Imad L Al-Qadi

List of Publications by Citations

252 papers	5,277 citations	38 h-index	57 g-index
271 ext. papers	6,177 ext. citations	2.8 avg, IF	6.24 L-index

#	Paper	IF	Citations
252	Measuring layer thicknesses with GPR Theory to practice. *Construction and Building Materials*, **2005**, 19, 763-772	6.7	162
251	Development of the fracture-based flexibility index for asphalt concrete cracking potential using modified semi-circle bending test parameters. *Construction and Building Materials*, **2016**, 115, 390-401	6.7	142
250	Hybrid life cycle assessment for asphalt mixtures with high RAP content. *Resources, Conservation and Recycling*, **2014**, 83, 77-86	11.9	119
249	Viscoelastic Modeling and Field Validation of Flexible Pavements. *Journal of Engineering Mechanics - ASCE*, **2006**, 132, 172-178	2.4	118
248	Effect of Mineral Filler Characteristics on Asphalt Mastic and Mixture Rutting Potential. *Transportation Research Record*, **2011**, 2208, 33-39	1.7	116
247	Partial replacement of asphalt binder with bio-binder: characterisation and modification. *International Journal of Pavement Engineering*, **2012**, 13, 515-522	2.6	112
246	Model to Predict Pavement Temperature Profile: Development and Validation. *Journal of Transportation Engineering*, **2006**, 132, 162-167		105
245	Dynamic Analysis and in Situ Validation of Perpetual Pavement Response to Vehicular Loading. *Transportation Research Record*, **2008**, 2087, 29-39	1.7	96
244	Simulation of tyre pavement interaction for predicting contact stresses at static and various rolling conditions. *International Journal of Pavement Engineering*, **2012**, 13, 310-321	2.6	88
243	Combined Effect of Moving Wheel Loading and Three-Dimensional Contact Stresses on Perpetual Pavement Responses. *Transportation Research Record*, **2009**, 2095, 53-61	1.7	83
242	Dynamic Analysis of Thin Asphalt Pavements by Using Cross-Anisotropic Stress-Dependent Properties for Granular Layer. *Transportation Research Record*, **2010**, 2154, 156-163	1.7	82
241	Automatic detection of multiple pavement layers from GPR data. *NDT and E International*, **2008**, 41, 69-81	4.1	82
240	Fracture Characterization of Asphalt Mixtures with High Recycled Content Using Illinois Semicircular Bending Test Method and Flexibility Index. *Transportation Research Record*, **2016**, 2575, 130-137	1.7	75
239	GPR signal de-noising by discrete wavelet transform. *NDT and E International*, **2009**, 42, 696-703	4.1	69
238	Flexible pavement responses to different loading amplitudes considering layer interface condition and lateral shear forces. *International Journal of Pavement Engineering*, **2006**, 7, 73-86	2.6	68
237	Development and validation for in situ asphalt mixture density prediction models. *NDT and E International*, **2011**, 44, 369-375	4.1	66
236	In-Place Hot-Mix Asphalt Density Estimation Using Ground-Penetrating Radar. *Transportation Research Record*, **2010**, 2152, 19-27	1.7	61

