

Sanjay S Nimbalkar

List of Publications by Year in descending order

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130
papers

3,503
citations

136950

32
h-index

155660

55
g-index

135
all docs

135
docs citations

135
times ranked

1330
citing authors

#	ARTICLE	IF	CITATIONS
1	Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2010, 136, 907-917.	3.0	200
2	Seismic passive resistance by pseudo-dynamic method. Geotechnique, 2005, 55, 699-702.	4.0	194
3	Pseudo-dynamic approach of seismic active earth pressure behind retaining wall. Geotechnical and Geological Engineering, 2006, 24, 1103-1113.	1.7	177
4	Improved Performance of Railway Ballast under Impact Loads Using Shock Mats. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2012, 138, 281-294.	3.0	144
5	Stress-Strain Degradation Response of Railway Ballast Stabilized with Geosynthetics. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 684-700.	3.0	139
6	Effect of cyclic loading frequency on the permanent deformation and degradation of railway ballast. Geotechnique, 2014, 64, 746-751.	4.0	120
7	Behavior of Geocell-Reinforced Subballast Subjected to Cyclic Loading in Plane-Strain Condition. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, .	3.0	115
8	Deformation and Degradation Mechanisms of Railway Ballast under High Frequency Cyclic Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	110
9	Behaviour of clay-fouled ballast under drained triaxial testing. Geotechnique, 2013, 63, 410-419.	4.0	106
10	Seismic stability of reinforced-soil wall by pseudo-dynamic method. Geosynthetics International, 2006, 13, 111-119.	2.9	102
11	Improved Performance of Ballasted Rail Track Using Geosynthetics and Rubber Shockmat. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	97
12	The Role of Ballast-Fouling Characteristics on the Drainage Capacity of Rail Substructure. Geotechnical Testing Journal, 2012, 35, 629-640.	1.0	97
13	Seismic rotational displacement of gravity walls by pseudo-dynamic method: Passive case. Soil Dynamics and Earthquake Engineering, 2007, 27, 242-249.	3.8	84
14	Observed and predicted behaviour of rail ballast under monotonic loading capturing particle breakage. Canadian Geotechnical Journal, 2015, 52, 73-86.	2.8	80
15	Sliding stability and seismic design of retaining wall by pseudo-dynamic method for passive case. Soil Dynamics and Earthquake Engineering, 2007, 27, 497-505.	3.8	68
16	Three-dimensional characterisation of particle size and shape for ballast. Geotechnique Letters, 2014, 4, 197-202.	1.2	68
17	Laboratory Assessment of the Role of Particle Size Distribution on the Deformation and Degradation of Ballast under Cyclic Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	65
18	Seismic Rotational Displacement of Gravity Walls by Pseudodynamic Method. International Journal of Geomechanics, 2008, 8, 169-175.	2.7	64

#	ARTICLE	IF	CITATIONS
19	Determination of Active Earth Pressure on Rigid Retaining Wall Considering Arching Effect in Cohesive Backfill Soil. International Journal of Geomechanics, 2016, 16, .	2.7	59
20	A constitutive model for coal-fouled ballast capturing the effects of particle degradation. Computers and Geotechnics, 2014, 61, 96-107.	4.7	57
21	Finite element model of ballasted railway with infinite boundaries considering effects of moving train loads and Rayleigh waves. Soil Dynamics and Earthquake Engineering, 2018, 114, 147-153.	3.8	56
22	Performance improvement of rail track substructure using artificial inclusions “ Experimental and numerical studies. Transportation Geotechnics, 2016, 8, 69-85.	4.5	55
23	Performance assessment of reinforced ballasted rail track. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2014, 167, 24-34.	1.0	53
24	Measured and Predicted Response of Pile Groups in Soft Clay Subjected to Cyclic Lateral Loading. International Journal of Geomechanics, 2018, 18, .	2.7	50
25	From theory to practice in track geomechanics “ Australian perspective for synthetic inclusions. Transportation Geotechnics, 2014, 1, 171-187.	4.5	49
26	The Behaviour of Ballasted Track Foundations: Track Drainage and Geosynthetic Reinforcement. , 2010, , .		46
27	Effect of fiber reinforcement on shear strength and void ratio of soft clay. Geosynthetics International, 2018, 25, 471-480.	2.9	46
28	Isotropic“kinematic hardening model for coarse granular soils capturing particle breakage and cyclic loading under triaxial stress space. Canadian Geotechnical Journal, 2016, 53, 646-658.	2.8	45
29	Estimation of Passive Earth Pressure against Rigid Retaining Wall Considering Arching Effect in Cohesive-Frictional Backfill under Translation Mode. International Journal of Geomechanics, 2017, 17, .	2.7	43
30	Numerical Solution of Single Pile Subjected to Torsional Cyclic Load. International Journal of Geomechanics, 2017, 17, .	2.7	41
31	External stability of reinforced soil walls under seismic conditions. Geosynthetics International, 2007, 14, 211-218.	2.9	40
32	Evaluation of seismic passive earth pressure of inclined rigid retaining wall considering soil arching effect. Soil Dynamics and Earthquake Engineering, 2017, 100, 286-295.	3.8	36
33	EFFECTS OF BODY WAVES AND SOIL AMPLIFICATION ON SEISMIC EARTH PRESSURES. Journal of Earthquake and Tsunami, 2008, 02, 33-52.	1.3	32
34	Application of fractional calculus in modelling ballast deformation under cyclic loading. Computers and Geotechnics, 2017, 82, 16-30.	4.7	32
35	Effects of soil arching on behavior of pile-supported railway embankment: 2D FEM approach. Computers and Geotechnics, 2020, 123, 103601.	4.7	31
36	Field assessment of railway ballast degradation and mitigation using geotextile. Geotextiles and Geomembranes, 2020, 48, 275-283.	4.6	29

