

CURRICULUM VITAE



PINNADUWA H.S.W. KULATILAKE---US Citizen

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PROFESSIONAL TITLES, AND CONTACT INFORMATION

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Chair, ISRM Commission on Estimation of Rock Mass Strength and Deformability
President, Sri Lankan Rock Mechanics and Engineering Society (SLRMES)
2024 ISRM Science Achievement Award Recipient

EDUCATION

Ph.D. in Civil Engineering, The Ohio State University, Columbus, Ohio, USA, October 1978-June 1981 (G.P.A.: 3.98/4.00).

Major field: Geotechnical Engineering

Minor fields: Probability and Statistics, Engineering Mechanics, Mathematics

Title of the dissertation: Probabilistic Approach to Estimate Deformability and Strength Properties of a Shale

Dissertation director: Professor Tien H. Wu

Ph.D. program in Civil Engineering, Geotechnical Engineering, Department of Civil Engineering, University of Calgary, Calgary, Alberta, Canada, July 1978-September 1978 (stayed only during summer). Moved to the USA to follow a Ph.D. program in Geotechnical Engineering at Ohio State University.

Master of Engineering in Soil Engineering, Asian Institute of Technology, Bangkok, Thailand, August 1976-April 1978 (Batch top).

B.S. in Civil Engineering, Hons., University of Sri Lanka, Peradeniya, Sri Lanka, Jan 1972-April 1976.

REGISTRATION

Professional Civil Engineer – California; since 1985; License No. C 039679

MAJOR FIELDS OF RESEARCH

Rock Mechanics & Rock Engineering; Application of Probabilistic, Statistical and Numerical Methods to Geo and Mining engineering; Rock mass Hydrogeology and Soil Engineering.

EMPLOYMENT

Academic:

January 2025 – Present	Professor of Civil Engineering, Christian Brothers University, Memphis, USA
June 2019– Present	Emeritus Professor, Geological Engineering (specialty: Rock Mechanics and Rock Engineering), Department of Mining and Geological Eng., University of Arizona, Tucson, Arizona

May 2019– May 2022	Academic Director and Distinguished Professor of Rock Mechanics and Rock Engineering, Department of Mining Engineering, School of Resources and Environmental Engineering, Jiangxi University of Science and Technology, Ganzhou, China
August 2004 – May 2019	Professor, Geological Engineering, Director, Rock Mass Modeling and Computational Rock Mechanics Laboratory, Department of Materials Science & Eng., and Department of Mining and Geological Eng., University of Arizona, Tucson, Arizona
June 1998 – July 2004	Professor of Geological Engineering, Director, Rock Mass Modeling and Computational Rock Mechanics Laboratory, Department of Mining and Geological Eng., University of Arizona, Tucson, Arizona
June 1988 – May 1998	Associate Professor of Geological Engineering, Department of Mining and Geological Eng., University of Arizona, Tucson, Arizona
Oct. 1981 – May 1988	Assistant Professor of Geological Engineering, Department of Mining and Geological Eng., University of Arizona, Tucson, Arizona
Jul. 1981 - Sep. 1981	Senior Research Associate, Geotechnical Engineering, Department of Civil Engineering, The Ohio State University, Columbus, Ohio
Oct. 1978 - June 1981	Graduate Research Associate, Geotechnical Engineering, Department of Civil Engineering, The Ohio State University, Columbus, Ohio.
Sep. 1980 - June 1981	Graduate Teaching Associate, Mathematics, Department of Mathematics, The Ohio State University, Columbus, Ohio.
Jul. 1978 - Sep. 1978	Graduate Scholar and Teaching Associate, Geotechnical Engineering, Department of Civil Engineering, University of Calgary, Calgary, Alberta, Canada.
Aug. 1976 - Apr. 1978	Graduate Scholar, Geotechnical Engineering, Asian Institute of Technology, Bangkok, Thailand.
May 1976 - Aug. 1976	Chief Instructor in Geotechnical Laboratory and Instructor in Civil Engineering, University of Sri Lanka, Peradeniya, Sri Lanka.
June 1988 - Nov.1988	Visiting Research Fellow at the Norwegian Geotechnical Institute. (Sabbatical leave)
Dec.1988 - Aug. 1989	Visiting Research Professor - Lulea University of Technology. (Sabbatical leave)
Summer 1990	Visiting Research Professor - Lulea University of Technology, Sweden

Industrial:

Civil Engineer at:

1. Dept. of National Housing, Colombo, Sri Lanka - 3 months
2. U.N. Gunasekara & Co., Sri Lanka - 6 months
3. Water Supply & Drainage Board, Sri Lanka - 3 months

LIST OF PUBLICATIONS

Refereed Articles and Invited Papers/Lectures:

1. Kulatilake, P.H.S.W. and T.H. Wu, "Estimation of Mean Trace Length of Discontinuities," Rock Mechanics and Rock Engineering, Vol. 17, pp. 215-232, 1984.
2. Kulatilake, P.H.S.W. and T.H. Wu, "Sampling Bias on Orientation of Discontinuities," Rock Mechanics and Rock Engineering, Vol. 17, pp. 243-254, 1984.
3. Kulatilake, P.H.S.W. and T.H. Wu, "The Density of Discontinuity Traces in Sampling Windows," Int. Jour. of Rock Mechanics and Mining Sciences, Vol. 21, pp. 345-347, 1984.
4. Kulatilake, P.H.S.W., "Estimating Elastic Constants and Strength of Discontinuous Rock," Journal of Geotechnical Engineering, ASCE, Vol. 111, No. 7, pp. 847-864, July 1985.
5. Kulatilake, P.H.S.W., "Fitting of Fisher Distribution on Discontinuity Orientation Data," Journal of Geological Education, Vol. 33, pp. 266-269, November 1985.
6. Kulatilake, P.H.S.W., "Bivariate Normal Distribution Fitting on Discontinuity Orientation Clusters," Journal of International Association for Mathematical Geology, Vol. 18, No. 2, pp. 181-195, February 1986.
7. Kulatilake, P.H.S.W. and S. Ouyang, "Target Detection Probabilities for Continuous Line Search," Journal of Computing in Civil Engineering, ASCE, Vol. 1, No. 1, pp. 1-19, January 1987.
8. Wu, T.H., R.L. Williams, J.E. Lynch, and P.H.S.W. Kulatilake, "Stability of Slopes in Red Conemaugh Shale of Ohio," Journal of Geotechnical Engineering, ASCE, Vol. 113, No. 3, pp. 248-264, March 1987.
9. Kulatilake, P.H.S.W., "Modeling of Cyclical Stratigraphy Using Markov Chains," Int. Journal of Mining and Geological Engineering, Vol. 5, pp. 121-130, June 1987.
10. Ghosh, A. and Kulatilake, P.H.S.W., "A Fortran Program for Generation of Multivariate Normally Distributed Random Variables," Int. Journal for Computers and Geosciences, Vol. 13, No. 3, pp. 221-233, June 1987.
11. Kulatilake, P.H.S.W. and K. Fuenkajorn, "Factor of Safety of Tetrahedral Wedges: A Probabilistic Study," Int. Journal of Surface Mining, Vol. 1, No. 2, pp. 147-154, Sept. 1987.
12. Kulatilake, P.H.S.W., "A Computer Simulation Technique to Study Probability of Detection of Geologic Targets," Application of Computers and Mathematics in the Mineral Industry, Vol. 20, pp. 271-278, October 1987.
13. Kulatilake, P.H.S.W., "Probabilistic Characterization of Shear Strength Parameters Using Triaxial Test Data," ASTM STP on Advanced Triaxial Testing of Soil and Rock, pp. 553-566, 1988.
14. Kulatilake, P.H.S.W., "Minimum Rock Bolt Force and Minimum Static Acceleration in Tetrahedral Wedge Stability: A Probabilistic Study," Int. Journal of Surface Mining; Vol. 2, No. 1, pp. 19-26, 1988.
15. Kulatilake, P.H.S.W., "Stochastic Joint Geometry Modeling: State-of-the-Art", Proceedings of the Symposium on Reliability-Based Design in Civil Engineering; Lausanne, Switzerland, Vol. 2, pp. 67-91, 1988 - **Invited paper**.

16. Kulatilake, P.H.S.W., "Stochastic Joint Geometry Modeling: State-of-the-Art", Proceedings of the First Mexican National Symposium on Rock Mechanics Applied to Mining; Hermosillo, Mexico, pp. CI-12-CI-36, 1989 - **Invited paper**.
17. Kulatilake, P.H.S.W., "Probabilistic Potentiometric Surface Mapping", ASCE, Journal of Geotechnical Engineering, Vol. 115, pp. 1569-1587, 1989.
18. Kulatilake, P.H.S.W., T.H. Wu and D.N. Wathugala, "Probabilistic Modeling of Joint Orientation", Int. Journal for Numerical and Analytical Methods in Geomechanics, Vol. 14, pp. 325-350, 1990.
19. Kulatilake, P.H.S.W., D.N. Wathugala, M. Poulton, and O. Stephansson, "Analysis of Structural Homogeneity of Rock Masses," Int. Jour. of Engineering Geology, Vol. 29, pp. 195-211, 1990.
20. Kulatilake, P.H.S.W., and D.N. Wathugala, "Three-Dimensional Fracture Network Modelling and Verification," Int. Conf. on Mechanics of Jointed and Faulted Rock, Vienna, Austria, pp. 71-82, - **A Special Lecture**, 1990.
21. Wathugala, D.N., Kulatilake, P.H.S.W., Wathugala, G.W. and Stephansson, O., "A General Procedure to Correct Sampling Bias on Joint Orientation Using a Vector Approach," Computers and Geotechnics, Vol. 10, pp. 1-31, 1990.
22. Kulatilake, P.H.S.W., and D.N. Wathugala, "Stochastic Three-Dimensional Joint Geometry Modelling Including a Verification to an Area in the Stripa Mine, Sweden", Int. Symp. on Excavations in Soils and Rocks, Including Earth Pressure Theories, Buried Structures, and Tunnels, Bangkok, Thailand, pp. 545-555, 1991 - **Invited paper**.
23. Kulatilake, P.H.S.W., Closure to the discussion on the paper entitled "Probabilistic Potentiometric Surface Mapping", ASCE, Journal of Geotechnical Engineering, Vol. 117, pp. 1457-1459, 1991.
24. Kulatilake, P.H.S.W., and Lacasse, S., "Probabilistic Equivalent Linear Soil Spring Stiffness Analysis for Gravity Platforms: Conceptual Model," Computers and Geotechnics, Vol.12, pp. 1-28, 1991.
25. Kulatilake, P.H.S.W., Lacasse, S. and Gabr, M.A., "Probabilistic Equivalent Linear Soil Spring Stiffness Analysis for Gravity Platforms: Illustrative Example", Computers and Geotechnics, Vol. 12, pp. 29-54, 1991.
26. Kulatilake, P.H.S.W., "Joint Network Modelling and Some Scale Effects in Rock Masses", Proceedings of the International Conf. on Geomechanics '91, Ostrava, Czechoslovakia, - **A main invited lecture**, pp. 139-152, 1992.
27. Kulatilake, P.H.S.W., "Stochastic Three-Dimensional Fracture Network Modelling Including Validations," Engineering for Energy (a Russian journal), Vol. 12, pp. 23-28, 1992 - **an invited paper**. Also, presented as an invited lecture at the Int. Seminar on Numerical Methods in Geomechanics, Moscow, Russia, March 1992.
28. Kulatilake, P.H.S.W., "Scale Effects in Rock Masses," Engineering for Energy (a Russian journal), Vol. 8, pp. 24-28, 1992 - **an invited paper**. Also, presented as an invited lecture at the Int. Seminar on Numerical Methods in Geomechanics, Moscow, Russia, March 1992.
29. Kulatilake, P.H.S.W., Ucpirti, H., Wang, S., Radberg, G. and Stephansson, O., "Use of the Distinct Element Method to Perform Stress Analysis in Rock with Non-Persistent Joints and to Study the Effect of Joint Geometry Parameters on the Strength and Deformability of Rock Masses," Rock Mechanics and Rock Engineering, Vol. 25, pp. 253-274, 1992.

30. Kulatilake, P.H.S.W., Wathugala, D.N. and Stephansson, O., "Stochastic Three-Dimensional Joint Size, Intensity and System Modelling, and a Validation to an area in the Stripa Mine Sweden," *Soils and Foundations*, Vol. 33, No. 1, pp. 55-70, 1993.
31. Kulatilake, P.H.S.W., "Application of Probability and Statistics in Joint Network Modeling in Three Dimensions", *Proceedings of the Conference on Probabilistic Methods in Geotechnical Engineering*, Canberra, Australia, pp. 63-87, 1993 - **An invited paper**.
32. Kulatilake, P.H.S.W., Wang, S. and Stephansson, O., "Effect of Finite Size Joints on Deformability of Jointed Rock at the Three-Dimensional Level," *Int. J. Rock Mech. & Min. Sci.*, Vol. 30, No. 5, pp. 479-501, 1993.
33. Kulatilake, P.H.S.W., Wathugala, D.N. and Stephansson, O., "Joint Network Modelling, Including a Validation to an Area in the Stripa Mine, Sweden," *Int. J. Rock Mech. & Min. Sci.*, Vol. 30, No. 5, pp. 503-526, 1993.
34. Wang, S. and Kulatilake, P.H.S.W. "Linking Between Joint Geometry Models and a Distinct Element Method in Three Dimensions to Perform Stress Analyses in Rock Masses Containing Finite Size Joints", *Soils and Foundations*, Vol. 33, No. 4, pp. 88-98, 1993.
35. Kulatilake, P.H.S.W., "Scale Effects on Rock Mass Deformability," *Proceedings of the Int. Conf. on Geomechanics '93*, Hradec, Ostrava, Czech Republic, **an invited keynote paper**, pp. 151-158, 1994.
36. Kulatilake, P.H.S.W., Ucpirti, H. and Stephansson, O., "Effect of Finite Size Joints on the Deformability of Jointed Rock at the Two-Dimensional Level," *Can. Geotech. J.*, Vol. 31, pp. 364-374, 1994.
37. Kulatilake, P.H.S.W., and Swoboda, G., "Geomechanical Modelling of Jointed Rock," *Felsbau*, Vol. 12, No. 6, pp. 387-394, 1994.
38. Kulatilake, P.H.S.W., Shou, G., Huang, T.-H. and Morgan, R.M., "New Peak Shear Strength Criteria for Anisotropic Rock Joints," *Int. J. Rock Mech. and Min. Sci.*, Vol. 32, No. 7, pp. 673-697, 1995.
39. Kulatilake, P.H.S.W., Shou, G. and Huang, T.-H., "A Spectral Based Peak Shear Strength Criterion for Rock Joints," *ASCE, J. Geotech. Engrg.*, Vol. 121, No. 11, pp. 789-796, 1995.
40. Kulatilake, P.H.S.W., Chen, J., Teng, J., Shufang, X. and Pan, G., "Discontinuity Geometry Characterization for the Rock Mass Around a Tunnel Close to the Permanent Shiplock Area of the Three Gorges Dam Site in China," *Int. J. Rock Mech. and Min. Sci.*, Vol. 33, pp. 255-277, 1996.
41. Kulatilake, P.H.S.W., and Panda, B. B., "Relation Between Fracture Tensor Properties and the Jointed Rock Hydraulic Behaviour Based on Numerical Simulation on Two Dimensional Joint Networks," *Proc. Of the Int. Conf. On Geomech. '96*, pp. 189-194, Roznov p.R., Czech Republic. - **An invited paper**.
42. Kulatilake, P.H.S.W., "New Peak Shear Strength Criteria for Anisotropic Rock Joints", *Proc. Of the Int. Conf. On Geomech. '96*, pp. 31-38, Roznov p.R., Czech Republic. - **An invited keynote paper**.
43. C Jianping, W Qing, X Shufang, T Jianren, P Kulatilake "Evaluation of statistical homogeneity" *Journal of Geological Hazards*. 1996.
44. Shirono, T. and Kulatilake, P.H.S.W., "Accuracy of the Spectral Method in Estimating Fractal/Spectral Parameters for Self-Affine Roughness Profiles," *Int. J. Rock Mech. and Min. Sci.*, Vol. 34, No. 5, pp. 789-804, 1997.

45. Kulatilake, P.H.S.W., Fiedler, R. and Panda, B.B., "Box Fractal Dimension as a Measure of Statistical Homogeneity of Jointed Rock Masses," *Int. J. Engineering Geology*, Vol.48, Nos. 3-4, pp.217-230, 1997.
46. Kulatilake, P.H.S.W., Um, J. and Pan, G., "Requirements for Accurate Estimation of Fractal Parameters for Self-Affine Roughness Profiles Using the Line Scaling Method," *Rock Mechanics & Rock Engineering*, Vol.30, No.4, pp. 181-206, 1997.
47. Kulatilake, P.H.S.W., Um, J. and Pan, G., "Requirements for Accurate Quantification of Self-affine Roughness Using the Variogram Method," *Int. J. Solids and Structures*, Vol. 35, Nos. 31-32, pp.4167-4189, 1998.
48. Kulatilake, P.H.S.W., "General Report for the session entitled Numerical Modelling – Part B," *Proceedings of the 3rd North American Rock Mechanics Conference*, pp. 151-158, Cancun, Mexico, June 1998—**Invited Paper**.
49. Kulatilake, P.H.S.W., Um, J., Panda, B.B. and Nghiem, N., "Accurate Quantification of Joint Roughness and Development of a New Peak Shear Strength Criterion for Anisotropic Rock Joints," *Proceedings of the International Conference on Geomechanics/ Ground Control in Mining and Underground Construction*, Wollongong, Australia, pp. 33-48, July 1998—**Invited Keynote Paper**.
50. Panda, B.B. and Kulatilake, P.H.S.W., "Influence of Discontinuity Geometry Parameters and Transmissivity on Hydraulic Behavior of Discontinuous Rock," *ASCE, Journal of Engineering Mechanics*, Vol.125 No. 1, pp.41-50, 1999.
51. Panda, B.B. and Kulatilake, P.H.S.W., "Relations Between Fracture Tensor Parameters and Permeability Tensor Parameters for Discontinuous Rock," *ASCE, Jour. of Engineering Mechanics*, Vol. 125 No. 1, pp. 51-59, 1999.
52. Kulatilake, P.H.S.W. and UM, J., "Requirements for Accurate Quantification of Self-affine Roughness Using the Roughness-Length Method," *Int. Jour. of Rock Mechanics and Mining Sci.*, Vol.36 No.1, pp. 1-18, 1999.
53. Kulatilake, P.H.S.W., Um, J., Panda, B.B. and Nghiem, N., "Development of a New Peak Shear Strength Criterion for Anisotropic Rock Joints," *ASCE, Jour of Engineering Mechanics*, Vol. 125, No.9, pp. 1010-1017, 1999.
54. Kulatilake, P.H.S.W., and Um, J., "Development of a New Peak Shear Strength Criterion for Anisotropic Rock Joints," *Proceedings of the '99 Japan-Korea Joint Symposium on Rock Engineering*, Fukuoka, Japan, pp.41-55, August 1999----**Invited Keynote Paper**.
55. Kulatilake, P.H.S.W., and Panda, B.B., "Effect of Block Size and Joint Geometry on Jointed Rock Hydraulics and REV," *ASCE, Jour. of Engineering Mechanics*, Vol. 126, No. 8, pp.850-858, 2000.
56. Kulatilake, P.H.S.W., and Um, J., "Development of a New Peak Shear Strength Criterion for Anisotropic Rock Joints," *Proceedings of the First Central Asian Geotechnical Symposium*, Astana, Kazakhstan Vol.1, pp. 317-330, May 2000----**Invited Keynote Paper**.
56. Wang M., Kulatilake, P.H.S.W., Panda, B.B. and Rucker, M.L., "Groundwater resources evaluation case study via discrete fracture fluid flow modeling", *Int. Jour. of Engineering Geology*, Vol. 62, No. 4, pp. 267-291, 2001.

57. Kulatilake, P.H.S.W., Liang, J. and Gao, H., "Experimental and numerical simulations of jointed rock block strength under uniaxial loading, ASCE Jour. of Engineering Mechanics, Vol. 127, No. 12, pp. 1240-1247, 2001.
58. Kulatilake, P.H.S.W., Malama, B. and Wang, J., "Physical and particle flow modeling of jointed rock block behaviour" Int. Jour. of Rock Mech. and Mining Sciences, Vol. 38, No. 5, pp. 641-657, 2001.
59. Um, J. and Kulatilake, P.H.S.W., "Kinematic and block theory analyses for ship lock slopes of the Three Gorges Dam site in China", Int. Jour. Geotechnical and Geological Engineering, Vol. 19, pp. 21-42, 2001.
60. Wang, M., Kulatilake, P.H.S.W., Um, J. and Narvaiz, J., "Estimation of REV size and three-dimensional hydraulic conductivity tensor for a fractured rock mass through a single well packer test and discrete fracture fluid flow modeling", Int. Jour. of Rock Mechanics and Mining Sciences, Vol. 39, No. 7, pp. 887-904, 2002.
61. Kulatilake, P.H.S.W., Um, J. and Morin B., "A case study on open-pit mine rock slope stability", Proceedings of the Int. Coastal Geotechnical Engineering Conf., Atyrau, Kazakhstan, pp. 53-62, May 2002-----**Invited Keynote Paper**.
62. Kulatilake, P.H.S.W., Malama, B. and Park, J., "A new rock mass strength criterion for biaxial loading conditions", Proceedings of the Int. Conference on Advancing Rock Mechanics Frontiers to Meet the Challenges of 21st Century, New Delhi, India, pp. KN15—KN 28, September 2002-----**Invited Keynote Paper**.
63. Kulatilake, P.H.S.W., and Um, J., "Spatial variation of cone tip resistance for the clay site at Texas A & M University", Geotechnical Special Publication No. 121, pp. 41-60, published by the American Society of Civil Engineers, 2003.
64. Kulatilake, P.H.S.W., and Um, J., "Spatial variation of cone tip resistance for the clay site at Texas A & M University", Int. Jour. of Geotechnical and Geological Engineering, Vol. 21, No. 2, pp 149-165, 2003.
64. Kulatilake, P.H.S.W., Um, J., Wang, M., Escandon R.F., and Narvaiz, J., "Stochastic fracture Geometry modeling in 3-D including validations for a part of Arrowhead East Tunnel site, California, USA", Int. Jour. of Engineering Geology, Vol. 70, Issues 1-2, pp. 131-155, 2003.
65. Zhang Z. and Kulatilake P.H.S.W., "A new stereo-analytical method for determination of removal blocks in discontinuous rock masses", Int. Jour. of Numerical and Analytical Methods in Geomechanics, Vol. 27, pp. 791-811, 2003.
66. Kulatilake, P.H.S.W., Um, J. and Morin, B., "Investigation of slope stability for a section of Phelps Dodge Sierrita Open Pit Mine", *Transactions of the Society for Mining, Metallurgy, and Exploration*, Vol. 314, pp. 177-182, 2003.
67. Kulatilake, P.H.S.W., Park, J. and Um, J., "Fracture network modeling including validations and Estimation of rock mass strength and deformability in 3-D for a 30m Cube located at a depth of 485m at ASPO Hard Rock Laboratory, Sweden", —**Keynote Paper** at the International Conference on Computer Methods in Mechanics, Wisla, Poland, pp. 35-37 (abstract), CDROM (full paper), June 2003.
68. Malama, B. and Kulatilake, P.H.S.W., "Models for normal fracture deformation under compressive loading", Int. Jour. of Rock Mechanics and Mining Sciences, Vol. 40, No. 6, pp. 893-901, 2003.

