# Shihui Shen

## List of Publications by Citations



| 66 | 1,328 | 22 | 35 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 67 | 1,597 | 3.4 | 4.9 |
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| ext. papers | ext. citations | avg, IF | L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 66 | Characterization of Fatigue and Healing in Asphalt Binders. *Journal of Materials in Civil Engineering*, **2010**, 22, 846-852 | 3 | 112 |
| 65 | A Dissipated Energy Approach to Fatigue Evaluation. *Road Materials and Pavement Design*, **2006**, 7, 47-69 | 2.6 | 107 |
| 64 | Fatigue Endurance Limit for Highway and Airport Pavements. *Transportation Research Record*, **2003**, 1832, 131-138 | 1.7 | 97 |
| 63 | Pervious concrete with titanium dioxide as a photocatalyst compound for a greener urban road environment. *Construction and Building Materials*, **2012**, 35, 874-883 | 6.7 | 88 |
| 62 | Dissipated Energy Approach to Study Hot-Mix Asphalt Healing in Fatigue | | 56 |
| 61 | Characterize packing of aggregate particles for paving materials: Particle size impact. *Construction and Building Materials*, **2011**, 25, 1362-1368 | 6.7 | 45 |
| 60 | Application of the Dissipated Energy Concept in Fatigue Endurance Limit Testing | | 43 |
| 59 | Viscoelastic–plastic damage model for porous asphalt mixtures: Application to uniaxial compression and freeze–thaw damage. *Mechanics of Materials*, **2014**, 70, 67-75 | 3.3 | 40 |
| 58 | Impact of aggregate packing on dynamic modulus of hot mix asphalt mixtures using three-dimensional discrete element method. *Construction and Building Materials*, **2012**, 26, 302-309 | 6.7 | 38 |
| 57 | Investigation of the influence of crack width on healing properties of asphalt binders at multi-scale levels. *Construction and Building Materials*, **2016**, 126, 197-205 | 6.7 | 36 |
| 56 | Quantification of Cohesive Healing of Asphalt Binder and its Impact Factors Based on Dissipated Energy Analysis. *Road Materials and Pavement Design*, **2011**, 12, 525-546 | 2.6 | 34 |
| 55 | Evaluation of Fatigue Models of Hot-Mix Asphalt through Laboratory Testing. *Transportation Research Record*, **2009**, 2127, 36-42 | 1.7 | 33 |
| 54 | Rheological and microstructural properties of foamed epoxy asphalt. *Construction and Building Materials*, **2016**, 114, 215-222 | 6.7 | 31 |
| 53 | Field performance of top-down fatigue cracking for warm mix asphalt pavements. *International Journal of Pavement Engineering*, **2019**, 20, 33-43 | 2.6 | 31 |
| 52 | A statistical based framework for predicting field cracking performance of asphalt pavements: Application to top-down cracking prediction. *Construction and Building Materials*, **2016**, 116, 226-234 | 6.7 | 30 |
| 51 | Packing Theory and Volumetrics-Based Aggregate Gradation Design Method. *Journal of Materials in Civil Engineering*, **2020**, 32, 04020110 | 3 | 29 |
| 50 | A micromechanical based three-dimensional DEM approach to characterize the complex modulus of asphalt mixtures. *Construction and Building Materials*, **2013**, 38, 1089-1096 | 6.7 | 29 |