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37	Particle breakage of granular materials during sample preparation. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2019, 11, 417-422.	8.1	23
38	Three-dimensional limit analysis of slopes reinforced with piles in soils exhibiting heterogeneity and anisotropy in cohesion. <i>Soil Dynamics and Earthquake Engineering</i> , 2019, 121, 194-199.	3.8	22
39	Application of bounding surface plasticity concept for clay-fouled ballast under drained loading. <i>Computers and Geotechnics</i> , 2015, 70, 96-105.	4.7	19
40	Phenomenological fractional stress-dilatancy model for granular soil and soil-structure interface under monotonic and cyclic loads. <i>Acta Geotechnica</i> , 2021, 16, 3115-3132.	5.7	19
41	Identification of ballast grading for rail track. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2017, 9, 945-954.	8.1	18
42	A simplified approach to assess seismic stability of tailings dams. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2018, 10, 1082-1090.	8.1	18
43	Grading and frequency dependence of the resilient modulus of ballast. <i>Geotechnique Letters</i> , 2018, 8, 305-309.	1.2	17
44	Liquefaction and post-liquefaction assessment of lightly cemented sands. <i>Canadian Geotechnical Journal</i> , 2020, 57, 173-188.	2.8	17
45	Evaluation of additional confinement for three-dimensional geoinclusions under general stress state. <i>Canadian Geotechnical Journal</i> , 2020, 57, 453-461.	2.8	17
46	Pile group in clay under cyclic lateral loading with emphasis on bending moment: Numerical modelling. <i>Marine Georesources and Geotechnology</i> , 2023, 41, 269-284.	2.1	17
47	Seismic Active Thrust on Rigid Retaining Wall Using Strain Dependent Dynamic Properties. <i>International Journal of Geomechanics</i> , 2018, 18, .	2.7	16
48	Finite Element Modeling of Ballasted Rail Track Capturing Effects of Geosynthetic Inclusions. <i>Frontiers in Built Environment</i> , 2019, 5, .	2.3	16
49	Three-dimensional finite element analyses of tyre derived aggregates in ballasted and ballastless tracks. <i>Computers and Geotechnics</i> , 2021, 136, 104220.	4.7	16
50	Cyclic stress-strain characteristics of calcareous sand improved by polyurethane foam adhesive. <i>Transportation Geotechnics</i> , 2021, 31, 100640.	4.5	16
51	Analytical Evaluation of Ballasted Track Substructure Response under Repeated Train Loads. <i>International Journal of Geomechanics</i> , 2020, 20, .	2.7	15
52	Track Stabilisation with Geosynthetics and Geodrains, and Performance Verification through Field Monitoring and Numerical Modelling. <i>International Journal of Railway Technology</i> , 2012, 1, 195-219.	0.3	15
53	Modernisation of Rail Tracks for Higher Speeds and Greater Freight. <i>International Journal of Railway Technology</i> , 2013, 2, 1-20.	0.3	15
54	Modeling Behaviour of Railway Ballast in Prismatic Apparatus Using Discrete Element Method. <i>Procedia Engineering</i> , 2016, 143, 1177-1184.	1.2	14

