Ken Gavin

List of Publications by Year
in descending order

94 papers	3,123 citations	101384 36 h-index	182168 51 g-index
96 all docs	96 docs citations	96 times ranked	1645 citing authors

#	Article	IF	Citations
1	A review of bridge scour monitoring techniques. Journal of Rock Mechanics and Geotechnical Engineering, 2014, 6, 138-149.	3.7	173
2	Base Resistance of Jacked Pipe Piles in Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2001, 127, 473-480.	1.5	132
3	An investigation into the effect of scour on the natural frequency of an offshore wind turbine. Ocean Engineering, 2015, 101, 1-11.	1.9	123
4	An investigation of the changes in the natural frequency of a pile affected by scour. Journal of Sound and Vibration, 2013, 332, 6685-6702.	2.1	107
5	Effect of Friction Fatigue on Pile Capacity in Dense Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2007, 133, 63-71.	1.5	82
6	PISA design model for monopiles for offshore wind turbines: application to a stiff glacial clay till. Geotechnique, 2020, 70, 1030-1047.	2.2	81
7	Simultaneous Determination of Critical Slip Surface and Reliability Index for Slopes. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2007, 133, 878-886.	1.5	80
8	A simple method to analyze infiltration into unsaturated soil slopes. Computers and Geotechnics, 2008, 35, 223-230.	2.3	80
9	The shaft capacity of pipe piles in sand. Canadian Geotechnical Journal, 2003, 40, 36-45.	1.4	79
10	Case study of a project-based learning course in civil engineering design. European Journal of Engineering Education, 2011, 36, 547-558.	1.5	78
11	Modelling the Cone Penetration Test in sand using Cavity Expansion and Arbitrary Lagrangian Eulerian Finite Element Methods. Computers and Geotechnics, 2011, 38, 482-490.	2.3	75
12	PISA design model for monopiles for offshore wind turbines: application to a marine sand. Geotechnique, 2020, 70, 1048-1066.	2.2	69
13	Laterally loaded monopile design for offshore wind farms. Proceedings of Institution of Civil Engineers: Energy, 2012, 165, 7-17.	0.5	64
14	Deterministic and probabilistic multi-modal analysis of slope stability. Computers and Geotechnics, 2015, 66, 172-179.	2.3	59
15	3D FEM approach for laterally loaded monopile design. Computers and Geotechnics, 2018, 100, 76-83.	2.3	59
16	Shaft Capacity of Open-Ended Piles in Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2011, 137, 1090-1102.	1.5	58
17	Field investigation of the axial resistance of helical piles in dense sand. Canadian Geotechnical Journal, 2014, 51, 1343-1354.	1.4	58
18	Monotonic laterally loaded pile testing in a dense marine sand at Dunkirk. Geotechnique, 2020, 70, 986-998.	2.2	55

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19	Effect of Rainfall Intensity on Infiltration into Partly Saturated Slopes. Geotechnical and Geological Engineering, 2008, 26, 199-209.	0.8	54
20	Monotonic laterally loaded pile testing in a stiff glacial clay till at Cowden. Geotechnique, 2020, 70, 970-985.	2.2	54
21	Field tests to investigate the cyclic response of monopiles in sand. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2015, 168, 407-421.	0.9	53
22	Determining the Presence of Scour around Bridge Foundations Using Vehicle-Induced Vibrations. Journal of Bridge Engineering, 2016, 21, .	1.4	52
23	A comparison of initial stiffness formulations for small-strain soilâ€“pile dynamic Winkler modelling. Soil Dynamics and Earthquake Engineering, 2016, 81, 27-41.	1.9	52
24	Base load â€“ displacement response of piles in sand. Canadian Geotechnical Journal, 2007, 44, 1053-1063.	1.4	50
25	Finite-element modelling of laterally loaded piles in a dense marine sand at Dunkirk. Geotechnique, 2020, 70, 1014-1029.	2.2	50
26	Influence of scour depth and type on pâ€“y curves for monopiles in sand under monotonic lateral loading in a geotechnical centrifuge. Ocean Engineering, 2020, 197, 106838.	1.9	49
27	Development of a landslide susceptibility assessment for a rail network. Engineering Geology, 2016, 215, 1-9.	2.9	47
28	Piles for offshore wind turbines: a state-of-the-art review. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2011, 164, 245-256.	0.9	45
29	Automatic classification of fine-grained soils using CPT measurements and Artificial Neural Networks. Advanced Engineering Informatics, 2018, 36, 207-215.	4.0	45
30	Field validation of fibre Bragg grating sensors for measuring strain on driven steel piles. Geotechnique Letters, 2015, 5, 74-79.	0.6	44
31	Geophysical and geotechnical assessment of a railway embankment failure. Near Surface Geophysics, 2011, 9, 33-44.	0.6	43
32	Shaft Capacity of Open-Ended Piles in Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2011, 137, 903-913.	1.5	43
33	The effect of ageing on the axial capacity of piles in sand. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2013, 166, 122-130.	0.9	40
34	Probabilistic examination of the change in eigenfrequencies of an offshore wind turbine under progressive scour incorporating soil spatial variability. Marine Structures, 2018, 57, 87-104.	1.6	39
35	Finite-element modelling of laterally loaded piles in a stiff glacial clay till at Cowden. Geotechnique, 2020, 70, 999-1013.	2.2	39
36	Ground characterisation for PISA pile testing and analysis. Geotechnique, 2020, 70, 945-960.	2.2	38