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| 49 | Long-Term Field Rutting and Moisture Susceptibility Performance of Warm-Mix Asphalt Pavement. *Transportation Research Record*, **2016**, 2575, 103-112 | 1.7 | 28 |
| 48 | Simulations of large-scale triaxial shear tests on ballast aggregates using sensing mechanism and real-time (SMART) computing. *Computers and Geotechnics*, **2019**, 110, 184-198 | 4.4 | 27 |
| 47 | Characterization of particle movement in Superpave gyratory compactor at meso-scale using SmartRock sensors. *Construction and Building Materials*, **2018**, 175, 206-214 | 6.7 | 27 |
| 46 | Prediction Model for Field Rut Depth of Asphalt Pavement Based on Hamburg Wheel Tracking Test Properties. *Journal of Materials in Civil Engineering*, **2017**, 29, 04017098 | 3 | 22 |
| 45 | Field-aged asphalt binder performance evaluation for Evotherm warm mix asphalt: Comparisons with hot mix asphalt. *Construction and Building Materials*, **2017**, 156, 574-583 | 6.7 | 22 |
| 44 | Analysis of Aggregate Gradation and Packing for Easy Estimation of Hot-Mix-Asphalt Voids in Mineral Aggregate. *Journal of Materials in Civil Engineering*, **2011**, 23, 664-672 | 3 | 22 |
| 43 | Towards smart compaction: Particle movement characteristics from laboratory to the field. *Construction and Building Materials*, **2019**, 218, 323-332 | 6.7 | 21 |
| 42 | Fracture Healing Properties of Asphaltic Material under Controlled Damage. *Journal of Materials in Civil Engineering*, **2014**, 26, 275-282 | 3 | 18 |
| 41 | Development of Predictive Models for Initiation and Propagation of Field Transverse Cracking. *Transportation Research Record*, **2015**, 2524, 92-99 | 1.7 | 18 |
| 40 | Sandwich Model to Evaluate Railroad Asphalt Trackbed Performance under Moving Loads. *Transportation Research Record*, **2009**, 2117, 57-65 | 1.7 | 18 |
| 39 | Comparison of Laboratory and Field Asphalt Aging for Polymer-Modified and Warm-Mix Asphalt Binders. *Journal of Materials in Civil Engineering*, **2018**, 30, 04018150 | 3 | 18 |
| 38 | Effects of In-Place Volumetric Properties on Field Rutting and Cracking Performance of Asphalt Pavement. *Journal of Materials in Civil Engineering*, **2019**, 31, 04019150 | 3 | 16 |
| 37 | Long-Term Field Aging of Warm-Mix and Hot-Mix Asphalt Binders. *Transportation Research Record*, **2017**, 2632, 140-149 | 1.7 | 15 |
| 36 | Moving load on track with Asphalt trackbed. *Vehicle System Dynamics*, **2010**, 48, 737-749 | 2.8 | 14 |
| 35 | Micro-surfacing mixtures with reclaimed asphalt pavement: Mix design and performance evaluation. *Construction and Building Materials*, **2019**, 201, 303-313 | 6.7 | 13 |
| 34 | A Dissipated Energy Approach to Fatigue Evaluation. *Road Materials and Pavement Design*, **2006**, 7, 47-69 | 2.6 | 12 |
| 33 | Numerical evaluation of surface-initiated cracking in flexible pavement overlays with field observations. *Road Materials and Pavement Design*, **2017**, 18, 221-234 | 2.6 | 11 |
| 32 | Modification of the Hirsch Dynamic Modulus Prediction Model for Asphalt Mixtures. *Journal of Materials in Civil Engineering*, **2017**, 29, 04017241 | 3 | 10 |

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| 31 | Effects of Aggregate Properties and Concrete Rheology on Stability Robustness of Self-Consolidating Concrete. *Journal of Materials in Civil Engineering*, **2015**, 27, 04014159 | 3 | 10 |
| 30 | Performance Characterization of Semi-Flexible Composite Mixture. *Materials*, **2020**, 13, | 3.5 | 10 |
| 29 | Long-Term Field Transverse Cracking Performance of Warm-Mix Asphalt Pavement and Its Significant Material Property. *Transportation Research Record*, **2016**, 2576, 109-120 | 1.7 | 9 |
| 28 | Estimation of the Vehicle Speed Using Cross-Correlation Algorithms and MEMS Wireless Sensors. *Sensors*, **2021**, 21, | 3.8 | 8 |
| 27 | Field Performance of Foaming Warm Mix Asphalt Pavement. *Transportation Research Record*, **2019**, 2673, 281-294 | 1.7 | 7 |
| 26 | Anisotropic Nonlinear Elastoviscoplastic Model for Rutting of Asphalt Mixtures. *Journal of Engineering Mechanics - ASCE*, **2014**, 140, 242-249 | 2.4 | 7 |
| 25 | Environmental impact evaluation and long-term rutting resistance performance of warm mix asphalt technologies. *Journal of Cleaner Production*, **2021**, 278, 123938 | 10.3 | 7 |
| 24 | Comparison of the Relative Long-Term Field Performance among Various Warm Mix Asphalt (WMA) Pavements. *Transportation Research Record*, **2018**, 2672, 200-210 | 1.7 | 6 |
| 23 | Development of Dynamic ModulusBased Mixture Blending Chart for Asphalt Mixtures with Reclaimed Asphalt Pavement. *Journal of Materials in Civil Engineering*, **2019**, 31, 04018382 | 3 | 6 |
| 22 | Short-Term Performance and Evolution of Material Properties of Warm- and Hot-Mix Asphalt Pavements: Case Studies. *Transportation Research Record*, **2017**, 2631, 39-54 | 1.7 | 5 |
| 21 | Fracture and Viscoelastic Properties of Asphalt Binders During Fatigue and Rest Periods. *Journal of Testing and Evaluation*, **2014**, 42, 20130030 | 1 | 5 |
| 20 | Sensing Mechanism and Real-Time Computing for Granular Materials. *Journal of Computing in Civil Engineering*, **2018**, 32, 04018023 | 5 | 4 |
| 19 | Local Practice of Assessing Dynamic Modulus Properties for Washington State Mixtures. *Transportation Research Record*, **2013**, 2373, 89-99 | 1.7 | 4 |
| 18 | Real-Time and Efficient Traffic Information Acquisition via Pavement Vibration IoT Monitoring System. *Sensors*, **2021**, 21, | 3.8 | 4 |
| 17 | Meso-Scale Kinematic Responses of Asphalt Mixture in Both Field and Laboratory Compaction. *Transportation Research Record*,036119812110092 | 1.7 | 4 |
| 16 | Characterization of In Situ Modulus of Asphalt Pavement and Its Relation to Cracking Performance Using SASW Method. *Journal of Transportation Engineering Part B: Pavements*, **2020**, 146, 04020039 | 1.4 | 3 |
| 15 | Quantitative Assessment of the Pavement Modulus and Surface Crack using the Rayleigh Wave Dispersion Curve. *Transportation Research Record*, **2020**, 2674, 259-269 | 1.7 | 3 |
| 14 | Predictive quality of the pavement ME design program for field performance of warm mix asphalt pavements. *Construction and Building Materials*, **2017**, 131, 400-410 | 6.7 | 3 |

