

Publications of D.V. Griffiths

Journal Publications

- [1] **Griffiths, D.V.** “Elasto-plastic analyses of deep foundations in cohesive soils.” *Int J Numer Anal Methods Geomech*, vol.6, no.2, pp.211-218, (1982)
- [2] **Griffiths, D.V.** “Computation of bearing capacity factors using finite elements.” *Géotechnique*, 32, no.3, pp.195-202, (1982)
- [3] **Griffiths, D.V.** “Rationalised charts for the method of fragments applied to confined seepage.” *Géotechnique*, 34, no.2, pp.229-238, (1984)
- [4] **Griffiths, D.V.** “A chart for estimating the average vertical stress increase in an elastic foundation below a uniformly loaded rectangular area.” *Can Geotech J*, vol.21, no.4, pp.710-713, (1984)
- [5] **Griffiths, D.V.** “The effect of pore-fluid compressibility on failure loads in elasto-plastic soil.” *Int J Numer Anal Methods Geomech*, vol.9, no.3, pp.253-259, (1985)
- [6] **Griffiths, D.V. and Koutsabeloulis, N.C.** “Finite element analyses of vertical excavations.” *Comput Geotech*, vol.1, no.3, pp.221-234, (1985)
- [7] **Griffiths, D.V.** “Some theoretical observations on conical failure criteria in principal stress space.” *Int J Solids Struct*, vol.22, no.5, pp.553-565, (1986)
- [8] **Griffiths, D.V. and Willson, S.M.** “An explicit form of the plastic matrix for a Mohr-Coulomb material.” *Commun Appl Numer Methods*, vol.2, pp.523-529, (1986)
- [9] **Griffiths, D.V.** “Numerical studies of soil-structure interaction using a simple interface model.” *Can Geotech J*, vol. 25, no.1, pp.158-162, (1988)
- [10] **Griffiths, D.V. and Prevost, J.H.** “Two- and three-dimensional dynamic finite element analyses of the Long Valley Dam.” *Géotechnique*, 38, no.3, pp.367-388, (1988)

- [11] **Griffiths, D.V. and Prevost, J.H.** “The properties of anisotropic conical failure surfaces in relation to the Mohr-Coulomb criterion.” *Int J Numer Anal Methods Geomech*, vol.12, no.5, pp.497-504, (1988)
- [12] **Griffiths, D.V.** “An iterative method for plastic analysis of frames.” *Comput Struct*, vol.30, no.6, pp.1347-1354, (1988)
- [13] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Numerical modelling of the trap-door problem.” *Géotechnique*, 39, no.1, pp.77-89, (1989)
- [14] **Griffiths, D.V.** “Advantages of consistent over lumped methods for analysis of beams on elastic foundations.” *Commun Appl Numer Methods*, vol.5, no.1, pp.53-60, (1989)
- [15] **Griffiths, D.V.** “Computation of collapse loads in geomechanics by finite elements.” *Ing Arch*, vol.59, no.3, pp.237-244, (1989)
- [16] **Griffiths, D.V. and Li, C.O.** “Accurate pore pressure calculation in undrained analysis.” *Eng Comput (Swansea, Wales)*, vol.6, no.4, pp.339-342, (1989)
- [17] **Griffiths, D.V.** “Failure criteria interpretation based on Mohr-Coulomb friction.” *J Geotech Eng, ASCE*, vol.116, no.6, pp.986-999, (1990)
- [18] **Griffiths, D.V.** “Treatment of skew boundary conditions in finite element analysis.” *Comput Struct*, vol.36, no.6, pp.1009-1012, (1990)
- [19] **Griffiths, D.V. and Prevost, J.H.** “Stress strain curve generation from simple triaxial parameters.” *Int J Numer Anal Methods Geomech*, vol.14, no.8, pp.587-594, (1990)
- [20] **Griffiths, D.V. and Lane, P.A.** “Finite element analysis of the shear vane test.” *Comput Struct*, vol.37, no.6, pp.1105-1116, (1990)
- [21] **Griffiths, D.V.** “Generalized numerical integration of moments.” *Int J Numer Methods Eng*, vol.32, no.1, pp.129-147, (1991)
- [22] **Clancy, P. and Griffiths, D.V.** “A spurious zero-energy mode in the numerical analysis of piled slab foundations.” *Comput Geotech*, vol.11, no.2, pp.159-170, (1991)

- [23] **Griffiths, D.V., Hicks, M.A. and Li, C.O.** “Transient passive earth pressure analyses.” *Géotechnique*, 41, no.4, pp.615-620, (1991)
- [24] **Holt, D.A. and Griffiths, D.V.** “Transient analysis of excavations in soil.” *Comput Geotech*, vol.13, no.3, pp.159-174, (1992)
- [25] **Fenton, G.A. and Griffiths, D.V.**, “Statistics of block conductivity through a simple bounded stochastic medium.” *Water Resour Res*, vol.29, no.6, pp.1825-1830, (1993)
- [26] **Griffiths, D.V. and Li, C.O.** “Analysis of delayed failure in sloping excavations.” *J Geotech Eng, ASCE*, vol.119, no.9, pp.1360-1378, (1993)
- [27] **Griffiths, D.V. and Fenton, G.A.** ¹ “Seepage beneath water retaining structures founded on spatially random soil.” *Géotechnique*, 43, no.4, pp.577-587, (1993)
- [28] **Griffiths, D.V.**, “Stiffness matrix of the four-node quadrilateral element in closed-form.” *Int J Numer Methods Eng*, vol.37, no.6, pp.1027-1038, (1994). See also Correction in *Int J Numer Methods Eng*, vol.38, p.2299, (1995).
- [29] **Griffiths, D.V.**, “Seepage beneath unsymmetric cofferdams.” *Géotechnique*, 44, no.2, pp.297-305, (1994)
- [30] **Griffiths, D.V. and Kidger, D.J.** “Enhanced visualization of failure mechanisms by finite elements.” *Comput Struct*, vol.55, no.2, pp.265-269, (1995)
- [31] **Griffiths, D.V. and Mustoe, G.G.W.**, “Selective reduced integration of the four-node plane element in closed-form.” *J Eng Mech, ASCE*, vol.121, no.6, pp.725-729, (1995)
- [32] **Fenton, G.A. and Griffiths, D.V.**, “Statistics of free surface flow through a stochastic earth dam.” *J Geotech Eng, ASCE* vol.122, no.6, pp.427-436, (1996)

¹Awarded the George Stephenson Medal for 1993 by the Institution of Civil Engineers, London, England

- [33] **Paice, G.M., Griffiths, D.V. and Fenton, G.A.**, “Finite element modeling of settlements on spatially random soil.” *J Geotech Eng, ASCE* vol.122, no.9, pp.777-779, (1996)
- [34] **Woodward, P.K. and Griffiths, D.V.**, “Influence of viscous damping in the dynamic analysis of an earth dam using simple constitutive models.” *Comput Geotech* vol.19, no.3, pp.245-263, (1996)
- [35] **Woodward, P.K. and Griffiths, D.V.** “Comparison of the pseudo-static and dynamic behaviour of gravity retaining walls.” *J Geotech Geolog Eng* vol.14, no.2, pp.269-290, (1996)
- [36] **Griffiths, D.V. and Fenton, G.A.**, “Three-dimensional seepage through a spatially random soil.” *J Geotech Geoenviron* vol.123, no.2, pp.153-160, (1997)
- [37] **Fenton, G.A. and Griffiths, D.V.** “Extreme hydraulic gradient statistics in a stochastic earth dam.” *J Geotech Geoenviron* vol.123, no.11, pp.995-1000, (1997)
- [38] **Fenton, G.A. and Griffiths, D.V.** “A mesh deformation algorithm for free surface problems.” *Int J Numer Anal Methods Geomech*, vol.21, no.12, pp.817-824, (1997)
- [39] **Woodward, P.K. and Griffiths, D.V.** “Observations on the computation of the bearing capacity factor N_γ by finite elements.” *Géotechnique*, 48, no.1, pp.137-141, (1998)
- [40] **Griffiths, D.V. and Fenton, G.A.**, “Probabilistic analysis of exit gradients due to steady seepage.” *J Geotech Geoenviron* vol.124, no.9, pp.789-797, (1998)
- [41] **Griffiths, D.V. and Lane, P.A.** “Slope stability analysis by finite elements.” *Géotechnique*, 49, no.3, pp.387-403, (1999)
- [42] **Lane, P.A. and Griffiths, D.V.** “Assessment of stability of slopes under drawdown conditions.” *J Geotech Geoenviron* vol.126, no.5, pp.443-450, (2000)
- [43] **Griffiths, D.V. and Mustoe, G.G.W.** “Modeling of elastic continua using a grillage of structural elements based on discrete element concepts.” *Int J Numer Methods Eng*, vol.50, no.7, pp.1759-1775, (2001)

