

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)
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- [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).
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- [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)
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- [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)
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- [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)
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- [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)

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- [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)
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- [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)
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- [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)

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- [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)

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- [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)
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- [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)
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- [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)
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- [77] **Huang, J. and Griffiths, D.V.** “Observations on FORM in a simple geomechanics example.” Accepted for publication by *Struct Safety*
- [78] **Griffiths, D.V., Huang, J. and deWolfe, G.F.** “Numerical and analytical observations on long and infinite slopes.” Accepted for publication by *Int J Numer Anal Methods Geomech*
- [79] **Griffiths, D.V., Huang, J. and Fenton G.A.** “Probabilistic infinite slope analysis.” Under review by *Can Geotech J*
- [80] **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.” Under review by *Can Geotech J*
- [81] **Huang, J., Griffiths, D.V. and Wong, S.W.** “Characterizing natural fracture permeability from mud loss data.” Under review by *SPE Journal*
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- [92] **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)
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- [96] **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)
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- [100] **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)

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