69. Kulatilake, P.H.S.W., Park, J. and Um, J., "Fracture network modeling including validations and Estimation of rock mass strength and deformability in 3-D for a 30m Cube located at a depth of 485m at ASPO Hard Rock Laboratory, Sweden", —**Invited Paper** at the 4th International Workshop on Applications of Computational Mechanics in Geotechnical Engineering, Ouro Preto, Brazil, pp. 217-233, August 2003.
70. Kulatilake, P.H.S.W., Park, J. and Um, J., "Estimation of rock mass strength and deformability in 3-D for a 30m cube at a depth of 485m at Äspö Hard Rock Laboratory, Sweden", *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 22, No. 3, pp. 313-330, 2004.
71. Kulatilake, P.H.S.W., Um, J., Wang, M., Escandon R.F., and Narvaiz, J., "Stochastic fracture geometry modeling in 3-D including validations and estimation of REV size and three-dimensional hydraulic conductivity tensor for a fractured rock mass through discrete fracture fluid flow modeling", **Invited Keynote Paper** at the International Geotechnical Conference on Construction of Large Scale and Unique Projects, Almaty, Kazakhstan, September 23-25, 2004.
72. Kulatilake, P.H.S.W., Um, J., Wang, M., Escandon R.F., and Narvaiz, J., "Stochastic fracture geometry modeling in 3-D including validations and estimation of REV size and three-dimensional hydraulic conductivity tensor for a fractured rock mass through discrete fracture fluid flow modeling", **Invited Keynote Paper** at the 2nd Iranian Rock Mechanics Conference, Tehran, Iran, December 14-15, 2004.
73. Kulatilake, P.H.S.W., Park, J., Balasingam, P. and McKenna, S.A. "Hierarchical probabilistic regionalization of volcanism for Sengan region, Japan", **Invited Keynote Paper** at the International Geotechnical Symposium on Geotechnical Aspects of Natural and Man-Made Disasters, Astana, Kazakhstan, pp. 37-54, June 1-3, 2005.
74. Kulatilake, P.H.S.W., Park, J., Balasingam, P. and McKenna, S.A. "Hierarchical probabilistic regionalization of volcanism for Sengan region, Japan", **Invited Paper** at the International Conference on Geotechnical Engineering for Disasters Prevention and Rehabilitation, Semarang, Indonesia, August 3-4, 2005.
75. Kulatilake, P.H.S.W., Park, J. and Malama, B. "A new rock mass strength criterion for biaxial loading conditions", *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 24, No. 4, pp. 871-888, 2006.
76. Kulatilake, P.H.S.W., Balasingam, P., Park, J. and Morgan, R. "Natural rock joint roughness quantification through fractal techniques", *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 24, No. 5, pp. 1182-1202, 2006.
77. Kulatilake, P.H.S.W., Park, J., Balasingam, P. and McKenna, S.A. "Hierarchical probabilistic regionalization of volcanism for Sengan region, Japan", *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 25, No. 1, pp.79-102, 2007.
78. Wang, M. and Kulatilake, P.H.S.W. "Understanding of hydraulic properties from configurations of stochastically distributed fracture networks", *Journal of Hydrological Processes*, Vol. 22, No. 8, pp. 1125-1135, 2008.
79. Kulatilake, P.H.S.W., Park, J., Balasingam, P. and Morgan, R. "Quantification of aperture and relations between aperture, normal stress and fluid flow for natural single rock fractures", *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 26, No. 3, pp. 269-281, 2008.
80. Kulatilake, P.H.S.W., Um, J., Crum, G. and Irvine, G. "Rock Slope Stability Analysis for an area of the Mt. Lemmon Highway, Tucson, Arizona", **Invited Keynote Paper**, Proceedings of the

COBRAMSEG 2008, the XIVth Brazilian Congress on Soil Mechanics and Geotechnical Engineering, pp. 315-328, Armação de Búzios, Brazil, August 2008.

81. Kulatilake, P.H.S.W. "Recent Developments on Rock Joint Roughness, and Rock Joint and Rock Mass Strength and Deformability", **Invited Keynote Paper**, Proceedings of the ISRM International Symposium 2008, 5th Asian Rock Mechanics Symposium, pp. 119-132, Tehran, Iran, November 24-26, 2008.
82. Kulatilake, P.H.S.W. "Case Studies on Open Pit Mine Rock Slope Stability and Estimation of Strength and Deformability in Three-Dimensions for a Jointed Rock Mass Located at a depth of 485m Underground", **Invited Plenary Lecture Abstract**, Proceedings of the Geomin 2009 Conference, Antofagasta, Chile, June 10-12, 2009.
83. Kulatilake, P.H.S.W. "Tensorial Approach to Rock Mass Strength and Deformability Estimations in Three Dimensions", **Invited Keynote Paper**, Proceedings of the 9th International Conference on Analysis of Discontinuous Deformation, pp. 59-72, Singapore, November 25-27, 2009.
84. Kulatilake, P.H.S.W. (**Guest Editor**) "Special Issue on Sri Lankan Geotechnical Society's First International Conference on Soil & Rock Engineering", Int. Jour. of Geotechnical and Geological Engineering, Vol. 28, No. 3, 2010.
85. Kulatilake, P.H.S.W., Qiong Wu, Hudaverdi, T. and Kuzu, C. "Mean Particle Size Prediction in Rock Blast Fragmentation Using Neural Networks". Int. Jour. of Engineering Geology, Vol. 114, pp. 298-311, 2010.
86. Hudaverdi, T., Kulatilake, P.H.S.W. and Kuzu, C. "Prediction of Blast Fragmentation Using Multivariate Analysis Procedures", Int. Jour. for Numerical and Analytical Methods in Geomechanics, Vol. 35 (12), pp. 1318-1333, 2011.
87. Qiong Wu, Kulatilake, P.H.S.W. and Tang Hui-ming "Comparison of Rock Discontinuity Mean Trace Length and Density Estimation Methods Using Discontinuity Data from an Outcrop in Wenchuan Area, China". Int. Journal of Computers and Geotechnics, Vol. 38, pp. 258-268, 2011.
88. Kulatilake, P.H.S.W., Qiong Wu, and Hudaverdi, T., "New Prediction Models for Mean particle size in rock blast fragmentation" **Invited Keynote Paper**, Proceedings of the Symposium on "Explosives & Blasting Techniques for Mining, Quarrying & Infrastructure Industry", Mangalore, India, Feb. 2011.
89. Kulatilake, P.H.S.W., Wang, L., Tang, H. and Liang, Y. "Evaluation of Rock Slope Stability for Yujian River Dam Site by Kinematic and Block Theory Analyses". Int. Jour. of Computers and Geotechnics, Vol. 38, pp. 846-860, 2011.
90. Xu, N., Tian, H., Kulatilake, P.H.S.W. and Duan, Q. "Building a three-dimensional sealed geological model to use in numerical stress analysis software: a case study for a dam site". Int. Jour. of Computers and Geotechnics, Vol. 38, pp. 1022-1030, 2011.
91. Wang, L., Kulatilake, P.H.S.W., Tang, H. and Liang, Y. "Kinematic analyses of sliding and toppling failure of double-free face rock mass slopes". Rock and Soil Mechanics". Vol. 32 (1), pp. 72-77, 2011.
92. Kulatilake, P.H.S.W. and Wu, Q. "A procedure to investigate the stability of large underground rock masses in 3-D including a case study". **Invited Keynote Paper** at the Third Indian Rock Conference, Roorkee, India, Oct. 13-15, 2011.
93. Kulatilake, P.H.S.W. "Stochastic fracture geometry modeling in 3-D including validations and estimation of REV size and three-dimensional hydraulic conductivity tensor for a fractured rock mass

through discrete fracture fluid flow modeling”, **Invited Keynote Paper** at the 2nd Annual World Congress on Hydraulic Fracturing & Acidizing, Dalian, China, October 19-21, 2011.

94. Zhengxing Yu, Pinnaduwa H.S.W. Kulatilake, Fuxing Jiang. “Study on the effect of tunnel shape and support system on tunnel stability in a deep coal mine in China”. *Geotechnical and Geological Engineering*, Vol. 30(2), pp. 383-394, 2012.
95. Wang, L., Kulatilake, P.H.S.W., Tang, H., and Liang, Y. “Rock slope stability study for Yujian River dam site based on kinematic analyses”. *Advanced Material Research Vols. 446-449*, pp. 2048-2055, 2012.
96. Zhang, Z.X., Xu, Y., Kulatilake, P.H.S.W. and Huang, X. “Failure modes and mechanisms of stratified rock masses during underground excavation”. *International Journal of Rock Mechanics and Mining Sciences*, Vol. 49, pp. 134-147, 2012.
97. Kulatilake, P.H.S.W., Qiong Wu, and Hudaverdi, T., “New Prediction Models for Mean particle size in rock blast fragmentation”. *Geotechnical and Geological Engineering*, Vol. 30, No. 3, pp. 665-684, 2012.
98. Kulatilake, P.H.S.W. (Guest Editor) “Preface - Special Issue on Selected Topics in Rock Mechanics and Rock Engineering”, *Int. Jour. of Geotechnical and Geological Engineering*, Vol. 30, No. 3, pp. 523-524, 2012.
99. Wu, Q. and Kulatilake, P.H.S.W. “REV and its properties on fracture system and mechanical properties, and an orthotropic constitutive model for a jointed rock mass in a dam site in China”. *Int. Jour. of Computers and Geotechnics*, Vol. 43, pp. 124-142, 2012.
100. Wu, Q., and Kulatilake, P.H.S.W. “Application of equivalent continuum and discontinuum stress analyses in three-dimensions to investigate the stability of a rock tunnel in a dam site in China”. *Int. Jour. of Computers and Geotechnics*, Vol. 46, pp. 48-68, 2012.
101. Kulatilake, P.H.S.W., Yu, Z. and Jiang, F. “Stability investigations of a tunnel in a deep coal mine in China”, **Invited Keynote Paper, Proceedings of the 18th Coal Congress of Turkey**, Zonguldak, Turkey, pp. 45-62, June 2012.
102. Kulatilake, P.H.S.W., and Wu, Q. “Influence of rock mass fracture system on REV and equivalent continuum behavior and stability of a tunnel – a case study”. **Invited Keynote Lecture** at the 34th International Geological Congress, Brisbane, Australia, August 2012.
103. Wang, Xin, Kulatilake, P.H.S.W. and Song, Wei-dong “Stability investigations around a mine tunnel through three-dimensional discontinuum and continuum stress analyses”. *Tunneling and Underground Space Technology Journal*, Vol. 32, pp. 98-112, 2012.
104. Xu, N., Kulatilake, P.H.S.W., Tian, H., Wu, X., Nan, Y. and Wei, T. “Surface subsidence prediction of WUTONG Mine by 3-D finite difference method”, *Int. Jour. of Computers and Geotechnics*, Vol. 48, pp.134-145, 2013.
105. Kulatilake, P.H.S.W. “Three-dimensional discontinuum and continuum stress analyses to study the stability of a mine tunnel”. **Invited Plenary Lecture at 2013 Geomin Conference**, Santiago, Chile, July 2013.
106. Kulatilake, P.H.S.W., Wu, Qiong, Yu, Zheng-xing and Jiang, Fu-xing. “Investigation of stability of a tunnel in a deep coal mine in China”, *International Journal of Mining Science and Technology*, Vol. 23, pp. 579-589, 2013.

107. Kulatilake, P.H.S.W., Hudaverdi, T. and Wu, Q. "New Median particle size prediction models for rock blast fragmentation". **Invited Keynote Paper**, Proceedings of the Symposium on "Explosives & Blasting Techniques for Mining, Quarrying & Infrastructure Industry", Mangalore, India, Sep. 2013.
108. Kulatilake, P.H.S.W., and Wu, Q. 'REV and equivalent continuum/discontinuum 3-D stability analyses of a tunnel'. Proceedings of the 3rd International FLAC-DEM Symposium, China, October 2013. **Paper received a Peter Cundall Award.**
109. Kulatilake, P.H.S.W., and Wu, Q. "Development of an orthotropic constitutive model for a jointed rock mass and equivalent continuum/discontinuum 3-D stability analyses of a tunnel". **Invited Lecture** at UTRE Workshop, Singapore, November 2013.
110. Tan, W., Kulatilake, P.H.S.W. and Sun, H. "Influence of an inclined rock stratum on in-situ stress state in an open-pit mine", International Journal of Geotechnical and Geological Engineering, Published online, DOI: 10.1007/s10706-013-9689-4, Vol. 32 (1), pp. 31-42, 2014.
111. Yunfeng Ge, Kulatilake, P.H.S.W., Huiming Tang and Chengren Xiong. "Investigation of natural rock joint roughness", International Jour. of Computers and Geotechnics, DOI: 10.1016/j.comgeo.2013.09.015, Vol. 55, pp.290-305, 2014.
112. Kulatilake, P.H.S.W. "Case Studies on rock mass stability around underground excavations in soft rock", **Invited Keynote Lecture**, 2014 ISRM Conference on Soft Rocks, June 6-7, Beijing, China. The Conference Committee covered all the expenses.
113. Zheng, J., Kulatilake, P.H.S.W., Shu, B., Sherizadeh, T. and Deng, J. "Probabilistic block theory analysis for a rock slope at an open pit mine in the USA", International Jour. of Computers and Geotechnics, DOI: 10.1016/j.compgeo.2014.06.002, Vol. 61, pp. 254-265, 2014.
114. Kulatilake, P.H.S.W., and Ge, Y. "Investigation of stability of the critical rock blocks that initiated the Jiweishan landslide in China", International Journal of Geotechnical and Geological Engineering, DOI: 10.1007/s10706-014-9806-z, Vol. 32(5), pp. 1291-1315, 2014.
115. Kulatilake, P.H.S.W. "Roof stability investigations in three dimensions for a room and Pillar coal mine in the USA", **Invited Keynote Lecture**, Chinese International Conference on Ground Control in Mining, October 24-25, 2014, Beijing, China.
116. Tan Wenhui, Kulatilake, P.H.S.W., Sun, Hongbao, Sun, Zhonghua, "Effect of faults on in-situ stress state in an open-pit mine", Electronic Journal of Geotechnical Engineering, vol. 19, pp. 9597-9629, 2014.
117. Fan Xiang, Kulatilake PHSW, Chen Xin, Cao Ping. Crack initiation stress and strain of jointed rock containing multi-cracks under uniaxial compressive loading: A particle flow code approach. Journal of Central South University. Vol. 22(2), pp. 638-645, 2015.
118. Zheng, J., Kulatilake, P.H.S.W. and Deng, J. "Development of a probabilistic block theory analysis procedure and its application to a rock slope at a hydropower station in China", Engineering Geology Journal, Vol. 190, pp. 1-16, 2015.
119. Xiang Fan, Kulatilake, P.H.S.W., and Xin Chen, "Mechanical behavior of rock-like jointed blocks with multi-non-persistent joints under uniaxial loading: a particle mechanics approach", Engineering Geology Journal, Vol. 190, pp. 17-32, 2015.

120. Chen, Wenling and Kulatilake, P.H.S.W., "Creep behavior modeling of a marble under uniaxial compression", *Geotechnical and Geological Engineering*, Vol. 33(5), pp. 1183-1191, 2015.
121. Yang, Xuxu, Kulatilake, P.H.S.W., Jing, Hongwen and Yang, Shengqi, "Numerical simulation of a jointed rock block mechanical behavior adjacent to an underground excavation and comparison with physical model test results", *Tunnelling and Underground Space Technology*, Vol. 50 (6). pp. 129-142, 2015.
122. Kulatilake, P.H.S.W., "3-D discontinuum numerical modeling of subsidence due to ore extraction and backfilling operations in an underground iron mine in China", **Invited Keynote Lecture** at the China Ground Control Conference, 2015, Jiaozuo, China, Oct. 16-18.
123. Kulatilake, P.H.S.W., "Probabilistic block theory analysis for a rock slope at an open-pit mine in the USA", **Invited Keynote Lecture** at the 12th ICADD Conference, 2015, Wuhan, China, Oct. 19.
124. Kulatilake, P.H.S.W., "Required data and computational techniques to investigate deformation and stability of rock masses in underground and surface mine excavations in three dimensions", **Invited Keynote Lecture** at the Int. Conference on Mining & Metallurgical Engineering, CMME 2015, Suzhou, China, Oct. 23-25.
125. Kulatilake, P.H.S.W. and Shu, B., "Prediction of Rock Mass Deformations in Three Dimensions for a Part of an Open Pit Mine and Comparison with Field Deformation Monitoring Data", *International Journal of Geotechnical and Geological Engineering*, Vol. 33, pp. 1551-1568, 2015.
126. Zheng J, Kulatilake PHSW, Deng J, Wei J. "A monte Carlo simulation for discontinuity orientations using bivariate empirical distribution". *Chinese Journal of Rock Mechanics and Engineering*, 34: 3922-3929, 2015.
127. Zheng J., Kulatilake, P.H.S.W., Deng, J. and Wei J., "Development of a probabilistic kinematic wedge sliding analysis procedure and application to a rock slope at a hydropower site in China", *Bulletin of Engineering Geology and the Environment*, 75(4), 1413-1428, 2016.
128. Shreedharan, S. and Kulatilake, P.H.S.W., "Discontinuum-equivalent continuum analysis of the stability of tunnels in a deep coal mine using the distinct element method", *Rock Mechanics and Rock Engineering Journal*, 49(5):1903-1922, 2016.
129. Kulatilake, P.H.S.W., Shreedharan, S., Sherizadeh, T., Shu, B., Xing, Y. and He, P., "Laboratory Estimation of Rock Joint Stiffness and Frictional Parameters", *International Journal of Geotechnical and Geological Engineering*, 34:1723-1735, DOI 10.1007/s10706-016-9984-y, 2016.
130. Kulatilake, P.H.S.W., and Yang, Xu-xu, "*PFC3D* modeling of a jointed rock block behavior near an underground excavation and comparison with physical model test results", *Proceedings of the 4th Itasca Conference*, Lima, Peru, March 2016. **Paper selected for Peter Cundall Award and Invited Keynote Lecture.**
131. Ni, Xiaoyan, Kulatilake, P.H.S.W., Chen, Zhanqing, Gong, Peng and Kong, Hailing, "Experimental investigation of possible Non-Darcy flow in sandstone", *International Journal of Geotechnical and Geological Engineering*, 34:1835-1846, DOI 10.1007/s10706-016-9992-y, 2016.
132. Mehranpour, M. H. and Kulatilake, P.H.S.W., "Comparison of six major intact rock criteria using a particle flow approach under true triaxial stress conditions", *International Journal of Geomechanics and Geophysics for Geo-energy and Geo-Resources*, 2:203-229, 2016.