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| 13 | Modeling the Effects of Temperature and Loading Rate on Fatigue Property of Asphalt Binder. *Journal of Testing and Evaluation*, **2010**, 38, 102806 | 1 | 3 |
| 12 | Case Study: Evaluation of the Effect of Extraction Temperature on WMA Binder Containing Sasobit Additive. *Journal of Testing and Evaluation*, **2018**, 46, 20160516 | 1 | 3 |
| 11 | Estimation of Vehicle Speed from Pavement Stress Responses Using Wireless Sensors. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147, 04021028 | 1.4 | 2 |
| 10 | Evaluation of the correlations between laboratory measured material properties with field cracking performance for asphalt pavement. *Construction and Building Materials*, **2021**, 301, 124126 | 6.7 | 2 |
| 9 | Characterization of the fatigue behavior of asphalt mixture under full support using a Wheel-tracking Device. *Construction and Building Materials*, **2021**, 277, 122326 | 6.7 | 1 |
| 8 | Laboratory Validation of Surface-Initiated Transverse Cracking of Asphalt Pavement. *Applied Sciences (Switzerland)*, **2020**, 10, 1002 | 2.6 | 0 |
| 7 | Investigation of Field Rut Depth of Asphalt Pavements Using Hamburg Wheel Tracking Test. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147, 04020091 | 1.4 | 0 |
| 6 | Engineered Semi-Flexible Composite Mixture Design and Its Implementation Method at Railroad Bridge Approach. *Transportation Research Record*,036119812110049 | 1.7 | 0 |
| 5 | Virgin Binder Determination for High RAP Content Mixture Design. *Journal of Materials in Civil Engineering*, **2021**, 33, 04021112 | 3 | 0 |
| 4 | Blending Efficiency and Effective Styrene Butadiene Rubber Concentration of Micro-Surfacing Mixtures with Reclaimed Asphalt Pavement. *Transportation Research Record*, **2020**, 2674, 47-58 | 1.7 | 0 |
| 3 | Monitoring Particle Movement under Compaction using SmartRock Sensor: A Case Study of Granular Base Layer Compaction. *Transportation Geotechnics*, **2022**, 34, 100764 | 4 | 0 |
| 2 | Comparison and Evaluation of Different Test Methods and Models for Determining Zero Shear Viscosity of Asphalt Binder. *Journal of Testing and Evaluation*, **2022**, 50, 20210260 | 1 | |
| 1 | In-Situ Modulus Determination Using Dispersion Curves Developed From the Deflection-Time History Data. *IEEE Transactions on Intelligent Transportation Systems*, **2022**, 1-10 | 6.1 | |