

Lu Sun, ǎ-ç'

List of Publications by Year in descending order

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75
papers

2,032
citations

236925

25
h-index

289244

40
g-index

77
all docs

77
docs citations

77
times ranked

1433
citing authors

#	ARTICLE	IF	CITATIONS
1	Genetic algorithm-based optimum vehicle suspension design using minimum dynamic pavement load as a design criterion. <i>Journal of Sound and Vibration</i> , 2007, 301, 18-27.	3.9	89
2	Asphalt modification using nano-materials and polymers composite considering high and low temperature performance. <i>Construction and Building Materials</i> , 2017, 133, 358-366.	7.2	86
3	Optimum design of "road-friendly" vehicle suspension systems subjected to rough pavement surfaces. <i>Applied Mathematical Modelling</i> , 2002, 26, 635-652.	4.2	77
4	Predicting Vertical Dynamic Loads Caused by Vehicle-Pavement Interaction. <i>Journal of Transportation Engineering</i> , 1998, 124, 470-478.	0.9	70
5	A viscoelastic-viscoplastic damage constitutive model for asphalt mixtures based on thermodynamics. <i>International Journal of Plasticity</i> , 2013, 40, 81-100.	8.8	69
6	Dynamic displacement response of beam-type structures to moving line loads. <i>International Journal of Solids and Structures</i> , 2001, 38, 8869-8878.	2.7	68
7	A closed-form solution of beam on viscoelastic subgrade subjected to moving loads. <i>Computers and Structures</i> , 2002, 80, 1-8.	4.4	67
8	Simulation of pavement roughness and IRI based on power spectral density. <i>Mathematics and Computers in Simulation</i> , 2003, 61, 77-88.	4.4	66
9	Pavement Condition Assessment Using Fuzzy Logic Theory and Analytic Hierarchy Process. <i>Journal of Transportation Engineering</i> , 2011, 137, 648-655.	0.9	62
10	Developing Master Curves and Predicting Dynamic Modulus of Polymer-Modified Asphalt Mixtures. <i>Journal of Materials in Civil Engineering</i> , 2011, 23, 131-137.	2.9	54
11	Spectral Analysis and Parametric Study of Stochastic Pavement Loads. <i>Journal of Engineering Mechanics - ASCE</i> , 2002, 128, 318-327.	2.9	51
12	Characterizing air void effect on fracture of asphalt concrete at low-temperature using discrete element method. <i>Engineering Fracture Mechanics</i> , 2017, 170, 23-43.	4.3	51
13	Modeling Indirect Statistics of Surface Roughness. <i>Journal of Transportation Engineering</i> , 2001, 127, 105-111.	0.9	50
14	Analytical dynamic displacement response of rigid pavements to moving concentrated and line loads. <i>International Journal of Solids and Structures</i> , 2006, 43, 4370-4383.	2.7	50
15	Stress and Deflection Parametric Study of High-Speed Railway CRTS-II Ballastless Track Slab on Elevated Bridge Foundations. <i>Journal of Transportation Engineering</i> , 2013, 139, 1224-1234.	0.9	47
16	Reliability-Based Risk Analysis of Roadway Horizontal Curves. <i>Journal of Transportation Engineering</i> , 2012, 138, 1071-1081.	0.9	46
17	An explicit representation of steady state response of a beam on an elastic foundation to moving harmonic line loads. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2003, 27, 69-84.	3.3	41
18	Weighted Neighborhood Pixels Segmentation Method for Automated Detection of Cracks on Pavement Surface Images. <i>Journal of Computing in Civil Engineering</i> , 2016, 30, .	4.7	39