133. Sherizadeh, T. and Kulatilake, P.H.S.W., "Assessment of roof stability in a room and pillar coal mine in the U.S. using three-dimensional distinct element method", *Tunneling and Underground Space Technology Journal*, 59: 24-37, 2016.
134. He, Peng-fei, Kulatilake, P.H.S.W., Yang, Xuxu, Liu, Dong-qiao, He, Man-chao and Chen, Xin, "A procedure to detect, construct, quantify, numerically simulate and validate fracture networks in coal blocks", *International Journal of Geomechanics and Geophysics for Geo-Energy and Geo-Resources*, 2(4): 257-274, DOI: 10.1007/s40948-016-0035-1, 2016.
135. Zhongjie Fan, P.H.S.W. Kulatilake, Jianbing Peng and Wenyue Che, "In-flight excavation of a Loess Slope in a Centrifuge model test", *International Journal of Geotechnical and Geological Engineering*, 34: 1577-1591, DOI:10.1007/s10706-016-0067-x, 2016.
136. Yang, X. X., Kulatilake, P.H.S.W., Chen, X., Jing, H.W. and Yang, S.Q., "Particle flow modeling of rock blocks with non-persistent open joints under uniaxial compression", *International Journal of Geomechanics*, 16(6): 04016020, DOI: 10.1061/(ASCE)GM.1943-5622.0000649, 2016.
137. Kulatilake, P.H.S.W., "Stability of tunnels and rock support performance in a deep coal mine in China using 3-D discontinuum stress analysis" **Invited Keynote Lecture at the Chinese Ground Control Conference, Liaoning, China, September 17-19, 2016.**
138. Kulatilake, P.H.S.W., "A new 3-D coal mass strength criterion", **Invited Keynote Lecture at the International Conference on Geomechanics, Geo-energy and Geo-resources – September 28 – 29, 2016, Melbourne, Australia.**
139. Kulatilake, P.H.S.W. "Recent developments on rock mass stability associated with surface and underground excavations in three dimensions". **Invited Keynote Lecture at the 9th Asian Rock Mechanics Conference, Bali, Indonesia, October 18-20, 2016.**
140. Kulatilake, P.H.S.W., "Physical, empirical and numerical modeling of jointed rock mass strength", **Invited Book Chapter** in *Rock Mechanics and Engineering* multi-volume book, **Edited by Xia-ting Feng and John Hudson**, CRC Press, Balkema, Taylor and Francis Group, 2016.
141. Xing, Yan, Kulatilake, P.H.S.W. and Sandbak, L.A., "Rock mass stability investigation around tunnels in an underground mine in the USA", *International Journal of Geotechnical and Geological Engineering*, 35:45-67, 2017.
142. Zheng, Jun and Kulatilake, P.H.S.W., "An improved probabilistic kinematic analysis procedure based on finite-size joints and its application to a rock slope at an open-pit mine in the USA", *International Journal of Geomechanics*, 17(2): 04016052, DOI: 10.1061/(ASCE)GM.1943-5622.0000721, 2017.
143. He, Peng-fei, Kulatilake, P.H.S.W., Liu, Dong-qiao and He, Man-chao, "Development of a new 3-D coal mass strength criterion", *International Journal of Geomechanics*, 17(3): 04016067, DOI: 10.1061/(ASCE)GM.1943-5622.0000741.2017.
144. Huang, Gang, Kulatilake, P.H.S.W., Cai, Sijing and Song, Hongqing, "3-D discontinuum numerical modeling of subsidence due to ore extraction and backfilling operations in an underground iron mine in China", *Int J Min Sci and Tech* 27:191–201, 2017.
145. Mehranpour, H.M., and Kulatilake, P.H.S.W., "Improvements for smooth joint contact model of the particle flow code and its applications", *Computers and Geotechnics*, 87:163-177, July 2017.
146. He, Peng-fei, Kulatilake, P.H.S.W., Yang, Xuxu, Liu, Dong-qiao and He, Man-chao, "Elaborative comparison of nine intact rock strength criteria using polyaxial intact coal strength data obtained

through PFC3D simulations", Acta Geotechnica International Journal 13(2):419-445, DOI: 10.1007/s11440-017-0566-9, 2018.

147. Kulatilake, P.H.S.W. "Recent developments on rock mass stability around underground excavations in three dimensions". **Invited Keynote Lecture at the 13th International Conference on Analysis of Discontinuous Deformation, Tianjin, China, December 8-10, 2017**. I was not able to attend this conference and deliver my keynote lecture due to a family matter.
148. Yan Xing, P.H.S.W. Kulatilake and L.A. Sandbak, "Investigation of rock mass stability around the tunnels in an underground mine in the USA using three-dimensional discontinuum numerical modeling", Rock Mechanics and Rock Engineering Journal. 51(2) 579-597, 2018.
149. Menglong Dong, P.H.S.W. Kulatilake, Faming Zhang, "Deformation Investigations in 3-D of an excavated rock slope in a hydroelectric power station in China", Computers and Geotechnics Journal, 96:132-149, 2018.
150. Yan Xing, P.H.S.W. Kulatilake and L.A. Sandbak, "Effect of rock mass and discontinuity mechanical properties and delayed rock supporting on tunnel stability in an underground mine in the USA", Engineering Geology Journal. 238:62-75, 2018.
151. Huilin Le, Shaorui Sun, Pinnaduwa Kulatilake. Jihong Wei, "Effect of grout on mechanical properties and cracking behavior of rock by comparing rock-like specimens containing single grout-infilled and unfilled flaw under uniaxial compression", Int. J. Geomech. doi:10.1061/(ASCE)GM.1943-5622.0001225, 18(10) 2018.
152. Mehranpour, M.H., Kulatilake, P.H.S.W., Xingen, M. and He, M. "Development of new three-dimensional rock mass strength criteria", Rock Mechanics and Rock Engineering Journal, 51(11):3537-3561 [https://doi.org/ 10.1007/s00603-018-1538-6](https://doi.org/10.1007/s00603-018-1538-6), 2018.
153. Yang, Xu-xu and Kulatilake, P.H.S.W. "Effect of Joint Micro Mechanical Parameters on a Jointed Rock Block Behavior Adjacent to an Underground Excavation: A Particle Flow Approach", Geotechnical and Geological Engineering, 37(1):431-453, DOI:10.1007/s10706-018-0621-9, 2018.
154. Kulatilake, P.H.S.W. "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions". **Invited Keynote Lecture at the First International Conference on Advances in Rock Mechanics (Tuni Rock), Hammamet, Tunisia, March 29-31, 2018**.
155. Kulatilake, P.H.S.W. "Several case histories on rock mass stability investigations in underground excavations in three dimensions". **Invited Keynote Lecture at the 8th Int'l Conference on Geology and Geophysics (ICGG 2018), which was held on June 1-3, 2018 in Chengdu, China**.
156. Kulatilake, P.H.S.W. "Development of a new rock mass strength criterion in three dimensions". **Invited Keynote Lecture at the First Conference on the Arabian Journal of Geosciences, Hammamet, Tunisia, November 12-15, 2018**.
157. Xiaobo Zhang, Qinghui Jiang, Pinnaduwa Kulatilake, Feng Xiong, Chi Yao, Zhi Cheng Tang, "Asperity Degradation and Mechanical Properties of Rock Joints with Regular Profiles under Direct Shear Test", International Journal of Geomechanics, [https://doi.org/10.1061/\(ASCE\)GM.1943-5622.0001347](https://doi.org/10.1061/(ASCE)GM.1943-5622.0001347), 2019: 19(2).
158. Yan Xing, P.H.S.W. Kulatilake and L.A. Sandbak, "Stability assessment and support design for underground tunnels located in complex geologies and subjected to engineering activities: a case

- study", International Journal of Geomechanics, 19(5): 05019004, DOI: 10.1061/(ASCE)GM.1943-5622.0001402, 2019.
159. Yang, Xu-xu and Kulatilake, P.H.S.W. "Laboratory investigation of mechanical behavior of granite samples containing discontinuous joints through direct shear tests", Arabian Journal of Geo-Sciences, <https://doi.org/10.1007/s12517-019-4278-3>, 2019 12:79.
 160. Wu, Hao, Zhao, Guoyan, Kulatilake, P.H.S.W. Liang, Weizhang and Wang, Enjie. "Fracturing behaviour of sandstone specimens with a cavity formed by intersecting excavations under compression: Experimental study and numerical modelling", Wiley Strain, DOI:10.1111str.12316, 2019.
 161. Kulatilake, P.H.S.W. "Prediction of rock mass deformations in three dimensions for a part of an open-pit mine and comparison with field deformations". **Invited Keynote Lecture at the International Symposium on Geology and Geophysics, Kunming, China, June 1-3, 2019.**
 162. Hao Wu, Pinnaduwa Kulatilake, Guoyan Zhao, Weizhang Liang, and Enjie Wang, "A comprehensive study of fracture evolution of brittle rock containing an inverted U-shaped cavity under uniaxial compression", Computers and Geotechnics, 116:103219, 2019.
 163. Kulatilake, P.H.S.W. " Stability of Underground Excavations and Effects of Rock Supports In a Deep Coal Mine Using the Three-Dimensional Distinct Element Method". **Invited Keynote Lecture at the 38th International Ground Control Conference in Mining, Taiyuan, China, October 11-14, 2019.**
 164. Kulatilake, P.H.S.W. "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions". **Invited Keynote Lecture at the 2nd Shaoxin International Forum on Rock Mechanics and Engineering Geology, Shaoxin, China, October 19-20, 2019.**
 165. Hao Wu, Pinnaduwa Kulatilake, Guoyan Zhao, Weizhang Liang, "Stress distribution and fracture evolution around a trapezoidal cavity in sandstone loaded in compression". Theoretical and Applied Fracture Mechanics, 104, 2019, 102348.
 166. Kulatilake, P.H.S.W. "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions". **Invited Keynote Lecture at the International Symposium on Rock Mechanics and Engineering, Hanoi, Vietnam, November 22-24, 2019.**
 167. Kulatilake, P.H.S.W. "Rock mass stability and support assessment for underground tunnels located in complex geologies and subjected to engineering activities: a case study". **Invited Keynote Lecture at the International Symposium on Sustainable Mining and Mineral Processing Technology, Wuhan, China, December 6-8, 2019.**
 168. Huilin Le, Shaorui Sun, Pinnaduwa Kulatilake. Jihong Wei, "Strength and Failure Pattern of Rock-Like Specimens with Single Unfilled flaw and Grout-infilled Flaw of Different Inclination Angles and Thicknesses", Arabian Journal of Geosciences, 2019, 12: 670. <https://doi.org/10.1007/s12517-019-4860-8>.
 169. Yan Xing, Pinnaduwa H.S.W. Kulatilake and Luis A. Sandbak, "Rock Mass Stability Around Underground Excavations in a Mine: A Case Study" A Book published by CRC Press/Balkema, Taylor & Francis Group, London, UK, DOI: <https://doi.org/10.1201/9780429343230>, 2020.
 170. Rui-Xuan Tang, Kulatilake, P.H.S.W., E-Chuan Yan and Jing-Sen Cai, "Evaluating Landslide susceptibility based on cluster analysis, probabilistic methods and artificial neural networks", Bulletin

- of Engineering Geology and the Environment, **19:2235-2254**, DOI: **10.1007/s10064-019-01684-y**, 2020.
171. Rui Wu, P.H.S.W. Kulatilake, Hao Luo, Kui Zhao, "Construction of key bearing layer and secondary mining technology in destroyed areas of small coal mines", Rock Mechanics and Rock Engineering, <https://doi.org/10.1007/s00603-019-02001-5>, 2020.
 172. Qiuxiang Huang, Xiangtao Xu, P.H.S.W. Kulatilake, Feng Lin, "Understanding formation mechanism of a rainfall triggered landslide in southwest China", Journal of Mountain Science, 17(5):1128-1142, <https://doi.org/10.1007/s11629-019-5736-9>, 2020.
 173. Pinnaduwa H. S. W. Kulatilake, Jinyong Park, Xiao-peng Su, "Fluid Flow through Natural Single Rock Fractures: Experimental and Numerical Investigations", International Journal of Geomechanics, 20(10), DOI: 10.1061/(ASCE)GM.1943-5622.0001790, October 2020.
 174. Kulatilake, P.H.S.W., Stability Investigations of Tunnels in a Coal Mine in China Through 3-D Discontinuum Numerical Modeling and Field Deformation Monitoring Data". **Invited Keynote Lecture at the China Rocks, October 26, 2020. Due to the bad Covid situation in the world, the lecture was presented through a video.**
 175. Jiong Wei, Jingren Zhou, Jae-Joon Song, Yulong Chen, Pinnaduwa H.S.W. Kulatilake, Guanglei Cui, Estimation of tensile strength and modulus of rock simultaneously considering tension-compression anisotropy of modulus. International Journal of Geomechanics and Engineering, 24(4):349-358, DOI: <https://doi.org/10.12989/gae.2021.24.4.349>, 2021.
 176. Truong Thanh Phi, Pinnaduwa H.S.W. Kulatilake, Mawuko Luke Yaw Ankah, Desmond Talamwin Sunkpal, Xiaokang Zhao, Ha Viet Nguyen, Tung Duc Van, "Rock mass statistical homogeneity investigation along a highway corridor in Vietnam". Engineering Geology 289, 2021, 106176.
 177. Pinnaduwa H.S.W. Kulatilake, Shi-Gui Du, Mawuko Luke Yaw Ankah, Rui Yong, Desmond Talamwin Sunkpal, Xiaokang Zhao, Guang-Jiang Liu, and Rui Wu, "Investigation of Non-Stationarity, Heterogeneity, Scale Effects, and Anisotropy on Natural Rock Joint Roughness Using the Variogram Method", Bulletin of Engineering Geology and Environment, 80(8):6121-6143, DOI **10.1007/s10064-021-02321-3**, June 2021.
 178. Kulatilake, P.H.S.W. " Rock mass Stability Investigations Around Tunnels in 3-D in an Underground Mine in the USA ". **Keynote Lecture at the International Symposium on Geology and Geophysics, Guilin, China, June 1-3, 2021. Due to the bad Covid situation in the world, the lecture was presented through a video.**
 179. Rui Wu, Pengui Zhang, Pinnaduwa H.S.W. Kulatilake, Hao Luo and Qingyuan He "Stress and deformation analysis of the gob-side pre-backfill driving procedure of longwall mining: a case study". International Journal of Coal Sciences and Technology, DOI: 10.1007/s40789-021-00460-2, August 2021.
 180. Kulatilake, P.H.S.W. 3-D Rock Mass Strength Criteria—A Review of the Current Status. Geotechnics 1(1):128–146, <https://doi.org/10.3390/geotechnics1010007>, 2021.
 181. Amin Manouchehrian and Pinnaduwa H.S.W. Kulatilake, "Analysis of stress and failure in rock specimens with closed and open flaws on the surface", Frontiers of Structural and Civil Engineering Journal, <https://doi.org/10.1007/s11709-021-0773-1>, 15(5), 2021.

182. Amin Manouchehrian, Pinnaduwa H.S.W. Kulatilake and Rui Wu, "Failure mechanism of rock specimens with a notched hole under compression - A numerical study". Appl. Sci. 2021, 11, 7797. <https://doi.org/10.3390/app11177797>.
183. Brendan C. O'Kelly, Pinnaduwa H. S. W. Kulatilake and George E. Mylonakis "Welcome to a New Open Access Journal for A Growing Multidisciplinary Community". Editorial for the First Issue of the Geotechnics Journal. *Geotechnics* 2021, 1(1), 216-218; [doi:10.3390/geotechnics1010011](https://doi.org/10.3390/geotechnics1010011), September 2021.
184. Kulatilake, P.H.S.W. "A Case Study on Stability and Rock Support Assessment for a Complex Underground Mine in the USA". **Invited Keynote Lecture at the International Conference on Geotechnical Challenges in Mining, Tunnelling & Underground Infrastructure (ICGMTU-2021), India, December 20-21, 2021. Due to the bad Covid situation in the world, the lecture was presented through a video.**
185. Amin Manouchehrian, Pinnaduwa H.S.W. Kulatilake and Rui Wu "Strainburst control in deep tunnels using a slotted excavation method", *International Journal of Geomechanics*, DOI:10.1061 (ASCE) GM.1943-5622.0002343, January 2022.
186. Pinnaduwa H.S.W. Kulatilake, "Editorial: A vision for the future of the journal", *Geotechnical and Geological Engineering Journal*, 40(1), 1-2, January 2022.
187. Mawuko Luke Yaw Ankah, Pinnaduwa H.S.W. Kulatilake, TruongThanh Phi, Desmond Talamwin Sunkpal, Xiaokang Zhao, LeMinh Nguyen, Rui Wu, "Investigation of rock mass statistical homogeneity in two islands in Vietnam", *International Journal of Geomechanics and Geophysics for Geo-Energy and Geo-Resources*, 8(3), 98. <https://doi.org/10.1007/s40948-022-00414-1>, 2022.
188. Mawuko Luke Yaw Ankah, Desmond Talamwin Sunkpal, Xiaokang Zhao and Pinnaduwa H.S.W. Kulatilake, "Role of heterogeneity on joint size effect, and influence of anisotropy and sampling interval on rock joint roughness quantification", *International Journal of Geomechanics and Geophysics for Geo-Energy and Geo-Resources*, 8(3), 101. <https://doi.org/10.1007/s40948-022-00413-2>, 2022.
189. Amin Manouchehrian and Pinnaduwa H.S.W. Kulatilake, "Numerical study on rock failure around a tunnel distressed by a conceptualized notched technique", *Underground Space Journal*, 7(6), 1086-1097, December 2022.
190. Ankah, M.L.Y, Kulatilake, P.H.S.W., Sunkpal, D.T., Zhao, X., (2022), Rock joint roughness quantification using 2-D and 3-D fractal methods. *Fractals Journal*, 30(7), 2250130. <https://doi.org/10.1142/S0218348X22501304>.
191. Kulatilake, P.H.S.W. "Recent Developments on Rock Joint Roughness". **Keynote Lecture at the International Symposium on Geology and Geophysics, Xian, China, May 31 - June 1, 2022. Due to the bad Covid situation in the world, the lecture was presented through a video.**
192. Kulatilake, P.H.S.W. " A Case Study on Stability and Rock Support Assessment for a Complex Underground Mine in the USA ". **Invited Keynote Lecture delivered at ARMS12, Hanoi, Vietnam, November 22-26, 2022.**
193. Zhang, B., Li, W., Zheng J., Kulatilake, P.H.S.W., Lu, Q., Duan, Y. (2023). "A numerical simulation procedure for evaluating the accuracy of 3-dimensional photogrammetric models and its application to geometric parameters of discontinuities in rock masses", *The Journal of Physics and Chemistry of the Earth*, 129, DOI: [10.1016/j.pce.2023.103364](https://doi.org/10.1016/j.pce.2023.103364), February 2023.

194. Kulatilake, P.H.S.W., Ankah, M.L.Y. (2023). "Rock joint roughness measurement and quantification – A review of the current status", *Geotechnics*, 2023, 3(2), 116-141. <https://doi.org/10.3390/geotechnics3020008>.
195. Huang Qiuxiang, Wang Jialin, Kulatilake P.H.S.W., Guo Haofeng, Shen Jipeng (2023). "Interpreting the formation mechanism of a complex landslide: a case study of a reactivated landslide of a reinforced embankment slope", *Bulletin of Engineering Geology and the Environment*, Vol. 82, article number 472 (2023).
- 196. Kulatilake, P.H.S.W. "Rock Slope Stability Comparison between Deterministic and Probabilistic Block Theory Analyses for an Open Pit Mine in the USA". *Keynote Lecture delivered at the 4th Badong International Geohazards Symposium, Badong, China, August 25-27, 2023.***
197. Kulatilake, P.H.S.W. "A Case Study on Stability and Rock Support Assessment for a Complex Underground Mine in the USA". **Keynote Lecture delivered at the 10th Asian Mining Congress, Kolkata, India, November 6-9, 2023.**
198. Guo, J.W., Yang, X.X., Kulatilake, P.H.S.W., Li, W.T., Xue, H.Y. (2024). "Development of a shear strength model for a rock mass containing a complex fracture system based on direct shear tests: a case study", *Bulletin of Engineering Geology and the Environment* 83 (1), article 34 (2024), <https://doi.org/10.1007/s10064-023-03533-5>.
199. Ge, Y., Wen, Z., Kulatilake, P.H.S.W., Liu, G. and Tang, H. (2025) "A peak shear strength criterion based on brightness area percentage", *International Journal of Geomechanics*, Vol. 25(6) <https://doi.org/10.1061/IJGNAL.GMENG-10693>.
200. Xue, H.Y., Yang, X.X., Kulatilake, P.H.S.W., Qu, G.L. (2024). "Influence of rock bolt reinforcement on shear behaviour of a nonpersistent joint plane", submitted for review and possible publication in an International Journal.

RESEARCH FUNDING DURING THE LAST 10 years:

Rock slope stability investigation in Jiangxi Province-Sole PI- RMB 50,000, Jiangxi Provincial Department of Science & Technology, January 2021-May 2022.

National and Jiangxi Province Distinguished Foreign Expert 1000 Talent Program Funding-Sole Recipient-RMB 8 million (approx.: US\$ 1.25 million), May 2019-May 2022.

Multiscale characterization of variability in jointed rock mass mechanical properties and its influence on the reliability assessment of underground excavations – PI: Dr. Lu Qing, Zhejiang University, China; RMB 610,000, Foreign Investigator: P. H. S. W. Kulatilake, Chinese Natural Science Research Council, January 2018 to December 2021. Grant No.: 41772287.

Study on multiple scale damage mechanism in large deformation failure of surrounding soft rock masses of deep coal mine tunnels—PI: Dr. Xin Chen from CUMTB, China; Approx. RMB 600,000, Foreign Investigator: P. H. S. W. Kulatilake, Chinese Natural Science Research Council, January 2016 to December 2019. Project No.: 11572344.

Development of a New Rock Mass Strength Criterion for Rock Masses having non-orthogonal Fracture Systems—Sole PI—RMB 50,000, State Key Laboratory for Geomechanics and Deep Underground Engineering, China University of Mining & Technology, Beijing, China, January 2017 to December 2018. Project No. SKLGDUEK 1720.

Development of Strength Criteria for Coal and Non-Sedimentary Rock Masses and Investigation of Underground and Open-Pit Mine Stability of Such Rock Masses- Sole PI, US\$ 1.25 Million, US NIOSH-CDC, September 1, 2011 to August 31, 2016 (balance money was used to support research and graduate students until the latter part of 2018).

Development of a New Coal Mass Strength Criterion-Sole PI, 120,000 RMB (Approx: US\$ 19,670), State Key Laboratory for Geomechanics and Deep Underground Engineering, China University of Mining & Technology, Beijing, China, January 1, 2015 to December 31, 2016. Project No.: SKLGDUEK1416.

Study on Geometrical Measurement of Joint Network and Anisotropic Strength Criterion of Jointed Rock Masses—PI: Dr. Xin Chen from CUMTB, China; Approx. US\$ 40,000, Foreign Investigator: P. H. S. W. Kulatilake, Chinese Natural Science Research Council, January 2012 to December 2015. Grant No.: 11102224.

High-End Foreign Experts Grant- Sole PI, 70,000 RMB (Approx: US\$ 11,500), State Administration of Foreign Experts Affairs, P.R. China, April 23, 2014 to December 31, 2014.

Previous Research Funding and Some of the Reports Resulted from the Completed Projects:

Research funding was secured from the following granting agencies as the sole Principal Investigator: US National Science Foundation, Petroleum Research fund of American Chemical Society, Metropolitan Water District of Southern California, Phelps Dodge Mining Company, Sandia National Laboratories, Swedish Nuclear Fuel & Waste Management Company, Freeport-McMoRan Mining Company, US Army Engineer Waterways Experiment Station, Exxon Production Research Company, US Bureau of Mines, Arizona Mining and Mineral Resources Research Institute, Agra Earth & Environmental Inc. and the University of Sonora Mexico.

