

# Andrew J Whittle

## List of Publications by Year in descending order

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109  
papers

3,400  
citations

136950

32  
h-index

155660

55  
g-index

110  
all docs

110  
docs citations

110  
times ranked

2279  
citing authors

#	ARTICLE	IF	CITATIONS
1	Formulation of MITâ€³ Constitutive Model for Overconsolidated Clays. Journal of Geotechnical Engineering, 1994, 120, 173-198.	0.4	223
2	Formulation of a unified constitutive model for clays and sands. International Journal for Numerical and Analytical Methods in Geomechanics, 1999, 23, 1215-1243.	3.3	206
3	Ground Movement Prediction for Deep Excavations in Softâ€‰Clay. Journal of Geotechnical Engineering, 1996, 122, 474-486.	0.4	172
4	Analysis of Deep Excavation in Boston. Journal of Geotechnical Engineering, 1993, 119, 69-90.	0.4	146
5	Undrained Limit Analyses for Combined Loading of Strip Footings on Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 1998, 124, 265-276.	3.0	143
6	Calculations of Bearing Capacity Factor $N_1^3$ Using Numerical Limit Analyses. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2003, 129, 468-474.	3.0	115
7	Nanoscale Elastic Properties of Montmorillonite upon Water Adsorption. Langmuir, 2012, 28, 16855-16863.	3.5	104
8	Wavelet-based Burst Event Detection and Localization in Water Distribution Systems. Journal of Signal Processing Systems, 2013, 72, 1-16.	2.1	98
9	Undrained Stability of Braced Excavations in Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2003, 129, 738-755.	3.0	88
10	Ground Movements due to Shallow Tunnels in Soft Ground. I: Analytical Solutions. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2014, 140, .	3.0	84
11	Mesoscale properties of clay aggregates from potential of mean force representation of interactions between nanoplatelets. Journal of Chemical Physics, 2014, 140, .	3.0	73
12	Model for Dynamic Shear Modulus and Damping for Granular Soils. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2000, 126, 859-869.	3.0	68
13	Mechanisms of Load Transfer and Arching for Braced Excavations in Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2002, 128, 187-197.	3.0	68
14	Model Prediction of Anisotropic Behavior of Boston Blue Clay. Journal of Geotechnical Engineering, 1994, 120, 199-224.	0.4	65
15	A simple sample-mounting method for random powder X-ray diffraction. Clays and Clay Minerals, 2003, 51, 218-225.	1.3	64
16	Automated sub-zoning of water distribution systems. Environmental Modelling and Software, 2015, 65, 1-14.	4.5	61
17	Evaluation of a constitutive model for clays and sands: Part II - clay behaviour. International Journal for Numerical and Analytical Methods in Geomechanics, 2002, 26, 1123-1146.	3.3	60
18	Effect of spatial variability on the bearing capacity of cement-treated ground. Soils and Foundations, 2012, 52, 600-619.	3.1	60