- [44] **Griffiths, D.V. and Fenton, G.A.**, “Bearing capacity of spatially random soil: the undrained clay Prandtl problem revisited.” *Géotechnique*, 51, no.4, pp.351-359, (2001)
- [45] **Fenton, G.A. and Griffiths, D.V.**, “Probabilistic foundation settlement on spatially random soil.” *J Geotech Geoenviron* vol.128, no.5, pp.381-390, (2002)
- [46] **Griffiths, D.V., Fenton, G.A. and Lemons, C.B.**, “Probabilistic analysis of underground pillar stability.” *Int J Numer Anal Methods Geomech* vol.26, no.8, pp.775-791, (2002)
- [47] **Griffiths, D.V., Fenton, G.A. and Manoharan, N.**, “Bearing capacity of a rough rigid strip footing on cohesive soil: a probabilistic study.” *J Geotech Geoenviron* vol.128, no.9, pp.743-755, (2002)
- [48] **Fenton, G.A. and Griffiths, D.V.** “Bearing capacity prediction of spatially random $c-\phi$ soils.” *Can Geotech J*, vol.40, no.1, pp.54-65, (2003)
- [49] **Griffiths, D.V. and Fenton, G.A.** “Probabilistic slope stability analysis by finite elements.” *J Geotech Geoenviron*, vol.130, no.5, pp.507-518, (2004)
- [50] **Lu, N. and Griffiths, D.V.** “Profiles of steady-state suction stress in unsaturated soils.” *J Geotech Geoenviron*, vol.130, no.10, pp.1063-1076, (2004)
- [51] **Griffiths, D.V. and Lu, N.** “Unsaturated slope stability analysis with steady infiltration or evaporation using elasto-plastic finite elements.” *Int J Numer Anal Methods Geomech* vol.29, pp.249-267, (2005)
- [52] **Fenton, G.A. and Griffiths, D.V.** “Three-dimensional probabilistic foundation settlement” *J Geotech Geoenviron*, vol.131, no.2, pp.232-239, (2005)
- [53] **Fenton, G.A., Griffiths, D.V. and Williams, M.B.** “Reliability of traditional retaining wall design” *Géotechnique*, 55, no.1, pp.55-62, (2005)

- [54] **Jaksa, M.B., Goldsworthy, J.S., Fenton, G.A., Kaggwa, W.S., Griffiths, D.V., Kuo, Y.L. and Poulos, H.G.** “Towards reliable and effective site investigations” *Géotechnique*, 55, no.2, pp.109-121, (2005)
- [55] **Fenton, G.A., Griffiths, D.V. and Cavers, W.** “Resistance factors for settlement design.” *Can Geotech J*, vol.42, no.5, pp.1422-1436, (2005)
- [56] **Lozada, I.J., Osorio, J.C., Griffiths, D.V. and Cerrolaza, M.** “Semi-analytical integration of the 8-node plane element stiffness matrix using symbolic computation” *Numer Meth Part Diff Eqns*, vol.22, no.2, pp.296-316, (2005)
- [57] **Griffiths, D.V., Fenton, G.A. and Manoharan, N.**, “Undrained bearing capacity of two strip footings on spatially random soil.” *Int J Geomech*, vol.6, no.6, pp.421-427, (2006)
- [58] **Chok, Y.H., Jaksa, M.B., Griffiths, D.V., Fenton, G.A. and Kaggwa, W.S.** “A parametric study on reliability of spatially random cohesive slopes.” *Australian Geomechanics*, vol.42, no.2, pp.79-85, (2007)
- [59] **Griffiths, D.V. and Marquez, R.M.** “Three-dimensional slope stability analysis by elasto-plastic finite elements.” *Géotechnique*, 57, no.6, pp.537-546, (2007)
- [60] **Goldsworthy, J.S., Jaksa, M.B., Fenton, G.A., Griffiths, D.V., Kaggwa, W.S. and Poulos, H.G.** “Effect of sample location on the reliability based design of pad foundations.” *Georisk*, vol.1, no.3, pp.155-166, (2007)
- [61] **Fenton, G.A., Zhang, X. and Griffiths, D.V.** “Reliability of shallow foundations designed against bearing failure using LRFD.” *Georisk*, vol.1, no.4, pp.202-215, (2007)
- [62] **Videla, L., Baloa, T., Griffiths, D.V. and Cerrolaza, M.** “Exact integration of an 8-node plane elastic finite element by symbolic computation.” *Numer Meth Part Diff Eqns*, vol.24, no.1, pp.249-261, (2008)

- [63] **Griffiths, D.V., Fenton, G.A. and Ziemann, H.R.**, “Reliability of passive earth pressure.” *Georisk*, vol.2, no.2, pp.113-121, (2008)
- [64] **Huang, J. and Griffiths, D.V.** “Observations on return mapping algorithms for piecewise linear yield criteria.” *Int J Geomech*, vol.8, no.4, pp.253-265, (2008)
- [65] **Fenton, G.A., Griffiths, D.V. and Zhang, X.** “Load and resistance factor design of shallow foundations against bearing failure.” *Can Geotech J*, vol.45, no.11, pp.1556-1571, (2008)
- [66] **Lozada, I., Griffiths, D.V. and Cerrolaza, M.** “Semi-analytical integration of finite element stiffness matrices in axisymmetric problems.” *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, vol.24, no.4, pp.345-356, (2008)
- [67] **Griffiths, D.V., Huang, J. and Schiermeyer, R.P.** “Elastic stiffness of straight-sided triangular finite elements by analytical and numerical integration.” *Comm Num Meth Eng*, vol.25, no.3, pp.247-262, (2009)
- [68] **Huang, J. and Griffiths, D.V.** “Return mapping algorithms and stress predictors for failure analysis in geomechanics.” *J Eng Mech*, vol.135, no.4, pp.276-284, (2009)
- [69] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “On the reliability of earth slopes in three dimensions.” *Proc R Soc A*, vol.465, issue 2110, pp.3145-3164 (2009)
- [70] **Griffiths, D.V., Huang, J. and Fenton G.A.** “Influence of spatial variability on slope reliability using 2-d random fields.” *J Geotech Geoenviron*, vol.135, no.10, pp.1367-1378, (2009)
- [71] **Griffiths, D.V. and Fenton G.A.** “Probabilistic settlement analysis by stochastic and random finite element methods.” *J Geotech Geoenviron*, vol.135, no.11, pp.1629-1637, (2009)
- [72] **Griffiths, D.V. and Huang, J.** “Observations on the extended Matsuoka-Nakai failure criterion.” *Int J Numer Anal Methods Geomech*, vol.33, pp.1889-1905, (2009), doi = 10.1002/nag.810.

