walls of variable height. *GeoAmericas 2008*, The First Pan American Geosynthetics Conference & Exhibition, March 2008, Cancun, Mexico, Paper No. 1205, pp. 1256-1264.
10. Hatami K, Witthoef, AF & Jenkins, LM, **2008**. Influence of Inadequate Compaction near the Facing on the Construction Response of Wrapped-Face MSE Walls. *87<sup>th</sup> TRB Annual Meeting*, Paper No. 08-625, January 2008, Washington, DC, USA.
11. Huang, B, Hatami, K & Bathurst, RJ, **2007**. Parametric analysis of a 9-m high reinforced soil wall with different reinforcement materials and soil backfill, *5<sup>th</sup> International Symposium on Earth*

*Reinforcement (IS Kyushu '07)* - New Horizons in Earth Reinforcement, November 2007, Fukuoka, Japan.

12. Huang, B, Bathurst RJ & Hatami, K, **2007**. Numerical study of the influence of block interface stiffness on reinforced soil segmental walls of variable height. *OttawaGeo2007: 60<sup>th</sup> Canadian Geotechnical Conference (Diamond Jubilee)*, Ottawa, Ontario, Canada, October 2007.
13. Hatami K & Witthoef AF, **2007**. Reduction of backfill earth pressure in reinforced soil walls using geofoam. *86<sup>th</sup> TRB Annual Meeting*, Paper No. 07-2926, January 2007, Washington, DC, USA.
14. Bathurst RJ & Hatami K, **2006**. Parametric analysis of reinforced soil walls with different height and reinforcement stiffness. *8<sup>th</sup> International Conference on Geosynthetics (8ICG)*, Yokohama, Japan, September 2006, 1343-1346.
15. Hatami K & Bathurst RJ, **2006**. A study on the seismic response of reinforced soil retaining walls to rocking ground excitation. *8<sup>th</sup> US National Conference on Earthquake Engineering, 100<sup>th</sup> Anniversary Earthquake Conference Commemorating the 1906 San Francisco Earthquake*, San Francisco, CA, USA, April 2006, Paper No. 1853, 10p.
16. Lim, HM, Zaman, M & Hatami, K, **2006**. Use of DMT for subsurface characterization: strengths and weaknesses. *2<sup>nd</sup> International Conference on the Flat Dilatometer*, Washington, DC, USA, April 2006, 213-219.
17. Hatami K & Raymond GP, **2006**. Influence of soil strength on the optimal embedment depth of a geosynthetic reinforcement layer in granular reinforced foundations. *85<sup>th</sup> TRB Annual Meeting*, Paper No. 06-1919, January 2006, Washington, DC, USA.
18. Hatami K & Bathurst RJ, **2005**. Parametric analysis of reinforced soil walls with different backfill material properties. *NAGS 2005/GRI-19 Conference*, Las Vegas, Nevada, USA, December 2005.
19. Hatami K, Bathurst RJ & El-Emam MM, **2005**. Acceleration amplification in the backfill of reinforced soil walls with different heights. *3<sup>rd</sup> Biot Conference on poromechanics*, Norman, Oklahoma, USA, May 2005, (Abousleiman, Cheng & Ulm Eds.), Balkema, London, 725-731.
20. Hatami K and Bathurst RJ, **2005**. Verification of a numerical model for reinforced-soil segmental retaining walls. *Geo-Frontiers 2005 Conference, ASCE Geotechnical Special Publication 140: Advances in Soil Reinforcement Applications II*, Austin, Texas, USA, January 2005, 10p.
21. El-Emam MM, Bathurst RJ & Hatami K, **2004**. Numerical parametric study of reinforced-soil walls subjected to earthquake load. *57<sup>th</sup> Canadian Geotechnical Conference*, October 2004, Québec City, Québec, Canada, G15.230, 7F: 27-34.
22. Hatami K & Bathurst RJ, **2004**. Numerical investigation of the influence of reinforcement configuration on construction response of reinforced-soil segmental walls. *57<sup>th</sup> Canadian Geotechnical Conference*, October 2004, Québec City, Québec, Canada, G15.70, 7F: 19-26.
23. Hatami K, Bathurst RJ, El-Emam MM & Allen T, **2004**. Numerical models for reinforced soil walls. *1<sup>st</sup> Canadian Young Geotechnical Engineers and Geoscientists Conference (CYGEGC)*, October 2004, Québec City, Québec, Canada, 6p.
24. Hatami K & Bathurst RJ, **2004**. Construction response of reinforced-soil segmental walls with different reinforcement spacing. *9<sup>th</sup> International Symposium on Numerical Models in Geomechanics, NUMOG IX*, Ottawa, Ontario, Canada, August 2004, 723-729.
25. El-Emam MM, Bathurst RJ & Hatami K, **2004**. Numerical modeling of reinforced-soil retaining walls subjected to base acceleration. *13<sup>th</sup> World Conference on Earthquake Engineering (13WCEE)*, Vancouver, BC, August 2004, paper #2621.

