

Curriculum Vitae

Steven Will Perkins

Contact

Department of Civil Engineering
Montana State University
219 Cobleigh Hall
406-994-6119
stevep@ce.montana.edu

Education

University of Colorado, Boulder	Ph.D., December, 1991	Civil Engineering
University of Colorado, Boulder	M.S., August, 1985	Civil Engineering
Virginia Polytechnic Institute and State University, Blacksburg	B.S., June, 1984	Civil Engineering
	Cum Laude	

Professional Experience

1. Professor, Montana State University, Department of Civil Engineering, Bozeman, Montana; October 2007 – Present.
2. Consultant, 1992-Present.
3. Visiting Research Engineer; Norwegian Geotechnical Institute (NGI), Oslo, Norway; August 2006 – August 2007.
4. Associate Professor; Montana State University, Department of Civil Engineering, Bozeman, Montana; July 1998 – October 2007.
5. Co-Instructor, National Highway Institute, Short Courses on *Geosynthetic Engineering Workshop* and *Geotechnical Aspects of Pavements*, 2007 – Present.
6. Visiting Research Professor; Norwegian Foundation for Industrial and Technical Research (SINTEF), Department of Civil and Environmental Engineering, Norwegian University of Science and Technology, Trondheim, Norway; May 2001 – July 2002.
7. Fulbright Research Scholar; Norwegian University of Science and Technology, Faculty of Civil and Environmental Engineering, Department of Geotechnical Engineering, Trondheim, Norway; May 2000 – May 2001.
8. Assistant Professor; Montana State University, Department of Civil Engineering, Bozeman, Montana; November 1991 – July 1998.
9. Research Fellow; Naval Civil Engineering Laboratory, Sea Floor Geosciences Group, Port Hueneme, California; May 1992 – July 1992.
10. Graduate Research Assistant; University of Colorado at Boulder, Center for Space Construction; January 1989 – November 1991.
11. Graduate Teaching Assistant; University of Colorado at Boulder, Department of Civil, Environmental and Architectural Engineering; September 1988 – May 1989.
12. Engineer; Kleinfelder and Associates, Geotechnical Engineers, Fairfield, California; September 1986 – August 1988.
13. Engineer; Dames and Moore, Geotechnical Engineers, Denver, Colorado; August 1985 – May 1986.
14. Graduate Research Assistant; University of Colorado at Boulder, Department of Civil, Environmental and Architectural Engineering; September 1984 – August 1985.

Professional Licenses

Licensed Professional Engineer, State of Montana, September 1993 – Present.

Peer-Reviewed Publications

1. "Use of Finite Difference Technique to Evaluate Deep Patch Embankment Repair with Geosynthetics", Perkins, S.W., Cuelho, E., Akin, M., Collins, B., accepted for publication in *TRB 11th International Conference on Low Volume Roads*, July, 2015.
2. "Mechanistic-Empirical Modeling of Geosynthetic-Reinforced Unpaved Roads", Perkins, S.W., Christopher, B.R., Lacina, B.A. and Klompmaker, J., *ASCE International Journal of Geomechanics*, Invited Paper, Vol. 12, No. 4, pp. 370-380, 2012.
3. "Effect of Cold Temperatures on Properties of Unfrozen Troll Clay", Perkins, S.W. and Sjursen, M.A., *Canadian Geotechnical Journal*, Vol. 46, No. 12, pp. 1473-1481, 2009.
4. "A Mechanistic-Empirical Model for Base-Reinforced Flexible Pavements", Perkins, S.W., Christopher, B.R., Cuelho, E.V., Eiksund, G.R., Schwartz, C.S. and Svanø, G., *International Journal of Pavement Engineering*, Vol. 10, No. 2, pp. 101-114, 2009.
5. "Mechanistic-Empirical Design Model Predictions for Base-Reinforced Pavements", Perkins, S.W. and Cuelho, E.V., *Transportation Research Record 1989, Transportation Research Board, National Research Council, Low-Volume Roads*, Vol. 2, pp. 121-128, 2007.
6. "Evaluation of Base-Reinforced Pavements Using a Heavy Vehicle Simulator", Perkins, S.W. and Cortez, E.R., *Geosynthetics International*, Vol. 12, No. 2, pp. 86-98, 2005.
7. "Finite Element Modeling of a Geosynthetic Pullout Test", Perkins, S.W. and Edens, M.Q., *Journal of Geotechnical and Geological Engineering*, V. 21, No. 4, pp. 357-375, 2003.
8. "A Design Model for Geosynthetic-Reinforced Pavements", Perkins, S.W. and Edens, M.Q., *International Journal of Pavement Engineering*, Vol. 4, No. 1, pp. 37-50, 2003.
9. "Finite Element and Distress Models for Geosynthetic-Reinforced Pavements", Perkins, S.W. and Edens, M.Q., *International Journal of Pavement Engineering*, Vol. 3, No. 4, pp. 239-250, 2002.
10. "Constitutive Modeling of Geosynthetics", Perkins, S.W., *Geotextiles and Geomembranes*, Vol. 18, No. 5, pp. 273-292, 2000.
11. "The Influence of Biofilm on the Mechanical Behavior of Sand", Perkins, S.W. and Gyr, P., *Geotechnical Testing Journal*, ASTM, Vol. 23, No. 3, pp. 300-312, 2000.
12. "Bearing Capacity of Shallow Foundations on Sand: A Relative Density Approach", Perkins, S.W. and Madson, C.R., *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, Vol. 126, No. 6, pp. 521-530, 2000.
13. "Soil-Geosynthetic Interface Strength and Stiffness Relationships From Pullout Tests", Perkins, S.W. and Cuelho, E.V., *Geosynthetics International*, Vol. 6, No. 5, pp. 321-346, 1999.
14. "Mechanical Response of Geosynthetic Reinforced Pavements", Perkins, S.W., *Geosynthetics International*, Vol. 6, No. 5, pp. 347-382, 1999.
15. "A Synthesis and Evaluation of Geosynthetic Reinforced Base Course Layers in Flexible Pavements: Part I", Perkins, S.W. and Ismeik, M., *Geosynthetics International*, Vol. 4, No. 6, pp. 549-604, 1997.
16. "A Synthesis and Evaluation of Geosynthetic Reinforced Base Course Layers in Flexible Pavements: Part II", Perkins, S.W. and Ismeik, M., *Geosynthetics International*, Vol. 4, No. 6, pp. 605-621, 1997.
17. "Instrumentation of a Geosynthetic - Reinforced Flexible Pavement System", Perkins, S.W. and Lapeyre, J.A., *Transportation Research Record 1596, Transportation Research Board, National Research Council*, pp. 31-38, 1997.
18. "Local Versus Global Strain Measurement of a Polymeric Geogrid", Perkins, S.W., Schulz J.L. and Lapeyre, J.A., *Journal of Testing and Evaluation*, ASTM, Vol. 25, No. 5, pp. 576-583, 1997.
19. "In-Isolation Strain Measurement of Geosynthetics In Wide-Width Strip Tension Test", Perkins, S.W. and Lapeyre, J.A., *Geosynthetics International*, Vol. 4, No. 1, pp.11-32, 1997.
20. "Mechanical and Load-Settlement Characteristics of Two Lunar Soil Simulants", Perkins, S.W. and Madson, *ASCE Journal of Aerospace Engineering*, Vol. 9, No. 1, pp.1-11, 1996.
21. "Bearing Capacity of Highly Frictional Material", Perkins, S.W., *ASTM Geotechnical Testing Journal*, Vol. 18, No. 4, pp. 450-462, 1995.
22. "Formulation of a Student's Constitutive Model", Perkins, S.W., *Computers in Education Journal*, ASEE, Vol. 5, No. 2, pp. 20-26, 1995.
23. "Modellierung von Tragwerken aus Regolith (Mondgestein) mittels Zentrifugenversuch" ("Centrifuge