- [73] **Huang, J., Griffiths, D.V. and Fenton, G.A.** “Probabilistic analysis of coupled soil consolidation.” *J Geotech Geoenviron*, vol.136, no.3, pp.417-430, (2010), doi = 10.1061/(ASCE)GT.1943-5606.0000238
- [74] **Huang, J., Griffiths, D.V. and Fenton, G.A.** “System reliability of slopes by RFEM.” *Soils Found*, vol.50, no.3, pp.343-353, (2010)
- [75] **Huang, J. and Griffiths, D.V.** “One-dimensional consolidation theories for layered soils and coupled and uncoupled solutions by the finite element method.” *Géotechnique*, 60, no.9, pp.709-713, (2010)
- [76] **Lozada, I.J., Griffiths, D.V. and Cerrolaza, M.** “Semi-analytical integration of the elastic stiffness matrix of an axisymmetric 8-noded finite element.” *Numer Meth Part Diff Eqns*, vol.26, no.6, pp.1624-1635, (2010)
- [77] **Menzies, W.T., Fenton, G.A., Lake, C.B. and Griffiths, D.V.** “A method to assess risk reduction when utilizing GCLs with compacted soil liners.” *Can Geotech J*, vol.48, no.1, pp.146-161, (2011)
- [78] **Huang, J. and Griffiths, D.V.** “Observations on FORM in a simple geomechanics example.” *Struct Safety*, vol.33, no.1, pp.115-119, (2011)
- [79] **Fenton, G.A., Griffiths, D.V. and Ojomo, O.O.** “Consequence factors in the ultimate limit state design of shallow foundations.” *Can Geotech J*, vol.48, no.2, pp.265-279, (2011)
- [80] **Huang, J., Griffiths, D.V. and Wong, S.W.** “In situ stress determination from inversion of hydraulic fracturing data.” *Int J Rock Mech and Min Sci*, vol.48, no.3, pp.476-481, (2011)
- [81] **Huang, J., Griffiths, D.V. and Wong, S.W.** “Characterizing natural fracture permeability from mud loss data.” *SPE Journal*, vol.16, no.1, pp.111-114, (2011)
- [82] **Griffiths, D.V., Huang, J. and deWolfe, G.F.** “Numerical and analytical observations on long and infinite slopes.” *Int J Numer Anal Methods Geomech*, vol.35, no.5, pp.569-585, (2011)
- [83] **Griffiths, D.V., Huang, J. and Fenton G.A.** “Probabilistic infinite slope analysis.” *Comput Geotech*, vol.38, no.4, pp.577-584, (2011)

- [84] **Huang, J., Griffiths, D.V. and Wong, S.W.** “Initiation pressure, location and orientation of hydraulic fracture.” *Int J Rock Mech and Min Sci*, vol.49, no.1, pp.59-67, (2012)
- [85] **Pantelidis, L. and Griffiths, D.V.** “Stability assessment of slopes using different factoring strategies.” Published ahead of print in *J Geotech Geoenv Eng*, doi:10.1061/(ASCE)GT.1943-5606.0000678 (2011)

Textbooks

- [86] **Smith, I.M. and Griffiths, D.V.** “Programming the Finite Element Method.” 2nd edition, John Wiley & Sons, Chichester, New York, (1988)
- [87] **Griffiths, D.V. and Smith, I.M.** “Numerical Methods for Engineers.” Blackwell Scientific Publications Ltd., Oxford,Boston, (1991); U.S. publisher, CRC Press Inc., Boca Raton, Ann Arbor, Boston (1991)
- [88] **Smith, I.M. and Griffiths, D.V.** “Programming the Finite Element Method.” 3rd edition, John Wiley & Sons, Chichester, New York (1998). Reprinted (1999, 2001)
- [89] **Smith, I.M. and Griffiths, D.V.** “Programming the Finite Element Method.” Simplified Chinese Translation Edition, Wiley/PHEI, Beijing (2003)
- [90] **Smith, I.M. and Griffiths, D.V.** “Programming the Finite Element Method.” 4th edition, John Wiley & Sons, Chichester, New York (2004). Reprinted (2006, 2008)
- [91] **Griffiths, D.V. and Smith, I.M.** “Numerical Methods for Engineers.” 2nd edition, Chapman & Hall/CRC Press Inc., Boca Raton (2006)
- [92] **Fenton, G.A. and Griffiths, D.V.** “Risk Assessment in Geotechnical Engineering”, John Wiley & Sons, Hoboken, NJ (2008)

Chapters in Textbooks

- [93] **Griffiths, D.V.** “Coupled Analyses in Geomechanics.” Chapter 5 in *Visco-plastic Behaviour of Geomaterials*, eds. N.D. Cristescu and G. Gioda, pub. Springer-Verlag, Wien, New York (1994)
- [94] **Griffiths, D.V.** “Stability Analysis of Highly Variable Soils by Elasto-Plastic Finite Elements.” in *Advanced Numerical Applications and Plasticity in Geomechanics*, eds. D.V. Griffiths and G. Gioda, Pub. Springer, Wien, New York, pp.159-230, (2001)
- [95] **Fenton, G.A. and Griffiths, D.V.** “Review of Probability Theory, Random Variables and Random Fields.” Chapter 1 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer, Wien, New York, pp.1-69, (2007)
- [96] **Fenton, G.A. and Griffiths, D.V.** “Random Field Generation and the Local Average Subdivision Method.” Chapter 9 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer, Wien, New York, pp.201-223, (2007)
- [97] **Griffiths, D.V. and Fenton, G.A.** “The random finite element method (RFEM) in steady seepage analysis.”, Chapter 10 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer Wien, New York, pp.225–241, (2007)
- [98] **Fenton, G.A., Griffiths, D.V., and Cavers, W.** “The random finite element method (RFEM) in settlement analysis.”, Chapter 11 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer Wien, New York, pp.243–270, (2007)
- [99] **Griffiths, D.V., Fenton, G.A. and Lemons, C.B.** “The random finite element method (RFEM) in mine pillar stability analysis.”, Chapter 12 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer Wien, New York, pp.271–294, (2007)
- [100] **Fenton, G.A. and Griffiths, D.V.** “The random finite element method (RFEM) in bearing capacity analysis.”, Chapter 13 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer Wien, New York, pp.295–315, (2007)

- [101] **Griffiths, D.V. and Fenton, G.A.** “The random finite element method (RFEM) in slope stability analysis.”, Chapter 14 in *Probabilistic Methods in Geotechnical Engineering*, eds. D.V. Griffiths and G.A. Fenton, Pub. Springer Wien, New York, pp.317–346, (2007)

Edited Books and Conference Proceedings

- [102] **Filz, G.M. and Griffiths, D.V.** “Numerical Methods in Geomechanics”, Geotechnical Special Publication No. 96, Proceedings of the GeoDenver 2000 Symposium., Pub. ASCE (2000)
- [103] **Griffiths, D.V., Fenton, G.A. and Martin, T.R.** “Slope Stability 2000”, Geotechnical Special Publication No. 101, Proceedings of the GeoDenver 2000 Symposium., Pub. ASCE (2000)
- [104] **Griffiths, D.V. and Gioda, G.** “Advanced numerical applications and plasticity in geomechanics”, Pub. Springer, Wien, New York, (2001)
- [105] **Griffiths, D.V. and Fenton, G.A.** “Probabilistic methods in geotechnical engineering”, CISM Courses and Lectures No. 491, Pub. Springer, Wien, New York (2007)
- [106] **Griffiths, D.V.** “Educational activities in geotechnical engineering”, Geotechnical Special Publication No. 166, Proceedings of Geo-Denver 2007, Pub. ASCE (2007)
- [107] **Phoon, K.K., Fenton, G.A., Glynn, E.F., Juang, C.H., Griffiths, D.V., Wolff, T.F. and Zhang, L.** “Probabilistic applications in geotechnical engineering”, Geotechnical Special Publication No. 170, Proceedings of Geo-Denver 2007, Pub. ASCE (2007)

Conference Publications

- [108] **Griffiths, D.V.** “Finite element analyses of walls footings and slopes” Proc. Symp. on Comp. Applic. to Geotech. Probs. in Highway Eng., Cambridge, U.K., (ed. M.F. Randolph), Pub. PM Geotechnical Analysts Ltd., pp.122-146, (1980)