Research funding was secured from the following granting agencies as a Co-Principal Investigator: Swedish Natural Science Research Council, Department of Transportation of Federal Highway Administration, Southwest Research Institute, and Chinese Natural Science Research Council.

A partial list of hard copy Research Reports up to 2005 (After 2005 most of the Research Reports were submitted in electronic form):

1. Wu, T.H., P.H.S.W. Kulatilake, et al., "Stability of Slopes in Shale and Colluvium," Research Report, submitted to Ohio Department of Transportation, and Federal Highway Administration by the Department of Civil Engineering, Ohio State University, 288 p., Dec. 1981.
2. Kulatilake, P.H.S.W., L. Temudom, and R. O. Roko, "Probabilistic Modeling of Discontinuity Orientation in Rocks," Research Report submitted to Arizona Mining and Mineral Resources Research Institute, 70 p., June 1983.
3. Kulatilake, P.H.S.W., "Target Detection Probabilities for Parallel-Line and Continuous Line Search Patterns," Research Report, Submitted to Geotechnical Laboratory, U.S. Army Engineer Waterways Experiment Station, 44 pp., December 1986.
4. Kulatilake, P.H.S.W., "Modeling of Cyclical Stratigraphy Using Markov Chains," Research Report, submitted to Geotechnical Laboratory, U.S. Army Engineer Waterways Experiment Station, 21 p., December 1986.
5. Kulatilake, P.H.S.W. and K.M. Miller, "A Scheme for Estimating the Spatial Variation of Soil Properties in Three Dimensions," Research Report, submitted to Geotechnical Laboratory, U.S. Army Engineer Waterways Experiment Station, 145 p., December 1986.
6. Kulatilake, P.H.S.W. and R. Southworth, "Spatial Variation Modeling of Regularly Spaced Soil Property Data in One Dimension," Research Report, submitted to Geotechnical Laboratory, U.S. Army Engineer Waterways Experiment Station, 146 p., December 1986.

7. Kulatilake, P.H.S.W., "A Methodology to Incorporate the Spatial Variation of Soil Properties in Ground Shock Calculations," Research Report, submitted to Structures Laboratory, U.S. Army Engineer Waterways Experiment Station, 78 p., July 1987.
8. Kulatilake, P.H.S.W., S. Lacasse and M.A. Gabr, "Probabilistic Equivalent Linear Soil Spring Stiffness Analysis for Deepwater Gravity Platforms," Norwegian Geotechnical Institute Report 514160-3, 1989.
9. Guttormsen, T.R., J.M. Keaveny and P.H.S.W. Kulatilake, "Probabilistic Settlement Analysis for Offshore Gravity Platforms", Norwegian Geotechnical Institute Report 514160-7, 1989.
10. Kulatilake, P.H.S.W., and D. Zhang, "Fluid Flow Through Jointed Rock - Preliminary Evaluations" Part 1 submitted to Exxon Production Research Company, Sept. 1991.
11. Kulatilake, P.H.S.W., Y. Jiang and S. Wang, "Fluid Flow Through Jointed Rock - Preliminary Evaluations - Part II", submitted to Exxon Production Research Company, Nov. 1991.
12. Kulatilake, P.H.S.W., "A Methodology to Perform Probabilistic Groundwater Flow Modeling" submitted to U.S. Waterways Experiment Station, Dec. 1991
13. Kulatilake, P.H.S.W., Y. Jiang, and D. Zhang, "Fluid Flow Through Jointed Rock - Preliminary Evaluations - Part III", submitted to Exxon Production Research Company, Jan. 1992.
14. Kulatilake, P.H.S.W., "Fluid Flow Through Jointed Rock-Preliminary Evaluations - Part IV," submitted to Exxon Production Research Company, August 1992.
15. Kulatilake, P.H.S.W., "Fluid Flow Through Jointed Rock - Preliminary Evaluations - Part V," submitted to Exxon Production Research Company, August 1992
16. Kulatilake, P.H.S.W., R.M. Morgan and G. Shou, "Joint Roughness Characterization and the Effect of Roughness on Peak Shear Strength of Rock Joints - Research Initiation", Research Report submitted to U.S. Bureau of Mines, Oct. 1992.
17. Kulatilake, P.H.S.W., et al., "Fracture Network characterization for the permanent ship lock area of the Three Gorges Dam site", Technical Report submitted to Yangtze Water Resources Commission, China, 1994.
18. Kulatilake, P.H.S.W. "Water Quality in the Hydrogeological Basin of San Pedro River," Technical Report submitted to the University of Sonora, Mexico, 1994.
19. Kulatilake, P.H.S.W., et al., "Stochastic discontinuity characterization for the metamorphic rock mass of the Arrowhead East Tunnel site, Inland Feeder Project", Technical Reports Vols. 1&2 submitted to Metropolitan Water District of Southern California, 1998.
20. Kulatilake, P.H.S.W. "Software manual for FRACNTWK- a computer package to model discontinuity geometry in rock masses", submitted to Metropolitan Water District of Southern California, 1998.
21. Kulatilake, P.H.S.W., Wang, M., Panda, B.B. and Um, J., "Stochastic discrete fracture fluid flow numerical modeling and evaluation of groundwater resources for the RV site, Payson, Arizona", Technical Report submitted to AGRA Earth and Environmental Inc., May 1999.
22. Kulatilake, P.H.S.W., Wang, M., and Um, J., "Estimation of REV size and three dimensional (3D) hydraulic conductivity tensor for the metamorphic rock mass of the Arrowhead East Tunnel Site, Inland Feeder project through 3D discrete fracture fluid flow modeling", Technical Report submitted to Metropolitan Water District of Southern California, November 1999.
23. Kulatilake, P.H.S.W. "Joint Roughness Characterization and Development of a New Peak Shear Strength Criterion for Rock Joints", Final Report Submitted to National Science Foundation, Washington, D.C., November 1999.
24. Jeong-gi Um, Morin M. and Kulatilake, P.H.S.W., "Discontinuity characterization and laboratory investigations conducted for the rock around and below the stationary crusher area on the north side of Esperanza pit", Technical Report submitted to Phelps Dodge Sierrita Inc., September 2000.
25. Jeong-gi Um, Morin M. and Kulatilake, P.H.S.W., "Rock slope stability investigations conducted for the rock around and below the stationary crusher area on the north side of Esperanza pit", Technical Report submitted to Phelps Dodge Sierrita Inc., January 2001.
26. Kulatilake, P.H.S.W., "Investigation of Fluid Flow Behavior Through Single Rock Joints", Final Report submitted to Petroleum Research Fund of American Chemical Society, September 2001.
27. Kulatilake, P.H.S.W., and Um, Jeong-Gi, "Fracture network models in three dimensions for four 30m cubes located at a depth region of 400-500m at Äspö Hard Rock Laboratory, Sweden", International Progress Report IPR-02-12, Swedish Nuclear Fuel and Waste Management Co., March 2002.

28. Kulatilake, P.H.S.W., Park, J. and Um, Jeong-Gi, "Estimation of rock mass strength and deformability in three dimensions for four 30m cubes located at a depth region of 400-500m at Äspö HRL", International Progress Report IPR-02-11, Swedish Nuclear Fuel and Waste Management Co., March 2002.
29. Kulatilake, P.H.S.W. "Effect of Finite Size Joints on Strength and Deformability of Rock Masses", Final Report Submitted to National Science Foundation, Washington, D.C., June 2002.
30. Kulatilake, P.H.S.W., Balasingham, P. and Park, J. "Possible Computational Approaches For Regionalized Classification of Volcanic Risk In Japan", Technical Report submitted to Sandia National Laboratories, Albuquerque, New Mexico, December 2003.
31. Kulatilake, P.H.S.W. "Establishing Functional Relations Between Fluid Flow Parameters for Single Rock Joints", Final Report Submitted to National Science Foundation, Washington, D.C., November 2004.
32. Kulatilake, P.H.S.W., Park, J. and Balasingham, P. "Hierarchical Probabilistic Regionalization of Volcanism for Sengan Region in Japan Using Multivariate Statistical Techniques and Geo-Statistical Interpolation Techniques", Technical Report submitted to Sandia National Laboratories, Albuquerque, New Mexico, December 2004. Sandia Report SAND2004-4667. Printed in September 2005.

Editor of Conference Proceedings or Special Issues in Journals:

1. Kulatilake, P.H.S.W., Jayawardena, C.L. and Kanesalingam, B. (Editors) Proceedings of the first SLRMES International Conference on Rock Mechanics for Infrastructure and Geo-resources Development – an ISRM Specialized Conference, December 3-7, 2023, Colombo, Sri Lanka.
2. Kulatilake P. H. S. W. and 6 other editors of the Conference Proceedings on "Recent advances in geo-environmental engineering, geomechanics and geotechnics, and geohazards" - 1st Springer Conference of the Arabian Journal of Geosciences (CAJG-1), Tunisia, November 12-15, 2018.
3. Kulatilake, P.H.S.W. (**Guest Editor**) "Special Issue on Selected Topics in Rock Mechanics and Rock Engineering", Int. Jour. of Geotechnical and Geological Engineering, Vol. 30, No. 3, 2012.
4. Kulatilake, P.H.S.W. (**Guest Editor**) "Special Issue on Sri Lankan Geotechnical Society's First International Conference on Soil & Rock Engineering", Int. Jour. of Geotech. and Geol. Engg., Vol. 28, No. 3, 2010.
5. Kulatilake, P.H.S.W. (**Editor**) "CD Proceedings of the International Conference on Rock Joints and Jointed Rock Masses, Tucson, Arizona, USA, January 4-11, 2009.
6. Kulatilake, P.H.S.W. (**Editor**) "CD Proceedings of the Sri Lankan Geotechnical Society's First International Conference on Soil and Rock Engineering, Colombo, Sri Lanka, August 7-11, 2007.

Papers in Conference and Symposium Proceedings:

1. Kulatilake, P.H.S.W., R.E. Finley and A. Ghosh, "Effect of Variability of Joint Orientation and Strength on Factor of Safety of Wedge Stability," Proceedings of the International Symposium on Fundamentals of Rock Joints, Bjorkliden, Lapland, Sweden, pp. 25-34, September 1985.
2. Kulatilake, P.H.S.W., and S. Ouyang, "Probabilistic Modeling of Shear Strength of Rock Discontinuities Using Direct Shear Test Data," Proceedings of the 27th U.S. Symposium on Rock Mechanics, Tuscaloosa, Alabama, pp. 112-120, June 1986.
3. Kulatilake, P.H.S.W. and T.H. Wu, "Relation Between Discontinuity Size and Trace Length," Proceedings of the 27th U.S. Symposium on Rock Mechanics, Tuscaloosa, Alabama, pp. 130-133, June 1986.

4. Kulatilake, P.H.S.W., and K. Fuenkajorn, "Calculation of Minimum Rock Bolt Force and Minimum Static Acceleration in Tetrahedral Wedge Stability," Proceedings of the International Symposium on Geotechnical Stability in Surface Mining, Calgary, Canada, pp. 187-204, November 1986.
5. Kulatilake, P.H.S.W., and K.M. Miller, "A Scheme for Estimating the Spatial Variation of Soil Properties in Three Dimensions," Proceedings of the 5th International Conference on Applications of Statistics and Probability in Soil and Structural Engineering, Vancouver, Canada, pp. 669-677, May 1987.
6. Kulatilake, P.H.S.W., and R. Southworth, "Modeling and Prediction of Spatial Variability of Soil Properties in One Dimension, Proceedings of the International Symposium on Prediction and Performance in Geotechnical Engineering, Calgary, Canada, pp. 429-437, June 1987.
7. Kulatilake, P.H.S.W., "Secondary Compression Properties of Soft Bangkok Clay," Proceedings of the International Symposium on Geotechnical Engineering of Soft Soils, Mexico City, Mexico, pp. 79-85, August 1987.
8. Kulatilake, P.H.S.W., and P. Varatharajah, "A Procedure to Obtain Optimum Borehole Pattern and Spacing in Exploring for Geologic Targets of Small Dimensions," Proceedings of the Ninth Southeast Asian Geotechnical Conference, Bangkok, Thailand, pp. 3-25 - 3-34, December 1987.
9. Kulatilake, P.H.S.W., "Corrections for Sampling Biases in Joint Surveys: State-of-the-Art," Proceedings of the 24th Annual Symposium on Engineering Geology and Soils Engineering, Coeur D'alene, Idaho, pp. 359-374, Feb. 1988.
10. Kulatilake, P.H.S.W., and A. Ghosh, "An Investigation into Accuracy of Spatial Variation Estimation Using Static Cone Penetrometer Data," Proceedings of the First International Symposium on Penetration Testing, Orlando, Florida, pp. 815-822, March 1988.
11. Kulatilake, P.H.S.W., "A correction for sampling bias on joint orientation for finite-size joints," Proceedings of the 6th International Conference on Numerical Methods in Geomechanics, Innsbruck, Austria, pp. 871-876, April 1988.
12. Kulatilake, P.H.S.W., "State-of-the-Art in Joint Geometry Modeling," Proceedings of the 29th U.S. Symposium on Rock Mechanics, Minneapolis, Minnesota, pp. 215-229, June 1988.
13. Kulatilake, P.H.S.W., "A Probabilistic Incremental Linear Elastic Constitutive Relationship Which Incorporates Spatial Variation of Soil Moduli", Proceedings of the Symposium on Reliability-Based Design in Civil Engineering, Lausanne, Switzerland, Vol. 1, pp. 285-294, 1988.
14. Kulatilake, P.H.S.W. and P. Varatharajah, "A Weighted Regression Approach to Model and Predict Spatial Variability of Soil Properties in One Dimension," Proceedings of the International Symposium on Computer and Physical Modelling in Geotechnical Engineering, Bangkok, Thailand, pp. 279-285, 1989.
15. Hernandez, A.A. and P.H.S.W. Kulatilake, "Slope Stability of the Pit Number One, El Encino Mine, Southern Jalisco, Mexico", Proceedings of the 1st Mexican Symposium on Rock Mechanics applied to Mining, pp. 1-10, 1989.
16. Kulatilake, P.H.S.W., D.N. Wathugala, and O. Stephansson, "Three Dimensional Stochastic Joint Geometry Modeling Including a Verification: A Case Study," Proceedings of 31st U.S. Symp. on Rock Mech., Golden, Colorado, pp. 1051-1058, 1990.
17. Kulatilake, P.H.S.W., D.N. Wathugala, and O. Stephansson, "Investigation of Statistical Homogeneity Around Ventilation Drift the Stripa Mine," Proceedings of the Int. Symp. on Rock Joints, Loen,

- Norway, pp. 75-82, 1990. Also, in the Proceedings of the Int. Conf. on Mechanics of Jointed and Faulted Rock, Vienna, Austria, pp.809-816, 1990.
18. Kulatilake, P.H.S.W., D.N. Wathugala, and O. Stephansson, "Three Dimensional Fracture Network Modelling Around Ventilation Drift the Stripa Mine," Proc. of the Int. Symp. on Rock Joints, Loen, Norway, pp. 67-74, 1990. Also, in Proceedings of GEOVAL-90 Symposium, Stockholm, Sweden, Paper No.55, 8 pages, 1990.
 19. Kulatilake, P.H.S.W. "Potentiometric Surface Mapping of the Wolfcamp Aquifer in the Palo Duro Basin, Texas by Probabilistic Methods", Sixth Int. Conf. on Probability and Statistics to Soil and Structural Engrg., Mexico City, Mexico, pp. 668-675, June 1991.
 20. Kulatilake, P.H.S.W., Wathugala, D.N., and Stephansson, O., "Application of Probabilistic and Statistical Methods to Joint Network Modelling and Verification in Rock Masses", Sixth Int. Conf. on Probability and Statistics to Soil and Structural Engg., Mexico City, Mexico, pp. 118-125, June 1991. Also, in Seventh Int. Conf. on Computer Methods and Advances in Geomechanics, Cairns, Australia, pp. 359-364, May 1991.
 21. Kulatilake, P.H.S.W., S. Wang, and H. Ucpirti, "Joint Network Modelling and Some Scale Effects in Rock Masses", (a) presented at the AIME Conference, Phoenix, Feb. 1992, and (b) Proceedings of the Ninth ASCE Engg. Mech. Conference, Texas A&M University, pp. 441-444, May 1992.
 22. Kulatilake et al., "Effect of Joints on Strength and Deformability of Rock Masses", Preprints of the Int. Conf. on Fractured and Jointed Rock Masses, Lake Tahoe, California, pp. 283-290, June 1992.
 23. Wang, S. and P.H.S.W. Kulatilake, "Linking of a Joint Geometry Model to a 3D Distinct Element Code", Preprints of the Int. Conf. on Fractured and Jointed Rock Masses, Lake Tahoe, California, pp. 430-437, June 1992.
 24. Kulatilake, P.H.S.W., "Joint Geometry Modelling in 3D and Validations", (a) Preprints of the Int. Conf. on Fractured and Jointed Rock Masses, Lake Tahoe, California, pp. 18-25, June 1992., and (b) Int. ISRM Symposium on Rock Characterization, Chester, U.K., pp. 336-341, Sept. 1992.
 25. Kulatilake, P.H.S.W., et al., "Some Scale Effects in Rock Masses," Int. IRSM Symp. on Rock Characterization, Chester, U.K., pp. 105-110, Sept. 1992.
 26. Kulatilake, P.H.S.W., H. Ucpirti, and O. Stephansson, "A Two Dimensional Study on Jointed Rock Deformability," Proc. Int. Symp. on Assessment and Prevention of Failure Phenomena in Rock Engineering, Istanbul, Turkey, pp. 155-166, April 1993.
 27. Wang, S. and P.H.S.W. Kulatilake, "A Distinct Element Methodology to Study the Effect of Finite Size Joints on Rock Mass Mechanical Properties in Three Dimensions," Proc. Int. Symp. on Assessment and Prevention of Failure Phenomena in Rock Engineering, Istanbul, Turkey, pp. 957-962, April 1993.
 28. Kulatilake, P.H.S.W., S. Wang, and O. Stephansson, "Scale Effects on the deformability of Jointed Rock at the Three-Dimensional Level", Proc. Second Int. Workshop on Scale Effects in Rock Masses, Lisbon, Portugal, pp. 265-276, June 1993.
 29. Kulatilake, P.H.S.W. and S. Wang, "Effects of Finite Size Joints on Deformability of Jointed Rock at the Three Dimensional Level," Pre-print Proc. 34th U.S. Symp. on Rock Mechanics, Madison, WI, pp. 681-684, June 1993.
 30. Kulatilake, P.H.S.W., G. Shou, T.-H. Huang, and R.M. Morgan, "A New Peak Shear Strength Criterion for Rock Joints," Proc. 1st N. American Rock Mech. Symp., Austin, Texas, pp. 565-572, June 1994.

31. Kulatilake, P.H.S.W., G. Shou, and T.-H. Huang, "A New Peak Shear Strength Criterion for Rock Joints, Which Includes Spectral Parameters as Roughness Measures," Workshop on Rock Mechanics Issues in Repository Design and Performance Assessment, Rockville, Maryland, pp. 37-55, Sept. 1994.
32. Panda, B.B. and Kulatilake, P.H.S.W., "Study of Effect of Joint Geometry Parameters on the Permeability of Jointed Rock," Proc. 10th ASCE EMD Specialty Conf., Boulder, Colorado, pp. 337-340, May 1995.
33. Kulatilake, P.H.S.W., G. Shou, and T.-H. Huang, "A Variogram/Fractal Based New Peak Shear Strength Criterion for Rock Joints," Proc. 35th U.S. Symp. on Rock Mechanics, Lake Tahoe, pp. 653-658, June 1995.
34. Kulatilake, P.H.S.W., J. Chen, J. Teng., G. Pan, and X. Shufang, "Discontinuity Network Modelling of the Rock Mass Around a Tunnel Close to the Permanent Shiplock Area of the Three Gorges Dam Site in China", Proc. 35th U.S. Symp. on Rock Mechanics, Lake Tahoe, pp. 807-812, June 1995.
35. Panda, B.B. and P.H.S.W. Kulatilake, "Study of the Effect of Joint Geometry Parameters on the Permeability of Jointed Rock," Proc. 35th U.S. Symp. on Rock Mechanics, Lake Tahoe, pp. 273-278, June 1995.
36. Um, J., P.H.S.W. Kulatilake, J. Chen, and T. Teng, "Maximum Safe Slope Angles for Shiplock Slopes of Three Gorges Dam Site in China Based on Kinematic Analysis Performed on Major Discontinuities," Proc. 13th Annual Meeting of ASSMR, Knoxville, Tennessee, pp. 267-281, May 1996.
37. Um, J. and P.H.S.W. Kulatilake, "Maximum Safe Slope Angles for Proposed Permanent Shiplock Slopes of the Three Gorges Dam Site in China Based on Application of Block Theory to Major Discontinuities," Proc. 2nd NARMS, Montreal, Canada, pp. 529-536, June 1996.
38. Kulatilake, P.H.S.W., B.B. Panda, and R. Fiedler, "Fractal Dimension and the First Invariant of Fracture Tensor of Fracture Networks as Measures of Statistical Homogeneity of Jointed Rock Masses," Proc. 2nd NARMS, Montreal, Canada, pp. 1779-1786, June 1996.
39. Kulatilake, P.H.S.W., B.B.Panda, and S. Wang, "Possible Correlations Between Rock Mass Properties and Fracture Tensor Parameters," Proc. 2nd NARMS, Montreal, Canada, pp. 1193-1200, June 1996.
40. Panda, B.B. and P.H.S.W. Kulatilake, "Effect of Block Size on the Hydraulic Properties of Jointed Rock Through Numerical Simulation," Proc. 2nd NARMS, Montreal, Canada, pp. 1969-1976, June 1996.
41. Kulatilake, P.H.S.W., He, W., Um, J., and Wang, H., "A Physical Model Study of Jointed Rock Mass Strength under Uniaxial Compressive Loading," Proc. 36th U.S. Rock Mech. Symp., New York, 1997. Published in the Int. Jour. of Rock Mech. and Min. Sci. vol. 34, No. 3-4, pp. 692-693 (abstract), full paper on CD ROM, 10 manuscript pages.
42. Kulatilake, P.H.S.W. and Um, J., "Requirements for Accurate Quantification of Self-affine Roughness Using the Roughness-Length Method," Proc. 36th U.S. Rock Mech. Symp., New York, 1997. Published in the Int. Jour. of Rock Mech. and Min. Sci. Vol.34, No. 3-4, pp. 392-393 (abstract), full paper on CD ROM, 10 manuscript pages.
43. Kulatilake, P.H.S.W., J. Um, B.B. Panda and N. Nghiem, "Development of a New Peak Shear Strength Criterion for Anisotropic Rock Joints", Proc. 3rd NARMS, Cancun, Mexico, June 1998.