235	Importance of Nonlinear Anisotropic Modeling of Granular Base for Predicting Maximum Viscoelastic Pavement Responses under Moving Vehicular Loading. *Journal of Engineering Mechanics - ASCE*, **2013**, 139, 29-38	2.4	60
234	Validity of Asphalt Binder Film Thickness Concept in Hot-Mix Asphalt. *Transportation Research Record*, **2008**, 2057, 37-45	1.7	59
233	Environmental and economic analyses of recycled asphalt concrete mixtures based on material production and potential performance. *Resources, Conservation and Recycling*, **2015**, 104, 141-151	11.9	58
232	Scattering analysis of ground-penetrating radar data to quantify railroad ballast contamination. *NDT and E International*, **2008**, 41, 441-447	4.1	55
231	Asphalt Portland Cement Concrete Composite: Laboratory Evaluation. *Journal of Transportation Engineering*, **1994**, 120, 94-108		54
230	Geogrid in Flexible Pavements: Validated Mechanism. *Transportation Research Record*, **2008**, 2045, 102-109	1.7	53
229	Effect of Surface Friction on Tire-Pavement Contact Stresses during Vehicle Maneuvering. *Journal of Engineering Mechanics - ASCE*, **2014**, 140, 04014001	2.4	51
228	Mechanical Property Characterization of Warm-Mix Asphalt Prepared with Chemical Additives. *Journal of Materials in Civil Engineering*, **2014**, 26, 304-311	3	50
227	An innovative method for measuring pavement dielectric constant using the extended CMP method with two air-coupled GPR systems. *NDT and E International*, **2014**, 66, 90-98	4.1	49
226	Effect of Transient Dynamic Loading on Flexible Pavements. *Transportation Research Record*, **2007**, 1990, 129-140	1.7	49
225	Vehicle energy consumption and an environmental impact calculation model for the transportation infrastructure systems. *Journal of Cleaner Production*, **2018**, 174, 424-436	10.3	45
224	Characterisation of interface bonding between hot-mix asphalt overlay and concrete pavements: modelling and in-situ response to accelerated loading. *International Journal of Pavement Engineering*, **2012**, 13, 181-196	2.6	44
223	Difference between In Situ Flexible Pavement Measured and Calculated Stresses and Strains. *Journal of Transportation Engineering*, **2006**, 132, 574-579		44
222	Impact Quantification of Wide-Base Tire Loading on Secondary Road Flexible Pavements. *Journal of Transportation Engineering*, **2011**, 137, 630-639		43
221	Interface Bonding between Hot-Mix Asphalt and Various Portland Cement Concrete Surfaces: Laboratory Assessment. *Transportation Research Record*, **2008**, 2057, 46-53	1.7	43
220	Quantitative Effect of Elastomeric Modification on Binder Performance at Intermediate and High Temperatures. *Journal of Materials in Civil Engineering*, **2003**, 15, 32-40	3	43
219	Algorithm development for the application of ground-penetrating radar on asphalt pavement compaction monitoring. *International Journal of Pavement Engineering*, **2016**, 17, 189-200	2.6	42
218	Measurement of Vertical Compressive Stress Pulse in Flexible Pavements: Representation for Dynamic Loading Tests. *Transportation Research Record*, **2002**, 1816, 125-136	1.7	42

217	Near-Surface Pavement Failure under Multiaxial Stress State in Thick Asphalt Pavement. *Transportation Research Record*, **2010**, 2154, 91-99	1.7	41
216	Evaluation of Surface-Related Pavement Damage due to Tire Braking. *Road Materials and Pavement Design*, **2010**, 11, 101-121	2.6	40
215	Creep Behavior of Hot-Mix Asphalt due to Heavy Vehicular Tire Loading. *Journal of Engineering Mechanics - ASCE*, **2009**, 135, 1265-1273	2.4	39
214	. *IEEE Transactions on Geoscience and Remote Sensing*, **2015**, 53, 1538-1548	8.1	38
213	Development of an analytic approach utilizing the extended common midpoint method to estimate asphalt pavement thickness with 3-D ground-penetrating radar. *NDT and E International*, **2016**, 78, 29-36	4.1	38
212	In situ measurements of hot-mix asphalt dielectric properties. *NDT and E International*, **2001**, 34, 427-434	4.1	38
211	Railroad Ballast Evaluation Using Ground-Penetrating Radar: Laboratory Investigation and Field Validation. *Transportation Research Record*, **2010**, 2159, 110-117	1.7	37
210	Accuracy of Current Complex Modulus Selection Procedure from Vehicular Load Pulse: NCHRP Project 1-37A Mechanistic-Empirical Pavement Design Guide. *Transportation Research Record*, **2008**, 2087, 81-90	1.7	37
209	Effective Approach to Improve Pavement Drainage Layers. *Journal of Transportation Engineering*, **2004**, 130, 658-664		37
208	Approach to Determining In Situ Dielectric Constant of Pavements: Development and Implementation at Interstate 81 in Virginia. *Transportation Research Record*, **2002**, 1806, 81-87	1.7	37
207	Application of regularized deconvolution technique for predicting pavement thin layer thicknesses from ground penetrating radar data. *NDT and E International*, **2015**, 73, 1-7	4.1	36
206	Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment. *Journal of Transportation Engineering*, **2010**, 136, 392-399		36
205	Effects of Interface Conditions on Reflective Cracking Development in Hot-Mix Asphalt Overlays. *Road Materials and Pavement Design*, **2010**, 11, 307-334	2.6	34
204	Successful Application of Ground-Penetrating Radar for Quality Assurance-Quality Control of New Pavements. *Transportation Research Record*, **2003**, 1861, 86-97	1.7	32
203	Analysis of Near-Surface Cracking under Critical Loading Conditions Using Uncracked and Cracked Pavement Models. *Journal of Transportation Engineering*, **2013**, 139, 992-1000		31
202	Geogrid mechanism in low-volume flexible pavements: accelerated testing of full-scale heavily instrumented pavement sections. *International Journal of Pavement Engineering*, **2011**, 12, 121-135	2.6	31
201	Prediction of pavement fatigue cracking at an accelerated testing section using asphalt mixture performance tests. *International Journal of Pavement Engineering*, **2018**, 19, 264-278	2.6	29
200	Continuous real-time monitoring of flexible pavement layer density and thickness using ground penetrating radar. *NDT and E International*, **2018**, 100, 48-54	4.1	29