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55	Assessment of Interface Shear Behaviour of Sub-ballast with Geosynthetics by Large-scale Direct Shear Test. <i>Procedia Engineering</i> , 2016, 143, 1007-1015.	1.2	13
56	Application of Shock Mats in Rail Track Foundation Subjected to Dynamic Loads. <i>Procedia Engineering</i> , 2016, 143, 1108-1119.	1.2	13
57	Field Assessment of Ballasted Railroads Using Geosynthetics and Shock Mats. <i>Procedia Engineering</i> , 2016, 143, 1485-1494.	1.2	13
58	Three-Dimensional Slope Stability Analysis Incorporating Coupled Effects of Pile Reinforcement and Reservoir Drawdown. <i>International Journal of Geomechanics</i> , 2019, 19, .	2.7	13
59	Shear behavior of polyurethane foam adhesive improved calcareous sand under large-scale triaxial test. <i>Marine Georesources and Geotechnology</i> , 2021, 39, 1449-1458.	2.1	11
60	Finite Element Modeling of the Dynamic Response of Critical Zones in a Ballasted Railway Track. <i>Frontiers in Built Environment</i> , 2021, 7, .	2.3	11
61	Seismic design of retaining wall by considering wall-soil inertia for active case. <i>International Journal of Geotechnical Engineering</i> , 2008, 2, 319-328.	2.0	10
62	Seismic response of concrete-rockfill combination dam using large-scale shaking table tests. <i>Soil Dynamics and Earthquake Engineering</i> , 2017, 99, 9-19.	3.8	10
63	Effect of Particle Shape and Confining Pressure on Breakage and Deformation of Artificial Rockfill. <i>International Journal of Geosynthetics and Ground Engineering</i> , 2019, 5, 1.	2.0	10
64	Strength Enhancement of Geotextile-Reinforced Fly-Ash-Based Geopolymer Stabilized Residual Soil. <i>International Journal of Geosynthetics and Ground Engineering</i> , 2020, 6, 1.	2.0	10
65	Simplified geotechnical rheological model for simulating viscoelastoâ€plastic response of ballasted railway substructure. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2021, 45, 2019-2047.	3.3	10
66	Laboratory study on impulse current characteristics of clay. <i>Environmental Geotechnics</i> , 2017, 4, 199-208.	2.3	9
67	Influence of Particle Size Distribution on the Critical State of Rockfill. <i>Advances in Civil Engineering</i> , 2019, 2019, 1-7.	0.7	9
68	Strength and Deformation Characteristics of Calcareous Sands Improved by PFA. <i>KSCE Journal of Civil Engineering</i> , 2021, 25, 60-69.	1.9	9
69	Field Installation Effects of Stone Columns on Load Settlement Characteristics of Reinforced Soft Ground. <i>International Journal of Geomechanics</i> , 2022, 22, .	2.7	9
70	A new mixing technique for solidifier and dredged fill in coastal area. <i>Marine Georesources and Geotechnology</i> , 2017, 35, 52-61.	2.1	8
71	Effect of Water Drawdown and Dynamic Loads on Piled Raft: Two-Dimensional Finite Element Approach. <i>Infrastructures</i> , 2019, 4, 75.	2.8	8
72	Effects of Tunneling-Induced Ground Movements on Stability of Piled Raft Foundation: Three-Dimensional Finite-Element Approach. <i>International Journal of Geomechanics</i> , 2020, 20, .	2.7	8