Published in the Int. Jour. of Rock Mech. and Min. Sci., Vol. 35, Nos. 4-5, pp. 418-420 (abstract), full paper on CD ROM, 10 manuscript pages.

44. Kulatilake, P.H.S.W. and Um, J., "Accurate Estimation of Rock Joint Roughness Using the Variogram Method," Proc. 37th U.S. Rock Mech. Symp., Vail, Colorado, pp. 407-413, 1999.
45. Kulatilake, P.H.S.W., Um, J., Crum, G. and G. Irvine, "Rock Slope Stability Analysis for the Seven Cataracts Vista Road Cut of the Mount Lemmon Highway, Tucson, Arizona," Proceedings of 16th ASSMR Conference, Scottsdale, Arizona, pp. 393-407, August 1999.
46. Kulatilake, P.H.S.W., and Gao, H., "Physical and Numerical Modeling Study of Jointed Rock Block Strength Under Uniaxial Loading," Proc. of the 4th North American Rock Mechanics Symposium, Seattle, Washington, pp. 1195-1202, July-August 2000.
47. Wang, M., Kulatilake, P.H.S.W. and Panda, B.B., "Discrete Fracture Fluid Flow Simulation of Pumping Tests in a Fractured Rock Mass," Proc. of the 4th North American Rock Mechanics Symposium, Seattle, Washington, pp. 831-840, July-August 2000.
48. Kulatilake, P.H.S.W., Morgan, R. and Um, J., "An experimental setup to investigate fluid flow through single fractures", Proc. of 38th US Rock Mech. Symposium, Washington DC, pp. 655-662, July 2001.
49. Malama, B. and Kulatilake, P.H.S.W., "Experimental and particle flow modeling of jointed rock block behavior under uniaxial loading", Proc. of 38th US Rock Mech. Symposium, Washington DC, pp.1509-1516, July 2001.
50. Um, J., Morin, B. and Kulatilake, P.H.S.W., "Investigation of slope stability for a section of Phelps Dodge Sierrita Mine", Proc. of 38th US Rock Mech. Symposium, Washington DC, pp. 967-974, July 2001.
51. Wang, Mingyu, Kulatilake, P.H.S.W. and Um, J., "Estimation of REV size and three-dimensional hydraulic conductivity tensor for a rock mass through 3D discrete fracture fluid flow modeling", Proc. of 38th US Rock Mech. Symposium, Washington DC, pp. 713-720, July 2001.
52. Um, J., Morin, B. and Kulatilake, P.H.S.W., "Investigation of slope stability for a section of Phelps Dodge Sierrita open pit mine", Pre-print 2002 SME Annual Meeting, February 2002.
53. Kulatilake, P.H.S.W., Um, J., Escandon, R. and Narvaiz, J., "Stochastic fracture geometry modeling including validations for a tunnel site in the USA", Proceedings of 5th NARMS Conference, Toronto, Canada, pp. 1233-1240, July 2002.
54. Zhang, Z. and Kulatilake, P.H.S.W., "A new stereo-analytical method for determination of removal blocks in discontinuous rock masses", Proceedings of 5th NARMS Conference, Toronto, Canada, pp. 1447-1454, July 2002.
55. Malama, B., Kulatilake, P.H.S.W., and Park J., "A new rock mass strength criterion for biaxial loading conditions", Proceedings of Soil Rock America Conference, MIT, Cambridge, Massachusetts, pp. 675-682, June 2003.
56. Kulatilake, P.H.S.W., Park, J. and Um, J., "Estimation of rock mass strength and deformability in 3-D for a 30m Cube at a Depth of 485m", Proceedings of Soil Rock America Conference, MIT, Cambridge, Massachusetts, pp. 729-736, June 2003.

57. Kulatilake, P.H.S.W., Malama, B. and Park J., "A new rock mass strength criterion for biaxial loading conditions", Proceedings of 10th ISRM Congress, Johannesburg, South Africa, pp. 669-675, September 2003.
58. Kulatilake, P.H.S.W., and Malama, B., "A new model for normal deformation of single fractures under compressive loading", Proceedings of Gulf Rocks 2004, Houston, Texas, June 2004, full paper on CD ROM, 10 manuscript pages.
59. Kulatilake, P.H.S.W., Um, J., Wang, M., Escandon, R.F. and Narvaiz, J., "A case study on stochastic fracture geometry modeling in 3-D including validations for a tunneling site in the USA", Proceedings of Fifth International Symposium on Ground Support in Mining and Underground Construction", Perth, Western Australia, pp. 185-202, September 2004.
60. Kulatilake, P.H.S.W., Um, J., Morin, B., "A case study on Open Pit Mine Rock Slope Stability", Proceedings of Ohio River Valley Soils Seminar", Louisville, Kentucky, 10 pages, October 2004.
61. Park, J., Kulatilake, P.H.S.W. and Morgan, R. "Experimental and numerical investigations of fluid flow for single rock fractures", Proceedings of Alaska Rocks 2005, full paper on a CD ROM, Anchorage, Alaska, June 2005.
62. Kulatilake, P.H.S.W., Balasingam, P., Park, J. and Morgan, R. "Accurate quantification of natural rock joint roughness through fractals", Proceedings of Alaska Rocks 2005, full paper on a CD ROM, Anchorage, Alaska, June 2005.
63. Kulatilake, P.H.S.W., Park, J., Balasingam, P. and Morgan, R. "Natural rock fracture aperture properties through fractals", Proceedings of 41st US Rock Mechanics Symposium (Golden Rocks), Golden Colorado, June 2006. Full paper on a CD ROM.
64. Kulatilake, P.H.S.W., Park, J. and Um, J., "Estimation of rock mass strength and deformability for a 30m Cube in three-dimensions including anisotropy", Proceedings of 11th ISRM Congress, Lisbon, Portugal, Vol.1, pp. 255-264, July 2007.
65. Balasingam, P., Kulatilake, P.H.S.W., Park, J. and Morgan, R. "Accurate quantification of natural rock joint roughness and aperture using fractals", Proceedings of the Sri Lankan Geotechnical Society's First International Conference on Soil & Rock Engineering, Colombo, Sri Lanka, August 2007. Full paper on a CD ROM.
66. Panda, B.B. and Kulatilake, P.H.S.W., "Validity of discrete fracture network approach to simulate field-scale flow in a fractured bedrock aquifer", Proceedings of the International Conference on Rock Joints and Jointed Rock Masses, Tucson, Arizona. USA, January 2009. Full paper on a CD ROM.
67. Kulatilake, P.H.S.W., "Recent Developments on Rock Joint Roughness, Aperture and Fluid Flow in Single Fractures", Proceedings of the 8th North American Workshop on Applications of Physics of Porous Media, Ensenada, Baja California, Mexico, October 9-12, 2009.
68. Kulatilake, P.H.S.W., "Fluid flow through discontinuous rock masses in 3-D", Proceedings of the workshop on Technical and Economic Challenges in Commercial Development of Unconventional Gas Reservoirs", Colorado School of Mines, Golden, Colorado, October 21, 2010.
69. Yu, Z., Kulatilake, P.H.S.W. and Jiang, F., "Study on the effect of tunnel shape and support system on tunnel stability in a deep coal mine in China" presented at the 2011 SME Meeting, Denver, Colorado, Feb-March, 2011.

70. Hudaverdi, T., Kulatilake, P.H.S.W. and Kuzu, C., "A new model for blast fragmentation prediction based on multivariate analysis" presented at the 2011 SME Meeting, Denver, Colorado, Feb.- March 2011. Full paper on a CD ROM.
71. Wu, Q., Kulatilake, P.H.S.W., and Hudaverdi T., "A neural network approach to predict mean particle size in rock blast fragmentation" presented at the 2011 SME Meeting, Denver, Colorado, Feb.- March 2011. Full paper on a CD ROM.
72. Qiong Wu, Kulatilake, P.H.S.W. and Tang Hui-ming "Comparison of Rock Discontinuity Mean Trace Length and Density Estimation Methods Using Discontinuity Data from an Outcrop in Wenchuan Area, China". Presented at the 45th US Symposium on Rock Mechanics, San Francisco, California, June 2011. Full paper on a CD ROM.
73. Kulatilake, P.H.S.W., Wang, L., Tang, H. and Liang, Y. "Evaluation of Rock Slope Stability for Yujian River Dam Site by Kinematic and Block Theory Analyses". Presented at the 45th US Symposium on Rock Mechanics, San Francisco, California, June 2011. Full paper on a CD ROM.
74. Yu, Z., Kulatilake, P.H.S.W. and Jiang, F., "Effect of tunnel shape and support system on the stability of a tunnel in a deep coal mine in China", presented at the 45th US Symposium on Rock Mechanics, San Francisco, California, June 2011. Full paper on a CD ROM.
75. Kulatilake, P.H.S.W., Wang, X. and Wei-dong, S. "Stability investigations in three dimensions around a tunnel excavated in a metal mine in China". Presented at the 2012 SME meeting, Seattle, Washington, Feb. 22, 2012. Full paper on a CD ROM.
76. Wang, L., Kulatilake, P.H.S.W., Tang, H. and Liang, Y. "Stability evaluation of Yujian River Dam Site diversion tunnel perimeter using block theory analyses". International Conference on Disaster Prevention Technology and Management, Chengdu, China, 2012.
77. Tan, W., Kulatilake, P.H.S.W. and Sun, H., "Influence of an inclined geologic intrusion on in situ stress in an open-pit mine". Presented at the 2013 SME Meeting, Denver, Colorado, Feb. 2013.
78. Xu, N., Kulatilake, P.H.S.W., Tian, H., Wu, X., Nan, Y. and Wei, T., "Investigation of influence of a coal mine subsidence on an adjacent dam". Presented at the 2013 SME Meeting, Denver, Colorado, Feb. 2013.
79. Kulatilake, P.H.S.W. and Wu, Q., "Development of an orthotropic constitutive model for a jointed rock mass". Presented at the 47th US Symposium on Rock Mechanics, San Francisco, California, June 2013. Full paper on a CD ROM.
80. Kulatilake, P.H.S.W. and Wu, Q., "Tunnel Stress analyses in 3_D using equivalent continuum and discontinuum procedures". Presented at the 47th US Symposium on Rock Mechanics, San Francisco, California, June 2013. Full paper on a CD ROM.
81. Kulatilake, P.H.S.W., Wang, Xing and Song, Wei-dong. "Three-dimensional ground stability study around a mine tunnel in a highly discontinuous rock mass under significant in situ stress". Proceedings of the 32nd International Conference on Ground Control in Mining, Morgantown, West Virginia, pp. 169-175, July-August 2013.
82. Xu, N., Kulatilake, P.H.S.W., Tian, H., Wu, X., Nan, Y. and Wei, T. "Influence of a coal mine subsidence on an adjacent dam". Proceedings of the 32nd International Conference on Ground Control in Mining, Morgantown, West Virginia, pp. 279-284, July-August 2013.

83. Kulatilake, P.H.S.W., Rock mass fracture network modeling using both remotely and manually mapped data", Presented at the 2014 SME Meeting, Salt Lake City, Utah, Feb. 2014.
84. He, P., Kulatilake, P.H.S.W., He, M. and Liu, D. "Experimental observations and interpretations on fracture networks, strength and deformability of coal masses under three-dimensional loading conditions", Proceedings of the 33rd International Conference on Ground Control in Mining, Morgantown, West Virginia, pp. 13-21, July 2014.
85. Kulatilake, P.H.S.W., Zheng, J., Shu, B., Sherizadeh, T. "Rock slope stability comparison between deterministic and probabilistic block theory analysis for an open-pit mine", Proceedings of the 33rd International Conference on Ground Control in Mining, Morgantown, West Virginia, pp. 236-242, July 2014.
86. Kulatilake, P.H.S.W., Wang, X., Song, W. "Stability investigations around a tunnel in an iron mine through 3D discontinuum and continuum stress analyses", Proceedings of the Deep Mining 2014 Conference, Sudbury, Canada, pp. 395-407, September 2014.
87. Kulatilake, P.H.S.W., Jun Zheng, Biao Shu, and Taghi Sherizadeh, Rock Slope Stability Comparison between Deterministic and Probabilistic Block Theory Analyses for an Open Pit Mine, Abstract in the Conference Proceedings, AZ AEG Conference, Phoenix, AZ, September 2014.
88. Kulatilake, P.H.S.W., Yunfeng Ge, Investigation of stability of the rock block system that initiated the Jiweishan landslide in China, Abstract in the Conference Proceedings, AZ AEG Conference, Phoenix, AZ, September 2014.
89. Kulatilake, P.H.S.W., Jun Zheng, Biao Shu, and Taghi Sherizadeh, Rock mass fracture network modeling using both remotely and manually mapped data, Abstract in the Conference Proceedings, AZ AEG Conference, Phoenix, AZ, September 2014.
90. Kulatilake, P.H.S.W., and Ge, Y.F., "Stability of the rock block system involved in the Jiweishan landslide in China", Proceedings of the 49th US Rock Mechanics/Geomechanics Symposium, San Francisco, CA, USA, June 28th-July 1st, 2015.
91. Kulatilake, P.H.S.W. Zheng, J., Shu, B. and Sherizadeh, T., "Deterministic and probabilistic block theory analyses comparison for an open-pit mine rock slope in the USA", Proceedings of the 49th US Rock Mechanics/Geomechanics Symposium, San Francisco, CA, USA, June 28th-July 1st, 2015.
92. Sherizadeh, T. and Kulatilake, P.H.S.W., "Effect of geological and mining factors on roof stability of a room and pillar mine in the US", Proceedings of the 34th Ground Control Conference, Morgantown, West Virginia, USA, July 28-30, 2015.
93. Kulatilake, P.H.S.W., and Shu, B., "An Approach to predict rock mass deformations in three dimensions for a part of an open-pit mine and comparison with field deformation monitoring data", Proceedings of the 34th Ground Control Conference, Morgantown, West Virginia, USA, July 28-30, 2015.
94. Kulatilake, P.H.S.W., and Zheng, Jun, "Improved deterministic and probabilistic kinematic analyses to an open-pit mine". Presented at the 2016 SME Meeting, Phoenix, Arizona, February 2016.
95. Xing, Yan and Kulatilake, P.H.S.W., "investigation of rock mass stability around tunnels in an underground mine". Presented at the 2016 SME Meeting, Phoenix, Arizona, February 2016.
96. He, Peng-fei, Kulatilake, P., Liu, Dongqiao and He, Manchao, "Development of a New 3-D Coal Mass Strength Criterion". Presented at the 2016 SME Meeting, Phoenix, Arizona, February 2016.

97. Kulatilake, P.H.S.W., and Shu, B., "3-D numerical modeling of rock mass deformations and comparison with field deformation data for a part of an open-pit mine in the USA", Proceedings of the 4th Itasca Conference, Lima, Peru, March 2016.
98. Kulatilake, P.H.S.W., and Shu, B., "3-D displacement comparison between modeling and field data for an open-pit mine in the USA", Proceedings of the 50th US Rock Mechanics/Geomechanics Symposium, Houston, Texas, USA, June 26th-29th, 2016.
99. Kulatilake, P.H.S.W., Shreedharan, S., Huang, G., Cai, S. and Song, H., "3-D discontinuum numerical modeling of ore extraction, backfilling and subsidence in an underground iron mine in China", Proceedings of the 50th US Rock Mechanics/Geomechanics Symposium, Houston, Texas, USA, June 26th-29th, 2016.
100. Shreedharan, S. and Kulatilake, P.H.S.W., "Distinct element method based stability analysis of tunnels in a deep coal mine in China", Proceedings of the 50th US Rock Mechanics/Geomechanics Symposium, Houston, Texas, USA, June 26th-29th, 2016.
101. Xing, Y. and Kulatilake, P.H.S.W., "Investigation of rock mass stability around tunnels in an underground mine in the USA by 3-D numerical modeling", Proceedings of the 35th Ground Control Conference, Morgantown, West Virginia, USA, July 26-28, 2016.
102. Kulatilake, P.H.S.W., Huang, G., Shreedharan, S., Cai, S. and Song, H., "3-D discontinuum numerical modeling of ore extraction, backfilling and subsidence in an underground iron mine in China", Proceedings of the 35th Ground Control Conference, Morgantown, West Virginia, USA, July 26-28, 2016.
103. He, P., Kulatilake, P.H.S.W., Liu, D., He, M., "A new empirical failure criterion for coal masses at the 3-D level", Proceedings of the 9th Asian Rock Mechanics Symposium, Bali, Indonesia, October 18-20, 2016.
104. Mehranpour, M.H., and Kulatilake, P.H.S.W., Modifications for the smooth joint contact model in the particle flow code", Proceedings of the 51st US Rock Mechanics/Geomechanics Symposium, San Francisco, California, USA, June 25th-28th, 2017.
105. Xing, Y., Kulatilake, P.H.S.W. and Sandbak, L.A., Investigation of rock mass stability around tunnels in an underground mine by three-dimensional numerical modeling", Proceedings of the 51st US Rock Mechanics/Geomechanics Symposium, San Francisco, California, USA, June 25th-28th, 2017.
106. Xing, Y., Kulatilake, P.H.S.W. and Sandbak, L.A., Three-dimensional numerical modeling of tunnel stability in an underground mine in the USA", Presented at the 2018 SME meeting, Minneapolis, Minnesota, February 24, 2018.
107. He, Peng-fei, Kulatilake, P., Liu, Dongqiao and He, Manchao, "A new empirical model to estimate 3-D coal mass strength". Proceedings of the 2nd DFNE Conference, Seattle, Washington, USA, June 20th-22nd, 2018, paper number DFNE-18-1081 on a CD ROM.
108. Manouchehrian, A. and Kulatilake, P.H.S.W., "Rock burst prevention using a novel destressing method". Proceedings of ARMS 11, Beijing, China, October 2021.

Unpublished Reports:

1. Kulatilake, P.H.S.W., "Study of Relevance of Secondary Compression to Bangkok Subsidence," M. Eng. Thesis, Asian Institute of Technology, Bangkok, Thailand, April 1978.
2. Kulatilake, P.H.S.W., "Probabilistic Approach to Estimate Deformation and Strength Properties of a Shale," Ph.D. Dissertation, Ohio State University, Columbus, Ohio, June 1981.

ACADEMIC ACTIVITIES

Courses Taught:

GEn 560X	Underground Rock Mechanics & Rock Engineering
GEn 510X	Fractal Theory and Applications in Geo-engineering
GEn/MnE 696A	Graduate Seminar Director
GEn 607X	Block Theory and Rock Engineering
GEn 606X	Computational Rock Mechanics II
GEn 605X	Computational Rock Mechanics I
GEn 604X	Stochastic Rock Mass Modeling II
GEn 603X	Stochastic Rock Mass Modeling I
CE 649/GEn 649	Probabilistic Methods in Geo-engineering
GEn/MnE 629	Rock Slope Engineering
GEn 425	Geotechnical Investigations
GEn 424/524	Fundamentals of Geotechnics
GEn/MnE 402/502	Probability and Statistical Concepts in Geologic Media
GEn 120	Introductory Geotechnical Engineering (one-third or one-fourth of the course)
CE 543	Block Theory and Rock Engineering
CE 411/511	Research Methods and Data Analysis in Civil Engineering
CE 214	Statics

Teaching Load:

2-3 courses per year (usually 1-2 graduate and one undergraduate)

New Courses Designed:

1. Rock slope engineering - GEn 629X. The course was first offered in the fall of 1984 for ten graduate students in geological, mining, and civil engineering.
2. Probabilistic methods in geo-engineering - GEn 649/CE 649. The course was offered in the spring of 1987 for eleven graduate students in geological, civil, and mining engineering.
3. Stochastic Rock Mass Modeling I - GEn 603X. The course was offered in the Fall of 1987 for seven graduate students in geological and mining engineering.
4. Stochastic Rock Mass Modeling II - GEn 604X. The course was offered in the spring of 1988 for five graduate students in geological and mining engineering.

5. Computational Rock Mechanics I - GEn 605X. The course was offered in the Fall of 1990 for eight graduate students in geological, mining, civil, and systems engineering.
6. Computational Rock Mechanics II - GEn 606X. The course was offered in the Spring of 1991 for six graduate students in geological, mining, and civil engineering.
7. Block Theory and Rock Engineering - GEn 607X. The course was offered in the Fall of 1991 for eight graduate students in geological, mining, and civil engineering.
8. Fractal Theory and Applications in Geo-engineering - GEn 510X. The course was offered in the Fall of 1996 for nine graduate students in geological and electrical engineering.
9. Underground Rock Mechanics & Rock Engineering- GEn 560X. The course was offered in the Fall of 2002 for 7 graduate students in geological engineering.