- [109] **Griffiths, D.V.** “Computation of strain-softening behaviour.” Proc. Symp. on Implementation of Computer Procedures and Stress-Strain Laws in Geotech. Eng., Chicago, U.S.A., (eds. C.S. Desai and S.K. Saxena), Pub. Acorn Press, pp.591-604, (1981)
- [110] **Griffiths, D.V.** “Computation of bearing capacity on layered soils.” Proc. 4th Int. Conf. Num. Meths. Geomech., Edmonton, Canada, (ed. Z. Eisenstein), Pub. Balkema pp.163-170, (1982)
- [111] **Griffiths, D.V., Molenkamp, F. and Smith, I.M.** “Computer implementation of a double hardening model for sand.” Proc. IUTAM Symposium on Deformation and Failure of Granular Materials, Delft, Netherlands, (eds. P.A. Vermeer and H.J. Luger), Pub. Balkema, pp.213-222, (1982)
- [112] **Griffiths, D.V. and Smith, I.M.** “Experience with a double hardening model for soils.” Proc. 1st Int. Conf. on Constit. Laws for Eng. Materials, Tucson, U.S.A., (eds. C.S. Desai *et al.*), Pub. University of Arizona Press, pp.553-560, (1983)
- [113] **Griffiths, D.V.** “Modelling of interfaces using conventional finite elements.” Proc. 5th Int. Conf. Num. Meths. Geomech., Nagoya, Japan, (eds. Y. Kawamoto and Y. Ichikawa), Pub. Balkema, pp.837-844, (1985)
- [114] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Determination of the horizontal stability coefficient for earthquake design of cohesionless slopes.” Proc. Int. Symp. on Earthquake Design of Structs. in Seismic Areas, Constantine, Algeria.(1985)
- [115] **Kay, S., Griffiths, D.V. and Kolk, H.J.** “Application of pressuremeter testing to assess lateral pile response in clays.” Proc. 2nd Int. Symp. on the Pressuremeter and its Marine Applications, Texas A&M, (eds. J-L. Briaud and J.M.E. Audibert), Pub. ASTM, pp.458-477, (1985)
- [116] **Griffiths, D.V. and Li, C.O.** “Finite element assessment of the method of fragments for problems of confined seepage.” Proc. 6th Int. Conf. on Finite Elements in Water Resources, Lisbon, Portugal (eds. A. Sa da Costa *et al.*), Pub. Springer-Verlag, pp.143-152, (1986)

- [117] **Griffiths, D.V. and Kan, J.H-S.** “Aspects of laterally loaded pile modelling.” Proc. 1st European Conference on Numerical Methods in Geomechanics, Stuttgart, W.Germany, (ed. P. Gussman), Pub. Stuttgart University Press, vol.2, pp.156-175, (1986)
- [118] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Numerical evaluation of uplift forces in sands using the trap- door problem.” Proc. 1st European Conference on Numerical Methods in Geomechanics, Stuttgart, W.Germany, (ed. P. Gussman), Pub. Stuttgart University Press, vol.2, pp.285-303, (1986)
- [119] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Accelerators for non-linear problems using the finite element method.” Proc. 3rd Int. Conf. on Num. Meths. for Non-Linear Probs., Dubrovnik, Yugoslavia, (ed. E. Hinton), Pub. Pineridge Press, pp.592-602, (1986)
- [120] **Griffiths, D.V. and Lane, P.A.** “The influence of interface roughness on problems of axisymmetric soil/structure interaction.” Proc. 2nd Int. Conf. on Constit. Laws for Eng. Materials, Tucson, U.S.A., (eds. C.S. Desai *et al.*), Pub. Elsevier, pp.1051-1058, (1987)
- [121] **Lane, P.A. and Griffiths, D.V.** “Computation of the ultimate pressure of a laterally loaded circular pile in frictional soil.” Proc. 6th Int. Conf. Num. Meths. Geomech., Innsbruck, Austria (ed. G. Swaboda), Pub. Balkema, pp.1025-1033, (1988)
- [122] **Li, C.O. and Griffiths, D.V.** “Finite element modelling of rapid drawdown.” Proc. 6th Int. Conf. Num. Meths. Geomech., Innsbruck, Austria (ed. G. Swaboda), Pub. Balkema, pp.1291-1296, (1988)
- [123] **Prevost, J.H. and Griffiths, D.V.** “Parameter identification and implementation of a kinematic plasticity model for frictional soils.” Proc. Workshop on Constit. Laws for the Anal. of Fill Retention Strucs., (ed. E. Evgin), Sponsored by the Panel for Energy Research and Development, Pub. Dept. of Civ. Eng., Univ. Ottawa, pp.285-358, (1988)
- [124] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Dynamic slope stability analysis using the finite element method.” Proc. Int. Symp. Computer and Physical Modelling in Geotechnical Engineering, Bangkok,

- Thailand, (eds. A.S. Balasubramaniam *et al.*), Pub. Balkema, pp.247-262, (1989)
- [125] **Griffiths, D.V. and Prevost, J.H.** “Modelling the stress/strain behavior of sand using a multi-surface kinematic model.” Proc. Int. Workshop on Constit. Eqns. for Granular Non-Cohesive Soils., Cleveland, U.S.A., (eds. A. Saada and G. Bianchini), Pub. Balkema, pp.275-291, (1989)
- [126] **Griffiths, D.V. and Prevost, J.H.** “Hysteretic damping in the seismic analysis of an earth dam.” Proc. 4th Int. Conf. Soil Dyn. Earthquake Eng., Mexico City, (eds. A.S. Cakmak and I. Herrera), Pub. Computational Mechanics Publications, Volume entitled *Engineering Seismology and Site Response*, pp.155-166, (1989)
- [127] **Clancy, P. and Griffiths, D.V.** “Finite element analysis of pile group interactions.” Proc. 2nd European Specialty Conference on Numerical Methods in Geotechnical Engineering, Santander, Spain, (ed. C. Sagaseta), Pub. CEDEX, Madrid, pp.381-397, (1990)
- [128] **Griffiths, D.V.** “Analysis of stresses and mechanisms within a silo.” Proc. 2nd European Specialty Conference on Numerical Methods in Geotechnical Engineering, Santander, Spain, (ed. C. Sagaseta), Pub. CEDEX, Madrid, pp.585-597, (1990)
- [129] **Griffiths, D.V. and Kidger, D.J.** “Finite element analysis of failure mechanisms in elasto-plastic soil slopes.” Proc. 3rd Int. Conf. on Constit. Laws for Eng. Materials, Tucson, U.S.A., Pub. ASME Press, New York, pp.713-716, (1991).
- [130] **Griffiths, D.V. and Lane, P.A.** “Elasto-plastic analysis of the shear vane test by semi-analytical finite elements.” Proc. Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics (IACMAG 91), Cairns, Queensland, Australia, (eds. G. Beer *et al.*), Pub. Balkema, pp.1067-1071, (1991)
- [131] **Griffiths, D.V., Clancy, P. and Randolph, M.F.** “Piled raft foundation analysis by finite elements.” Proc. Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics

- (IACMAG 91), Cairns, Queensland, Australia, (eds. G. Beer *et al.*), Pub. Balkema, pp.1153-1157, (1991)
- [132] **Kay, S. and Griffiths, D.V.** “Finite element analysis of skirts for gravity base structures.” Proc. 10th Eur. Conf. on Soil Mech. and Found. Eng., Florence, (ed. Associazione Geotecnica Italiana), Pub. Balkema, Vol.1, pp.233-236, (1991)
- [133] **Woodward, P.K. and Griffiths, D.V.** “Three-dimensional finite element analyses of the natural frequencies of non-homogeneous earth dams.” Proc. 5th Int. Conf. Soil Dyn. Earthquake Eng. (SDEE '91), Karlsruhe, Germany, (ed. IBF), Pub. Computational Mechanics Publications/ Elsevier Applied Science, pp.377-388, (1991)
- [134] **Woodward, P.K. and Griffiths, D.V.** “Dynamic active earth pressure analysis.” Proc. 4th Int. Symp. on Numerical Models in Geomechanics (NUMOG IV), Swansea, (eds. G.N. Pande and S. Pietruszczak), Pub. Balkema, Vol.1, pp.403-410, (1992)
- [135] **Griffiths, D.V.** “Transient plasticity in geomechanics.” Proc. 2nd Czech. Conf. of the International Association for Computer Methods and Advances in Geomechanics (NUMEG 92), Prague, Czechoslovakia, (ed. M. Doležalová), Pub. Czech Technical University, Vol.1, pp.187-194, (1992)
- [136] **Griffiths, D.V.** “Derivation of element stiffness matrices using computer algebra.” In *Computational Mechanics in UK – 1993*, Proc. 1st Conf. Assoc. Comp. Mech. Eng. (ACME), (ed. N. Bicanic), Pub. Inst. for Num. Meths. in Eng., Univ. College Swansea, pp. 81-86, (1993)
- [137] **Mok, F.B. and Griffiths, D.V.** “An assessment of Backward and Forward Euler methods applied to the Prandtl problem.” In *Computational Mechanics in UK – 1993*, Proc. 1st Conf. Assoc. Comp. Mech. Eng. (ACME), (ed. N. Bicanic), Pub. Inst. for Num. Meths. in Eng., Univ. College Swansea, pp. 175-184, (1993)
- [138] **Griffiths, D.V.** “Use of computer algebra systems to generate element stiffness matrices.” In *The Mathematics of Finite Elements and Applications–Highlights 1993*, (ed. J.R. Whitehead), Pub. John Wiley & Sons, pp. 373-374, (1993)

- [139] **Woodward, P.K. and Griffiths, D.V.** “Earthquake induced forces on retaining walls.” Proc. 6th Int. Conf. Soil Dyn. Earthquake Eng. (SDEE '93), Bath, U.K., (eds. A.S. Cakmak and C.A. Brebbia), Pub. Computational Mechanics Publications, pp.735-751, (1993)
- [140] **Mok, F.B. and Griffiths, D.V.** “Selective reduced integration in numerical modelling of soil plasticity.” Proc. Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics (IACMAG 94), Morgantown, W. Virginia, (ed. H.J. Siriwardane and M.M. Zaman), Pub. Balkema, pp.1987-1992, (1994)
- [141] **Griffiths, D.V., Paice, G.M. and Fenton, G.A.** “Finite element modeling of seepage beneath a sheet pile wall in spatially random soil.” Proc. Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics (IACMAG 94), Morgantown, W. Virginia, (ed. H.J. Siriwardane and M.M. Zaman), Pub. Balkema, pp.1205-1210, (1994)
- [142] **Woodward, P.K. and Griffiths, D.V.** “Non-linear dynamic analysis of the Long Valley Dam.” Proc. Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics (IACMAG 94), Morgantown, W. Virginia, (ed. H.J. Siriwardane and M.M. Zaman), Pub. Balkema, pp.1005-1010, (1994)
- [143] **Paice, G.M., Griffiths, D.V. and Fenton, G.A.** “Influence of spatially random soil stiffness on foundation settlements.” ASCE Specialty Conference, *Settlement '94*, Texas A&M University, (ed. A.T. Yeung and G.Y. Félio), Pub. ASCE, pp.628-639, (1994)
- [144] **Fenton, G.A. and Griffiths, D.V.** “Flow through earth dams with spatially random permeability.” Proceedings of the 10th ASCE Engineering Mechanics Conference, Boulder, Colorado, (ed. S. Sture), Pub. ASCE, pp.341-344, (1995)
- [145] **Griffiths, D.V. and Fenton, G.A.** “Observations on two- and three-dimensional seepage through a spatially random soil.” Proceedings of the ICASP 7 conference, Applications of Statistics and Probability, Paris, France, (eds. M. Lemaire *et al.*), Pub. Balkema, pp.65-70, (1995)

- [146] **Paice, G.M. and Griffiths, D.V.** “Estimation of seepage through spatially random soil by equivalent rectangles.” Proceedings of Numerical Models in Geomechanics, NUMOG V, (eds. G.N. Pande and S. Pietruszczak), Pub. Balkema, pp.315-320, (1995)
- [147] **Lane, P.A. and Griffiths, D.V.** “Finite element analysis of the effect of drainage conditions on the in-situ vane test.” Proceedings of Numerical Models in Geomechanics, NUMOG V, (eds. G.N. Pande and S. Pietruszczak), Pub. Balkema, pp.687-691, (1995)
- [148] **Griffiths, D.V., Fenton, G.A. and Paice, G.M.** “Reliability based exit gradient design of water retaining structures.” Proceedings of Uncertainty 96, *Uncertainty in the Geological Environment: From Theory to Practice*, Pub. ASCE, pp.518-534, (1996)
- [149] **Fenton, G.A., Paice, G.M. and Griffiths, D.V.** “Probabilistic analysis of foundation settlement.” Proceedings of Uncertainty 96, *Uncertainty in the Geological Environment: From Theory to Practice*, Pub. ASCE, pp.651-665, (1996)
- [150] **Griffiths, D.V. and Torres, R.L.** “Prediction of post-earthquake performance of Willow Creek Dam.” *Proceedings of the International Symposium on Seismic and Environmental Aspects of Dams Design: Earth, Concrete and Tailings Dams*, Vol.1, Pub. SOCHIGE, pp.497-506, (1996)
- [151] **Griffiths, D.V. and Lane, P.A.** “Slope stability analysis by finite elements.” Joint ASME/ASCE/SES Meeting, McNU '97, Northwestern University, p.725, (1997)
- [152] **Lane, P.A. and Griffiths, D.V.** “Finite element slope stability – why are engineers still drawing circles?” Proceedings of Numerical Models in Geomechanics, NUMOG VI, (eds. G.N. Pande and S. Pietruszczak), Pub. Balkema, pp.689-593, (1997)
- [153] **Paice, G.M. and Griffiths, D.V.** “Reliability of an undrained clay slope formed from spatially random soil.” Proceedings of the 9th Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics, IACMAG 97, (ed. J-X. Yuan), Pub. Balkema, pp.543-548, (1997)

- [154] **Woodward, P.K. and Griffiths, D.V.** “Accurate numerical prediction of bearing capacity in cohesionless soil.” Proceedings of the 9th Int. Conf. of the International Association for Computer Methods and Advances in Geomechanics, IACMAG 97, (ed. J-X. Yuan), Pub. Balkema, pp.1969-1972, (1997)
- [155] **Griffiths, D.V.** “Elasto-plastic finite element analysis of stability problems in geo-engineering.” Proceedings of the 4th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS’98*, (eds. O. Prado *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 107-115, (1998).
- [156] **Lane, P.A. and Griffiths, D.V.** “The assessment of stability of partially submerged slopes.” Proc. 8th Int. Conf. Offshore and Polar Eng., (eds. J.S. Chung *et al.*), Pub. ISOPE, Vol. I, pp.628-634, (1998).
- [157] **Mustoe, G.G.W. and Griffiths, D.V.** “An equivalent continuum model using the discrete element method.” Proc. 12th ASCE Eng. Mech. Spec. Conf., San Diego, California, CD-ROM (1998).
- [158] **Paice, G.M. and Griffiths, D.V.** “Bearing capacity reliability of an undrained clay block formed from spatially random soil”, In *ACME’99*, Proc. 7th Conf. Assoc. Comp. Mech. Eng. (ACME), (ed. P. Bettess), Pub. Penshaw Press, pp. 203-206, (1999)
- [159] **Griffiths, D.V. and Lu, N.** “Effect of osmotic efficiency on fluid flow and chemical transport in clays” Proc. 13th ASCE Eng. Mech. Div. Spec. Conf., Johns Hopkins University, Baltimore, Maryland, CD-ROM (1999).
- [160] **Griffiths, D.V. and Fenton, G.A.** “Elasto-plastic finite element analysis of geomaterials with randomly distributed shear strength” Fifth U.S. National Congress on Computational Mechanics (V US-ACM), held in Boulder, Colorado. Abstracts, Pub. University of Colorado, p.496, (1999)
- [161] **Torres, R.L. and Griffiths, D.V.** “Application of finite elements to assess modifications of Salmon Lake Dam”, Proc. XI Panamerican Conf. on Soil Mech and Geotech. Eng. (PCSMGE), Aug 1999, Iguasu Falls, Brazil, Pub. ABSM, Brazil, Vol. 3, pp. 1061-1067, (1999)

