

Yiren Sun

List of Publications by Year in descending order

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48
papers

1,208
citations

361045
20
h-index

395343
33
g-index

48
all docs

48
docs citations

48
times ranked

702
citing authors

#	ARTICLE	IF	CITATIONS
1	Use of random forests regression for predicting IRI of asphalt pavements. Construction and Building Materials, 2018, 189, 890-897.	3.2	169
2	Investigating impacts of warm-mix asphalt technologies and high reclaimed asphalt pavement binder content on rutting and fatigue performance of asphalt binder through MSCR and LAS tests. Journal of Cleaner Production, 2019, 219, 879-893.	4.6	85
3	Improving accuracy of rutting prediction for mechanistic-empirical pavement design guide with deep neural networks. Construction and Building Materials, 2018, 190, 710-718.	3.2	77
4	Investigating impacts of asphalt mixture properties on pavement performance using LTPP data through random forests. Construction and Building Materials, 2019, 204, 203-212.	3.2	59
5	A unified procedure for rapidly determining asphalt concrete discrete relaxation and retardation spectra. Construction and Building Materials, 2015, 93, 35-48.	3.2	50
6	Characterization of asphalt concrete linear viscoelastic behavior utilizing Havriliak-Negami complex modulus model. Construction and Building Materials, 2015, 99, 226-234.	3.2	48
7	Analysis of load-induced top-down cracking initiation in asphalt pavements using a two-dimensional microstructure-based multiscale finite element method. Engineering Fracture Mechanics, 2019, 216, 106497.	2.0	48
8	Effect of temperature field on damage initiation in asphalt pavement: A microstructure-based multiscale finite element method. Mechanics of Materials, 2020, 144, 103367.	1.7	48
9	A two-dimensional random aggregate structure generation method: Determining effective thermo-mechanical properties of asphalt concrete. Mechanics of Materials, 2020, 148, 103510.	1.7	39
10	Using the viscoelastic parameters to estimate the glass transition temperature of asphalt binders. Construction and Building Materials, 2017, 153, 908-917.	3.2	38
11	Characterizing rheological behavior of asphalt binder over a complete range of pavement service loading frequency and temperature. Construction and Building Materials, 2016, 123, 661-672.	3.2	37
12	Laboratory performance analysis of high percentage artificial RAP binder with WMA additives. Construction and Building Materials, 2017, 147, 58-65.	3.2	32
13	Gradient Boosted Models for Enhancing Fatigue Cracking Prediction in Mechanistic-Empirical Pavement Design Guide. Journal of Transportation Engineering Part B: Pavements, 2019, 145, 04019014.	0.8	32
14	Neural networks for fatigue cracking prediction using outputs from pavement mechanistic-empirical design. International Journal of Pavement Engineering, 2021, 22, 162-172.	2.2	27
15	Rheological and physico-chemical properties of warm-mix recycled asphalt mastic containing high percentage of RAP binder. Journal of Cleaner Production, 2021, 289, 125134.	4.6	27
16	Improved estimation of dynamic modulus for hot mix asphalt using deep learning. Construction and Building Materials, 2020, 263, 119912.	3.2	26
17	A novel raw material for geopolymers: Coal-based synthetic natural gas slag. Journal of Cleaner Production, 2020, 262, 121238.	4.6	24
18	Mesomechanical prediction of viscoelastic behavior of asphalt concrete considering effect of aggregate shape. Construction and Building Materials, 2021, 274, 122096.	3.2	23