Former Graduate Students and Visiting Scholars: R. Southworth, K.M. Miller, A.A. Hernandez, P. Reed, A. Ghosh, S. Ouyang, D.N. Wathugala, S Wang, H. Ucpirti, R.M. Morgan, K. Fuenkajorn, D. Crouthamel, B.B. Panda, G. Shou, R. Fiedler, Dr. J. Chen, J. Teng, G. Pan, J. Um, T. Shirono, W. He, L. Xiangdong, Dr. Hong Wang, Wang Mingyu, Hualin Gao, Jialai Wang, Jianghua Liang, Ben Morin, B. Malama, Jinyong Park, Y. Jian, Dr. Zixin Zhang, Mijia Yang, Prof. Bo An Jang, P. Varatharajah, P. Balasingam, N. Alrogibah, T. Hudaverdi, Dr. Lianqing Wang, Yu Zhengxing, Ye Liang, Qiong Wu, Xin Wang, Dr. Xu Qing, Dr. Qing Yan Ren, Cheng Yan, Binglei Li, Dr. Wenhui Tan, Taghi Sherizadeh, Wen Gao, Biao Shu, Pengfei He, Yunfeng Ge, Zheng Jun, Xiang Fan, Dr. Wenling Chen, Dr. Chai Bo, Dr. Sun Shaorui, Dr. Wei Jihong, Yan Xing, Yang Xuxu, Taoying Liu, Prof. Wan Zhijun, Dr. Chen Yuanjiang, Dr. Changqing Qi, Srisharan Shreedharan, Mohammad Mehranpour, Gang Huang, Ni Xiaoyan, Xueliang Xu, Zhongjie Fan, Bing Liu, Dr. Peiju Yang, Xin Zhang, Dong Menglong, Ruixuan Tang, Yinhe Zheng, Li Meng, Prof. Jiebing Zhu, Dr. Zhonghu Zhao, Xiaobo Zhang, Huilin Le, Dr. Wang Bin, Dr. Qiaorong Meng, Yanghao Peng, Dr. Qiuxiang Huang, Dr. Rui Wu, Hao Wu, Yiran Yang, Feiyong Wang, Xiopeng Su, Tao Gong, Mawuko Luke Yaw Ankah, Sunkpal Talamwin Desmond, Xiaokang Zhao, Huang Min, Xuepeng Song.

Master's and Doctoral Committees Served:

Served on 33 completed Ph.D. dissertation committees, 32 Ph.D. preliminary or qualifying examination committees, and 24 completed master's degree committees. Director for 27 completed Ph.D. dissertations and 14 completed M.S. thesis.

HONORS, RECOGNITIONS, AND AWARDS

2024 ISRM Science Achievement Award recipient – the award was received at the banquet of ARMS13th held in September 2024 in New Delhi, India.

Formed the ISRM Commission on Estimation of Rock Mass Strength and Deformability and have been serving as the Chair of the Commission since April 2024.

Conference Chair, First SLRMES International Conference on Rock Mechanics for Infrastructure and Geo-resources Development – an ISRM Specialized Conference, December 3-7, 2023, Colombo, Sri Lanka.

Delivered two lectures on Representative Elementary Volume, Rock Mass Fracture Geometry, Rock Mass Mechanical Properties and Underground Rock Mass Stability for a Mine Site and a Dam Site for the Malaysian National Group of the ISRM, August 22, 2023, Kuala Lumpur, Malaysia.

Formed the Sri Lankan Rock Mechanics and Engineering Society (SLRMES) as a member country under the International Society of Rock Mechanics and have been serving as the President of the SLRMES since October 2022.

Invited to join as an Editor-in-Chief for Geotechnical and Geological Engineering International Journal. Accepted the offer and served during the period October 26th, 2021 to December 31, 2022.

Invited to join as an Advisory Board Member of the MDPI Geosciences Journal. Accepted the offer and have been serving since October 2021.

Invited Member of the 11th Council of Jiangxi people's Association for friendship with foreign countries.

Winner of Lushan Friendship Award from the Jiangxi Provincial Department of Science & Technology, China, 2020-2021.

Delivered a 2-hour online invited lecture on "Rock mass stability and support assessment for underground tunnels located in complex geologies and subjected to engineering activities: a case study" for Changjiang River Scientific Research Institute, China on August 29th, 2021. Changjiang River Scientific Institute provided an honorarium.

Invited to join as an Editorial Board Member of a new journal named Geotechnics established in 2020 in Switzerland.

Delivered a 2-hour lecture on "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions" and explored initiating possible collaborative research at the Changjiang River Scientific Research Institute, China on December 6th, 2019. Changjiang River Scientific Institute covered domestic travel expenses and provided an honorarium.

Received an invitation to deliver an invited keynote lecture at the International Symposium on Sustainable Mining & Mineral Processing Technology in Wuhan, China, December 7-8, 2019. The Wuhan University of Technology covered all the expenses related to attending the conference.

Received an invitation to deliver an invited keynote lecture at the 1st Vietnam-China Researchers and Engineers Symposium-ISRM Specialized Conference in Hanoi, Vietnam, November 22-24, 2019.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at the Central South University, China, on Nov. 6, 2019. Central South University covered all the expenses and provided an honorarium.

Received an invitation to evaluate the Graduate Mineral Engineering Program at the Central South University, Changsha, China as an International Expert, November 5-6, 2019. Central South University covered all the expenses and provided an honorarium.

Received an invitation to deliver an invited lecture at the 2nd Shaoxin International Forum on Rock Mechanics and Engineering Geology in Shaoxin, China, October 19-20, 2019.

Received an invitation to deliver an invited keynote lecture as a well-known Foreign Expert at the 38th International Conference on Ground Control in Mining in Taiyuan, China, October 11-14, 2019.

Invited to evaluate an application for a State Science and Technology Award, China, August 2019.

Delivered an Invited Lecture at the International Conference on Geology and Geophysics in Kunming, China, June 1-3, 2019.

Recipient of the National (Chinese Government) Distinguished Foreign Expert 1000 Talent Award, 2019.

Recipient of Jiangxi Province Distinguished Foreign Expert 1000 Talent Award, 2019.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at the Xiang University of Science & Technology, Xian on March 9, 2019. The Xian University Science & Technology covered all the local expenses and provided an honorarium.

Elected to the Editorial Board of the International Journal of Mining Science, January 2019.

Delivered a 2-hour lecture on "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions" at the Wuhan Institute of Technology, China on November 28th, 2018. The Wuhan Institute of Technology covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on "Recent developments on rock mass stability investigations associated with surface and underground excavations in three dimensions" at the Nanchang University, China on November 26th, 2018. The Nanchang University covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on "New three-dimensional rock mass strength criteria" at the Central South University, Changsha, China on November 24th, 2018. Central South University covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on "New three-dimensional rock mass strength criteria" at the Water Resources Commission, China on November 23rd, 2018. The Water Resources Commission covered all the expenses and provided an honorarium.

Recipient of Best Keynote Paper Award of the 1st Conference of the Arabian Journal of Geosciences, November 12-15, 2018, Hammamet, Tunisia.

Recipient of the Best Proceedings Editor Award of the 1st Conference of the Arabian Journal of Geosciences, November 12-15, 2018, Hammamet, Tunisia.

Recipient of an award for one of the best Associate Editors in the Arabian Journal of Geosciences.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Zhejiang University, Hangzhou on June 5th, 2018. Zhejiang University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Chang'an University, Xian on June 4th, 2018. Chang'an University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Xiang University of Science & Technology, Xian on June 3rd, 2018. The Xian University Science & Technology covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Chengdu University of Technology, Chengdu on June 1st, 2018. The Chengdu University of Technology covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at Chongqing University, Chongqing on May 30-31st, 2018. The Chongqing University covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at the Jianxi University of Science & Technology, Ganzhou on May 28-29th, 2018. The Jianxi University of Science & Technology covered all the local expenses and provided an honorarium.

Delivered a 1-hour lecture at a workshop based on recently published rock mechanics journal papers at the China University of Mining & Technology, Beijing on May 17th, 2018. The China University of Mining & Technology Beijing covered all the local expenses and provided an honorarium.

Delivered four 1-hour lectures based on recently published rock mechanics journal papers at the China University of Mining & Technology, Beijing on May 15-16th, 2018. The China University of Mining & Technology Beijing covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Institute of Geology and Geophysics, Beijing on May 14th, 2018. The Institute of Geology and Geophysics covered all the local expenses and provided an honorarium.

Had a 3-hour discussion based on recently published rock mechanics journal papers at the China University of Mining & Technology, Beijing on May 13th, 2018. The China University of Mining & Technology Beijing covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the China University of Mining & Technology, Xuzhou on May 12th, 2018. The China University of Mining & Technology covered all the local expenses and provided an honorarium.

A paper reviewer and an Editor of “Track 3. Geoenvironmental engineering, geomechanics and geotechnics, and geohazards”, 1st Conference of the Arabian Journal of Geosciences, Hammamet, Tunisia, November 12-15, 2018.

Elected as An Associate Editor of the Arabian Journal of Geosciences, in March 2018.

Invited to evaluate a Faculty promotion from Associate Professor to Full Professor for the Department of Energy Resources Engineering at the Seoul National University, Korea, October 2017.

Served as the invited external examiner for the dissertation entitled "Studies on Stability Assessment of Large Caverns in Himalayan Region" which was completed at the National Institute of Technology Karnataka, Surathkal, Mangalore, India, 2017.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at the Hunan University of Science and Technology, Xiangtan, on May 7th, 2017. The Hunan University of Science and Technology covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at the Central South University (CSU), Changsha, on May 6th, 2017. The CSU covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at the China University of Mining and Technology, Beijing (CUMTB), April 28th, 2017. The CUMTB covered all the local expenses and provided an honorarium.

Recipient of “Guest Professorship”, Taiyuan University of Technology, April 27, 2017.

Delivered two 2-hour lectures based on recently published rock mechanics journal papers at the Taiyuan University of Technology, Taiyuan City, on April 26th and 27th, 2017. The Taiyuan University of Technology covered all the local expenses and also provided an honorarium.

Invited to evaluate Faculty dossier for a Full Professor position with tenure for the Mining Engineering Department at the Colorado School of Mines, Colorado, USA, April 2017.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at The Changjiang Water Resources Research Institute (CRSRI), Wuhan, January 4, 2017. The CRSRI covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at Zhejiang University, Hangzhou, on January 3, 2017. Zhejiang University covered all the local expenses.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at The Wuhan Institute of Technology, Wuhan, on January 2, 2017. The Wuhan Institute of Technology covered all the local expenses and also provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at The Road Development Authority, Sri Lanka, on September 22, 2016. The Road Development Authority covered some of the local expenses.

Delivered a 2-hour lecture on the Development of a new 3-D coal mass strength criterion at The China University of Mining and Technology in Beijing, China, on May 31, 2016. The China University of Mining and Technology, Beijing covered all the local expenses.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at The China University of Geosciences, Beijing, on May 31, 2016. The China University Geosciences, Beijing covered all the local expenses and provided an honorarium.

Delivered a 1-hour lecture based on recently published rock mechanics journal papers at Northeastern University, Shenyang, on June 1, 2016. Northeastern University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Lanzhou University, China, on June 2, 2016. Lanzhou University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Chang'an University, Xian, China, on June 3, 2016. Chang'an University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Hohai University, Nanjing, China, on June 16, 2016. Hohai University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Anhui University of Science & Technology, Huainan, China, on June 17, 2016. The AUST covered all the local expenses and provided an honorarium.

Played a very important role in a two-day workshop to explore possibilities of initiating research cooperation with Changjiang Water Resources Research Institute (CRSRI) and also delivered three 1-hour lectures based on recently published rock mechanics journal papers at the CRSRI, Wuhan, June 18-19, 2016. The CRSRI covered all the local expenses and provided an honorarium.

Delivered a 1-hour lecture based on recently published rock mechanics journal papers at Wuhan University, China, on June 20, 2016. Wuhan University covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the China University of Geosciences, Wuhan, China, on June 20, 2016. The CUG Wuhan covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Central South University, Changsha, on June 21, 2016. Central South University covered all the local expenses and provided an honorarium.

Invited to evaluate a Faculty promotion from Assistant Professor to Associate Professor with tenure for the Mining Engineering Department at West Virginia University, West Virginia, USA, 2016.

Peter Cundall Award recipient for the best paper submitted to the 4th Itasca Symposium which was held in Peru in March 2016.

Delivered a 2-hour lecture on the Development of a new 3-D coal mass strength criterion at The China University of Mining and Technology Beijing, China, on October 12, 2015. The China University of Mining and Technology, Beijing covered all the expenses.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at The China University of Geosciences, Beijing, on October 13, 2015. The China University Geosciences, Beijing covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers in China University of Mining & Technology, Xuzhou, October 14-16, 2015. The China University of Mining & Technology, Xuzhou covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Institute of Rock & Soil Mechanics, Wuhan, China, on October 20th morning, 2015. The Institute of Rock & Soil Mechanics covered all the local expenses and provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at Wuhan University, China, on October 20th afternoon, 2015. Wuhan University covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at the Central South University, Changsha, on October 21, 2015. Central South University covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at Hohai University, Nanjing, on October 22, 2015. Hohai University covered all the local expenses and provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at Zhejiang University, Hangzhou, China, on October 23, 2015. Zhejiang University covered all the local expenses.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at Jacobs Associates, San Francisco, California, on October 26, 2015. Jacobs Associates covered all the local expenses.

Delivered a lecture on "Investigation of Stability of the Rock Block System that Initiated the Jiweishan Landslide in China" at Chang'an University, Xian, China, on October 23, 2014. Chang'an University covered all the local expenses and provided an honorarium.

Delivered a lecture on "REV and equivalent continuum/discontinuum 3-D stability analyses of a tunnel" at Hohai University, Nanjing, China, on October 26, 2014. Hohai University covered all the local expenses and provided an honorarium.

Delivered a lecture on “Roof stability investigations in three dimensions for a room and Pillar coal mine in the USA” at the China University of Mining and Technology (CUMT), Xuzhou, China, October 29, 2014. The CUMT covered all the local expenses and provided an honorarium.

Delivered a lecture on “REV and equivalent continuum/discontinuum 3-D stability analyses of a tunnel” at the China University of Petroleum, Beijing, in June 2014. The China University of Petroleum covered all the local expenses.

Delivered a lecture on “REV and equivalent continuum/discontinuum 3-D stability analyses of a tunnel” at the University of Science & Technology Beijing, in June 2014. The University of Science and Technology, Beijing covered all the local expenses.

Delivered a lecture on “Rock mass stability research associated with tunnels at the Ministry of Irrigation and Mahaweli, Jawatta, Sri Lanka, in July 2014. The Ministry of Irrigation and Mahaweli covered the local expenses.

Delivered an **Invited Lecture** on “Development of an orthotropic constitutive model for a jointed rock mass and equivalent continuum/discontinuum 3-D stability analyses of a tunnel” at UTRE Workshop, Singapore, November 2013. The workshop organizing committee covered all my expenses and provided an honorarium.

Peter Cundall Award-Honorable Mention recipient for a paper submitted to the 3rd Flac-Dem Symposium held in China in October 2013.

Delivered an **Invited Lecture** on “Stochastic fracture geometry modeling in 3-D including validations, and estimation of REV size and 3-D hydraulic conductivity tensor for a fractured rock mass through discrete fracture fluid flow modeling” at GSA PENROSE CONFERENCE on Predicting and Detecting Natural and Induced Flow Paths for Geothermal Fluids in Deep Sedimentary Basins, Salt Lake City, Utah, October 19-23, 2013. The workshop organizing committee covered all my expenses.

Delivered an **Invited Plenary Lecture** on “Three-dimensional discontinuum and continuum stress analyses to study the stability of a mine tunnel” at the 2013 Geomin Conference, Santiago, Chile, July 2013. The conference organizing committee covered all my expenses.

Delivered an Invited lecture on “Rock Mass Fracture Network Modeling and Rock Slope Stability Analyses” at the Geological Survey & Mines Bureau, Pitakotte, Sri Lanka, in June 2013.

Delivered an Invited lecture on “Tools and Techniques to Investigate Deformability, Stability and Fluid Flow behaviors of Discontinuous Rock Mass Structures” at the Mine Reconciliation Summit held in Phoenix, Arizona, on January 23, 2013.

Delivered an Invited lecture on “Tools and Techniques to Investigate Deformability, Stability and Fluid Flow behaviors of Discontinuous Rock Mass Structures” at the Geological Survey & Mines Bureau, Pitakotte, Sri Lanka, on December 28, 2012.

Delivered a keynote lecture on “A New Procedure to Investigate Stability of Underground Excavations in Discontinuous Rock Masses in Three Dimensions (Including a Case Study)” at the 2nd International Conference on Sustainable Built Environment, Kandy, Sri Lanka, December 15, 2012.

Provided advice on the curriculum revision for the undergraduate Civil Engineering Program and the postgraduate Geotechnical Engineering Program at the University of Sri Lanka, Peradeniya, December 15, 2012.

Delivered four 90 min. lectures based on recently published rock mechanics journal papers at the Federal University of Rio Grande do Sul, November 21-22, 2012. The Federal University of Rio Grande do Sul covered all the local expenses. The University of Arizona covered partial expenses of the International ticket.

Delivered a 2-hour lecture on “A procedure to investigate the stability of large underground rock masses in 3-D including a case study”, at The China University Geosciences, Beijing, November 16, 2012. The China University Geosciences, Beijing covered all the local expenses and also provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers at the Institute of Rock & Soil Mechanics, Wuhan, November 15, 2012. The Institute of Rock & Soil Mechanics, Wuhan covered all the local expenses and also provided an honorarium.

Delivered two 1-hour lectures based on recently published rock mechanics journal papers in China University of Mining & Technology, Xuzhou, November 14, 2012. The China University of Mining & Technology, Xuzhou covered all the local expenses and also provided an honorarium.

Delivered three 1-hour lectures based on recently published rock mechanics journal papers at the Central South University, Changsha, on November 13, 2012. Central South University covered all the local expenses and also provided an honorarium.

Elected to Editorial Board of Int. Jour. of Advances in Geological and Geophysical Engineering, May 2012.

Received an award in the amount of 515,000 RMB (US\$ 81,320) from the Chinese Academy of Sciences to spend one year in China (August 2012- July 2013) as a Senior Visiting Professor on sabbatical leave. Unfortunately, I had to turn down this offer because of the very high level of research work in the USA.

Elected to Editorial Board of Mining & Science-Turkey, 2011.

Elected to Editorial Board of Coal Science and Technology, 2011.

Delivered a 2-hour lecture on “Approach to Perform Stress Analysis in Large Underground Rock Masses-A case Study” at Coal Research Institute, Beijing, China, August 12, 2011. Coal Research Institute covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on “Stochastic Rock Fracture Geometry Network Modeling in 3-D Including Validations for a Part of Arrowhead East Tunnel, California, USA” at the University of Science & Technology Beijing, China, August 13, 2011. University of Science & Technology Beijing covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on “Rock Slope Stability Analysis—A Case Study” at the University of Science & Technology Beijing, China, on August 13, 2011. University of Science & Technology Beijing covered all the local expenses and provided an honorarium.

Delivered a 2-hour lecture on “Approach to Perform Stress Analysis in Large Underground Rock Masses-A case Study” and engaged in collaborative research discussions at China University of Geosciences, Wuhan, China, August 16-18, 2011. The China University of Geosciences covered international and local plane tickets and local expenses in Wuhan.

Invited to take part in the International Colloquium on Ultra Deep Gypsum-Salt Bed’s Stress and Wellbore Integrity as a World-Renowned Expert in Rock Mechanics, January 16-18, 2011, Beijing, China. The organizing committee covered all the expenses and provided an honorarium.

Recipient of “Guest Professorship” for 2010-2013 from Wuhan University, China.

Recipient of “Kwang-Hua Visiting Professorship” for 2009-2010 from the College of Engineering, Tongji University, China.

Delivered a 2-hour lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at Tongji University, China, December 10, 2010. Tongji University covered all the expenses and provided an honorarium.

Delivered a 2-hour lecture on “Rock Fracture Geometry Network Modeling in 3-D and Estimation of REV Size and Three-Dimensional Hydraulic Conductivity Tensor for a Rock Mass Through 3-D Discrete Fracture Fluid Flow Modeling” at Wuhan University, China, December 14, 2010. Wuhan University covered all the expenses.

Delivered a 2-hour lecture on “Rock Slope Stability Analysis” at Wuhan University of Technology, China, December 15, 2010. The Wuhan University of Technology covered all the expenses and also provided an honorarium.

Delivered a 2-hour lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at the Institute of Geology and Geophysics, Beijing, China, on December 22, 2010. The Institute of Geology and Geophysics covered all the expenses and provided an honorarium.

Delivered three 2-hour lectures based on recently published rock mechanics journal papers at the China University of Geosciences in Wuhan, on June 19, 2010. The China University of Geosciences, Wuhan covered all the expenses and also provided an honorarium.

Delivered a 2-hour lecture on “Rock Slope Stability Analysis” at the Institute of Rock and Soil Mechanics, Wuhan, China, on June 18, 2010. The Institute of Rock and Soil Mechanics covered all the expenses.

Delivered a 2-hour lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at the Changjiang River Scientific Research Institute, Wuhan, China, on June 18, 2010. The Changjiang River Scientific Research Institute covered all the expenses.

Delivered a 2-hour lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at the Xian University of Technology, Xian, China, on June 14, 2010. The Xian University of Technology covered all the expenses.

Delivered a 2-hour lecture based on recently published rock mechanics journal papers at the University of Science & Technology, Beijing, China, on June 11, 2010. The University of Science & Technology, Beijing covered all the expenses.

Delivered a 2-hour lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at the China University of Mining & Technology, Beijing, on June 10, 2010. The China University of Mining & Technology covered all the expenses and also provided an honorarium.

Delivered an Invited Keynote Lecture on “Tensorial Approach for Rock Mass Strength and Deformability” at the 9th ICADD Conference on Analysis of Discontinuous Deformation, Singapore, November 27th, 2009. The conference organizing committee covered all my expenses.

Delivered an Invited Keynote Lecture on “Rock mass fracture network modeling including validations-from case histories” at the UTRE Workshop, Singapore, November 24th, 2009. The workshop organizing committee covered all my expenses.

Delivered a 2-hour lecture on “Recent Developments on Rock Joint Roughness, and Rock Joint and Rock Mass Strength and Deformability” at the Nanyang Technological University (NTU), Singapore, August 5, 2009. NTU covered all the local expenses.

Delivered a 2-hour lecture on “Recent Developments on Rock Mass Strength and Deformability” at Monash University, Melbourne, Australia, July 28, 2009. Monash University covered the domestic air ticket and all the expenses in Melbourne.