Modeling of Lunar Regolith Structures"), Perkins, S.W., Sture, S., Ko, H.Y. and Dialer, C., *Bautechnik*, Ernst and Sohn, 69 Jahrgang, Heft 11, Germany, 1992.

Conference Proceedings

1. "Temperature Effects on Laboratory Measured Strength on Soft Clays Sampled in Deep Water and Cold Environments – Recommended Test Procedures", Gue, C.S., Lunne, T. and Perkins, S.W., accepted for publication in *3rd International Symposium on Frontiers in Offshore Geotechnics (ISFOG)*, Oslo, Norway, June 2015.
2. "Biaxial Versus Uniaxial Geogrids for Deep Patch Embankment Repair", Perkins, S.W. and Cuelho, E.V., *Geosynthetics 2015*, Portland, Oregon, February, 2015.
3. "Field Performance of Geosynthetics Used as Subgrade Stabilization", Cuelho, E.V. and Perkins, S.W., *Geosynthetics 2015*, Portland, Oregon, February, 2015.
4. "The Deep Patch Slope Repair Method for Roads on Steep Hillsides", Perkins, S.W., Cuelho, E.V., Akin, M., and Collins, B., *Proceedings of the International Symposium on Design and Practice of Geosynthetic-Reinforced Soil Structures*, Bologna, Italy, October 2013.
5. "Layer Coefficient Ratio for Reinforced Pavements and the Influence of Pavement Thickness and Subgrade Strength", Perkins, S.W., Christopher, B.R. and Klompaker, J., *Proceedings of the Conference Geosynthetics 2013*, Long Beach, California, April 2013.
6. "Reinforced Flexible Pavement Layer Coefficients Determined by Mechanistic-Empirical Modeling", Perkins, S.W., Christopher, B.R. and Klompaker, J., *Proceedings of the 5th European Geosynthetics Conference EuroGeo5*, Valencia, Spain, September 2012.
7. "Comparison of Large Scale Laboratory Box Test and Field Performance Using Mechanistic Empirical Design", Perkins, S.W., Christopher, B.R., Cuelho, E.V. and von Maubeuge, K., *Proceedings of the 2nd Pan American Geosynthetics Conference and Exhibition GeoAmericas 2012*, Lima, Peru, May 2012.
8. "Temperature Effects on Laboratory Strength Measured on Soft Clays Sampled in Deep Water and Cold Environments", Lunne, T., Gue, C.-S., Perkins, S.W., and Selvig, M., *Proceedings of the 7th International Conference on Offshore Site Investigation and Geotechnics*, London, UK, September 2012.
9. "Effect of Cold Temperature on Shear Strength and Consolidation Properties of Deep Water Soft Marine Clays", Perkins, S.W. and Selvig, M., *Proceedings of the 2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA, January 2011.
10. "Full-Scale Field Study of Geosynthetics Used as Subgrade Stabilization", Cuelho, E.V., Perkins, S.W. and von Maubeuge, K., *Proceedings of the Conference GeoFrontiers 2011*, 2011.
11. "Geosynthetics in Pavement Reinforcement Applications", Perkins, S.W., Christopher, B.R., Thom, N., Montestruque, G., Korkiala-Tanttu, L. and Watn, A., *Proceedings of the 9th International Geosynthetics Conference*, Vol. 1, pp. 165-192, Guarujá, Brazil, May, 2010.
12. "Characterization of Micaceous Sand for Investigation of a Subsea Mass Movement", Langford, T. and Perkins, S.W., *Proceedings of the Fourth International Symposium on Submarine Mass Movements and Their Consequence*, Austin, Texas, USA, November 2009.
13. "Pore Water Pressure Influence on Geosynthetic Stabilized Subgrade Performance", Christopher, B.R., Perkins, S.W., Lacina, B.A. and Marr, W.A., *Proceedings of the Conference Geosynthetics 2009*, Salt Lake City, Utah, USA, 2009.
14. "Field Construction and Trafficking of an Unsurfaced Geosynthetic-Stabilized Road", Cuelho, E.V., Perkins, S.W., Hauck, J., Akin, M.R. and von Maubeuge, K., *Proceedings of the Conference Geosynthetics 2009*, Salt Lake City, Utah, USA, 2009.
15. "Mechanistic-Empirical Design Method for Unpaved Roads Using Geosynthetics", Perkins, S.W., Christopher, B.R. and Lacina, B.A., *Proceedings of the 4th European Geosynthetics Conference EuroGeo4*, Edinburgh Scotland, 2008.
16. "Full Scale Testing of Geogrids to Evaluate Junction Strength Requirements for Reinforced Roadway Base Design", Christopher, B.R. and Perkins, S.W., *Proceedings of the 4th European Geosynthetics Conference EuroGeo4*, Edinburgh Scotland, 2008.
17. "Small Strain and Displacement Monitoring Methods for Geosynthetics Under Monotonic and Cyclic Loading", Cuelho, E.V., Christopher, B.R. and Perkins, S.W., *First Pan American Geosynthetics Conference*, Cancun, Mexico, 2008, pp. 734-743.
18. "Development of Geogrid Junction Strength Requirements for Reinforced Roadway Base Design", Christopher, B.R., Cuelho, E.V. and Perkins, S.W., *First Pan American Geosynthetics Conference*, Cancun,