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37	Structural Health Monitoring for Performance Assessment of Bridges under Flooding and Seismic Actions. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2018, 28, 296-307.	0.5	37
38	Implications of climate change for railway infrastructure. Wiley Interdisciplinary Reviews: Climate Change, 2021, 12, e728.	3.6	33
39	The Shaft Capacity of Displacement Piles in Clay: A State of the Art Review. Geotechnical and Geological Engineering, 2011, 29, 389-410.	0.8	31
40	Isolating the location of scour-induced stiffness loss in bridges using local modal behaviour. Journal of Civil Structural Health Monitoring, 2017, 7, 483-503.	2.0	31
41	Shaft Capacity of Continuous Flight Auger Piles in Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2009, 135, 790-798.	1.5	30
42	Use of a genetic algorithm to perform reliability analysis of unsaturated soil slopes. Geotechnique, 2009, 59, 545-549.	2.2	29
43	System reliability of slopes using multimodal optimisation. Geotechnique, 2016, 66, 413-423.	2.2	28
44	New data analysis methods for instrumented medium-scale monopile field tests. Geotechnique, 2020, 70, 961-969.	2.2	28
45	Assessment of long-term deformation of a tunnel in soft rock by utilizing particle swarm optimized neural network. Tunnelling and Underground Space Technology, 2021, 110, 103838.	3.0	28
46	Evaluation of CPT-based Pâ€“y models for laterally loaded piles in siliceous sand. Geotechnique Letters, 2014, 4, 110-117.	0.6	25
47	A New Methodology for Assessment of Railway Infrastructure Condition. Transportation Research Procedia, 2016, 14, 1930-1939.	0.8	25
48	Rainfall thresholds as a landslide indicator for engineered slopes on the Irish Rail network. Geomorphology, 2018, 306, 40-50.	1.1	24
49	The effect of shape on the pull-out capacity of shallow plate anchors in sand. Geotechnique, 2019, 69, 355-363.	2.2	24
50	Fragility curves for rainfall-induced shallow landslides on transport networks. Canadian Geotechnical Journal, 2018, 55, 852-861.	1.4	22
51	Pile Aging in Cohesive Soils. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 1620-1624.	1.5	21
52	Field investigation of the effect of installation method on the shaft resistance of piles in clay. Canadian Geotechnical Journal, 2010, 47, 730-741.	1.4	19
53	Field experiments on instrumented winged monopiles. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2016, 169, 227-239.	0.9	19
54	Monopiles subjected to uni- and multi-lateral cyclic loading. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2017, 170, 246-258.	0.9	18