Delivered four 2-hour lectures based on recently published rock mechanics journal papers at the China University of Geosciences in Wuhan and Institute of Rock and Soil Mechanics, Wuhan, July 8-11, 2009. The two Institutes covered all the expenses and also provided honorariums.

Received an invitation to deliver a plenary lecture on “Case Studies on Open Pit Mine Rock Slope Stability and Estimation of Strength and Deformability in Three-Dimensions for a Jointed Rock Mass Located at a depth of 485m Underground” at the Geomin 2009 Conference which was held in Antofagasta, Chile, June 10-12, 2009. The conference committee covered all the local expenses in Chile.

Delivered an invited keynote lecture on “Recent Developments on Rock Joint Roughness, and Rock Joint and Rock Mass Strength and Deformability” at the ISRM International Symposium 2008, 5th Asian Rock Mechanics Symposium, Tehran, Iran, November 24-26, 2008. The conference committee covered all the expenses.

Delivered an invited keynote lecture on “Steep Rock Slopes in Urban Areas” at the XIVth Brazilian Congress on Soil Mechanics and Geotechnical Engineering, Armação de Búzios, Brazil, August 2008. The conference committee covered all the local expenses in Brazil.

Delivered a lecture on “A case history on Rock Slope Stability Analysis” at the Association of Engineering Geologists (AEG) meeting, Phoenix, Arizona, May 2008. AEG covered all the expenses.

Delivered the Invited LEEP lecture at the University of North Dakota, in February 2008. The University of North Dakota covered all the expenses.

Invited Member at Large, American Rock Mechanics Awards Committee, 2006.

Delivered lectures based on recently published rock mechanics journal papers at Southwest Research Institute, Texas, May 11, 2006. Southwest Research Institute covered all the expenses.

Delivered lectures based on recently published rock mechanics journal papers at Stanford University, Palo Alto, California, on April 26, 2006. Stanford University covered the local expenses for one day.

Delivered lectures based on recently published rock mechanics journal papers at Lawrence Berkeley Laboratory, California, April 25, 2006. Lawrence Berkeley Laboratory covered all the expenses.

Delivered lectures based on recently published rock mechanics journal papers at Shell, Houston, on April 12, 2006. Shell covered the expenses for one day.

Delivered lectures based on recently published rock mechanics journal papers at the Technical University of Graz, Austria, on April 7, 2006. The Technical University of Graz covered the local expenses for one day and also provided an honorarium.

Delivered lectures based on recently published rock mechanics journal papers at Korea Institute of Construction Technology, South Korea, January 12, 2006. Korea Institute of Construction Technology covered the local expenses for one day and also provided an honorarium.

Delivered lectures based on recently published rock mechanics journal papers at Seoul National University, Seoul, South Korea, January 13-14, 2006. Seoul National University covered the local expenses for 4 days and also provided an honorarium.

Recipient of “Honorary Professorship” at the Eurasian National University, Kazakhstan, December 2005.

Delivered lectures for the Ph.D. Program in Geotechnical Engineering (according to the western style) at the Eurasian National University, Astana, Kazakhstan, December 2005. The Eurasian National University provided an Honorarium and covered all the expenses related to the travel.

Delivered an invited lecture on “Investigation of slope stability for a section of Phelps Dodge Sierrita Open Pit Mine” at Freeport Indonesia Mine, Tembagapura, Indonesia, August 5, 2005. The Freeport Indonesia Mine covered all the expenses related to the travel.

Delivered an invited lecture on “Hierarchical probabilistic regionalization of volcanism for Sengan region, Japan”, at the International Symposium on Geotechnical Engineering for Disaster Prevention and Rehabilitation, Semarang, Indonesia, August 2-4, 2005. The conference committee covered partial expenses related to the travel.

Delivered an invited keynote lecture on “Hierarchical probabilistic regionalization of volcanism for Sengan region, Japan”, at the International Symposium on Geotechnical Aspects of Natural and Man-Made Disasters, Astana, Kazakhstan, June 1-3, 2005. The Conference committee covered all the expenses related to the travel.

Took part in an invited initial collaboration to develop a Ph.D. Program in Geotechnical Engineering according to Western style at the Eurasian National University, Astana, Kazakhstan, May-June, 2005. The Eurasian National University provided an honorarium and covered all the expenses related to the travel.

Received an invitation to deliver a keynote lecture on “Rock Fracture Geometry Network Modeling in 3-D and Estimation of REV Size and Three-Dimensional Hydraulic Conductivity Tensor for a Rock Mass Through 3-D Discrete Fracture Fluid Flow Modeling”, at the 2nd Iranian Rock Mechanics Conference, December 2004. The Conference committee offered to cover all the expenses related to the travel. However, due to a flight delay, I was not able to travel to Iran and deliver this lecture.

Delivered an invited keynote lecture on “Applications of Probability and Statistics to Rock Mechanics and Rock Engineering”, at the International Workshop on Risk Assessment in Site Characterization and Geotechnical Design”, Bangalore, India, November 26-27, 2004.

Received an invitation to deliver a keynote lecture on “Rock Fracture Geometry Network Modeling in 3-D and Estimation of REV Size and Three-Dimensional Hydraulic Conductivity Tensor for a Rock Mass Through 3-D Discrete Fracture Fluid Flow Modeling”, at the International Geotechnical Conference on Geotechnical Problems On Construction of Large-Scale and Unique Projects, Almaty, Kazakhstan, September 23-25, 2004. However, I could not find time to travel to Kazakhstan and deliver this lecture.

Served as the invited external examiner for the dissertation entitled "Rock Mass Modeling in Poly-axial Stress State" which was completed at the Indian Institute of Technology, Delhi, India, in 2004.

Delivered an invited lecture on “Estimation of REV Size and Three-Dimensional Hydraulic Conductivity Tensor for a Rock Mass Through 3-D Discrete Fracture Fluid Flow Modeling”, 5th International Workshop on Application of Physics in Porous Media, Puerto Vallarta, Mexico, Nov. 7-11, 2003. The Conference committee covered most of the expenses in Mexico.

Delivered an invited lecture on “Fracture Network Modeling Including Validations and Estimation of Rock Mass Strength and Deformability in Three Dimensions for a 30M Cube Located at a Depth Region of 400-500M at ASPO Hard Rock Laboratory, Sweden” at the 4th International Workshop on

Applications of Computational Mechanics in Geotechnical Engineering, Ouro Preto, Brazil, 17-20 August 2003.

Delivered a keynote lecture on “Fracture Network Modeling Including Validations and Estimation of Rock Mass Strength and Deformability in Three Dimensions for a 30M Cube Located at a Depth Region of 400-500M at ASPO Hard Rock Laboratory, Sweden” at the 15th International Conference on Computer Methods in Mechanics, CMM-2003, Wisla, Poland, 3-6 June 2003. Received a travel grant of US\$ 900 from the University of Arizona, Foreign Travel Grant Program.

Elected to Editorial Board of Int. Jour. of Geotechnical and Geological Engineering, October 2002.

Received Outstanding Asian American Faculty Award 2002, the University of Arizona for exemplary accomplishments in research, teaching, and contributions of service to the profession, the University of Arizona, and the community, October 2002.

Received an invitation to deliver a keynote lecture on “A New Rock Mass Strength Criterion” at the Second International Conference on New Development in Rock Mechanics and Rock Engineering, Shenyang, P. R. China, October 2002. However, I could not find time to travel to China and deliver this lecture.

Delivered a keynote lecture on “A New Rock Mass Strength Criterion” at the ISRM Symposium on Advancing Rock Mechanics Frontiers to Meet the Challenges of 21st Century, New Delhi, India, September 2002.

Received the award of “2002 Distinguished Alumnus” of the College of Engineering, Ohio State University in recognition of the distinguished achievements and eminent contributions made to the advancement of the profession.

Delivered an Invited keynote lecture on “Rock Slope Stability Analyses” at the International Conference on Coastal Geotechnical Engineering in Practice, Atyrau, Kazakhstan, May 2002. Received a travel grant of US\$ 1000 from the University of Arizona, Foreign Travel Grant Program.

Served on invitation on a Geomechanics and Geotechnical Systems research proposal review panel for the National Science Foundation, Washington DC, May 2002.

Elected to Editorial Board of Int. Jour. of Rock Mechanics & Mining Sciences, December 2001.

Received an invitation to deliver an invited lecture at the workshop on “To bring together the International cooperation in contracting, consulting and managing engineering projects” which was held at the 2nd Asian Rock Mechanics Symposium, Beijing, China, September 2001. However, I could not find time to attend this workshop.

Delivered an invited keynote lecture on Open Pit Mine Slope Stability at the Int. Symposium Geotechnika 2000, Ustron-Zwodzie, Poland, October 2000. The Symposium Committee covered all the expenses in Poland.

Delivered an invited keynote lecture at the First Central Asian Geotechnical Symposium, Astana, Kazakhstan, May 2000. Received a travel grant of US\$ 800 from the University of Arizona, Foreign Travel Grant Program.

Delivered an invited lecture on Open Pit Mine Slope Stability at the Open Pit Mine Symposium, Sonora, Mexico., in March 2000. The Symposium Committee covered all the expenses.

Delivered lectures at several mines in Chile during a sabbatical leave period, in Oct. 1999.

Delivered an invited keynote lecture at the '99 Japan-Korea Joint Symposium on Rock Engineering, Fukuoka, Japan, August 1999. Received a travel grant of US\$ 520 from the University of Arizona, Foreign Travel Grant Program. The Conference Committee covered the expenses in Japan for one week.

Elected to the Fellow Rank of the American Society of Civil Engineers, March 1999.

Delivered an invited lecture on "Fractured Media" at the American Rock Mechanics Association Forum on New Research Directions in Rock Mechanics, which was held in Asilomar, California, in October 1998.

Delivered an invited keynote lecture at the Int. Conf. on Geomechanics/Ground Control in Mining & Underground Construction, which was held in Wollongong, Australia, in July 1998. Received a travel grant of US\$ 700 from the University of Arizona, Foreign Travel Grant Program. The Conference Committee covered the expenses in Australia.

Served as the invited General Reporter and the Session Chairman for the session entitled "Numerical Modeling- Part B" at the 3rd North American Rock Mechanics Conference, which was held in Cancun, Mexico, in June 1998.

Served on an NSF panel to review research proposals, 1996.

Delivered invited lectures at the Int. Conf. on Geomechanics '96, which was held in Ostrava, Czech Republic, Sept. 1996. Received a travel grant in the amount of US \$600 from the University of Arizona, Foreign Travel Grant Program.

Delivered an invited lecture on "Validating Rock Mass Structure Assumptions" at the Rock Engineering Systems Workshop associated with the 8th ISRM Congress, which was held in Tokyo in Sept. 1995.

Delivered an invited lecture on "Geomechanical Modelling of Discontinuous Rock" at a Geomechanical Research Meeting held in Tokyo in Nov. 1994. Japanese Institute for Systems Research covered all expenses and also provided an honorarium.

Delivered an invited lecture on "A New Peak Shear Strength Criterion for Rock Joints which Includes Fractal Parameters as Roughness Measures" at the Symp. on Fractal Fracture Mechanics, which was held in Tokyo, Japan, in Nov. 1994. The conference committee covered all expenses.

Delivered an invited lecture on "State-of-the-art on Fracture Network Modeling" at the Workshop on Rock Fracture Mechanics and Fractals, which was held in Tokyo, Japan in Nov. 1994. The conference committee covered all expenses.

Delivered an invited lecture on "Geomechanical Modelling in Jointed Rock," at the Geomechanics Colloquium, 1994, which was held in Salzburg, Austria, Oct. 1994. The conference committee will cover all the expenses.

Served as the invited external examiner for the dissertation entitled "Geotechnical and Statistical Estimation of Slope Stability" which was completed at the Indian School of Mines, Dhanbad, India, in 1994.

Delivered an invited lecture on "scale effects on rock masses with respect to deformability" at the Int. Conf. on Geomechanics '93, which was held in the Czech Republic, Sept. 1993. Received a travel grant of US\$700 from the University of Arizona, Foreign Travel Grant Program. The conference committee covered all expenses in the Czech Republic.

Delivered an invited lecture on "Probabilistic Groundwater Level Mapping" at the University of Sonora, Mexico in June 1993. The University of Sonora covered all the expenses.

Delivered an invited lecture at the Int. Conf. on Probabilistic Methods in Geotechnical Engineering which was held in Canberra, Australia in Feb. 1993. Received a travel grant of US\$ 650 from the University of Arizona, Foreign Travel Grant Program. The Conference committee provided AS\$ 580 as a travel grant.

Delivered an invited lecture at the Third National Conference on Open Pit Mining, which was held in Hermosillo, Mexico in November 1992. The conference committee covered all the expenses.

Delivered two invited lectures at the International Seminar on Numerical Methods in Geomechanics which was held in Moscow, Russia in March 1992. The conference committee covered all the expenses in Russia.

Delivered an invited main lecture on "Joint Network Modelling and Some Scale Effects in Rock Masses" at the Int. Conf. on Geomechanics '91 which was held in Ostrava, Czechoslovakia in Sept. '91. Received a foreign travel grant of \$1,000 from the University of Arizona, Foreign Travel Grant Program. The conference committee covered all the expenses in Czechoslovakia.

Delivered invited lectures on "Fracture Network Modelling" and Effect of Fractures on Strength and Deformability of Rock Masses" at Exxon Production Research Company, Houston, Texas, in Dec. 1990. Exxon covered all expenses.

Appeared as an invited external examiner for the dissertation entitled "Numerical Modelling of Jointed Rock Masses by Distinct Element Method for Two and Three-dimensional Problems," defended at the Lulea University of Technology, Sweden Nov. 1990. The Lulea University of Technology covered all the expenses and also provided an Honorarium.

Delivered an invited lecture on "Fracture Network Modeling in Three Dimensions", at the Int. Symp. on Advances in Geological Engineering, Beijing, China, Aug. 1990. Received a foreign travel grant of \$600 from The University of Arizona, Foreign Travel Grant Program. The conference committee covered all the expenses in China.

Delivered an invited lecture on "Stochastic Three-Dimensional Joint Geometry Modelling Including a Verification to an Area in the Stripa Mine, Sweden", at the Delft University of Technology, the Netherlands, and Koninklijke/Shell Exploratie en Productie Laboratorium, Netherlands, May 1990. Shell covered all the expenses.

Delivered a special lecture on "Stochastic Three-Dimensional Joint Geometry Modelling Including a Verification to an Area in the Stripa Mine, Sweden," at the International Conference on Mechanics of Jointed and Faulted Rock, Vienna, Austria, Apr. 1990.

Delivered an invited special lecture on "Stochastic Three-Dimensional Fracture Network Modelling Including a Verification," at the International Symposium on Underground Excavations in Soils and Rocks, Bangkok, Thailand, Nov. 1989. Received a foreign travel grant of \$450 from The University of Arizona, Foreign Travel Grant Program.

Delivered lectures at the Royal Institute of Technology, Stockholm, and Chalmers University, Goteborg in 1989 through the Swedish Natural Science Research Council's sponsoring.

Delivered an invited special lecture on "Stochastic Joint Geometry Modeling" at the First Mexican Symposium on Rock Mechanics Applied to Mining, Sonora, Mexico, in March 1989. The University of Sonora covered all the expenses.

Received nomination from at least four well-known researchers in geotechnical engineering from four different countries for the 1988 Casagrande Award.

Delivered an invited lecture on "Stochastic Joint Geometry Modeling" at the Workshop on "Crustal Fracturing and Seismicity and Their Impact on Rock Stress and Groundwater Flow", Goteborg, Sweden, November 1988. The workshop committee covered all the expenses.

Invited to present a paper entitled "State-of-the-Art on Stochastic Joint Geometry Modeling" at the International Symposium on "Reliability-Based Design in Civil Engineering", Lausanne, Switzerland, July 1988. Norwegian Geotechnical Institute covered all the expenses.

Received a Research Fellowship from the Royal Norwegian Council for Scientific and Industrial Research to perform research on the topic "Reducing Uncertainties Related to Offshore Geotechnical Engineering" at the Norwegian Geotechnical Institute, June 1988 - November 1988.

Invited to present a lecture entitled "Estimation of Strength and Deformation Parameters of Discontinuous Rock", by the Mining Engineering Department at the University of Sonora, Mexico, May 1988. The University of Sonora covered all the expenses.

Invited to Participate as a Panel Member in the specialty session on the "Applications of Statistics in Penetration Testing", at the First International Symposium on Penetration Testing, Orlando, Florida, March 1988.

Invited to present a paper entitled "A Computer Simulation Technique to Study Probability of Detection of Geologic Targets", at the 20th International Symposium on Application of Computers and Mathematics in the Mineral Industry, Johannesburg, South Africa, October 1987. The conference committee covered all the expenses.

Received nomination from the Awards and Executive Committee of ASCE for an ASCE award for my ASCE, Journal of Geotechnical Engineering, July 1985 paper.

Exxon Educational Foundation Award, 1982 through 1985.

Phi Kappa Phi Honor Society membership, 1980

Recipient of a Scholarship from the University of Calgary to pursue a Ph.D. in Geotechnical Engineering at the University of Calgary, March 1978.

Recipient of one of five French Government Scholarships to pursue a Ph.D. in Geotechnical Engineering in France, March 1978.

Canadian Government Scholarship to pursue a Master's degree in Soil Engineering at the Asian Institute of Technology, Bangkok, Thailand, Aug. 1976.

Rupesinghe Memorial Scholarship - for being among the top five at the scholarship examination in grade 11, high school, Sri Lanka, 1970

Jathika Navodaya Scholarship - for being among the top 25 students in the nation at the G.C.E. (Ord. Level) Examination, Sri Lanka, 1969.

MEMBERSHIPS IN SCIENTIFIC AND PROFESSIONAL SOCIETIES

Founding member, American Rock Mechanics Association

International Society for Rock Mechanics
International Association for Civil Engineering Reliability and Risk Analysis
International Society for Soil Mechanics and Foundation Engineering
International Association for Mathematical Geology
American Society of Civil Engineers
American Society for Testing and Materials
American Society of Mining Engineers
Associate Member, Institute of Civil Engineers, London, 1977-1982

SERVICE

Intramural:

Invited to serve on the University of Arizona's Global/Internationalization Review International Alumni Subcommittee, Feb. 2018 to May 2019.

Invited to serve on the College Faculty Status (Promotion and Tenure) Committee (served as the Chair)—Dec. 2017-May 2019.

Invited member of the Institutional Research Conflict Review Committee, University of Arizona, September 2012 through August 2015.

One of the two faculty members responsible for running the undergraduate Geological Engineering Program, since Aug. 2004.

Served on the College Sabbatical Leave Committee, Aug. 2005—Aug. 2006.

Faculty Advisor for the Association of Sri Lankans at the University of Arizona, Aug. 2005-- Aug. 2007.

Prepared ABET document (with another faculty member) for the undergraduate Geological Engineering program, 2004.

Served as the Chair of the Department Faculty Status (Promotion and Tenure) Committee, 2002.

Served as the Chair of the Faculty Search Committee on a Geological Engineering Faculty Position, 2001-2002.

Served on the College Promotion and Tenure Committee, 2000-2001.

Served on the College Committee on Graduate Studies, 2000-2004.

Served on the University Committee on Graduate Studies, 1991-2004.

Contributed to preparing ABET document for Geological Engineering program, 1999.

Served on the Department Committee for faculty merit evaluation, 1984, 1985, 1991, and 1992-2002.

Served on the College Advisory Committee, 1989-93.

Provided input to the Dept. Head in preparing the PAIP document, 1993.

Took an active role in the undergraduate recruiting program at the Dept. open house held in 1993.

Served on the College Ad Hoc Budget Advisory Committee, 1992.

Contributed to preparing ABET document for Geological Engineering program, 1992.

Revised GUIDE TO GRADUATE STUDY for the Department of Mining and Geological Engineering, 1987.

Served on the Department Committee for upgrading the Geological Engineering undergraduate curriculum, 1986.

A student advisor at the Univ. of Arizona for the Regional Academic Mobility Exchange Program organized by the Institute of International Education for Engineering Students in Canada, Mexico, and the United States.

Extramural:

Delivered a lecture on "Required Data and Computational Techniques to Investigate Deformation and Stability around Underground Mine Excavations in Three Dimensions" at the Vale Mining Company, Sudbury, Canada, in November 2014.

Delivered a lecture on "Required Data and Computational Techniques to Investigate Deformation and Stability around Underground Mine Excavations in Three Dimensions" at the Center for Excellence in Mining Innovation, Sudbury, Canada, in November 2014.

Delivered a lecture on "Required Data and Computational Techniques to Investigate Deformation and Stability around Underground Mine Excavations in Three Dimensions" at the Glencore Mining Company, Sudbury, Canada, in November 2014.

Delivered a lecture on "Required Data and Computational Techniques to Investigate Deformation and Stability around Underground Mine Excavations in Three Dimensions" at the Barrick mining Company, Elko, Nevada, in December 2014.

Delivered a lecture on "Deterministic and Probabilistic block theory analysis for a US open pit mine" at the Barrick mining Company, Elko, Nevada, in December 2014.

Delivered a lecture on "Three-dimensional slope stability analysis for a US open pit mine" at the Barrick mining Company, Elko, Nevada, in December 2014.

Delivered a lecture on "Required Data and Computational Techniques to Investigate Deformation and Stability around Underground Mine Excavations in Three Dimensions" at the Newmont mining Company, Elko, Nevada, in December 2014.

Conference Chair, International Conference on Rock Joints and Jointed Rock Masses, Tucson, Arizona, USA, January 4-11, 2009.

Technical Program Chair and Co-Chair of the Sri Lankan Geotechnical Society's First International Conference on Soil and Rock Engineering, Colombo, Sri Lanka, August 7-11, 2007.

Research proposal reviewer for the National Science Foundation in the area of Geo- Mechanics and Geotechnical Engineering.