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73	Applicability of Bouc-Wen Model to Capture Asymmetric Behavior of Sand at High Cyclic Shear Strain. International Journal of Geomechanics, 2020, 20, .	2.7	8
74	Improved Vacuum Preloading Method Combined with Sand Sandwich Structure for Consolidation of Dredged Clay-Slurry Fill and Original Marine Soft Clay. International Journal of Geomechanics, 2021, 21, .	2.7	8
75	Mechanism Analysis of Rock Failure Process under High-Voltage Electropulse: Analytical Solution and Simulation. Materials, 2022, 15, 2188.	2.9	8
76	Experimental and numerical investigation of high-yield grout ore pass plugs to resist impact loads. International Journal of Rock Mechanics and Minings Sciences, 2014, 70, 1-15.	5.8	7
77	An Elasto-plastic Method for Analysing the Deformation of the Railway Ballast. Procedia Engineering, 2016, 143, 954-960.	1.2	7
78	Stability Assessment of Earth Retaining Structures under Static and Seismic Conditions. Infrastructures, 2019, 4, 15.	2.8	7
79	Stress-fractional soil model with reduced elastic region. Soils and Foundations, 2019, 59, 2007-2023.	3.1	7
80	Dynamic Behavior of the Transition Zone of an Integral Abutment Bridge. Sustainability, 2022, 14, 4118.	3.2	7
81	Effect of Amplification on Seismic Stability of Tailings Dam. , 2010, , .		6
82	Elastoplastic Solution for Spherical Cavity Expansion in Modified Cam-Clay Soil under Drained Condition. International Journal of Geomechanics, 2017, 17, .	2.7	6
83	Piles Subjected to Torsional Cyclic Load: Numerical Analysis. Frontiers in Built Environment, 2019, 5, .	2.3	6
84	Two Decades of Advancement in Process Simulation Testing of Ballast Strength, Deformation, and Degradation. , 2018, , 11-38.		6
85	Discussion and Response: Seismic stability of reinforced-soil wall by pseudo-dynamic method. Geosynthetics International, 2006, 13, 277-278.	2.9	5
86	Use of Geosynthetics in Railways Including Geocomposites and Vertical Drains. , 2011, , .		5
87	Performance Monitoring of Rail Tracks Stabilized by Geosynthetics and Shock Mats: Case Studies at Bulli and Singleton in Australia. , 2013, , .		5
88	Performance Improvement of Ballasted Railway Tracks Using Geocells: Present State of the Art. Springer Transactions in Civil and Environmental Engineering, 2020, , 277-318.	0.4	5
89	Analytical and Numerical Solutions to Selected Research Problems in Geomechanics and Geohydraulics. WSEAS Transactions on Applied and Theoretical Mechanics, 2021, 16, 222-231.	1.1	5
90	Effect of water and salinity on soil behaviour under lightning. Environmental Geotechnics, 2018, 5, 56-62.	2.3	4

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91	Three-dimensional assessment of cracked slopes with pore water pressure using limit analysis. Environmental Earth Sciences, 2021, 80, 1.	2.7	4
92	Performance Improvement of Ballasted Railway Tracks for High-Speed Rail Operations. Lecture Notes in Civil Engineering, 2021, , 841-849.	0.4	4
93	Performance evaluation of shock mats and synthetic grids in the improvement of rail ballast. , 2012, , 47-62.		4
94	Simple Graphical Prediction of Relative Permeability of Unsaturated Soils under Deformations. Fractal and Fractional, 2021, 5, 153.	3.3	4
95	Performance Improvement of Railway Ballast Using Shock Mats and Synthetic Grids. , 2012, , .		3
96	Field Data Based Method for Predicting Long-Term Settlements. American Journal of Engineering and Applied Sciences, 2016, 9, 466-476.	0.6	3
97	Contact Pressure Distribution on Subgrade Soil Underlying Geocell Reinforced Foundation Beds. Frontiers in Built Environment, 2019, 5, .	2.3	3
98	Time-dependent evolution of bearing capacity of driven piles in clays. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2023, 176, 402-418.	1.6	3
99	A Semi-Analytical Solution for Shock Wave Pressure and Radius of Soil Plastic Zone Induced by Lightning Strikes. Materials, 2022, 15, 2239.	2.9	3
100	Novel Open Trench Techniques in Mitigating Ground-Borne Vibrations due to Traffic under a Wide Range of Ground Conditions. International Journal of Geomechanics, 2022, 22, .	2.7	3
101	Re-liquefaction resistance of lightly cemented sands. Canadian Geotechnical Journal, 2022, 59, 2085-2101.	2.8	3
102	Analytical modelling of the mechanical damage of soil induced by lightning strikes capturing electro-thermal, thermo-osmotic, and electro-osmotic effects. Journal of Mountain Science, 2022, 19, 2027-2043.	2.0	3
103	Deformation and Degradation of Railroad Granular Layers under High Frequency Cyclic Loading and the Benefits of Using Geosynthetics. , 2016, , .		2
104	Laboratory Investigation on Particle Breakage Characteristics of Calcareous Sands. Advances in Civil Engineering, 2021, 2021, 1-8.	0.7	2
105	Performance monitoring " case studies of tracks stabilised by geosynthetic grids and prefabricated vertical drains. , 2015, , .		2
106	Deformation and Degradation of Clay fouled Ballast Subjected to Monotonic Loading. , 2012, , .		2
107	Visual Inspection Based Maintenance Strategy on Unsealed Road Network in Australia. Sustainable Civil Infrastructures, 2020, , 92-103.	0.2	2
108	Closure to "Stress-Strain Degradation Response of Railway Ballast Stabilized with Geosynthetics" by Buddhima Indraratna and Sanjay Nimbalkar. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 2233-2233.	3.0	1