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19	Efficient Hydraulic State Estimation Technique Using Reduced Models of Urban Water Networks. Journal of Water Resources Planning and Management - ASCE, 2011, 137, 343-351.	2.6	54
20	Three-Dimensional Analyses of Excavation Support System for the Stata Center Basement on the MIT Campus. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, .	3.0	52
21	Real-time network distribution system monitoring to improve operational efficiency. Journal - American Water Works Association, 2011, 103, 63-75.	0.3	50
22	Evaluation of a constitutive model for clays and sands: Part I - sand behaviour. International Journal for Numerical and Analytical Methods in Geomechanics, 2002, 26, 1097-1121.	3.3	48
23	Bearing Capacity of Spatially Random Cohesive Soil Using Numerical Limit Analyses. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2011, 137, 989-996.	3.0	48
24	Prediction of Ground Movements due to Pile Driving in Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2001, 127, 55-66.	3.0	45
25	Analysis of Pullout Tests for Planar Reinforcements in Soil. Journal of Geotechnical Engineering, 1995, 121, 476-485.	0.4	41
26	Ground Movements due to Shallow Tunnels in Soft Ground. II: Analytical Interpretation and Prediction. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2014, 140, .	3.0	41
27	Stress-dependent behavior of saturated clay. Canadian Geotechnical Journal, 2012, 49, 907-916.	2.8	39
28	Prediction and Interpretation of the Performance of a Deep Excavation in Berlin Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2011, 137, 1047-1061.	3.0	36
29	Constitutive modelling approach for evaluating the triggering of flow slides. Canadian Geotechnical Journal, 2012, 49, 499-511.	2.8	35
30	Filtration in a Porous Granular Medium: 1. Simulation of Pore-Scale Particle Deposition and Clogging. Transport in Porous Media, 2006, 65, 53-87.	2.6	33
31	Model Prediction of Static Liquefaction: Influence of the Initial State on Potential Instabilities. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 420-432.	3.0	33
32	Mesoscale simulation of clay aggregate formation and mechanical properties. Granular Matter, 2016, 18, 1.	2.2	33
33	An assessment study of three indirect methods for estimating leaf area density and leaf area index of individual trees. Agricultural and Forest Meteorology, 2020, 292-293, 108101.	4.8	33
34	Event Detection and Localization in Urban Water Distribution Network. IEEE Sensors Journal, 2014, 14, 4134-4142.	4.7	32
35	Demand Satisfaction as a Framework for Understanding Intermittent Water Supply Systems. Water Resources Research, 2019, 55, 5217-5237.	4.2	32
36	Integration of the modified Cam-Clay model in non-linear finite element analysis. Computers and Geotechnics, 1992, 14, 59-83.	4.7	31

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37	Prediction and Performance of Deep Excavations for Courthouse Station, Boston. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, 04014123.	3.0	31
38	Shaft Resistance of Piles in Clay. Journal of Geotechnical Engineering, 1990, 116, 205-221.	0.4	30
39	Pore shapes, volume distribution and orientations in monodisperse granular assemblies. Granular Matter, 2015, 17, 727-742.	2.2	30
40	Effect of spatial variability on the slope stability using Random Field Numerical Limit Analyses. Georisk, 2016, 10, 42-54.	3.5	30
41	Effect of anisotropy in ground movements caused by tunnelling. Geotechnique, 2013, 63, 1083-1102.	4.0	29
42	Particle Network Model for Simulating the Filtration of a Microfine Cement Grout in Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2009, 135, 224-236.	3.0	28
43	WaterWiSe@SG: A Testbed for Continuous Monitoring of the Water Distribution System in Singapore. , 2011, , .		28
44	Prediction of Pile Setup in Clay. Transportation Research Record, 1999, 1663, 33-40.	1.9	25
45	Flexible Reconfiguration of Existing Urban Water Infrastructure Systems. Environmental Science & Technology, 2015, 49, 13378-13384.	10.0	25
46	Experimental Evaluation of Pullout Analyses for Planar Reinforcements. Journal of Geotechnical Engineering, 1995, 121, 486-492.	0.4	24
47	Development of a MEMS-based electrochemical aptasensor for norovirus detection. Micro and Nano Letters, 2016, 11, 582-585.	1.3	24
48	Shear-Lag Analysis of Planar Soil Reinforcement in Plane-Strain Compression. Journal of Engineering Mechanics - ASCE, 1993, 119, 270-291.	2.9	23
49	Case study: a smart water grid in Singapore. Water Practice and Technology, 2012, 7, .	2.0	23
50	Comparative study of the effects of three tunneling methods on ground movements in stiff clay. Tunnelling and Underground Space Technology, 2018, 74, 167-177.	6.2	23
51	Filtration in a Porous Granular Medium: 2. Application of Bubble Model to 1-D Column Experiments. Transport in Porous Media, 2006, 65, 309-335.	2.6	22
52	Microbial abundance and community composition in biofilms on in-pipe sensors in a drinking water distribution system. Science of the Total Environment, 2021, 766, 142314.	8.0	22
53	Water Distribution System Monitoring and Decision Support Using a Wireless Sensor Network. , 2013, , .		21
54	Interpretation of Free-Field Ground Movements Caused by Mechanized Tunnel Construction. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2017, 143, .	3.0	19