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19	Travel time estimation based on piecewise truncated quadratic speed trajectory. <i>Transportation Research, Part A: Policy and Practice</i> , 2008, 42, 173-186.	4.2	33
20	Development of Multiregime Speed-Density Relationships by Cluster Analysis. <i>Transportation Research Record</i> , 2005, 1934, 64-71.	1.9	31
21	Computer simulation and field measurement of dynamic pavement loading. <i>Mathematics and Computers in Simulation</i> , 2001, 56, 297-313.	4.4	30
22	Finding Reliable Shortest Path in Stochastic Time-dependent Network. <i>Procedia, Social and Behavioral Sciences</i> , 2013, 96, 451-460.	0.5	30
23	Empirical-Mechanistic Method Based Stochastic Modeling of Fatigue Damage to Predict Flexible Pavement Cracking for Transportation Infrastructure Management. <i>Journal of Transportation Engineering</i> , 2003, 129, 109-117.	0.9	29
24	Evaluation of vehicle-track-bridge interacted system for the continuous CRTS-II non-ballast track slab. <i>Science China Technological Sciences</i> , 2014, 57, 1895-1901.	4.0	29
25	Multi-scale wavelet transform filtering of non-uniform pavement surface image background for automated pavement distress identification. <i>Measurement: Journal of the International Measurement Confederation</i> , 2016, 86, 26-40.	5.0	29
26	Dynamics of Plate Generated by Moving Harmonic Loads. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2005, 72, 772-777.	2.2	27
27	Reliability Analysis of Vehicle Stability on Combined Horizontal and Vertical Alignments: Driving Safety Perspective. <i>Journal of Transportation Engineering</i> , 2013, 139, 804-813.	0.9	26
28	Mechanistic Rutting Prediction Using a Two-Stage Viscoelastic-Viscoplastic Damage Constitutive Model of Asphalt Mixtures. <i>Journal of Engineering Mechanics - ASCE</i> , 2013, 139, 1577-1591.	2.9	26
29	Inorganic Nanoparticle-Modified Asphalt with Enhanced Performance at High Temperature. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	2.9	26
30	Developing Spectrum-Based Models for International Roughness Index and Present Serviceability Index. <i>Journal of Transportation Engineering</i> , 2001, 127, 463-470.	0.9	25
31	A serial two-stage viscoelastic-viscoplastic constitutive model with thermodynamical consistency for characterizing time-dependent deformation behavior of asphalt concrete mixtures. <i>Construction and Building Materials</i> , 2013, 40, 584-595.	7.2	25
32	Development of Multiregime Speed-Density Relationships by Cluster Analysis. <i>Transportation Research Record</i> , 2005, 1934, 64-71.	1.9	24
33	High-order thin layer method for viscoelastic wave propagation in stratified media. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 257, 65-76.	6.6	24
34	Dynamic response of top-down cracked asphalt concrete pavement under a half-sinusoidal impact load. <i>Acta Mechanica</i> , 2013, 224, 1865-1877.	2.1	22
35	Non-contact optical sensing of asphalt mixture deformation using 3D stereo vision. <i>Measurement: Journal of the International Measurement Confederation</i> , 2016, 85, 100-117.	5.0	22
36	A new higher-order viscous continuum traffic flow model considering driver memory in the era of autonomous and connected vehicles. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 547, 123829.	2.6	22

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37	Probabilistic Approaches for Pavement Fatigue Cracking Prediction based on Cumulative Damage Using Miner's Law. <i>Journal of Engineering Mechanics - ASCE</i> , 2005, 131, 546-549.	2.9	21
38	The characterisation of three-dimensional texture morphology of pavement for describing pavement sliding resistance. <i>Road Materials and Pavement Design</i> , 2019, 20, 1076-1095.	4.0	21
39	Steady-State Dynamic Response of a Bernoulli-Euler Beam on a Viscoelastic Foundation Subject to a Platoon of Moving Dynamic Loads. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2008, 130, .	1.6	19
40	The Influence of Road Geometry on Vehicle Rollover and Skidding. <i>International Journal of Environmental Research and Public Health</i> , 2020, 17, 1648.	2.6	18
41	A forward-looking anticipative viscous high-order continuum model considering two leading vehicles for traffic flow through wireless V2X communication in autonomous and connected vehicle environment. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 556, 124589.	2.6	18
42	Nonstationary Dynamic Pavement Loads Generated by Vehicles Traveling at Varying Speed. <i>Journal of Transportation Engineering</i> , 2007, 133, 252-263.	0.9	17
43	An overview of a unified theory of dynamics of vehicle-pavement interaction under moving and stochastic load. <i>Journal of Modern Transportation</i> , 2013, 21, 135-162.	2.5	17
44	Characterizing Heterogeneity in Drivers' Merging Maneuvers Using Two-Step Cluster Analysis. <i>Journal of Advanced Transportation</i> , 2018, 2018, 1-15.	1.7	17
45	L-Curve Based Tikhonov's Regularization Method for Determining Relaxation Modulus From Creep Test. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2011, 78, .	2.2	16
46	Decremental algorithm for adaptive routing incorporating traveler information. <i>Computers and Operations Research</i> , 2012, 39, 3012-3020.	4.0	16
47	Fracture Characteristics of Asphalt Concrete in Mixed-Loading Mode at Low-Temperature Based on Discrete-Element Method. <i>Journal of Materials in Civil Engineering</i> , 2018, 30, .	2.9	16
48	Pavement performance evaluation of recycled styrene-butadiene-styrene-modified asphalt mixture. <i>International Journal of Pavement Engineering</i> , 2017, 18, 404-413.	4.4	15
49	Aging Characteristics of Rubber Modified Asphalts in Different Environmental Factors Combinations. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 806.	2.5	15
50	Steady-State Dynamic Response of a Kirchhoff Slab on Viscoelastic Kelvin Foundation to Moving Harmonic Loads. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2007, 74, 1212-1224.	2.2	14
51	Transient Wave Propagation in Multilayered Viscoelastic Media: Theory, Numerical Computation, and Validation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2008, 75, .	2.2	14
52	Estimation of expected travel time using the method of moment. <i>Canadian Journal of Civil Engineering</i> , 2011, 38, 154-165.	1.3	14
53	Two-Stage Viscoelastic-Viscoplastic Damage Constitutive Model of Asphalt Mixtures. <i>Journal of Materials in Civil Engineering</i> , 2013, 25, 958-971.	2.9	14
54	Effect of overlay thickness, overlay material, and pre-overlay treatment on evolution of asphalt concrete overlay roughness in LTPP SPS-5 experiment: A multilevel model approach. <i>Construction and Building Materials</i> , 2018, 162, 192-201.	7.2	14

