

# Mohamed Amin Shahin

## List of Publications by Year in descending order

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79  
papers

3,902  
citations

159358

30  
h-index

128067

60  
g-index

81  
all docs

81  
docs citations

81  
times ranked

2178  
citing authors

#	ARTICLE	IF	CITATIONS
1	Cementation of sand soil by microbially induced calcite precipitation at various degrees of saturation. Canadian Geotechnical Journal, 2013, 50, 81-90.	1.4	526
2	State-of-the-Art Review of Biocementation by Microbially Induced Calcite Precipitation (MICP) for Soil Stabilization. Geomicrobiology Journal, 2017, 34, 524-537.	1.0	313
3	Data Division for Developing Neural Networks Applied to Geotechnical Engineering. Journal of Computing in Civil Engineering, 2004, 18, 105-114.	2.5	262
4	Predicting Settlement of Shallow Foundations using Neural Networks. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2002, 128, 785-793.	1.5	244
5	Influence of Key Environmental Conditions on Microbially Induced Cementation for Soil Stabilization. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2017, 143, .	1.5	236
6	Bio-cementation of sandy soil using microbially induced carbonate precipitation for marine environments. Geotechnique, 2014, 64, 1010-1013.	2.2	196
7	Soil bio-cementation using a new one-phase low-pH injection method. Acta Geotechnica, 2019, 14, 615-626.	2.9	157
8	State-of-the-art review of some artificial intelligence applications in pile foundations. Geoscience Frontiers, 2016, 7, 33-44.	4.3	135
9	Microstructural and Geomechanical Study on Biocemented Sand for Optimization of MICP Process. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	94
10	Intelligent computing for modeling axial capacity of pile foundations. Canadian Geotechnical Journal, 2010, 47, 230-243.	1.4	93
11	Urease active bioslurry: a novel soil improvement approach based on microbially induced carbonate precipitation. Canadian Geotechnical Journal, 2016, 53, 1376-1385.	1.4	92
12	Recent Advances and Future Challenges for Artificial Neural Systems in Geotechnical Engineering Applications. Advances in Artificial Neural Systems, 2009, 2009, 1-9.	1.0	84
13	Three-dimensional numerical modelling of ballasted railway track foundations for high-speed trains with special reference to critical speed. Transportation Geotechnics, 2016, 6, 55-65.	2.0	83
14	A review on methods for liberating lithium from pegmatities. Minerals Engineering, 2020, 145, 106085.	1.8	73
15	Utilization of Lime for Stabilizing Soft Clay Soil of High Organic Content. Geotechnical and Geological Engineering, 2009, 27, 105-113.	0.8	67
16	Neural network prediction of pullout capacity of marquee ground anchors. Computers and Geotechnics, 2005, 32, 153-163.	2.3	58
17	Load-settlement modeling of axially loaded steel driven piles using CPT-based recurrent neural networks. Soils and Foundations, 2014, 54, 515-522.	1.3	58
18	Enhancing fiber/matrix bonding in polypropylene fiber reinforced cementitious composites by microbially induced calcite precipitation pre-treatment. Cement and Concrete Composites, 2018, 88, 1-7.	4.6	53