Research proposal reviewer for the National Science Foundation for International Programs and SBIR

Research proposal reviewer for the Department of Energy

Research proposal reviewer for the Petroleum Research Fund of the American Chemical Society

Research proposal reviewer for Ohio Supercomputer Center

Research proposal reviewer for the Australian Research Grants Council.

Research proposal reviewer for Hong Kong Research Grants Council

Research proposal reviewer for the Turkish Research Grants Council

Research proposal reviewer for United Arab Emirates Research Grants Council

Research proposal reviewer for International Science Foundation.

Research paper reviewer for Int. Jour. of Rock Mechanics and Mining Sciences
 Research paper reviewer for Int. Jour. of Geotechnical and Geological Engineering
 Research paper reviewer for Tunneling and Underground Space Technology
 Research paper reviewer for ASCE, Jour. of Geotechnical Engineering
 Research paper reviewer for the Canadian Geotechnical Engineering journal
 Research paper reviewer for Rock Mechanics & Rock Engineering
 Research paper reviewer for Int. J. Engineering Geology
 Research paper reviewer for the Bulletin of Engineering Geology
 Research paper reviewer for the Arabian Journal of Geosciences
 Research paper reviewer for Int. J. on Computers and Geotechnics
 Research paper reviewer for ASCE, Journal of Engineering Mechanics
 Research paper reviewer for Int. Jour. for Numerical and Analytical Methods in Geomechanics
 Research paper reviewer for ASCE, Int. Journal of Geomechanics
 Research paper reviewer for Geotechnique
 Research paper reviewer for Int. J. Solids & Structures
 Research paper reviewer for Engineering Fracture Mechanics
 Research paper reviewer for Acta Geotechnica
 Research paper reviewer for Energy
 Research paper reviewer for the International Journal of Geomechanics and Geophysics for Geo-Energy and Geo-Resources
 Research paper reviewer for Int. J. on Computers and Geosciences
 Research paper reviewer for the Chinese Journal of Rock Mechanics and Geotechnical Engineering
 Research paper reviewer for Advances in Civil Engineering
 Research paper reviewer for the International Journal of Mining Science and Technology
 Research paper reviewer for Korean Nuclear Journal
 Research paper reviewer for Jour. of Hydrology
 Research paper reviewer for Mining Technology
 Research paper reviewer for Jour. of Geophysical Research
 Research paper reviewer for Soils and Foundations
 Research paper reviewer for SpringerPlus
 Research paper reviewer for Surface Review and Letters
 Research paper reviewer for the Arabian Journal of Geosciences
 Research paper reviewer for Environmental Earth Sciences
 Research paper reviewer for Geomechanics and Engineering
 Research paper reviewer for the International Journal of Mining Science & Technology
 Research paper reviewer for Jour. of Mountain Science
 Research paper reviewer for the International Journal of Mining and Mineral Engineering
 Research paper reviewer for the Journal of Asian Earth Science
 Research paper reviewer for Mechanics of Materials
 Research paper reviewer for Measurements
 Research paper reviewer for Iranian Jour. of Science & Technology
 Research paper reviewer for the Transportation Research Board of the National Research Council
 Research paper reviewer for Mining Engineering Magazine
 Research paper reviewer for the Bulletin of the Faculty of Earth Sciences - Saudi Arabia
 Research paper abstract reviewer for 41st US Rock Mechanics Symposium, Golden, Colorado, June 2006.
 Research paper reviewer for 40th US Rock Mechanics Symposium, Anchorage, Alaska, June 2005
 Research paper abstract reviewer for 40th US Rock Mechanics Symposium, Anchorage, Alaska, June 2005
 Research paper reviewer for Soil Rock America Conference, MIT, June 2003.
 Research paper abstract reviewer (18 abstracts) for Soil Rock America Conference, MIT, June 2003.
 Research paper abstract reviewer for 5th North American Rock Mechanics Conference, Toronto, July 2002.
 Research paper reviewer for the 2001 ASSMR Conference, Albuquerque, New Mexico.
 Research paper reviewer for 38th US Rock Mechanics Symposium, Washington, D.C., July 2001
 Research paper reviewer for the Rock Mechanics Session, Geo Denver Conf., January 2000.
 Research paper reviewer for the 2000 ASSMR Conference, Tampa, Florida.

Research paper abstract reviewer for 38th US Rock Mechanics Symposium, Washington, D.C., July 2001.
 Research paper abstract reviewer for 37th US Rock Mechanics Symposium, Vail, Colorado, June 1999.
 Research paper reviewer for the 1999 ASSMR Conference, Scottsdale, Arizona.
 Research paper reviewer for the 1998 ASSMR Conference, St. Louis, Missouri.
 Research paper reviewer for the 1997 ASSMR Conference, Austin, Texas.
 Research paper reviewer for 2nd North American Rock Mechanics Symposium, Montreal, Canada, June 1996.
 Research paper reviewer for the 1996 ASSMR Conference, Knoxville, Tennessee.
 Research paper reviewer for the 1996 Conference on Uncertainty in the Geologic Environment: From theory to practice, Madison, Wisconsin, August 1996.
 Research paper reviewer (22 papers) for 35th U.S. Symp. on Rock Mechanics, Lake Tahoe, June 1995.
 Research paper reviewer (30 papers) for First North American Rock Mechanics Symposium, Austin, Texas, June 1994.
 Research paper reviewer for Int. Conf. on Geomechanics '93, Czech Republic, Sept. 1993.
 Research paper reviewer for Int. Conf. on Fractured and Jointed Rock Masses, Lake Tahoe, CA, June 1992.
 Research paper reviewer for Int. Conf. on Geomechanics '91, Ostrava, Czechoslovakia, Sept. 1991.
 Research paper abstract reviewer for 30th U.S. Symp. on Rock Mechanics, 1989.
 Examiner for the Professional Engineering exam in Geological Engineering conducted by the Arizona State Board of Technical Registration (since 1985).
 Chair, Southern Arizona Branch, ASCE Geo-Institute
 Head of Committee on Stability, Erosion Control, and Damage Mitigation of Mine Slopes of the Geotechnical Engrg. Div. of the Am. Soc. of Surface Mining and Reclamation.
 Committee member of the Rock Mechanics Committee of ASCE, Geo-Institute.
 Core Member, TC41 Committee of ISSMGE-Geotechnical Infrastructure for Mega Cities and New Capitals
 Member, National Academies Transportation Research Board Committee on Soil and Rock Properties, A2L02, Section L-Geology and Properties of Earth Material, Feb. 1, 2003, through Jan. 31, 2006.
 Member, National Academies Transportation Research Board Committee on Modelling Techniques in Geomechanics, AFS50, Section K- Soil Mechanics, Feb. 11, 2003, through April 14, 2008.
 Member of ASCE Geotechnical Risk Assessment and Management Committee.
 Former committee member in ASCE, EMD Division Properties of Materials Committee.
 Member of Organizing Committee, EUROCK Conference, Czech Republic, 2005.
 Member of Organizing Committee, 40th US Rock Mechanics Symposium, Anchorage Alaska, 2005.
 Chairman of the Short Course Committee, 40th US Rock Mechanics Symposium, Anchorage, Alaska, 2005.
 Member of the Int. Committee for the Int. Conf. on Geomechanics/Ground Control in Mining & Underground construction, Wollongong, Australia, July 1998.
 Member of the International Committee for the International Conference on Geomechanics '96, which was held in Ostrava, Czech Republic, Sept. 1996.
 Member of the Technical Program Committee for the 2nd North American Rock Mechs. Symp., which was held in Montreal, Canada, in June 1996.
 A member of the International Committee for the International Conference on Geomechanics '93, Ostrava, Czech Republic, Sept. 1993.
 A member of the International Committee for International Conference on Geomechanics 91, Ostrava, Czechoslovakia, Sept. 1991.
 Panel Member in the specialty session on the "Application of Statistics in Penetration Testing", at the First Int. Symp. on Penetration Testing, Orlando, Florida, March 1988.
 Session Chair, 12th Asian Rock Mechanics Symposium, Hanoi, Vietnam, November 22-26, 2022.
 Session Chair, International Symposium on Rock Mechanics and Engineering, Hanoi, Vietnam, November 22-24, 2019.
 Session Chair, Shaoxin International Forum on Rock Mechanics and Engineering Geology, Shaoxin, China, October 19-20, 2019.
 Session Chair, 38th International Ground Control Conference in Mining, Taiyuan, China, October 11-14, 2019.

Session Chair, International Symposium on Geology and Geophysics, Kunming, China, June 1-3, 2019.

Session Chair, First Conference on the Arabian Journal of Geosciences, Hammamet, Tunisia, November 12-15, 2018.

Session Chair, International Conference on Geomechanics, Geo-energy and Geo-resources – September 28 – 29, 2016, Melbourne, Australia.

Session Chair, 4th Itasca Conference, Lima, Peru, March 2016.

Session Chair, 12th ICADD Conference, 12th ICADD Conference, Wuhan, China, Oct. 19, 2015.

Session Chair, Symposium on “Explosives & Blasting Techniques for Mining, Quarrying & Infrastructure Industry”, Mangalore, India, Feb. 2011.

Session Chair, “Rock Mechanics: Open-pit and Underground Mining I & II”, 2011 SME Conference, Denver, Colorado, Feb.-March 2011.

Session Chairman, 9th ICADD Conference on Analysis of Discontinuous Deformation, Singapore, November 25-27, 2009.

Session Chairman, 8th North American Workshop on Applications of Physics of Porous Media, Ensenada, Baja California, Mexico, October 9-12, 2009.

Session Chairman, ISRM International Symposium 2008, 5th Asian Rock Mechanics Symposium, Tehran, Iran, November 2008.

Invited Session Chairman, 41st US Rock Mechanics Symposium, Golden Colorado, June 2006.

Session Chairman for the session on “Probabilistic Approaches in Rock Engineering”, 40th US Rock Mechanics Symposium, Anchorage, Alaska, June 2005.

Session Chairman, International Geotechnical Symposium on Geotechnical Aspects of Natural and Man-Made Disasters, Astana, Kazakhstan, June 1-3, 2005.

Session Chairman for the session on “Fluid Flow”, 5th International Workshop on Application of Physics in Porous Media, Puerto Vallarta, Mexico, Nov. 7-11, 2003.

Session Chairman for the session on “Rock Mechanics”, 4th International Workshop on Applications of Computational Mechanics in Geotechnical Engineering, Ouro Preto, Brazil, August 2003.

Session Chairman for the session on “Block Theory and Applications”, 5th NARMS, Toronto, Canada, July 2002.

Session Chairman for the session on Characterization of Joints and Fractures I at the 38th US Rock Mech. Symp., Washington D.C., July 2001.

Session Chairman for the session on Joint Characterization at the 37th US Symp. On Rock Mech., Vail, Colorado, June 1999.

Session Chairman for 1999 ASSMR Conference, Scottsdale, Arizona.

Session Chairman for Numerical Modeling at the 3rd North American Rock Mech. Conf., Cancun, Mexico, June-July 1998.

Session Co-Chairman for 36th U.S. Symp. on Rock Mechanics, New York, June 1997.

Session Chairman for 1996 ASCE Convention, Washington, D.C. Nov. 1996.

Session Co-Chairman for Prager Symposium, Phoenix, Arizona, Oct. 1996.

Session Chairman for Geomechanics '96, Ostrava, Czech Republic, Sept. 1996.

Session Co-Chairman for 2nd North American Rock Mech. Symposium Montreal, Canada, June 1996.

Session Chairman for 1996 ASSMR Conf., Knoxville, Tennessee, May 1996.

Session Chairman for 35th U.S. Symp. on Rock Mechanics, Lake Tahoe, June 1995.

Organizer and Chairman for two sessions on "Uncertainty Evaluations in Geo-Engineering" which were completed for the 10th ASCE Engineering Mechanics Specialty Conference, held in Boulder, Colorado, in May 1995.

Organizer and Chairman for a session on "Uncertainty Evaluations on Rock Mechanics and Rock Engineering" for the First North American Rock Mechanics Symposium, which was held in Austin, Texas, in June 1994.

Session Co-chairman - 34th U.S. Symp. on Rock Mechanics, Madison, Wisconsin, June 1993.

Session Chairman - Int. Conf. on Assessment and Prevention of Failure Phenomena in Rock Engineering, Istanbul, Turkey, April 1993.

Session Co-chairman - Int. Conf. on Fractured and Jointed Rock Masses, Lake Tahoe, CA, June 1992.

Session Chairman - Int. Conf. on Geomechanics '91, Ostrava, Czechoslovakia, Sept. 1991.

Session Chairman - International Conference on Mechanics of Jointed and Faulted Rock, Vienna, Austria, Apr. 1990.

Session Co-chairman - 28th U.S. Symp. on Rock Mechanics, 1987.

Delivered a lecture on "Fracture Network Modelling Including Validations" at Energy and Resources Labs., ITRI, Taiwan, Nov. 1994. ITRI provided an honorarium for the lecture.

Presented a paper at the Second Int. Workshop on Scale Effects in Rock Masses, Lisbon, Portugal, June 1993. The workshop committee covered most of the expenses.

Delivered lectures on the following topics at the ASME Symposium on Probabilistic Structural Analysis Methods in Geomechanics, Columbus, Ohio, June 1991.

- (a) A Probabilistic Vector Approach to Correct Sampling Bias on Rock Joint Orientation
- (b) Application of Probabilistic & Statist. Methods to Joint Network Modeling & Verification in Rock Masses
- (c) Potentiometric Surface Mapping of the Wolfcamp Aquifer in the Palo Duro Basin Texas
- (d) Probabilistic Equivalent Linear Soil Spring Stiffness Analysis for Deepwater Gravity Platforms

Delivered lectures at Ecole des Mines, Nancy, France, May 1991. Ecole des Mines covered the expenses.

Delivered lectures at Spokane Research Center, Bureau of Mines, Spokane, Washington, Feb. 1991. Spokane Research Center covered the expenses.

Delivered lectures at Inst. for Found. Eng., Soil Mechanics, Rock Mechanics and Waterways Construction, Aachen, Germany, 1990. The Institute in Germany covered the expenses.

Delivered lectures at the Norwegian Institute of Technology (NIT), Norway, 1989. NIT covered the expenses.

Delivered lectures at JMC Geothermal Engineering Co., Japan, Nov. 1995. JMC covered the expenses.

Delivered lectures at Texaco, Inc., Houston, TX, Dec. 1995. Texaco covered the expenses and also provided an honorarium.

Outreach:

1. Taught a 1-day short course on Rock Slope Stability Analysis as a post-conference short course at the **First International Conference on Advances in Rock Mechanics (Tuni Rock), Hammamet, Tunisia** on April 1st (Sunday), 2018.
2. Taught a 2-day short course on "Block Theory and Applications to Rock Engineering" for graduate students and Faculty at the Anhui University of Science and Technology (AUST), Anhui, May 15-16, 2017. The AUST covered all the local expenses and provided an honorarium.
3. Taught a 2-day short course on Rock Slope Stability Analysis for graduate students and Faculty at the Wuhan Institute of Technology (WIT), Wuhan, May 10-11, 2017. The WIT covered a majority of the international and local expenses and also provided an honorarium.
4. Taught a 7-day short course on Probability and Statistics for International Undergraduate students in Civil and Mechanical Engineering at the Wuhan Institute of Technology (WIT), Wuhan, May 2-5, May 8-9, and May 12, 2017. The WIT covered a majority of the international and local expenses and also provided an honorarium.
5. Taught a 2-day short course on "Rock Slope Stability Analyses" at China University of Mining & Technology, Beijing, China, December 16-17, 2010.
6. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Lima, Peru, July 19-20, 2010.
7. Taught a 2-day short course on "Rock Slope Stability Analyses" in Lima, Peru, July 21-22, 2010.
8. Taught a 2-day short course on "Block Theory and Applications for Surficial and Underground Excavations" in Lima, Peru, July 23-24, 2010.
9. Taught a 1-day short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" in Lima, Peru, on July 25, 2010.
10. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Milan, Italy, June 28-29, 2010.
11. Taught a 1-day short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" in Milan, Italy, on June 30, 2010.

12. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" at Nanjing University, Nanjing, China, June 21-22, 2010.
13. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" at China University of Geosciences, Beijing, China, June 12-13, 2010.
14. Taught a 2-day short course on "Block Theory and Applications for Surficial and Underground Excavations" at Tongji University, Shanghai, China, June 6-7, 2010.
15. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Tucson, Arizona, USA, March 14-15, 2010.
16. Taught a 1-day short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" in Tucson, Arizona, USA, March 16, 2010.
17. Taught a 2-day short course on "Rock Slope Stability Analyses" in Tucson, Arizona, USA, March 17-18, 2010.
18. Taught a 2-day short course on "Block Theory and Applications for Surficial and Underground Excavations" in Tucson, Arizona, USA, March 19-20, 2010.
19. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Calama, Chile, December 16-17, 2009.
20. Taught a 1-day short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" in Calama, Chile, on December 18, 2009.
21. Taught a 2-day short course on "Rock Slope Stability Analyses" in Calama, Chile, December 19-20, 2009.
22. Taught a 2-day short course on "Block Theory and Applications for Surficial and Underground Excavations" in Calama, Chile, December 21-22, 2009.
23. Taught a 2-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Brisbane, Australia, July 20-21, 2009.
24. Taught a 2-day short course on "Rock Slope Stability Analyses" in Brisbane, Australia, July 22-23, 2009.
25. Taught a 2-day short course on "Block Theory and Applications for Surficial and Underground Excavations" in Brisbane, Australia, July 24-25, 2009.
26. Taught a 1-day short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" in Brisbane, Australia, on July 26, 2009.
27. Taught a one-day post-conference short course on "Measurement and Quantification of Rock Joint Roughness and Aperture" at the 43rd US Symposium on Rock Mechanics, Asheville, North Carolina, July 2, 2009.
28. Taught one and a half-day pre-conference short course on "Rock Slope Stability Analysis" at the International Conference on Rock Joints and Jointed Rock Masses, Tucson, Arizona, USA, January 4-5, 2009.
29. Taught one and a half-day pre-conference short course on "Block Theory and Applications for Surficial and Underground Excavations" at the International Conference on Rock Joints and Jointed Rock Masses, Tucson, Arizona, USA, January 5-6, 2009.
30. Taught a pre-conference short course on "Rock Fracture Geometry Network Modeling in 3-D to Study Mechanical and Hydraulic Behavior of Rock Masses", at the ISRM International Symposium 2008, 5th Asian Rock Mechanics Symposium, Tehran, Iran, November 22-23, 2008.
31. Taught a 2-day pre-conference short course on "Block Theory and Applications for Surficial and Underground Excavations", at the 42nd US Symposium on Rock Mechanics, San Francisco, California, June 28-29, 2008.
32. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations" in Cairo, Egypt, March 17-19, 2008.
33. Taught a one-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Cairo, Egypt, on March 20, 2008.
34. Taught a 3-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Vienna, Austria, December 10-12, 2007.

35. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations" in Vienna, Austria, December 13-15, 2007.
36. Taught one and a half-day pre-conference short course on "Rock Slope Stability Analysis" at the Sri Lankan Geotechnical Society's First International Conference on Soil & Rock Engineering, Colombo, Sri Lanka, August 5-6, 2007.
37. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations", Tucson, Arizona, December 2006.
38. Taught a 2-day pre-conference short course on "Block Theory and Applications for Surficial and Underground Excavations", at the 41st US Symposium on Rock Mechanics, Golden Colorado, June 17-18, 2006.
39. Taught a 3-day short course on "Rock Fracture Geometry Network Modeling, Including Validations" in Vienna, Austria, March 30- April 1, 2006.
40. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations" in Vienna, Austria, April 3-5, 2006.
41. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations", Seoul, Korea, January. 2006.
42. Taught a 3-day short course on "Rock Fracture Geometry Network Modeling, Including Validations", Seoul, Korea, January 2006.
43. Taught a 3-day short course on "Stereographic Projections, Applications of Kinematic, Block Theory and Limit Equilibrium Analyses to Surficial and Underground Rock Excavations", Brisbane, Australia, July. 2005.
44. Taught a 2-day short course on "Rock Slope Stability Analyses", at Hong Kong University of Science & Technology, Hong Kong, Dec. 2001.
45. Taught a 1-day short course on "Rock Joint Network Modelling, Including Validations", at the EUROCK Conference 2001, Helsinki, Finland, June 2001.
46. Taught a 2-day short course on "Applications of Kinematic Analysis and Block Theory for Surficial and Underground Excavations", in Vancouver, British Columbia, Canada, Dec. 99.
47. Taught a 3-day short course on "Rock Joint Network Modelling, Including Validations", at the Royal Institute of Technology, Stockholm, Sweden, Nov., '99.
48. Taught a 1-day short course on "Rock Joint Network Modelling, Including Validations", at the Hong Kong Polytechnic University, Hong Kong, July '99.
49. Taught a 3-day short course on "Rock Joint Network Modelling, Including Validations and Applications of Kinematic Analysis and Block Theory for Surficial Excavations" in Gliwice, Poland, October 1998.
50. Taught a 2-day short course on "Rock Joint Network Modelling, Including Validations and Applications of Block Theory for Surficial and Underground Excavations" at the 3rd NARMS, Cancun, Mexico, June 1998.
51. Taught a 3-day short course on "Applications of stereographic Projections and Block Theory for Surficial and Underground Excavations," at the Hong Kong Polytechnic University, Hong Kong, March 1998.
52. Taught a 3 ½ day short course on "Rock Joint Network Modelling Including Validations and Applications of Kinematic Analysis and Block Theory for Surficial Excavations," at the Hong Kong Polytechnic University, Hong Kong, July 1996.
53. Taught a short course on "Geomechanical Modelling" with two other instructors at the 2nd NARMS, Montreal, Canada, in June 1996.
54. Taught a 5-day short course on "Fracture Network Modelling Including Validations" at Graz Univ. of Tech., Austria, Oct. 1994.
55. Taught a 5-day short course on "Stochastic Fracture Network Modelling Including Validations" at the University of Sonora, Hermosillo, Mexico, in July 1993.

56. Taught a 5-day short course on "Fracture Network Modelling and Validations" at the Royal Institute of Technology, Stockholm, Sweden, in June 1991.