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109	An Australian Perspective on Modernization of Rail Tracks Using Geosynthetics and Shockmats. , 2015, , 583-608.		1
110	A New Failure Load Criterion for Large-Diameter Under-Reamed Piles: Practical Perspective. International Journal of Geosynthetics and Ground Engineering, 2018, 4, 1.	2.0	1
111	Closure to "Estimation of Passive Earth Pressure against Rigid Retaining Wall Considering Arching Effect in Cohesive-Frictional Backfill under Translation Mode" by Yanyan Cai, Qingsheng Chen, Yitao Zhou, Sanjay Nimbalkar, and Jin Yu. International Journal of Geomechanics, 2018, 18, 07018012.	2.7	1
112	A Strain Dependent Approach for Seismic Stability Assessment of Rigid Retaining Wall. Geotechnical and Geological Engineering, 2020, 38, 6041-6055.	1.7	1
113	Laboratory and Constitutive Modeling of Critical State Behavior of Rockfill Aggregates Mixed with Polymer. Journal of Testing and Evaluation, 2021, 49, 4344-4356.	0.7	1
114	Finite Element Analysis of Soil Arching in Piled Embankment. Lecture Notes in Civil Engineering, 2021, , 817-824.	0.4	1
115	Finite Element Modeling of Soil Arching in Pile Supported Embankment: 2D Approach. Sustainable Civil Infrastructures, 2020, , 40-50.	0.2	1
116	Impact of Ballast Fouling on Rail Tracks. , 0, , .		1
117	Effects of Geosynthetic Reinforcement on Performance of Ballasted Rail Track. , 2012, , .		1
118	Finite Element Analysis of Electro-Thermal Coupling of Sandstone Under Lightning Currents. Geotechnical and Geological Engineering, 0, , 1.	1.7	1
119	Ground Improvement for Rail, Port and Road Infrastructure--From Theory to Practice. , 2014, , .		0
120	Closure to "Behavior of Geocell-Reinforced Subballast Subjected to Cyclic Loading in Plane-Strain Condition" by Buddhima Indraratna, M. Mahdi Biabani, and Sanjay Nimbalkar. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, 07015028.	3.0	0
121	The Deformation and Degradation of Granular Material under High-Frequency Cyclic Loading. , 2016, , .		0
122	Editorial: Geotechnical Innovation for Transport Infrastructures. Frontiers in Built Environment, 2020, 6, .	2.3	0
123	Field Assessment of Gravel Loss on Unsealed Roads in Australia. Frontiers in Built Environment, 2020, 6, .	2.3	0
124	Prediction of Extra Confinement Offered by Cellular Inclusion Under Three-Dimensional Stress State. Lecture Notes in Civil Engineering, 2021, , 850-858.	0.4	0
125	PHYSICAL AND CHEMICAL GROUND IMPROVEMENT FOR SUSTAINABLE TRANSPORTATION INFRASTRUCTURE UNDER CYCLIC LOADS. , 2011, , .		0
126	Effects Of Fouling On The Stress"Strain"Degradation Behaviour Of Rail Ballast. , 2013, , .		0

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127	Ground improvement in transport geotechnics “ from theory to practice. , 2014, , 35-44.		0
128	Mathematical Modeling of the Short-Term Performance of Railway Track Under Train-Induced Loading. Lecture Notes in Civil Engineering, 2022, , 15-24.	0.4	0
129	Railway Subgrade Characterization Through Repeated Loading Triaxial Testing. Lecture Notes in Civil Engineering, 2022, , 327-335.	0.4	0
130	NMR-Based Measurement of AWRC and Prediction of Shear Strength of Unsaturated Soils. International Journal of Geomechanics, 2022, 22, .	2.7	0