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55	Performance of CPT-based methods to assess monopile driveability in North Sea sands. Ocean Engineering, 2018, 166, 76-91.	1.9	16
56	Design Charts for the Stability Analysis of Unsaturated Soil Slopes. Geotechnical and Geological Engineering, 2010, 28, 79-90.	0.8	15
57	An iterative method to infer distributed mass and stiffness profiles for use in reference dynamic beam-Winkler models of foundation piles from frequency response functions. Journal of Sound and Vibration, 2018, 431, 1-19.	2.1	14
58	Application of neural networks for the reliability design of a tunnel in karst rock mass. Canadian Geotechnical Journal, 2021, 58, 455-467.	1.4	14
59	Design of the curriculum for a second-cycle course in civil engineering in the context of the Bologna framework. European Journal of Engineering Education, 2010, 35, 175-185.	1.5	13
60	Multi-modal Reliability Analysis of Slope Stability. Transportation Research Procedia, 2016, 14, 2468-2476.	0.8	13
61	The base resistance of non-displacement piles in sand. Part II: finite-element analyses. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2013, 166, 549-560.	0.9	12
62	A Multiobjective Decision-Making Model for Risk-Based Maintenance Scheduling of Railway Earthworks. Applied Sciences (Switzerland), 2021, 11, 965.	1.3	12
63	The base resistance of non-displacement piles in sand. Part I: field tests. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2013, 166, 540-548.	0.9	11
64	Field experiments at three sites to investigate the effects of age on steel piles driven in sand. Geotechnique, 2020, 70, 469-489.	2.2	11
65	An investigation into the use of push-in pile foundations by the offshore wind sector. International Journal of Environmental Studies, 2013, 70, 777-791.	0.7	10
66	Experimental application of FRF-based model updating approach to estimate soil mass and stiffness mobilised under pile impact tests. Soil Dynamics and Earthquake Engineering, 2019, 123, 1-15.	1.9	10
67	Impact of scour on lateral resistance of wind turbine monopiles: an experimental study. Canadian Geotechnical Journal, 2021, 58, 1770-1782.	1.4	10
68	Electrochemical impedance and electrical resistance sensors for the evaluation of anticorrosive coating degradation. Corrosion Reviews, 2017, 35, 65-74.	1.0	9
69	Characterization of the Blessington sand geotechnical test site. AIMS Geosciences, 2019, 5, 145-162.	0.4	9
70	An investigation of correlation factors linking footing resistance on sand with cone penetration test results. Computers and Geotechnics, 2012, 46, 84-92.	2.3	8
71	Assessing the Vulnerability of Irish Rail Network Earthworks. Transportation Research Procedia, 2016, 14, 1904-1913.	0.8	8
72	Sensitivity Studies on Scour Detection Using Vibration-based Systems. Transportation Research Procedia, 2016, 14, 3982-3989.	0.8	8

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73	Categorization of the Condition of Railway Embankments Using a Multi-Attribute Utility Theory. Applied Sciences (Switzerland), 2019, 9, 5089.	1.3	8
74	Influence of Vertical Loading on Behavior of Laterally Loaded Foundation Piles: A Review. Journal of Marine Science and Engineering, 2020, 8, 1029.	1.2	8
75	Investigation of Cyclic Loading of Aged Piles in Sand. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2021, 147, .	1.5	8
76	Cyclic and Rapid Axial Load Tests on Displacement Piles in Soft Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2012, 138, 1022-1026.	1.5	7
77	CPT-Based Axial Capacity Design Method for Driven Piles in Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2022, 148, .	1.5	7
78	A field investigation into the mechanisms of pile ageing in sand. Geotechnique, 2021, 71, 120-131.	2.2	6
79	The Development and Testing of an Instrumented Open-Ended Model Pile. Geotechnical Testing Journal, 2010, 33, 72-82.	0.5	6
80	Influence of scour protection layers on the lateral response of monopile in dense sand. Ocean Engineering, 2022, 244, 110377.	1.9	6
81	A review of CPT based axial pile design in the Netherlands. Underground Space (China), 2021, 6, 85-99.	3.4	5
82	Discussion of â€œDetermination of Bearing Capacity of Open-Ended Piles in Sandâ€•by Kyuho Paik and Rodrigo Salgado. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2004, 130, 656-658.	1.5	4
83	Using Reliability Theory to Assess the Stability and Prolong the Design Life of Existing Engineered Slopes. , 2017, , .		4
84	Factors Influencing the Prediction of Pile Driveability Using CPT-Based Approaches. Energies, 2020, 13, 3128.	1.6	4
85	Trends in non-destructive testing of rock bolts. Gradevinar, 2019, 71, 823-831.	0.2	4
86	Recent Development and Remaining Challenges In Determining Unique Bridge Scour Performance Indicators. Baltic Journal of Road and Bridge Engineering, 2018, 13, .	0.4	4
87	Geotechnical installation design of suction buckets in non-cohesive soils: A reliability-based approach. Ocean Engineering, 2019, 188, 106242.	1.9	3
88	New insights into the failure mechanisms of horizontal plate anchors in clay during pull-out. Geotechnique, 2022, 72, 189-199.	2.2	3
89	Field tests to investigate the cyclic response of monopiles in sand. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2015, 168, 407-421.	0.9	3
90	Evaluation of Creep Behavior of Soft Soils by Utilizing Multisensor Data Combined with Machine Learning. Sensors, 2022, 22, 2888.	2.1	3

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91	Experimental Investigation of the Effect of Shearing Rate on the Capacity of Piles in Soft Silt. , 2009, , .		2
92	Installation Torque Measurements of Helical Piles in Dry Sand for Offshore Foundation Systems. , 2016, , .		2
93	Development of Design Practice for Piles in Stiff Glacial Till. DFI Journal, 2009, 3, 57-66.	0.2	1
94	Gravity Based Foundations for Offshore Wind Turbines: Cyclic Loading and Liquefaction. , 2018, , .		0