- [162] **Ebrahim, A., Pearson, C.M. and Griffiths, D.V.** “Perforation design for for fracture stimulated wells: A finite element method.” SPE56599, Presented at the 1999 SPE Annual Technical Conference and Exhibition, Houston, Texas, 3-6 October 1999.
- [163] **Griffiths, D.V., Torres, R.L. and Lane, P.A.** “Embankment stability analysis by elasto-plastic finite elements” Proceedings: Fifth Benchmark Workshop on Numerical Analysis of Dams, Pub. USCOLD, pp.301-325, (1999)
- [164] **Lechman, J.B. and Griffiths, D.V.** “Analysis of progressive failure of earth slopes by finite elements” Proceedings of the Twelfth Regional Conference for Africa on Soil Mechanics and Geotechnical Engineering, (eds. G.R. Wardle *et al.*), Pub. Balkema, pp. 443-449, (1999).
- [165] **Griffiths, D.V. and Fenton, G.A.** “Bearing capacity of heterogeneous soils by finite elements” Proceedings of the 5th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS’00*, (eds. N. Troyani and M. Cerrolaza), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 27-37, (2000).
- [166] **Fenton, G.A. and Griffiths, D.V.** “Bearing capacity of spatially random soils”, Proceedings of the 8th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability, Notre Dame, Indiana, July 24–26, CD-ROM (2000).
- [167] **Griffiths, D.V. and Fenton, G.A.** “Influence of soil strength spatial variability on the stability of an undrained clay slope by finite elements”. In *Slope Stability 2000*. Geotechnical Special Publication No. 101. Proceedings of the GeoDenver 2000 Symposium. (eds. D.V. Griffiths *et al.* Pub. ASCE, pp.184-193, (2000)
- [168] **Lechman, J.B. and Griffiths, D.V.** “Analysis of the progression of failure in earth slopes by finite elements” In *Slope Stability 2000*. Geotechnical Special Publication No. 101. Proceedings of the GeoDenver 2000 Symposium. (eds. D.V. Griffiths *et al.*), Pub. ASCE, pp.250-265, (2000)

- [169] **Woodward, P.K., Nesnas, K. and Griffiths, D.V.** “Advanced numerical modelling of footings on granular soils” In *Numerical methods in geotechnical engineering*. Geotechnical Special Publication No. 96. Proceedings of the GeoDenver 2000 Symposium. (eds. G.M. Filz and D.V. Griffiths), Pub. ASCE, pp.88-101, (2000)
- [170] **Fenton, G.A. and Griffiths, D.V.** “Bearing capacity of spatially random c - ϕ soils”, Proc. 10th Int. Conf. on Computer Methods and Advances in Geomechanics (IACMAG 01), Tucson, Arizona, (eds. C.S. Desai *et al.*), Pub. Balkema, pp.1411-1415, (2001)
- [171] **Manoharan, N., Griffiths, D.V. and Fenton, G.A.** “A probabilistic study of rough strip footing on cohesive soil” Sixth U.S. National Congress on Computational Mechanics (VI USACM), held in Dearborn, Michigan. Abstracts, Pub. University of Michigan, p.257, August (2001)
- [172] **Griffiths, D.V., Fenton, G.A. and Lemons, C.B.** “Underground pillar stability: A probabilistic approach” Proceedings of the XV IC-SMGE, Istanbul, Turkey, Pub. Balkema, pp.1343-1346, (2001)
- [173] **Szynakiewicz, T., Griffiths, D.V. and Fenton, G.A.** “A probabilistic investigation of c' , ϕ' slope stability” Proceedings of the 6th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS'02*, (eds. C. Muller-Karger *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 25-36, (2002).
- [174] **Griffiths, D.V., Fenton, G.A. and Tveten, D.E.** “Probabilistic geotechnical analysis: How difficult does it need to be?” Proceedings of an International Conference on, “Probabilistics in Geotechnics: Technical and Economic Risk Estimation”,(eds. R. Poettler *et al.*), Pub. VGE, Essen, Germany, pp.3-20, (2002)
- [175] **Fenton, G.A., Griffiths, D.V. and Urquart, A.** “A slope stability model for spatially random soils.” Proceeding of ICASP9, (eds. A. Der Kiureghian *et al.*), Pub. Millpress, Rotterdam, Netherlands, pp. 1263-1269, (2003)

- [176] **Fenton, G.A., Zhou, H., Jaksa, M.B. and Griffiths, D.V.** “Reliability of a strip footing designed against settlement.” Proceeding of ICASP9, (eds. A. Der Kiureghian *et al.*), Pub. Millpress, Rotterdam, Netherlands, pp. 1271-1277, (2003)
- [177] **Goldsworthy, J.S., Jaksa, M.B., Kaggwa, W.S., Fenton, G.A., Griffiths, D.V., Poulos, H.G. and Kuo, Y.L.** “The influence of site investigations on the design of pad footings” Proceedings 9th Australia New Zealand Conference on Geomechanics, (eds. G. Farquhar *et al.*), Pub. Centre for Continuing Education, University of Auckland, Vol.1, pp.282-288, (2004)
- [178] **Chok, Y.H., Kaggwa, W.S., Jaksa, M.B. and Griffiths, D.V.** “Modelling the effects of vegetation on stability of slopes.” Proceedings 9th Australia New Zealand Conference on Geomechanics, (eds. G. Farquhar *et al.*), Pub. Centre for Continuing Education, University of Auckland, Vol.1, pp.391-397, (2004)
- [179] **Kuo, Y. L., Jaksa, M. B., Kaggwa, W. S., Fenton, G. A., Griffiths, D. V. and Goldsworthy, J. S.** “Probabilistic analysis of multi-layered soil effects on shallow foundation settlement.” Proceedings 9th Australia New Zealand Conference on Geomechanics, (eds. G. Farquhar *et al.*), Pub. Centre for Continuing Education, University of Auckland, Vol.2, pp.541-547, (2004)
- [180] **Griffiths, D.V.** “Use of computer algebra systems in finite element software development” Proceedings of the 7th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS'04*, (eds. J. Rojo *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 55-65, (2004).
- [181] **Goldsworthy, J.S., Jaksa, M.B., Kaggwa, W.S., Fenton, G.A., Griffiths, D.V. and Poulos, H.G.** “Cost of foundation failures due to limited site investigations” Proceedings of the International Conference on Structural and Foundation Failures, (eds. C.M. Wang and K. Murugappen), Pub. IES/IStructE Joint Committee, Singapore, pp.398-409, (2004)
- [182] **Goldsworthy, J.S., Jaksa, M.B., Kaggwa, W.S., Fenton, G.A., Griffiths, D.V. and Poulos, H.G.** “Reliability of site investigations