- Mexico, 2008, pp. 1003-1012.
19. "Pavement Response Model for Base-Reinforced Flexible Pavements", Perkins, S.W. and Cuelho, E.V., *Conference on Advanced Characterization of Pavement and Soil Engineering Materials*, Athens, Greece, 2007.
 20. "Assessment of Interface Shear Growth from Measured Geosynthetic Strains in a Reinforced Pavement Subject to Repeated Loads", Perkins, S.W. and Svanø, G., *Eighth International Conference on Geosynthetics*, J. Kuwano and J. Koseki eds., Vol.3, pp. 813-816, Yokohama, Japan, 2006.
 21. "Comparison of a Mechanistic-Empirical Design Model to Measured Performance for Base-Reinforced Pavements", Perkins, S.W. and Cuelho, E.V., *19th Geosynthetics Research Institute and NAGS Conference*, Las Vegas, Nevada, 2005.
 22. "Geosynthetic Material Properties for Use in 2-D Finite Element Pavement Response Models", Perkins, S.W. and Eiksund, G.R., *Proceedings of the Seventh International Conference on the Bearing Capacity of Roads, Railways and Airfields*, Trondheim, Norway, 2005.
 23. "Geosynthetic Reinforcement for Pavement Systems: US Perspectives", Perkins, S.W., Bowders, J.J., Christopher, B.R. and Berg, R.R., *Proceedings of the Conference GeoFrontiers, Geotechnical Special Publication 141, International Perspectives on Soil Reinforcement Applications*, ASCE, Austin, Texas, 2005.
 24. "Modeling Effects of Reinforcement on Lateral Confinement of Roadway Aggregate", Perkins, S.W., Christopher, B.R., Eiksund, G.R., Schwartz, C.S. and Svanø, G., *Proceedings of the Conference GeoFrontiers, Geotechnical Special Publication 130, Advances in Pavement Engineering*, ASCE, Austin, Texas, 2005.
 25. "Resilient Interface Shear Modulus from Short-Strip, Cyclic Pullout Tests", Cuelho, E.V. and Perkins, S.W., *Proceedings of the Conference GeoFrontiers, Geotechnical Special Publication 140, Slopes and Retaining Structures under Seismic and Static Conditions*, ASCE, Austin, Texas, 2005.
 26. "Determining Geosynthetic Material Properties Pertinent to Reinforced Pavement Design", Cuelho, E.V., Perkins, S.W. and Ganeshan, S.K., *Proceedings of the Conference GeoFrontiers, Geotechnical Special Publication 130, Advances in Pavement Engineering*, ASCE, Austin, Texas, 2005.
 27. "Cyclic Triaxial Tests on Reinforced Base Course Material", Eiksund, G., Hoff, I. and Perkins, S.W., *Proceedings of the Conference EuroGeo 2004*, Munich, Germany, pp. 619-624, 2004.
 28. "Mechanistic-Empirical Models for Reinforced Pavements", Perkins, S.W., Cuelho, E.V., Eiksund, G., Hoff, I., Svanø, G., Watn, A., Christopher, B.R. and Schwartz, C.W., *Proceedings of the Seventh International Conference on Geosynthetics*, Nice France, Vol. 3, pp. 951-954, 2002.
 29. "Material Models for Reinforced Unbound Aggregate", Eiksund, G., Hoff, I., Svanø, G., Watn, A., Cuelho, E.V., Perkins, S.W., Christopher, B.R. and Schwartz, C.S., *Proceedings of the Sixth International Conference on the Bearing Capacity of Roads, Railways and Airfields*, Lisbon, Portugal, Vol. 1, pp. 133-143, 2002.
 30. "Scandinavian and US Research and Design Experience with Geosynthetic Reinforced Flexible Pavements", Perkins, S.W. and Watn, A., *Proceedings of the Fourth International Conference and Exhibition on Road and Airfield Pavement Technology*, Kunming China, 2002, Vol. 1, pp. 278-287.
 31. "Light Weight Clay Aggregate (LWA) for Insulation and Light Weight Material in Road Structures", Watn, A., Hoff, I. and Perkins, S.W., *Proceedings of the Fourth International Conference and Exhibition on Road and Airfield Pavement Technology*, Kunming China, Vol. 2, pp. 999-1008, 2002.
 32. "The Reinforcement Benefits of Geosynthetics in Flexible Pavements", Ismeik, M. and Perkins, S.W., *Proceedings of the Fourth International Congress on Advances in Civil Engineering*, Famagusta, Cyprus, pp. 589-598, 2000.
 33. "A Finite Element Model Illustrating Reinforcement Mechanisms for Paved Roadways", Perkins, S.W., Edens, M.Q., Wang, Y. and Fragaszy, R.J., *Second European Geosynthetics Conference, EuroGeo 2000*, Bologna, Italy, V. 1, pp. 431-436, 2000.
 34. "Prediction of Permanent Deformation in the Unbound Aggregate and Subgrade Soils of a Paved Roadway", Perkins, S.W., Wang, Y., Edens, M.Q. and Fragaszy, R.J. *Unbound Aggregates in Road Construction*, Balkema, Rotterdam, Netherlands, pp. 377-384. 2000.
 35. "Compaction Induced and Earth Pressure Relaxation of a Clay Core at Tongue River Dam, Montana", Perkins, S.W., Miller, D.J. and Lindsey, A., *Performance Confirmation of Constructed Geotechnical Facilities, Geotechnical Special Publication No. 94*, ASCE, Reston, VA, USA, pp. 263-276, 2000.
 36. "Measurement of Compaction Induced Earth Pressure Against a Counterfort Retaining Wall", Perkins, S.W., *Proceedings of the 35th Symposium on Engineering Geology and Geotechnical Engineering*, Idaho State University, Pocatello, Idaho, p. 260, 2000.
 37. "Influence of Geosynthetic Placement Position on the Performance of Reinforced Flexible Pavement Systems", Perkins, S.W., Ismeik M. and Fogelsong, M.L., *Proceedings of the Conference Geosynthetics '99*,