199	Field Application of Ground-Penetrating Radar for Measurement of Asphalt Mixture Density: Case Study of Illinois Route 72 Overlay. *Transportation Research Record*, **2012**, 2304, 133-141	1.7	29
198	Innovative Approach for Asphalt Pavement Compaction Monitoring with Ground-Penetrating Radar. *Transportation Research Record*, **2013**, 2347, 79-87	1.7	28
197	Investigation of viscoelastic fracture fields in asphalt mixtures using digital image correlation. *International Journal of Fracture*, **2017**, 205, 37-56	2.3	27
196	Mitigation of moisture damage in asphalt concrete: Testing techniques and additives/modifiers effectiveness. *Construction and Building Materials*, **2015**, 84, 437-443	6.7	27
195	Pavement drainage pipe condition assessment by GPR image reconstruction using FDTD modeling. *Construction and Building Materials*, **2017**, 154, 1283-1293	6.7	27
194	Geogrid-Reinforced Low-Volume Flexible Pavements: Pavement Response and Geogrid Optimal Location. *Journal of Transportation Engineering*, **2012**, 138, 1083-1090		27
193	Pattern recognition algorithms for density estimation of asphalt pavement during compaction: a simulation study. *Journal of Applied Geophysics*, **2014**, 107, 8-15	1.7	26
192	Optimization of antenna configuration in multiple-frequency ground penetrating radar system for railroad substructure assessment. *NDT and E International*, **2010**, 43, 20-28	4.1	26
191	Optimization of Ground-Penetrating Radar Data to Predict Layer Thicknesses in Flexible Pavements. *Journal of Transportation Engineering*, **2003**, 129, 93-99		26
190	All for one: Centralized optimization of truck platoons to improve roadway infrastructure sustainability. *Transportation Research Part C: Emerging Technologies*, **2020**, 114, 84-98	8.4	25
189	Fracture-Based Friction Model for Pavement Interface Characterization. *Transportation Research Record*, **2008**, 2057, 54-63	1.7	25
188	Optimization of Tack Coat Application Rate for Geocomposite Membrane on Bridge Decks. *Transportation Research Record*, **2000**, 1740, 143-150	1.7	25
187	Hyperelastic Modeling of Wide-Base Tire and Prediction of Its Contact Stresses. *Journal of Engineering Mechanics - ASCE*, **2016**, 142, 04015084	2.4	25
186	Damage zone development in heterogeneous asphalt concrete. *Engineering Fracture Mechanics*, **2017**, 182, 356-371	4.2	24
185	Prediction of thin asphalt concrete overlay thickness and density using nonlinear optimization of GPR data. *NDT and E International*, **2018**, 100, 20-30	4.1	24
184	Development of regularization methods on simulated ground-penetrating radar signals to predict thin asphalt overlay thickness. *Signal Processing*, **2017**, 132, 261-271	4.4	24
183	Performance Characterization of Hot In-Place Recycled Asphalt Mixtures. *Journal of Transportation Engineering*, **2014**, 140, 04014029		24
182	Life-Cycle Greenhouse Gases and Energy Consumption for Material and Construction Phases of Pavement with Traffic Delay. *Transportation Research Record*, **2014**, 2428, 27-34	1.7	24