- using different reduction techniques for foundation design” Proc. 9th Int. Conf. on Structural Safety and Reliability, Rome, Italy (eds. G. Augusti *et al.*), Pub. Millpress, Rotterdam, pp. 901-908. (On CD.) (2005)
- [183] **Griffiths, D.V., Fenton, G.A. and Tveten, D.E.** “Probabilistic earth pressure analysis by the Random Finite Element method” Proc. 11th Int. Conf. on Computer Methods and Advances in Geomechanics (IACMAG 05), Turin, Italy, (eds. G. Barla and M. Barla), Pub. Pàtron Editore, Bologna, vol.4, pp.235-249, (2005)
- [184] **Evans, M.D. and Griffiths, D.V.** “Parallel three-dimensional finite element analysis of slopes” Proc. 11th Int. Conf. on Computer Methods and Advances in Geomechanics (IACMAG 05), Turin, Italy, (eds. G. Barla and M. Barla), Pub. Pàtron Editore, Bologna, vol.1, pp.25-32, (2005)
- [185] **Fenton, G.A. and Griffiths, D.V.** “A slope stability reliability model” Proceedings of the K.Y. Lo Symposium, on CD, London, Ontario, Canada, July 7-8, (2005)
- [186] **Evans, M.D. and Griffiths, D.V.** “Three-dimensional finite element bearing capacity analysis in clay” Proceedings of the XVI ICSMGE, Osaka, Japan, Pub. Millpress Science, vol.2, pp.893-896, (2005)
- [187] **Griffiths, D.V. and Fenton, G.A.** “Probabilistic settlement analysis of rectangular footings” Proceedings of the XVI ICSMGE, Osaka, Japan, Pub. Millpress Science, vol.2, pp.1041-1044, (2005)
- [188] **Griffiths, D.V., Fenton, G.A. and Ziemann, H.R.** “Seeking out failure: The Random Finite Element Method (RFEM) in probabilistic geotechnical analysis” Proceeding of the GEOCONGRESS 2006, Atlanta. Mini-Symposium on Numerical Modeling and Analysis (*Probabilistic Modeling and Design*), ASCE publication on CD, (2006)
- [189] **Griffiths, D.V. and Huang, J.** “Development of efficient finite element software” Proceedings of the 8th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMEN-ICS’06*, (eds. B. Gámez *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 17-23, (2006).

- [190] **Lozada, I.J., Cerrolaza, M. and Griffiths, D.V.** “Integración simbólica de la matriz de rigidez del elemento finito cuadrilátero de cuatro nodos en problemas de simetría axial” Proceedings of the 8th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS'06*, (eds. B. Gámez *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp. TM 123-129, (2006).
- [191] **Griffiths, D.V., Fenton, G.A. and Ziemann, H.R.** “The influence of strength variability in the analysis of slope failure risk” In *Geomechanics II*, Proceeding of the Second Japan-U.S. Workshop on Testing, Modeling and Simulation, Kyoto, Japan, September, 2005. (eds. P.V. Lade and T. Nakai), Pub. ASCE, GSP No. 156, pp.113-123, (2006).
- [192] **Osorio, J, Lozada, I.J., Griffiths, D.V. and Cerrolaza, M.** “Nodal orthogonality in the stiffness matrix of the 8-node plane elastic element” XXIV Congreso Argentino de Mecánica Computacional. Buenos Aires, Argentina, pp. 338-346, (2006)
- [193] **Griffiths, D.V., Fenton, G.A. and Denavit, M.D.** “Traditional and advanced probabilistic slope stability analysis” In *Probabilistic applications in geotechnical engineering*. Geotechnical Special Publication No. 170. Proceedings of the Geo-Denver 2007 Symposium. (eds. K.K. Phoon *et al.* Pub. ASCE, (2007)
- [194] **Fenton, G.A. and Griffiths, D.V.** “Reliability-based deep foundation design” In *Probabilistic applications in geotechnical engineering*. Geotechnical Special Publication No. 170. Proceedings of the Geo-Denver 2007 Symposium. (eds. K.K. Phoon *et al.*) Pub. ASCE, (2007)
- [195] **Goldsworthy, J.S., Jaksa, M.B., Fenton, G.A., Griffiths, D.V., Kaggwa, W.S and Poulos, H.G.** “Measuring the risk of geotechnical site investigations” In *Probabilistic applications in geotechnical engineering*. Geotechnical Special Publication No. 170. Proceedings of the Geo-Denver 2007 Symposium. (eds. K.K. Phoon *et al.*) Pub. ASCE, (2007)
- [196] **Griffiths, D.V. and Denavit, M.D.** “Probabilistic analysis and finite element modeling of infinite slopes” Proceedings of the 1st North American Landslide Conference. *Landslides and Society*, (eds. A.K.

Turner and R.L. Schuster), AEG Special Publication No. 22, pp. 261-276. Pub. Assoc. Environ. Eng. Geol., Denver, Colorado (2007)

- [197] **Griffiths, D.V. and Fenton, G.A.** “Probabilistic settlement analysis by stochastic and random finite element methods” Proceedings of the XIII PanAmerican Conference on Soil Mechanics and Geotechnical Engineering, Isla de Margarita, Venezuela, July 15-19, 2007, pp.166-176. (CD-ROM) (2007)
- [198] **Menzies, W.T., Fenton, G.A., Lake, C.B. and Griffiths, D.V.** “A method to assess risk reduction when utilizing GCLs with compacted soil liners” Proceedings of the 60th Canadian Geotechnical Conference & 8th Joint CGS/IAH-CNC Groundwater Conference, Ottawa, Canada, October 21 - 24, 2007, pp 2115-2122 (2007)
- [199] **Chok, Y.H., Jaksa, M.B., Griffiths, D.V., Fenton, G.A. and Kaggwa, W.S.** “Effect of spatial variability on reliability of soil slopes.” Proc. 10th Australia New Zealand Conference on Geomechanics, Brisbane, Vol.2, pp.584-589, (2007)
- [200] **Griffiths, D.V., deWolfe, F.G., Huang, J. and Fenton, G.A.** “Analysis of infinite slopes with spatially random shear strength” In: *Geosustainability and Geohazard Mitigation*, Geotechnical Special Publication No.178, (eds. K.R. Reddy *et al.*), ASCE Press, Reston, Virginia, pp.122-129 (2008)
- [201] **Huang, J., Griffiths, D.V. and Fenton, G.A.** “One-dimensional probabilistic uncoupled consolidation analysis by the Random Finite Element Method” In: *Geosustainability and Geohazard Mitigation*, Geotechnical Special Publication No.178, (eds. K.R. Reddy *et al.*), ASCE Press, Reston, Virginia, pp.138-145. (2008)
- [202] **Fenton, G.A., Zhang, X. and Griffiths, D.V.** “Load and resistance factor design of strip footings” In: *Geosustainability and Geohazard Mitigation*, Geotechnical Special Publication No.178, (eds. K.R. Reddy *et al.*), ASCE Press, Reston, Virginia, pp.106-113 (2008)
- [203] **Griffiths, D.V., Paiboon, J., Huang, J. and Fenton, G.A.** “Numerical analysis of beams on random elastic foundations” Proceedings

of the 9th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS'08*, (eds. L. Martino *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 19-25, (2008).

- [204] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Probabilistic stability analysis of shallow landslides using random fields” Proc. 12th Int. Conf. on Computer Methods and Advances in Geomechanics (IAC-MAG 08), Goa, India, pp.2013-2020, (CD-ROM) (2008).
- [205] **Woodward, P.K., Medero, G. and Griffiths, D.V.** “Reducing track faults using polymer geocomposite technology.”, Proceedings of the 8th International Conference on BCR2A, Champaign, Illinois, USA, June 29th - July 2nd, pp.1273-1282, (2009)
- [206] **Griffiths, D.V., Schiermeyer, R.P., Huang, J. and Fenton, G.A.** “Influence of anisotropy and rotation on probabilistic slope stability analysis by RFEM.” Proceedings of *GeoHalifax 2009*, Paper 408, (CD-ROM) (2009).
- [207] **Fenton, G.A., Ojomo, O.O. and Griffiths, D.V.** “Consequence factors for use in shallow foundation reliability-based design.” Proceedings of *GeoHalifax 2009*, Paper 312, (CD-ROM) (2009).
- [208] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Three dimensional probabilistic slope stability analysis by RFEM.” Proceedings of the 17th ICSMGE, Alexandria, Egypt, vol. 2, pp.1538-1541, (Paper 1538, pdf on the CD-ROM), (eds M. Hamza *et al.*), IOS Press, doi:10.3233/978-1-60750-031-5-1538 (2009).
- [209] **Fenton, G.A. and Griffiths, D.V.** “Reliability-Based Geotechnical Engineering.” Keynote lecture. Proceedings of *GeoFlorida 2010: Advances in Analysis, Modeling & Design*, (eds D. Fratta *et al.*), ASCE GSP No 199, (CD-ROM), pp.14-52, (2010).
- [210] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Comparison of slope reliability methods of analysis.” Proceedings of *GeoFlorida 2010: Advances in Analysis, Modeling & Design*, (eds D. Fratta *et al.*), ASCE GSP No 199, (CD-ROM), pp.1622-1632, (2010).