- Boston, MA, USA, V. 1, pp. 253-264, 1999.
38. "Mechanical Response of a Geosynthetic-Reinforced Pavement System to Cyclic Loading", Perkins, S.W., Ismeik, M. and Fogelson, M.L., *Fifth International Conference on the Bearing Capacity of Roads and Airfields*, Trondheim, Norway, V. 3, pp. 1503-1512, 1998.
 39. "Geosynthetic-Reinforced Pavements: Overview and Preliminary Results", Perkins, S.W., Ismeik, M., Fogelson, M.L., Wang, Y. and Cuelho, E.V., *Sixth International Conference on Geosynthetics*, Atlanta, GA, USA, V. 2, pp. 951-958, 1998.
 40. "A Dilatancy Approach For The Bearing Capacity of Sands", Perkins, S.W. and Madson, C.R., *Proceedings of the 14th International Conference on Soil Mechanics and Foundation Engineering*, Hamburg, Germany, V. 2, pp. 1189-1192, 1997.
 41. "A Summary of Geosynthetic Reinforced Flexible Pavements", Ismeik, M. and Perkins, S.W., *Proceedings of the 32nd Symposium on Engineering Geology and Geotechnical Engineering*, Boise, ID, USA, pp. 127-134, 1997.
 42. "Determination of Geosynthetic Load-Strain Properties by Large Scale In-Air and In-Soil Tests", Cuelho, E.V. and Perkins, S.W., *Proceedings of the 32nd Symposium on Engineering Geology and Geotechnical Engineering*, Boise, ID, USA, pp. 411-419, 1997.
 43. "Mechanical Effects of Biofilm on a Laboratory Sand", Gyr, P. and Perkins, S.W., *Proceedings of the 32nd Symposium on Engineering Geology and Geotechnical Engineering*, Boise, ID, USA, pp. 341-350, 1997.
 44. "Scale Effects of Shallow Foundations on Lunar Regolith", Perkins, S.W. and Madson, C.R., *Proceedings of the ASCE 5th International Conference on Engineering, Construction and Operations in Space: SPACE 96*, Albuquerque, NM, USA, V. 2, pp. 963-972, 1996.
 45. "Non-Linear Limit Analysis for the Bearing Capacity of Highly Frictional Soils", Perkins, S.W., *Second Congress on Computing in Civil Engineering, ASCE*, Atlanta, GA, USA, V. 1, pp. 629-636, 1995.
 46. "Settlement of Shallow Foundations on Dense, Highly Angular Silty Sand", Perkins, S.W., Rockwell, M.S. and Madson, C.R., *31st Annual Geological and Geotechnical Symposium*, Logan, UT, USA, pp. 54-66, 1995.
 47. "Evaluation of Lunar Regolith Constitutive Properties at Ultra-Low Levels of Mean Stress", Perkins, S.W., Sture, S. and Ko, H.Y., *Proceedings of the 13th International Conference on Soil Mechanics and Foundation Engineering*, New Delhi, India, 1994.
 48. "Bearing Capacity of a Highly Frictional Simulated Lunar Regolith", Perkins, S.W. and Gui, G., *Proceeding of the Eighth International Conference of the International Association for Computer Methods and Advances in Geomechanics*, Morgantown, WV, USA, V. 2, pp. 1521-1526, 1994.
 49. "Direct Tension Experiments on Compacted Granular Materials", Perkins, S.W., *Proceedings of the National Educators' Workshop: Standard Experiments In Engineering Materials, Science and Technology*, Department of Energy, Oak Ridge National Laboratory, Oak Ridge, TN, USA, Section 12, pp. 1-10, 1992.
 50. "Experimental, Physical and Numerical Modeling of Lunar Regolith and Lunar Regolith Structures", Perkins, S.W., Sture, S. and Ko, H.Y., *Proceedings of the ASCE Third International Conference on Engineering, Construction and Operations in Space: SPACE 92*, Denver, CO, USA, pp. 189-200, 1992.
 51. "Engineering Properties of Lunar Regolith and Their Impact on Mining", Perkins, S.W., Sture, S., Barnes, F. and Ko, H.Y., *Proceedings of the International Symposium on Mine Mechanization and Automation*, Colorado School of Mines, Golden, CO, USA, 1991.
 52. "Regolith-Structure Modeling of Lunar Facilities", Perkins, S.W., Sture, S. and Ko, H.Y., *Proceedings of the ASCE Second International Conference on Engineering, Construction and Operations in Space: SPACE 90*, Albuquerque, NM, USA, V. 1, pp. 439-448, 1990.