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19	Stabilisation of granular media and formation soil using geosynthetics with special reference to railway engineering. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2007, 11, 27-43.	0.7	50
20	Geo-mechanical behavior of clay soils stabilized at ambient temperature with fly-ash geopolymer-incorporated granulated slag. Soils and Foundations, 2019, 59, 1906-1920.	1.3	48
21	Microbially induced calcite precipitation for production of "bio-bricks" treated at partial saturation condition. Construction and Building Materials, 2020, 231, 117095.	3.2	47
22	Surface Percolation for Soil Improvement by Biocementation Utilizing <i>In Situ</i> Enriched Indigenous Aerobic and Anaerobic Ureolytic Soil Microorganisms. Geomicrobiology Journal, 2017, 34, 546-556.	1.0	43
23	Settlement prediction of shallow foundations on granular soils using B-spline neurofuzzy models. Computers and Geotechnics, 2003, 30, 637-647.	2.3	42
24	Artificial Intelligence in Geotechnical Engineering. , 2013, , 169-204.		41
25	Use of Fly-Ash Geopolymer Incorporating Ground Granulated Slag for Stabilisation of Kaolin Clay Cured at Ambient Temperature. Geotechnical and Geological Engineering, 2019, 37, 721-740.	0.8	41
26	Use of evolutionary computing for modelling some complex problems in geotechnical engineering. Geomechanics and Geoengineering, 2015, 10, 109-125.	0.9	37
27	Effect of microbially induced calcite precipitation treatment on the bonding properties of steel fiber in ultra-high performance concrete. Journal of Building Engineering, 2022, 50, 104132.	1.6	37
28	A review of artificial intelligence applications in shallow foundations. International Journal of Geotechnical Engineering, 2015, 9, 49-60.	1.1	36
29	Pullout capacity of small ground anchors by direct cone penetration test methods and neural networks. Canadian Geotechnical Journal, 2006, 43, 626-637.	1.4	34
30	Review of Fly-Ash-Based Geopolymers for Soil Stabilisation with Special Reference to Clay. Geosciences (Switzerland), 2020, 10, 249.	1.0	34
31	Neural networks for modelling ultimate pure bending of steel circular tubes. Journal of Constructional Steel Research, 2008, 64, 624-633.	1.7	33
32	Design of ballasted railway track foundations using numerical modelling. Part I: Development. Canadian Geotechnical Journal, 2018, 55, 353-368.	1.4	33
33	Modeling the mechanical behavior of railway ballast using artificial neural networks. Canadian Geotechnical Journal, 2006, 43, 1144-1152.	1.4	30
34	Probabilistic Analysis of Soil Consolidation via Prefabricated Vertical Drains. International Journal of Geomechanics, 2013, 13, 877-881.	1.3	30
35	Systematic approach to assessing the applicability of fly-ash-based geopolymer for clay stabilization. Canadian Geotechnical Journal, 2020, 57, 1356-1368.	1.4	26
36	Sustainable geopolymer using lithium concentrate residues. Construction and Building Materials, 2019, 228, 116740.	3.2	25

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37	Cyclic behaviour of clay stabilised with fly-ash based geopolymer incorporating ground granulated slag. <i>Transportation Geotechnics</i> , 2021, 26, 100430.	2.0	23
38	Neural network based stochastic design charts for settlement prediction. <i>Canadian Geotechnical Journal</i> , 2005, 42, 110-120.	1.4	22
39	Loadâ€‘Settlement Modeling of Axially Loaded Drilled Shafts Using CPT-Based Recurrent Neural Networks. <i>International Journal of Geomechanics</i> , 2014, 14, .	1.3	22
40	Probabilistic design of ground improvement by vertical drains for soil of spatially variable coefficient of consolidation. <i>Geotextiles and Geomembranes</i> , 2014, 42, 1-14.	2.3	22
41	Simulating the behaviour of reactive soils and slab foundations using hydro-mechanical finite element modelling incorporating soil suction and moisture changes. <i>Computers and Geotechnics</i> , 2018, 98, 17-34.	2.3	19
42	Limit analysis for the seismic stability of three-dimensional rock slopes using the generalized Hoek-Brown criterion. <i>International Journal of Mining Science and Technology</i> , 2022, 32, 237-245.	4.6	19
43	Microbially Induced Calcite Precipitation (MICP) for Soil Stabilization. <i>Ecwise</i> , 2019, , 47-68.	0.1	18
44	Bio-composites treatment for mitigation of current-induced riverbank soil erosion. <i>Science of the Total Environment</i> , 2021, 800, 149513.	3.9	18
45	State-of-the-Art Review of Enzyme-Induced Calcite Precipitation (EICP) for Ground Improvement: Applications and Prospects. <i>Geosciences (Switzerland)</i> , 2021, 11, 492.	1.0	17
46	Stabilisation of oil-contaminated soils using microbially induced calcite crystals by bacterial flocs. <i>Geotechnique Letters</i> , 2017, 7, 146-151.	0.6	16
47	Experimental and Analytical Study on Geomechanical Behavior of Biocemented Sand. <i>International Journal of Geomechanics</i> , 2021, 21, .	1.3	15
48	Stabilisation of Clay with Fly-Ash Geopolymer Incorporating GGBFS. , 0, , .		15
49	Design of Stiffened Slab Foundations on Reactive Soils Using 3D Numerical Modeling. <i>International Journal of Geomechanics</i> , 2020, 20, .	1.3	14
50	Design of ballasted railway track foundations using numerical modelling. Part II: Applications. <i>Canadian Geotechnical Journal</i> , 2018, 55, 369-396.	1.4	13
51	Genetic Programming for Modelling of Geotechnical Engineering Systems. , 2015, , 37-57.		12
52	Dynamic Response Analysis of Ballasted Railway Trackâ€‘Ground System under Train Moving Loads using 3D Finite Element Numerical Modelling. <i>Transportation Infrastructure Geotechnology</i> , 2023, 10, 639-659.	1.9	12
53	Numerical analysis of slab foundations on reactive soils incorporating sand cushions. <i>Computers and Geotechnics</i> , 2019, 112, 218-229.	2.3	11
54	Bio-Cementation for Improving Soil Thermal Conductivity. <i>Sustainability</i> , 2021, 13, 10238.	1.6	11