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55	Effects of Disturbance on Undrained Strengths Interpreted from Pressuremeter Tests. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2000, 126, 1133-1144.	3.0	18
56	Insights into Diagenesis and Pore Structure of Opalinus Shale Through Comparative Studies of Natural and Reconstituted Materials. Clays and Clay Minerals, 2017, 65, 135-153.	1.3	18
57	Evolving pore orientation, shape and size in sheared granular assemblies. Granular Matter, 2019, 21, 1.	2.2	17
58	Experimental Study of Wellbore Instability in Clays. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2011, 137, 766-776.	3.0	16
59	Analytical scaling relations to evaluate leakage and intrusion in intermittent water supply systems. PLoS ONE, 2018, 13, e0196887.	2.5	16
60	Benefits of Genomic Insights and CRISPR-Cas Signatures to Monitor Potential Pathogens across Drinking Water Production and Distribution Systems. Frontiers in Microbiology, 2017, 8, 2036.	3.5	15
61	Analysis of seismic damage mitigation for a pile-supported wharf structure. Soil Dynamics and Earthquake Engineering, 2019, 119, 21-35.	3.8	15
62	Multi-objective optimization for conjunctive placement of hydraulic and water quality sensors in water distribution systems. Water Science and Technology: Water Supply, 2011, 11, 166-171.	2.1	14
63	Effect of Polydispersity of Clay Platelets on the Aggregation and Mechanical Properties of Clay at the Mesoscale. Clays and Clay Minerals, 2016, 64, 425-437.	1.3	14
64	Simulation of long-term thermo-mechanical response of clay using an advanced constitutive model. Acta Geotechnica, 2019, 14, 295-311.	5.7	13
65	Re-Analysis of Deep Excavation Collapse Using a Generalized Effective Stress Soil Model. , 2010, , .		12
66	Measurement of Temperature-Dependent Bound Water in Clays. Geotechnical Testing Journal, 2019, 42, 232-244.	1.0	12
67	Water Main Burst Event Detection and Localization. , 2011, , .		11
68	An inertial macroelement for bridge abutments. Geotechnique, 2022, 72, 247-259.	4.0	11
69	Compression and Creep of Venice Lagoon Sands. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2012, 138, 1266-1276.	3.0	10
70	Interpretation of Pressuremeter Tests in Sand using Advanced Soil Model. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2002, 128, 274-278.	3.0	8
71	Formulation of a new elastoviscoplastic model for timeâ€dependent behavior of clay. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 843-864.	3.3	8
72	Effect of spatial variability of block-type cement-treated ground on the bearing capacity of foundation under inclined load. Soils and Foundations, 2019, 59, 2125-2143.	3.1	8

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73	Comparison of Absorbed and Intercepted Fractions of PAR for Individual Trees Based on Radiative Transfer Model Simulations. Remote Sensing, 2021, 13, 1069.	4.0	7
74	Calibration and validation of a new elastoviscoplastic soil model. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 700-716.	3.3	7
75	Analyzing the Effects of Gaining and Losing Ground. , 2003, , 255.		6
76	Evaluation and Prediction of 17th Street Canal I-Wall Stability Using Numerical Limit Analyses. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 841-852.	3.0	6
77	Validation of Soil Models for Wellbore Stability in Ductile Formations Using Laboratory TWC Tests. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2017, 143, 04016095.	3.0	6
78	Selection of Material Parameters for Sands using the MIT-S1 Model. , 2005, , 425.		5
79	Stability analyses for deviated wellbores in unconsolidated cross-anisotropic formations. Canadian Geotechnical Journal, 2016, 53, 1450-1459.	2.8	5
80	Effects of hydraulically disconnecting consumer pumps in an intermittent water supply. Water Research X, 2021, 12, 100107.	6.1	5
81	Stability Analysis of Upstream Tailings Dam Using Numerical Limit Analyses. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2022, 148, .	3.0	5
82	Prediction and Evaluation of Size Effects for Surface Foundations on Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2020, 146, 04020022.	3.0	4
83	Geotechnical considerations in the design of borehole heat exchangers. Canadian Geotechnical Journal, 2021, 58, 1247-1262.	2.8	4
84	Mesoscale simulation of aggregation of imogolite nanotubes from potential of mean force interactions. Molecular Physics, 2019, 117, 3445-3455.	1.7	3
85	Consolidation properties and structural alteration of Old Alluvium. Acta Geotechnica, 2022, 17, 1569-1584.	5.7	3
86	Base Stability of Deep Excavation in Anisotropic Soft Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2000, 126, 757-762.	3.0	2
87	Parameters for average Gulf Clay and Prediction of Pile Set-up in the Gulf of Mexico. , 2005, , 440.		2
88	Virtual Sensors to Improve On-Line Hydraulic Model Calibration. , 2011, , .		2
89	On-Line Hydraulic Modeling of a Water Distribution System in Singapore. , 2011, , .		2
90	Proof of concept of wireless TERS monitoring. Structural Control and Health Monitoring, 2017, 24, e2026.	4.0	2