Book Chapters

1. Material Properties, Chapter 2 of *Geosynthetics in Civil Engineering*, R.W. Sarsby ed., Woodhead Publishing, Cambridge, UK., 2007, 295p.
2. Paved Roads, (with Christopher, B.R. and Berg, R.R.), Chapter 7 of *Geosynthetics and Their Applications*, S. Shukla ed., Thomas Telford Ltd., 2nd ed., London, 2011, 430p.
3. ASCE Ports and Harbors Roadway Design Guide, Contributing Author.

Reports

1. *Relative Operational Performance of Geosynthetics Used As Subgrade Stabilization*, Cuelho, E., Perkins, S., and Morris, Z., Montana Department of Transportation, U.S. Department of Transportation, Federal Highway

- Administration, Washington, DC, Report No. FHWA/MT-14-002/7712-251, 328 p., May, 2014
2. *Modification of Austroads Empirical Design Charts for Paved Roads Reinforced with a NAUE Geogrid*, Perkins, S.W., May 5, 2014, 28 p.
 3. *Deep Patch Repair Phase I: Analysis and Design*, Cuelho, E.V., Perkins, S.W. and Aiken, M., Federal Highway Administration, Western Federal Lands, Publication No. FHWA-CFL/TD-05-00x, February, 2012.
 4. *Temperature Effects on Laboratory Strength Measured on Soft Clay Sampled in Deep Water and Cold Environment, Summary and Recommendation Report - Phase 2*. Gue, C.-S., Perkins, S.W. and Lunne, T., Norwegian Geotechnical Institute Report Number 20081088-00-7-R, 8 February 2012.
 5. *Temperature Effects on Laboratory Strength Measured on Soft Clay Sampled in Deep Water and Cold Environment, Phase 2*, Gue, C.-S., Perkins, S.W. and Lunne, T., Norwegian Geotechnical Institute, Report Number 20081088-00-6-R, December 2011.
 6. *Synthesis of Warm Mix Asphalt Paving Strategies for Use in Montana Highway Construction*, Perkins, S.W., Montana Department of Transportation, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-09-009/8117-38, 209 p., November, 2009
 7. *Field Investigation of Geosynthetics Used for Subgrade Stabilization*, Cuelho, E.V. and Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-09-003/8193, 140 p., July 2009.
 8. *Development of Design Methods for Geosynthetic Reinforced Flexible Pavements*, Perkins, S.W., Christopher, B.R., Cuelho, E.V., Eiksund, G.R., Hoff, I., Schwartz, C.W., Svanø, G., and Watn, A., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, FHWA Report Reference Number DTFH61-01-X-00068, 263p., May, 2004.
 9. *Evaluation of Geosynthetic Reinforced Flexible Pavement Systems Using Two Pavement Test Facilities*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-02-008/20040, 120 p., November, 2002.
 10. *Mechanistic-Empirical Modeling and Design Model Development of Geosynthetic Reinforced Flexible Pavements*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-01-002/99160-1, 170 p., October, 2001.
 11. *Numerical Modeling of Geosynthetic Reinforced Flexible Pavements*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-01-003/99160-2, 97 p., October, 2001.
 12. *Geosynthetic Reinforcements in Roadway Sections*, Christopher, B.R., Berg, R.R. and Perkins, S.W., NCHRP Report 20-07, Task 112, Transportation Research Board, Washington, DC, USA, 2001.
 13. *Geosynthetic Reinforcement of the Aggregate Base/Subbase Courses of Flexible Pavement Structures - GMA White Paper II*, Berg, R.R., Christopher, B.R. and Perkins, S.W., Geosynthetic Materials Association, Roseville, MN, USA, 176 p., 2000.
 14. *Geosynthetic Reinforcement of Flexible Pavements: Laboratory Based Pavement Test Sections*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-99/8106-1, 140 p., March 17, 1999.
 15. *A Review of Geosynthetic Functions and Applications in Paved and Unpaved Roads*, Tensar Earth Technologies, Inc. Technical Note, TTN:BR11, 45 p., July 1998.
 16. *In-Field Performance of Geosynthetics Used To Reinforce Base Layers; Phase I: Instrumentation Selection and Verification*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-96/8126-1, 160 p., September 1996.
 17. *Seasonal Variation of Subgrade Support Values*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-96/8117-4, 115 p., September 1996.
 18. *Feasibility of the Use of Existing Analytical Models and Experimental Data To Assess Current Design Methods For Pavement Geogrid-Reinforced Base Layers*, Perkins, S.W., U.S. Department of Transportation, Federal Highway Administration, Washington, DC, Report No. FHWA/MT-94/8116, 39 p., February 1995.
 19. *Analysis of Plow Performance Data and Suggestions for Further Work*, Perkins, S.W., Naval Civil Engineering Laboratory Contract Report N6258393P3301, August 1993.
 20. *Compressional Wave Speed Measurements in Sand for Validation of Full Saturation*, Perkins, S.W., Naval Civil Engineering Laboratory Report TM-M-42-92-03, July 1992.
 21. *First Parameter Identification in ASCS Sub-Bottom Profiler*, Perkins, S.W., Naval Civil Engineering Laboratory Report TM-42-92-02, July 1992.
 22. *Modeling of Regolith Structure Interaction In Extraterrestrial Constructed Facilities*, Perkins, S.W., PhD Thesis, University of Colorado at Boulder, 324 p., December 1991.