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55	Intelligent Computing for Predicting Axial Capacity of Drilled Shafts. , 2009, , .		10
56	Numerical modeling of granular pile-anchor foundations (GPAF) in reactive soils. International Journal of Geotechnical Engineering, 2012, 6, 149-155.	1.1	10
57	A new model based on evolutionary computing for predicting ultimate pure bending of steel circular tubes. Journal of Constructional Steel Research, 2014, 94, 84-90.	1.7	9
58	Design of Ram-Compacted Bearing Base Piling Foundations by Simple Numerical Modelling Approach and Artificial Intelligence Technique. International Journal of Geosynthetics and Ground Engineering, 2021, 7, 1.	0.9	9
59	Mitigation of alkali-silica reaction by microbially induced CaCO <sub>3</sub> protective layer on aggregates. Construction and Building Materials, 2022, 328, 127065.	3.2	8
60	Probabilistic analyses of soil consolidation by prefabricated vertical drains for singleâ€ drain and multiâ€ drain systems. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 2398-2420.	1.7	7
61	Investigation into Impact of Train Speed for Behavior of Ballasted Railway Track Foundations. Procedia Engineering, 2016, 143, 1152-1159.	1.2	7
62	Parametric Study on the Resilient Response of Ballasted Railway Track Substructure Using Numerical Modeling. , 2006, , 1.		6
63	A Note on Void Ratio of Fibre-Reinforced Soils. International Journal of Geosynthetics and Ground Engineering, 2015, 1, 1.	0.9	6
64	Stabilization of Ballasted Rail Tracks and Underlying Soft Formation Soils with Geosynthetic Grids and Drains. , 2006, , 143.		5
65	Three-dimensional finite element analysis of spatially variable PVD improved ground. Georisk, 2015, 9, 37-48.	2.6	5
66	Closure to â€ Predicting Settlement of Shallow Foundations Using Neural Networksâ€ by Mohamed A. Shahin, Holger R. Maier, and Mark B. Jaksa. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2003, 129, 1175-1177.	1.5	4
67	Experimental Investigation into Multistage versus Conventional Triaxial Compression Tests for a &lt;i>&lt;i>-Phi Soil. Applied Mechanics and Materials, 0, 90-93, 28-32.	0.2	4
68	Relevance vector machine and multivariate adaptive regression spline for modelling ultimate capacity of pile foundation. Journal of Numerical Methods in Civil Engineering, 2016, 1, 37-45.	0.3	4
69	Use of slag (with cement) for improving the performance of expansive soil of road pavement subgrade. MATEC Web of Conferences, 2019, 276, 05002.	0.1	3
70	Geomechanical Behaviour of Clay Stabilised with Fly-Ash-Based Geopolymer for Deep Mixing. Geosciences (Switzerland), 2022, 12, 207.	1.0	3
71	Effects of soil spatial variability on axisymmetric versus plane strain analyses of ground improvement by prefabricated vertical drains. International Journal of Geotechnical Engineering, 2012, 6, 139-147.	1.1	2
72	In situ biomass flocculation improves placement of <i>Sporosarcina Pasteurii</i> for microbially mediated sandy soil stabilization. Acta Geotechnica, 2022, 17, 4435-4445.	2.9	2

#	ARTICLE	IF	CITATIONS
73	Design of Ballasted Railway Track Foundations under Cyclic Loading. , 2009, , .		1
74	Reliability-based semi-analytical solution for ground improvement by PVDs incorporating inherent (spatial) variability of soil. Computers and Geotechnics, 2015, 67, 121-134.	2.3	1
75	Modeling of Ground Improvement by Prefabricated Vertical Drains in Highly Variable Soils. , 2012, , .		1
76	Reply to the discussion by Das and Sivakugan on "Intelligent computing for modeling axial capacity of pile foundations" Appears in Canadian Geotechnical Journal, <b>47</b>(8): 928-930.. Canadian Geotechnical Journal, 2010, 47, 931-934.	1.4	0
77	Laboratory Investigation into Applicability of Red Sand-Bitumen Mixture as Landfill Liner. Applied Mechanics and Materials, 0, 178-181, 1022-1025.	0.2	0
78	Honors Lecture: Biological Cementation of Unstable Soils and Grounds for Civil Infrastructure Developments. Sustainable Civil Infrastructures, 2019, , 1-9.	0.1	0
79	Investigation into Some Design Aspects of Ballasted Railway Track Foundations using Numerical Modelling. , 0, , .		0