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55	Closed-Form Representation of Beam Response to Moving Line Loads. Journal of Applied Mechanics, Transactions ASME, 2001, 68, 348-350.	2.2	14
56	Stochastic Spatial Excitation Induced by a Distributed Contact on Homogenous Gaussian Random Fields. Journal of Engineering Mechanics - ASCE, 2006, 132, 714-722.	2.9	13
57	Data mining-based adaptive regression for developing equilibrium speed-density relationships. Canadian Journal of Civil Engineering, 2010, 37, 389-400.	1.3	13
58	Data mining using regularized adaptive B-splines regression with penalization for multi-regime traffic stream models. Journal of Advanced Transportation, 2014, 48, 876-890.	1.7	13
59	Generalized Maxwell Viscoelastic Contact Model-Based Discrete Element Method for Characterizing Low-Temperature Properties of Asphalt Concrete. Journal of Materials in Civil Engineering, 2016, 28, .	2.9	13
60	Dynamic analysis of coupled train - ladder track - elevated bridge system. Structural Engineering and Mechanics, 2013, 47, 661-678.	1.0	13
61	Arrays of dynamic circular loads moving on an infinite plate. International Journal for Numerical Methods in Engineering, 2007, 71, 652-677.	2.8	12
62	Study on the Influence of Road Geometry on Vehicle Lateral Instability. Journal of Advanced Transportation, 2020, 2020, 1-15.	1.7	10
63	Steady-State Wave Propagation in Multilayered Viscoelastic Media Excited by a Moving Dynamic Distributed Load. Journal of Applied Mechanics, Transactions ASME, 2009, 76, .	2.2	9
64	An Asymmetric-Anticipation Car-following Model in the Era of Autonomous-Connected and Human-Driving Vehicles. Journal of Advanced Transportation, 2020, 2020, 1-23.	1.7	9
65	Transient response of a beam on viscoelastic foundation under an impact load during nondestructive testing. Earthquake Engineering and Engineering Vibration, 2005, 4, 325-333.	2.3	8
66	Driver's Anticipation and Memory Driving Car-Following Model. Journal of Advanced Transportation, 2020, 2020, 1-12.	1.7	8
67	Spectral and time-frequency analyses of freeway traffic flow. Journal of Advanced Transportation, 2014, 48, 821-857.	1.7	7
68	Lower bounds for the axial three-index assignment problem. European Journal of Operational Research, 2010, 202, 654-668.	5.7	6
69	Stochastic Projection-Factoring Method Based on Piecewise Stationary Renewal Processes for Mid- and Long-Term Traffic Flow Modeling and Forecasting. Transportation Science, 2016, 50, 998-1015.	4.4	6
70	Nonlinear stability analysis for an anticipation-memory car following model in the era of autonomous and connected vehicles. , 2020, , .		6
71	Integrated-Hybrid Framework for Connected and Autonomous Vehicles Microscopic Traffic Flow Modelling. Journal of Advanced Transportation, 2022, 2022, 1-16.	1.7	5
72	Risk Assessment of Rollover and Skidding due to Pavement Roughness and Differential Settlement for Enhancing Transportation Safety. Journal of Advanced Transportation, 2021, 2021, 1-15.	1.7	3

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73	Shock Wave Based Ray Tracing Method for Travel Time Estimation. , 2018, , .		0
74	Coupled Dynamics of Vehicle-Bridge Interaction System Using High Efficiency Method. Advances in Civil Engineering, 2021, 2021, 1-22.	0.7	0
75	Study on the Influence of Road Geometry with Design Speed of 100 km/h on Vehicle Rollover and Skidding. , 2020, , .		0