23. *Friction and Adhesion of Granular Materials in Vacuum*, Perkins, S.W., Center for Space Construction Report, Extraterrestrial Cluster, and Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder, Colorado, 34 p., December 1990.
24. *Experimental Results and Model Calibration for a Lunar Soil Simulant, Progress Report*, Perkins, S.W., Center for Space Construction Report, Extraterrestrial Cluster, and Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder, Colorado, 210 p., December 1990.
25. *High Pressure Multiaxial Testing and Modeling of a Compacted Nellis Baseline Soil*, Perkins, S.W., MS Thesis, University of Colorado at Boulder, 540 p., August 1985.

Presentations

1. "Geosynthetics in Paved and Unpaved Roads", Full day seminars, Perth, Brisbane, Sydney and Melbourne, Australia, and Auckland, New Zealand, November 29 to December 9, 2013.
2. "Geosynthetics in Road Pavement Design Methods", Seminar presented to the Australian Geomechanics Society, Brisbane, Australia, December 2, 2013.
3. "MSU Mechanistic-Empirical Model for Geosynthetic Reinforced Pavements", Invited Lecture, National Research Council, Transportation Research Board Annual Meeting, Washington, DC, January, 2013.
4. "Geosynthetics in Pavement Reinforcement Applications", Keynote Lecture, 9th International Geosynthetics Conference, Guarujá, Brazil, May, 2010
5. "Geosynthetics in Pavement Systems", Invited presentation at the Idaho Asphalt Conference, Moscow, Idaho, October 22, 2009.
6. "Mechanistic-Empirical Design: Definition, Status and Future Direction", Presentation to Naue Geosynthetics, Espelkamp, Germany, November 3, 2008.
7. "Base Reinforcement: Testing, Modeling and Design", Invited presentation to the ASTM Committee D35 on Geosynthetics, Denver, Colorado, June 26, 2008.
8. "Evaluation of Base-Reinforced Pavements Using a Heavy Vehicle Simulator", *First Pan American Geosynthetics Conference*, Cancun, Mexico, March 3, 2008.
9. "Reinforced Pavement Research at MSU", *Norwegian Geotechnical Institute*, January, 10, 2007.
10. "COST 348: What Has it Done for the Industry?", COST Action 348, Reinforcement of Pavements with Steel Meshes and Geosynthetics, Dissemination Symposium, March 16, 2006, Windsor, UK.
11. "Geosynthetic Reinforcement in Roadways: A US Perspective on Research, Practice and Future Trends", Invited Lectures at University of Zagreb and University of Osijek, Croatia, October 3 and 5, 2005.
12. "Unfulfilled Geosynthetics' Research and Development Needs in Pavements", 18th Geosynthetics Research Institute Conference on Geosynthetics' Research and Development "In-Progress", Austin, Texas, 2005.
13. "Geosynthetic Reinforcement for Pavement Systems: US Perspectives", *Conference GeoFrontiers*, ASCE, Austin, Texas, 2005.
14. "Modeling Effects of Reinforcement on Lateral Confinement of Roadway Aggregate", *Conference GeoFrontiers*, ASCE, Austin, Texas, 2005.
15. "A Method for Analysis of Geogrid Junction Testing Data", Workshop on Junction Strength and Biaxial Geogrid Properties, Naue Fasertechnik, Aachen, Germany, December 2004.
16. "Design of Reinforced Unbound Base Course Aggregates", Invited Presentation, European Cooperation in the Field of Scientific and Technical Research, Committee on Reinforcement of Pavements with Steel Meshes and Geosynthetics, Munich Germany, March 2004.
17. "Evaluation of Base-Reinforced Pavements Using a Heavy Vehicle Simulator", National Research Council, Transportation Research Board Annual Meeting, Washington, DC, January 2004.
18. "What Do We Know About Base Reinforcement", Presentation and Panel Member, Panel on *Design and Performance of Base Reinforcement in Flexible Pavements*, National Research Council, Transportation Research Board Annual Meeting, Washington, DC, January 2003.
19. "Results From Four Reinforced HVS Test Sections", National Research Council, Transportation Research Board Annual Meeting, A2K07(2) Committee Meeting, Washington, DC, January 2003.
20. "Geosynthetics in Transportation Infrastructure Applications", A Half-Day Training Course for the Montana Department of Transportation, Bozeman, Montana, January 7 & 8, 2003.
21. "A Roadmap for Base Reinforcement Research and Implementation", North American Geosynthetics Society Past President Seminar, Austin, Texas, November 2002.
22. "Current Design Model Development Research", North American Geosynthetics Society Past President Seminar, Austin, Texas, November 2002.