26. Bathurst RJ, Alfaro MC & Hatami K, **2004**. Pseudo-static seismic design of geosynthetic reinforced-soil retaining structures. *Asia Conference on Earthquake Engineering (ACEE) 2004*, Diverse Cultures, One Common Goal - Seismic Hazards and Loss Mitigation in Asia, Manila, Philippines, March 2004, 149-160.
27. Hatami K, Bathurst RJ & Allen TM, **2003**. A calibrated FLAC model for geosynthetic reinforced-soil modular block walls at end of construction. *3<sup>rd</sup> International Symposium on FLAC and FLAC3D Numerical Modeling in Geomechanics*, Sudbury, Ontario, Canada, October 2003, Balkema, Lisse, 251-259.
28. Hatami K & Raymond GP, **2003**. Numerical simulation of foundation response to footing pressure. *12<sup>th</sup> Pan-American Conference on Soil Mechanics and Geotechnical Engineering - SARA 2003*, Boston, Massachusetts, USA, June 2003, 2: 1785-1792.
29. Hatami K & Bathurst RJ, **2002**. Numerical simulation of a segmental retaining wall under uniform surcharge loading. *55<sup>th</sup> Canadian Geotechnical Conference*, Niagara Falls, ON, Canada, October 2002.
30. Bathurst RJ, Walters DL, Hatami K, Saunders DD, Vlachopoulos N & Burgess GP, **2002**. Performance testing and numerical modeling of reinforced-soil retaining walls. *7<sup>th</sup> International Conference on Geosynthetics (7ICG)*, Nice, France, September 2002, 1: 217-220.
31. El-Emam, MM, Bathurst RJ & Hatami K, **2002**. Effect of reinforcement design on seismic response of reinforced-soil retaining walls. *International Conference on Physical Modeling in Geotechnics (ICPMG)*, St. John's, NF, Canada, July 2002, 1011-1016.
32. Hatami K, Blatz JA & Bathurst RJ, **2002**. Numerical modeling of geosynthetic reinforced-soil retaining walls and embankments. *2<sup>nd</sup> Canadian Specialty Conference on Computer Applications in Geotechnique*, Winnipeg, MB, Canada, April 2002.
33. El-Emam MM, Bathurst RJ, Hatami K & Mashhour MM, **2001**. Shaking table and numerical modeling of reinforced-soil walls. *International Symposium on Earth Reinforcement, IS-Kyushu 2001*, Fukuoka, Kyushu, Japan, November 2001, 1: 329-334.
34. Hatami K & Bathurst RJ, **2001**. Modeling static response of geosynthetic reinforced-soil segmental retaining wall using FLAC. *2<sup>nd</sup> International FLAC Symposium on Numerical Modeling in Geomechanics*, Lyon, France, October 2001, Balkema, Lisse, 223-231.
35. Hatami K & Bathurst RJ, **2001**. Investigation of seismic response of reinforced-soil retaining walls. *4<sup>th</sup> International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*, March 2001, San Diego, CA, USA, Paper no. 7.18.
36. Hatami K, Bathurst RJ, Di Pietro P & Bianco PM, **2000**. Numerical study of retaining walls with non-uniform reinforcement. *2<sup>nd</sup> European Geosynthetics Conference: EuroGeo 2000*, Bologna, Italy, October 2000, 1: 219-224.
37. Walters DL, Hatami K, Bathurst RJ, Vlachopoulos N, Saunders DD, Burgess GP & Allen TM, **2000**. Full-scale testing and modeling of geosynthetic reinforced-soil retaining walls. *53<sup>rd</sup> Canadian Geotechnical Conference*, Montreal, QC, October 2000, 2: 1107-1114.
38. Bathurst RJ & Hatami K, **1999**. Earthquake response analysis of reinforced-soil retaining walls using FLAC. *International FLAC Symposium on Numerical Modeling in Geomechanics*, Minneapolis, Minnesota, September 1999, Balkema, Rotterdam, 407-415. (Also included in: International Workshop on Seismic Performance of Geosynthetic-Reinforced-soil Structures, Sponsored by National Science Foundation, Columbia University, New York, NY, USA, October 2000).
39. Hatami K & Bathurst RJ, **1999**. Frequency response analysis of reinforced-soil retaining walls. *8<sup>th</sup>*

*Canadian Conference on Earthquake Engineering (8CCEE)*, Vancouver, BC, June 1999, 341-346.