#	ARTICLE	IF	CITATIONS
19	Multi-scale study on the high percentage warm-mix recycled asphalt binder based on chemical experiments. <i>Construction and Building Materials</i> , 2020, 252, 119124.	3.2	21
20	Three-Dimensional Micromechanical Complex-Modulus Prediction of Asphalt Concrete Considering the Aggregate Interlocking Effect. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	1.3	20
21	Analysis of cohesive and adhesive damage initiations of asphalt pavement using a microstructure-based finite element model. <i>Construction and Building Materials</i> , 2020, 261, 119973.	3.2	20
22	Fabrication of solvent-free asphalt emulsion prime with high penetrative ability. <i>Construction and Building Materials</i> , 2020, 230, 117020.	3.2	19
23	Rutting and fatigue performance evaluation of warm mix asphalt mastic containing high percentage of artificial RAP binder. <i>Construction and Building Materials</i> , 2020, 240, 117860.	3.2	19
24	3D Multiscale Modeling of Asphalt Pavement Responses under Coupled Temperature–Stress Fields. <i>Journal of Engineering Mechanics - ASCE</i> , 2022, 148, .	1.6	17
25	Characterization of Triaxial Stress State Linear Viscoelastic Behavior of Asphalt Concrete. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	1.3	16
26	Estimating Asphalt Concrete Modulus of Existing Flexible Pavements for Mechanistic-Empirical Rehabilitation Analyses. <i>Journal of Materials in Civil Engineering</i> , 2019, 31, .	1.3	13
27	Evaluation of Rejuvenated Aged-Asphalt Binder by Waste-Cooking Oil with Secondary Aging Considered. <i>Journal of Materials in Civil Engineering</i> , 2022, 34, .	1.3	13
28	Investigation on mechanical properties and microstructure of coal-based synthetic natural gas slag (CSNGS) geopolymer. <i>Construction and Building Materials</i> , 2020, 259, 119793.	3.2	11
29	Mechanical response analysis of asphalt pavement on concrete curved slope bridge deck based on complex mechanical system and temperature field. <i>Construction and Building Materials</i> , 2021, 276, 122206.	3.2	11
30	Mechanical response analysis of asphalt pavement on curved concrete bridge deck using a mesostructure-based multi-scale method. <i>Construction and Building Materials</i> , 2021, 285, 122858.	3.2	11
31	Laboratory and Field Study of Electroosmosis Dewatering for Pavement Subgrade Soil. <i>Journal of Cold Regions Engineering - ASCE</i> , 2017, 31, .	0.5	10
32	Pressure Distribution under Steel and Timber Crossties in Railway Tracks. <i>Journal of Transportation Engineering Part A: Systems</i> , 2017, 143, .	0.8	10
33	Factors influencing static and dynamic rheological properties of cement emulsified asphalt composite binder. <i>Construction and Building Materials</i> , 2020, 264, 120257.	3.2	10
34	An efficient and robust method for predicting asphalt concrete dynamic modulus. <i>International Journal of Pavement Engineering</i> , 2022, 23, 2565-2576.	2.2	10
35	Fast-Acquiring High-Quality Prony Series Parameters of Asphalt Concrete through Viscoelastic Continuous Spectral Models. <i>Materials</i> , 2022, 15, 716.	1.3	10
36	Development of locally homogeneous finite element model for simulating the mesoscale structure of asphalt mixture. <i>Computers and Structures</i> , 2021, 248, 106517.	2.4	9

#	ARTICLE	IF	CITATIONS
37	Coupled Thermomechanical Damage Behavior Analysis of Asphalt Pavements Using a 2D Mesostructure-Based Finite-Element Method. <i>Journal of Transportation Engineering Part B: Pavements</i> , 2021, 147, 04021012.	0.8	9
38	Characterizing asphalt mixtures with random aggregate gradations based on the three-dimensional locally homogeneous model. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2022, 37, 1687-1702.	6.3	8
39	Resilient Interface Shear Modulus for Characterizing Shear Properties of Pavement Base Materials. <i>Journal of Materials in Civil Engineering</i> , 2018, 30, 04018333.	1.3	7
40	A new approach to evaluating the moisture damage of semi-rigid base materials based on the eroding test by the hydrodynamic pressure generator. <i>Construction and Building Materials</i> , 2019, 227, 116613.	3.2	7
41	Novel Procedure for Accurately Characterizing Nonlinear Viscoelastic and Irrecoverable Behaviors of Asphalt Binders. <i>International Journal of Geomechanics</i> , 2020, 20, .	1.3	7
42	Effect of filler on performance of porous asphalt pavement using multiscale finite element method. <i>International Journal of Pavement Engineering</i> , 2022, 23, 3244-3254.	2.2	7
43	Research on Rheological Properties of High-Percentage Artificial RAP Binder with WMA Additives. <i>Advances in Materials Science and Engineering</i> , 2020, 2020, 1-24.	1.0	5
44	Multi-scale analysis of asphalt pavement on curved concrete bridge deck considering effect of mesoscopic structure characteristics. <i>Construction and Building Materials</i> , 2021, 282, 122724.	3.2	5
45	Two-vehicle driver-injury severity: A multivariate random parameters logit approach. <i>Analytic Methods in Accident Research</i> , 2022, 33, 100190.	4.7	5
46	Mesoscopic asphalt pavement response analysis using a random aggregate generation-based concurrent multiscale method. <i>Construction and Building Materials</i> , 2022, 321, 126404.	3.2	4
47	Field performance evaluation of open-graded asphalt friction courses: A survival data analysis. <i>Construction and Building Materials</i> , 2021, 306, 124745.	3.2	3
48	Analysis of moisture damage susceptibility of semi-rigid base materials based on hydrodynamic pressure erosion test and damage constitutive model. <i>Canadian Journal of Civil Engineering</i> , 2021, 48, 449-457.	0.7	2