23. "Design of Geosynthetic Reinforced Flexible Pavements Using the MSU-GRFP Design Model", Montana Department of Transportation, Helena, Montana, November 2002.
24. "Mechanistic-Empirical Models for Reinforced Pavements", Seventh International Conference on Geosynthetics, Nice France, September, 2002.
25. "Scandinavian and US Research and Design Experience with Geosynthetic Reinforced Flexible Pavements", Fourth International Conference and Exhibition on Road and Airfield Pavement Technology, Kunming China, April 2002.
26. "Light Weight Clay Aggregate (LWA) for Insulation and Light Weight Material in Road Structures", Fourth International Conference and Exhibition on Road and Airfield Pavement Technology, Kunming China, April 2002.
27. "New Pavement Design Methods for Reinforced Pavements: An International Collaborative Project", Annual meeting of the Norwegian Geotechnical Society, Trondheim, Norway, March 11, 2002.
28. "Development of Design Methods for Geosynthetic Reinforced Flexible Pavements", European Cooperation in the Field of Scientific and Technical Research, Committee on Reinforcement of Pavements with Steel Meshes and Geosynthetics, Brussels Belgium, January 2002.
29. "Design Methods for Reinforced Pavements", National Research Council, Transportation Research Board Annual Meeting, A2K07 Committee Meeting, Washington, DC, January 2002.
30. "Base Reinforcement", Workshop on Roadway Construction Techniques, SINTEF, Trondheim Norway, Sponsored by ENRECO GeoSystemer AS, Stjørdal, Norway, May 28, 2001.
31. "Geosynthetics for Pavement Design With an Emphasis on Base Reinforcement", two invited lectures at Bogazici University and the 17 Division of the Turkish Road Administration, Istanbul, Turkey, May 21-22, 2001.
32. "Geosynthetic Reinforcement of Roadways", Annual meeting of Fulbright Scholars, Gausdal, Norway, February 17, 2001.
33. *Third Advisory Meeting for the Pooled Fund Study on Numerical Modeling and Design Development of Geosynthetic Reinforced Flexible Pavements*, Full day meeting with participants from FHWA, Western Transportation Institute, and the following State Departments of Transportation: Idaho, Kansas, Minnesota, Montana, New York, Texas, Wisconsin and Wyoming; January 7, 2001, Washington, DC.
34. "Projects Addressing Experimental Modeling, Numerical Modeling and Design Methodology Development – Past, Current & Propose", Meeting of the AASHTO Subcommittee on Materials Technical Section 4E, Task Force on Geogrids/Geotextiles, January 7, 2001.
35. NTNU Seminar Series on "Geosynthetic Reinforcement of Flexible Pavements: Seminar I, Introduction and Overview; Seminar II, Experimental Modeling; Seminar III, Numerical Modeling", NTNU, Trondheim Norway, September 18, October 2, December 13, 2000.
36. "Geosynthetic Reinforcement of Paved Roadways", A workshop on subbase-stabilization for flexible pavements, Colbond Geosynthetics, Arnhem, The Netherlands, November 13, 2000.
37. "A Finite Element Model Illustrating Reinforcement Mechanisms for Paved Roadways", *Second European Geosynthetics Conference, EuroGeo 2000*, Bologna, Italy, October 2000.
38. "Prediction of Permanent Deformation in the Unbound Aggregate and Subgrade Soils of a Paved Roadway", *International Symposium on Unbound Aggregates in Road Construction, UNBAR 5*, Nottingham, UK, June 2000.
39. *Second Advisory Meeting for the Pooled Fund Study on Numerical Modeling and Design Development of Geosynthetic Reinforced Flexible Pavements*, Full day meeting with participants from FHWA, Western Transportation Institute, and the following State Departments of Transportation: Idaho, Kansas, Minnesota, Montana, New York, Texas, Wisconsin and Wyoming; May 1, 2000, Minneapolis, Minnesota.
40. "Numerical Modeling Methods for Reinforced Pavements", Presentation to the U.S. Army Corp of Engineers Waterways Experiment Station, May 10, 2000, Vicksburg, MS.
41. "Compaction Induced and Earth Pressure Relaxation of a Clay Core at Tongue River Dam, Montana", *ASCE Specialty Conference on Performance Confirmation of Constructed Geotechnical Facilities*, Amherst, MA, April 12, 2000.
42. "Measurement of Compaction Induced Earth Pressure Against a Counterfort Retaining Wall", *35th Symposium on Engineering Geology and Geotechnical Engineering*, Pocatello, Idaho, March 31, 2000.
43. *First Advisory Meeting for the Pooled Fund Study on Numerical Modeling and Design Development of Geosynthetic Reinforced Flexible Pavements*, Full day meeting with participants from FHWA, Western Transportation Institute, and the following State Departments of Transportation: Kansas, Minnesota, Montana, New York, Texas, Wisconsin and Wyoming; September 21, 1999, Bozeman, Montana.

