

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) [DOI](#)
- [2] **Griffiths, D.V.** “Computation of bearing capacity factors using finite elements.” *Géotechnique*, 32, no.3, pp.195-202, (1982) [DOI](#)
- [3] **Griffiths, D.V.** “Rationalised charts for the method of fragments applied to confined seepage.” *Géotechnique*, 34, no.2, pp.229-238, (1984) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
- [6] **Griffiths, D.V. and Koutsabeloulis, N.C.** “Finite element analysis of vertical excavations.” *Comput Geotech*, vol.1, no.3, pp.221-234, (1985) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)

- [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) [DOI](#)
- [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) [DOI](#)
- [12] **Griffiths, D.V.** “An iterative method for plastic analysis of frames.” *Comput Struct*, vol.30, no.6, pp.1347-1354, (1988) [DOI](#)
- [13] **Koutsabeloulis, N.C. and Griffiths, D.V.** “Numerical modelling of the trap-door problem.” *Géotechnique*, 39, no.1, pp.77-89, (1989) [DOI](#)
- [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) [DOI](#)
- [15] **Griffiths, D.V.** “Computation of collapse loads in geomechanics by finite elements.” *Ing Arch* (Now called *Arch Appl Mech*), vol.59, no.3, pp.237-244, (1989) [DOI](#)
- [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) [DOI](#)
- [17] **Griffiths, D.V.** “Failure criteria interpretation based on Mohr-Coulomb friction.” *J Geotech Eng, ASCE*, vol.116, no.6, pp.986-999, (1990) [DOI](#)
- [18] **Griffiths, D.V.** “Treatment of skew boundary conditions in finite element analysis.” *Comput Struct*, vol.36, no.6, pp.1009-1012, (1990) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)

- [21] **Griffiths, D.V.** “Generalized numerical integration of moments.” *Int J Numer Methods Eng*, vol.32, no.1, pp.129-147, (1991) [DOI](#)
- [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) [DOI](#)
- [23] **Griffiths, D.V., Hicks, M.A. and Li, C.O.** “Transient passive earth pressure analysis.” *Géotechnique*, 41, no.4, pp.615-620, (1991) [DOI](#)
- [24] **Holt, D.A. and Griffiths, D.V.** “Transient analysis of excavations in soil.” *Comput Geotech*, vol.13, no.3, pp.159-174, (1992) [DOI](#)
- [25] ¹ **Griffiths, D.V. and Fenton, G.A.** “Seepage beneath water retaining structures founded on spatially random soil.” *Géotechnique*, 43, no.4, pp.577-587, (1993) [DOI](#)
- [26] **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) [DOI](#)
- [27] **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) [DOI](#)
- [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). [DOI](#)
- [29] **Griffiths, D.V.** “Seepage beneath unsymmetric cofferdams.” *Géotechnique*, 44, no.2, pp.297-305, (1994) [DOI](#)
- [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) [DOI](#)

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

- [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) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
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- [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) [DOI](#)
- [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) [DOI](#)
- [40] **Griffiths, D.V. and Fenton, G.A.** “Probabilistic analysis of exit gradients due to steady seepage.” *J Geotech Geoenviron Eng* vol.124, no.9, pp.789-797, (1998) [DOI](#)

- [41] **Griffiths, D.V. and Lane, P.A.** “Slope stability analysis by finite elements.” *Géotechnique*, 49, no.3, pp.387-403, (1999) [DOI](#)
- [42] **Lane, P.A. and Griffiths, D.V.** “Assessment of stability of slopes under drawdown conditions.” *J Geotech Geoenviron Eng* vol.126, no.5, pp.443-450, (2000) [DOI](#)
- [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) [DOI](#)
- [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) [DOI](#)
- [45] **Fenton, G.A. and Griffiths, D.V.** “Probabilistic foundation settlement on spatially random soil.” *J Geotech Geoenviron Eng* vol.128, no.5, pp.381-390, (2002) [DOI](#)
- [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) [DOI](#)
- [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 Eng* vol.128, no.9, pp.743-755, (2002) [DOI](#)
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- [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) [DOI](#)
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- [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)
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- [85] **Griffiths, D.V., Paiboon, J, Huang, J. and Fenton, G.A.** “Homogenization of geomaterials containing voids by random fields and finite elements.” *Int J Solids Struct*, vol.49, pp.2006-2014 (2012) [DOI](#)
- [86] **Pantelidis, L. and Griffiths, D.V.** “Stability assessment of slopes using different factoring strategies.” *J Geotech Geoenviron Eng*, vol.138, no.9, pp.1158-1160 (2012) [DOI](#)
- [87] **Milledge, D.G., Griffiths, D.V., Lane, S.N. and Warburton, J.** “Limits on the validity of infinite length assumptions for modelling landslides.” *Earth Surface Processes and Landforms*, vol.37, no.11, pp.1158-1166, (2012) [DOI](#)

³Computers and Geotechnics, 2016 Outstanding Paper Award

- [88] **Griffiths, D.V., Paiboon, J, Huang, J. and Fenton, G.A.** “Reliability analysis of beams on random elastic foundations.” *Géotechnique*, vol.63, no.2, pp.180-188, (2013) [DOI](#)
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- [91] **Paiboon, J., Griffiths, D.V., Huang, J. and Fenton, G.A.** “Numerical analysis of effective elastic properties of geomaterials containing voids using 3D random fields and finite elements.” *Int J Solids Struct*, vol.50, no.20-21, pp.3233-3241 (2013) [DOI](#)
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