- [211] **Griffiths, D.V., Hang Lin and Ping Cao** “A comparison of numerical algorithms in the analysis of pile reinforced slopes.” Proceedings of *GeoFlorida 2010: Advances in Analysis, Modeling & Design*, (eds D. Fratta *et al.*),) ASCE GSP No 199, (CD-ROM), pp.175-183, (2010).
- [212] **Griffiths, D.V.** “Stability analysis of slopes in variable soils by finite elements.” Keynote lecture. Proceedings of University of Minnesota 58th Annual Geotechnical Engineering Conference, (eds J.F. Labuz and M.L. Nutzmann), University of Minnesota Press, pp.33-44, Feb (2010).
- [213] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Three-dimensional stability analysis of highly variable slopes by finite elements.” Proceedings of the 10th International Congress on Numerical Methods in Engineering and Scientific Applications, *CIMENICS'10*, (eds R. Chácon *et al.*), Pub. Sociedad Venezolana de Métodos Numéricos en Ingeniería, pp.CI 11-20, (2010).
- [214] **deWolfe, G.F., Griffiths, D.V. and Huang, J.** “Probabilistic slope stability analysis of embankment dams using random finite elements (RFEM).” In Proceedings of *Dam Safety 2010*, (CD-ROM), Association of State Dam Safety Officials, (2010)
- [215] **deWolfe, G.F., Griffiths, D.V. and Huang, J.** “Probabilistic and deterministic slope stability analysis by Random Finite Elements.” *GeoTrends*, (eds C, M, Goss *et al.*), Pub. ASCE, GPP No. 6, pp.91-111, (2010).
- [216] **Griffiths, D.V., Paiboon, J., Huang, J. and Fenton, G.A.** “Numerical analysis of the influence of porosity and void size on soil stiffness using random fields.” Proc. 13th Int. Conf. on Computer Methods and Advances in Geomechanics (IACMAG 2011), Melbourne, Australia, (eds N. Khalili and M. Oeser), Pub. Centre for Infrastruc. Eng. and Safety, Sydney, pp.21-27, (2011).
- [217] **Griffiths, D.V., Dotson, D. and Huang, J.** “Probabilistic finite element analysis of a raft foundation supported by drilled shafts in karst.” Proc. *GeoRisk 2011*, (eds H. Juang *et al.*) Pub. ASCE GSP No 224 (CD-ROM), doi:10.1061/41183(418)15, Atlanta, June (2011).

- [218] **Piecznyńska, J., Puła, W., Griffiths, D.V. and Fenton, G.A.** “Probabilistic characteristics of strip footing bearing capacity evaluated by random finite element method.” Proc. of *ICASP 2011*, Paper No. 10321 (CD-ROM), Zurich, Switzerland, August (2011)
- [219] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Modeling of stability and risk of geotechnical systems in highly variable soils.” Proc. *ICAGE 2011*, Perth, Australia, (eds. M.A. Shahin and H.R. Nakriz), Pub. Dept, Civil Engineering, Curtin University, pp. 75-88, (2011).
- [220] **Xue, Y., Huang, H. and Griffiths, D.V.** “Specimen reconstitution and uniaxial compressive strength testing of rock-soil mixtures.” To appear in *International Symposium on Advances in Ground Technology and Geo-Information (IS-AGTG)*, Singapore, December (2011).
- [221] **Griffiths, D.V., Huang, J. and Fenton, G.A.** “Risk Assessment in Geotechnical Engineering: Stability Analysis of Highly Variable Soils.” Keynote lecture. To appear in *GeoCongress 2012*, Oakland, CA, March (2012).

Other Published Material

- [222] **Griffiths, D.V.** “Goodbye Apollo.” *California Engineer*, vol.53, no.4, pp.32-33, (1975)
- [223] **Griffiths, D.V.** Letter to the editor on, “Numerical prediction of collapse loads using finite element methods” by S.W. Sloan and M.F. Randolph, *Int. J. Numer. Anal. Methods Geomech.*, vol.7, pp.135-136, (1983)
- [224] **Griffiths, D.V.** Reply to discussion by S.W. Sloan and M.F. Randolph on, “Elasto-plastic analyses of deep foundations in cohesive soil”, *Int. J. Numer. Anal. Methods Geomech.*, vol.7, pp.388-390, (1983)
- [225] **Griffiths, D.V. and Koutsabeloulis, N.C.** Discussion on, “Possibilities and limitations of finite elements for limit analysis” by R. De Borst and P.A. Vermeer, *Géotechnique*, 35, No.1, pp.90-91, (1985)

- [226] **Griffiths, D.V.** “HARMONY: A program for predicting the elastoplastic response of axisymmetric bodies subjected to non-axisymmetric loading.” University of Manchester Engineering Department Report (1985). Archived at the Arthur Lakes library, Colorado School of Mines, TA703.C64.
- [227] **Griffiths, D.V.** Reply to discussion by T.H. Wu *et al.* on, “Rationalized charts for the method of fragments applied to confined seepage”, *Géotechnique*, 35, No.3, pp.375-377, (1985)
- [228] **Griffiths, D.V.** Discussion on, “On the variable mesh finite element analysis of unconfined seepage problems” by A. Cividini and G. Gioda, *Géotechnique*, 40, No.3, pp.523-524, (1990)
- [229] **Woodward, P.K. and Griffiths, D.V.** Reply to discussion by R.A. Day and D.M. Potts on, “Computation of the bearing capacity factor N_γ ”, *Géotechnique* 50, No.3, pp.301-304, (2000)
- [230] **Goss, C. and Griffiths, D.V.** Discussion on, “Rigorous plasticity solutions for the bearing capacity of two-layered clays” by R.S. Merifield *et al.*, *Géotechnique*, 51, No.2, pp.179-183, (2001)
- [231] **Griffiths, D.V. and Lane, P.A.** Reply to discussion by F. Cai and K. Ugai on, “Slope stability analysis by finite elements”, *Géotechnique* 51, No.7, pp.653-654, (2001)
- [232] **Fenton, G.A. and Griffiths, D.V.** Reply to discussion by J.T. Christian and G.B. Baecher on, “Probabilistic foundation settlement on spatially random soil”, *J Geotech Geoenviron* vol.129, no.9, pp.866-867, (2003)
- [233] **Fenton, G.A. and Griffiths, D.V.** Reply to discussion by R. Popescu on, “Bearing capacity prediction of spatially random $c-\phi$ soils.” *Can Geotech J*, vol.41, pp.368-369, (2004)
- [234] **Jaksa, M.B., Goldsworthy, J.S., Fenton, G.A., Kaggwa, W.S., Griffiths, D.V., Kuo, Y.L. and Poulos, H.G.** Reply to discussion by R. Baker on, “Towards reliable and effective site investigations.”, *Géotechnique* 55, No.8, pp.625-626, (2005)

- [235] **Griffiths, D.V.** “Finite elements in geotechnical engineering”, *Geo-Strata*, vol.6, issue.4, pp.26-31, (2006)
- [236] **Griffiths, D.V. and Huang, J.** Reply to discussion by P.R. Vaughan on, “Three-dimensional slope stability analysis by elasto-plastic finite elements”, *Géotechnique* 58, No.8, pp.683-685, (2008)
- [237] **Griffiths, D.V. and Fenton, G.A.** “It’s all the RAGE”, *Geo-Strata*, vol.14, issue.1, pp.16-20, (2010)
- [238] **Huang, J., Griffiths, D.V. and Fenton, G.A.** Reply to discussion by P.P. Gilani and R.J. Chenari on, “Probabilistic Analysis of Coupled Soil Consolidation”, *J Geotech Geoenviron* vol.137, no.9, pp.858-860,(2011)