44. "Influence of Geosynthetic Placement Position on the Performance of Reinforced Flexible Pavement Systems", *Geosynthetics '99*, Boston, MA, USA, April 1999.
45. Invited presentation at panel session / workshop organized by J.M. Rigo.
46. "Mechanical Response of a Geosynthetic-Reinforced Pavement System to Cyclic Loading", *Fifth International Conference on the Bearing Capacity of Roads and Airfields*, Trondheim, Norway, July 1998.
47. "Geosynthetic-Reinforced Pavements: Overview and Preliminary Results", *Sixth International Conference on Geosynthetics*, Atlanta, Georgia, March 1998.
48. "Reinforcement of the Base Layer of Flexible Pavements", *Sixth International Conference on Geosynthetics*, Atlanta, Georgia, March 1998.
49. "Mechanisms of Base Course Geosynthetic-Reinforcement of Flexible Pavements: Experimental Results", National Research Council, Transportation Research Board Annual Meeting, A2K07(2) Committee Meeting, Washington, DC, January 11, 1998.
50. "A Dilatancy Approach For The Bearing Capacity of Sands", *14th International Conference on Soil Mechanics and Foundation Engineering*, Hamburg, Germany, Poster Session Presentation, September 1997.
51. "Geosynthetic Reinforcement of Flexible Pavements: Current Research at MSU", Civil Engineering External Advisory Committee Meeting, April, 17, 1997, MSU, Bozeman.
52. "Instrumentation of a Geosynthetic - Reinforced Flexible Pavement System", National Research Council, Transportation Research Board Annual Meeting, Washington, DC, January 13, 1997.
53. "Scale Effects of Shallow Foundations on Lunar Regolith", *ASCE 5th International Conference on Engineering, Construction and Operations in Space: SPACE 96*, Albuquerque, New Mexico, June 4, 1996.
54. "Local Versus Global Strain Measurement of a Polymeric Geogrid", *ASTM Committee E-28 on Mechanical Testing Workshop on Strain Gages in Mechanical Testing*, Orlando, Florida, May 22, 1996.
55. "In-Field Performance of Geosynthetics Used to Reinforce Roadway Base Layers - On-Going and Proposed Work at MSU", Presented at the A2K07(2) Subcommittee (Geosynthetics in Pavement Systems) Meeting as part of the National Research Council, Transportation Research Board Annual Meeting, Washington, DC, 1-10-96.
56. "In-Field Performance of Geosynthetics Used to Reinforce Roadway Base Layers, Review of Phase I Work-To-Date and Proposed Phase II Test Sections", Montana Department of Transportation, October, 19, 1995.
57. "Feasibility of the Use of Existing Analytical Models and Experimental Data To Assess Current Design Methods For Pavement Geogrid Reinforced Base Courses", Presentation of Final Report to the Montana Department of Transportation, January, 9, 1995.
58. "Non-Linear Limit Analysis for the Bearing Capacity of Highly Frictional Soils", *2nd Congress on Computing in Civil Engineering*, ASCE, Atlanta, 4 June, 1995.
59. "Settlement of Shallow Foundations on Dense, Highly Angular Silty Sand", *31st Annual Geological and Geotechnical Symposium*, Utah State University, 29 March, 1995.
60. "Bearing Capacity of a Highly Frictional Simulated Lunar Regolith", *Proc. 8th Int. Conf. of the Int. Assoc. for Computer Methods and Advances in Geomechanics*, Morgantown, West Virginia, 26 May, 1994.
61. "Direct Tension Experiments on Compacted Granular Materials", Video Presented at *National Educators' Workshop: Standard Experiments In Engineering Materials, Science and Technology*, Department of Energy, Oak Ridge National Laboratory, Oak Ridge, Tennessee, November, 1992.
62. "Engineering Properties of Lunar Regolith and Their Impact on Mining", *International Symposium on Mine Mechanization and Automation*, Colorado School of Mines, Golden, Colorado, June, 1991.
63. "Regolith-Structure Interaction Modeling and Regolith Properties", *Center For Space Construction Technical Seminar*, University of Colorado at Boulder, February, 1991.
64. "Characteristics of Lunar Regolith", *Center for Space Construction Second Annual Symposium*, Boulder, Colorado, October, 1990.
65. "Lunar Soil Mechanics: Further Results", *Second Joint CSC/Stearns Rogers/Johnson Engineering Orbital and Lunar Base Assembly Workshop*, University of Colorado at Boulder, August 2, 1990.
66. "Regolith-Structure Modeling of Lunar Facilities", *ASCE 2nd International Conference on Engineering, Construction and Operations in Space: SPACE 90*, Albuquerque, New Mexico, April, 1990.
67. "Mechanical Properties of Lunar Regolith and Lunar Soil Simulant", *Symposium of the NASA University Space Engineering Research Center*, Estes Park, Colorado, October, 1989.

Short Courses / Symposia

1. *Geosynthetics in Roadway Systems*, Perkins, S.W., Geosynthetics Conference 2009, Salt Lake City, Utah USA, February 27, 2009.
2. *Geotechnical Aspects of Pavements*, Berg, R.R., Perkins, S.W. and Schwartz, C.S., NHI short course, Columbus, OH, September 18-20, 2007.
3. *Geosynthetics in Roadway Systems*, Schwartz, C.S. and Perkins, S.W., Geosynthetics Conference 2007, Washington, DC, USA, January 18, 2007.
4. *Third Tele Textiles Geotechnical Symposium*, Featured Short Course Presenter, Sponsored by Sagatex Tele Textiles AS, Kristiansand, Norway, June 20-23, 2002.
5. *Pavement Design with Geosynthetics*, Christopher, B.R., Berg, R.R. and Perkins, S.W., Geosynthetics Conference 2001, Portland, OR, USA, February 11, 2001.
6. *The Economic Use of Geosynthetics for Pavement Designs*, Featured Guest Speaker, Educational Seminar Sponsored by Tensar Earth Technologies, Inc. and Contech Construction Products, Inc., Austin, TX and Sacramento, CA, March 9 and 11, 1999.