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91	Constitutive model of structural alteration and swelling behavior for Old Alluvium. <i>Engineering Geology</i> , 2021, 293, 106307.	6.3	2
92	Thick-Walled Cylinder Testing of Clays for the Study of Wellbore Instability. <i>Geotechnical Testing Journal</i> , 2011, 34, 746-754.	1.0	2
93	Soil structure of a highly weathered old alluvium. <i>Geotechnique</i> , 2004, 54, 453-466.	4.0	2
94	Index properties of a highly weathered old alluvium. <i>Geotechnique</i> , 2004, 54, 441-451.	4.0	2
95	Effect of concreting pressure on ground response caused by installation of diaphragm wall panels. <i>Geotechnique</i> , 2024, 74, 81-98.	4.0	2
96	Closure to "Analysis of Deep Excavation in Boston" by Andrew J. Whittle, Youssef M. A. Hashash, and Robert V. Whitman (January, 1993, Vol. 119, No. 1). <i>Journal of Geotechnical Engineering</i> , 1994, 120, 1911-1912.	0.4	1
97	A Wireless Remote Monitoring System: Application in the Northeast Corridor Railtrack. , 2007, , .		1
98	Pipeline Response to Ground Deformations Induced by Tunneling. , 2017, , .		1
99	A novel elasto-viscoplastic formulation for compression behaviour of clays. <i>Geotechnique</i> , 2019, 69, 750-752.	4.0	1
100	Extended TTS Model for Thermal and Mechanical Creep of Clay and Sand. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2022, 148, .	3.0	1
101	Analysis of Staged Construction of Containment Levees for Sidoarjo Mudflow. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2022, 148, .	3.0	1
102	Site Characteristics of a Weathered Old Alluvium in San Juan, Puerto Rico. , 2005, , 617.		0
103	A Methodology for Evaluating Liquefaction Susceptibility in Shallow Sandy Slopes. , 2013, , .		0
104	ReStructure: A Wireless Sensor Network for Monitoring Temporary Earth Retaining Systems. , 2016, , .		0
105	Numerical Prediction of Stress-Deformation Behavior for a Bridge Approach Embankment on Soft Compressible Clay. , 2017, , .		0
106	Micro-scale anisotropy of contacts and pores in granular media. <i>EPJ Web of Conferences</i> , 2017, 140, 15003.	0.3	0
107	Automated Station for Monitoring Seasonal Ground Movements in Expansive Clay. , 2018, , .		0
108	Predicting tunnelling-induced ground movements and interpreting field measurements using numerical analysis: Crossrail case study at Hyde Park. <i>Geotechnique</i> , 2019, 69, 936-939.	4.0	0

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109	Prediction and Control of Ground Deformations for Mechanized Tunneling in Clays with Mixed Face Conditions. Lecture Notes in Applied and Computational Mechanics, 2020, , 267-280.	2.2	0