40. Bathurst RJ & Hatami K, **1999**. Numerical study of the influence of base shaking on reinforced-soil retaining walls. *Geosynthetics '99*, Boston, MA, April 1999, 2, 963-976.
41. Hatami K, **1998**. A measure of dynamic response for seismic response analysis of concrete dams. *6<sup>th</sup> U.S. National Conference on Earthquake Engineering*, Seattle, WA, USA, May-June 1998, p. 353, 12p.
42. Bathurst RJ & Hatami K, **1998**. Influence of reinforcement properties on seismic response and design of reinforced-soil retaining walls. *51<sup>st</sup> Canadian Geotechnical Conference*, Edmonton, Alberta, October 1998, 2: 479-486.
43. Bathurst RJ & Hatami K, **1998**. Influence of reinforcement stiffness, length and base condition on seismic response of geosynthetic reinforced retaining walls. *6<sup>th</sup> International Conference on Geosynthetics*, Atlanta, GA, USA, March 1998, 2: 613-616, 4p.
44. Hatami K, **1996**. A model for reservoir bottom absorption effects in seismic response analysis of concrete dams. 1<sup>st</sup> runner up in 1995 Student Paper Competition, *48<sup>th</sup> Annual Meeting of Earthquake Engineering Research Institute (EERI)*, Los Angeles, CA, February 1996.
45. Hatami K & Ghobarah A, **1995**. Reduction of seismic response of concrete gravity dams using hydrodynamic isolation. *7<sup>th</sup> Canadian Conference on Earthquake Engineering (7CCEE)*, Montreal, QC, June 1995, 333-340.

Conference Extended Abstracts/Posters/Presentations/Articles:

1. Hatami K, Miller GA and Esmaili D, **2010**. Measuring Soil Suction in Reinforced Soil Slopes and Embankments for Highway Construction and Repair Applications. *ODOT-OTC Transportation Research Day*, October 14, 2010, ODOT, Oklahoma City, OK.
2. Hatami K, **2010**. ASCE Midwest Regional GeoCompetition at the University of Oklahoma. *OSPE Central /SW Chapter Meeting*, Oklahoma Society of Professional Engineers, May 2010, Oklahoma City, OK.
3. Hatami K, Miller GA and Garcia LM, **2009**. Use of MSE technology in reconstruction and retrofitting highway slopes and embankments. *ODOT-OTC Transportation Research Day*, October 7, 2009, ODOT, Oklahoma City, OK.
4. Hatami K, **2008**. Advancing the use of mechanically stabilized earth for slope construction and repair. *The Oklahoma Transportation Center Newsletter*, Tulsa, OK, Fall 2008, 8-9.
5. Hatami K and Wang Z, **2008**. Geogrid properties in ODOT's specifications manual. *ODOT-OTC Transportation Research Day*, October 15, 2008, ODOT, Oklahoma City, OK.
6. Hatami K, Bathurst RJ, El-Emam MM & Allen TM. **2005**. Validation of numerical models for static and seismic analysis of reinforced soil walls. *McMat 2005, ASME/ASCE/SES joint Conference on Mechanics and Materials*, Louisiana State University, Baton Rouge, Louisiana, USA, June 2005.
7. Hatami K, **2001**. Even dams can tremble. *Robert and Joyce Jones Speaker Series*, Department of Civil Engineering, Queen's University, Kingston, ON.
8. Bathurst RJ, Hatami K & Gaskin A, **1999**. Reduction of seismic earth pressure on rigid retaining walls using geoinclusions. *9<sup>th</sup> International Conference on Soil Dynamics and earthquake Engineering, SDEE '99*, Bergen, Norway, August 1999, p. 134.
9. Hatami K & Bathurst RJ, **1999**. Dynamic response of reinforced-soil retaining walls to ground

motion, Part II: Parametric Analysis”, *17<sup>th</sup> Canadian Congress of Applied Mechanics, CANCAM 99*, May-June 1999, McMaster University, Hamilton, ON, 89-90.

10. Hatami K & Bathurst RJ, **1999**. Dynamic response of reinforced-soil retaining walls to ground motion, Part I: Numerical Model”, *17<sup>th</sup> Canadian Congress of Applied Mechanics, CANCAM 99*, May-June 1999, McMaster University, Hamilton, ON, 87-88.
11. Hatami K, **1996**. Absorption of Seismic Pressure Waves in Reservoirs, *Canadian Association of Earthquake Engineering Newsletter*, December 1996, 3-6.
12. Hatami K & Ghobarah A, **1996**. Reservoir bottom absorption effects in seismic response analysis of concrete dams. *CANCOLD/CDSA Conference*, October 1996, Niagara Falls, ON, 352.

Theses/Dissertations:

1. Hatami K, **1997**. Effect of reservoir boundaries on seismic response of gravity dams, *Ph.D. Dissertation*, McMaster University, Hamilton, Ontario, Canada, xxvii, 267p.
2. Hatami K, **1991**. A study on the effects of suspended fine particles on drag reduction in open-channel flow, *M.Sc. Thesis*, Sharif University of Technology, Tehran, Iran.