181	Influence of Filler Fractional Voids on Mastic and Mixture Performance. *Transportation Research Record*, **2012**, 2294, 74-80	1.7	24
180	Effect of moisture on asphaltic concrete at microwave frequencies. *IEEE Transactions on Geoscience and Remote Sensing*, **1991**, 29, 710-717	8.1	24
179	Achieving Desired Volumetrics and Performance for Mixtures with High Percentage of Reclaimed Asphalt Pavement. *Transportation Research Record*, **2012**, 2294, 34-42	1.7	23
178	New Generation of Wide-Base Tires: Impact on Trucking Operations, Environment, and Pavements. *Transportation Research Record*, **2007**, 2008, 100-109	1.7	23
177	Effect of Wide-Base Tires on Nationwide Flexible Pavement Systems: Numerical Modeling. *Transportation Research Record*, **2016**, 2590, 104-112	1.7	23
176	Algorithm development for real-time thin asphalt concrete overlay compaction monitoring using ground-penetrating radar. *NDT and E International*, **2019**, 104, 114-123	4.1	22
175	A strain-controlled hot-mix asphalt fatigue model considering low and high cycles. *International Journal of Pavement Engineering*, **2010**, 11, 565-574	2.6	22
174	Development of a Pressurized Blister Test for Interface Characterization of Aggregate Highly Polymerized Bituminous Materials. *Journal of Materials in Civil Engineering*, **2011**, 23, 656-663	3	22
173	Pavement Response to Dual Tires and New Wide-Base Tires at Same Tire Pressure. *Transportation Research Record*, **2002**, 1806, 38-47	1.7	22
172	Impact of Wide-Base Tires on Pavements: Results from Instrumentation Measurements and Modeling Analysis. *Transportation Research Record*, **2012**, 2304, 169-176	1.7	21
171	Runway Instrumentation and Response Measurements. *Transportation Research Record*, **2010**, 2153, 162-169	1.7	21
170	Construction and Instrumentation of Geosynthetically Stabilized Secondary Road Test Sections. *Transportation Research Record*, **1996**, 1534, 50-57	1.7	21
169	Fracture properties of asphalt concrete under various displacement conditions and temperatures. *Construction and Building Materials*, **2019**, 222, 332-341	6.7	20
168	Tire–pavement interaction modelling: hyperelastic tire and elastic pavement. *Road Materials and Pavement Design*, **2017**, 18, 1067-1083	2.6	20
167	Asphalt Pavements with High Reclaimed Asphalt Pavement Content: Economic and Environmental Perspectives. *Transportation Research Record*, **2014**, 2456, 161-169	1.7	20
166	Interface Bonding between Hot-Mix Asphalt and various Portland Cement Concrete Surfaces: Assessment of Accelerated Pavement Testing and Measurement of Interface Strain. *Transportation Research Record*, **2009**, 2127, 20-28	1.7	20
165	Tecnico accelerated ageing (TEAGE) – a new laboratory approach for bituminous mixture ageing simulation. *International Journal of Pavement Engineering*, **2020**, 21, 753-765	2.6	20
164	Introducing realistic tire–pavement contact stresses into Pavement Analysis using Nonlinear Damage Approach (PANDA). *International Journal of Pavement Engineering*, **2017**, 18, 1027-1038	2.6	19

163	Impact of Tire Loading and Tire Pressure on Measured 3D Contact Stresses **2013**,		19
162	Managing Multiple Mandates: A System of Systems Model to Analyze Strategies for Producing Cellulosic Ethanol and Reducing Riverine Nitrate Loads in the Upper Mississippi River Basin. *Environmental Science & Technology*, **2015**, 49, 11932-40	10.3	19
161	Three-Dimensional Finite Element Modeling of Instrumented Airport Runway Pavement Responses. *Transportation Research Record*, **2013**, 2367, 76-83	1.7	19
160	Time-Frequency Approach for Ground Penetrating Radar Data Analysis to Assess Railroad Ballast Condition. *Research in Nondestructive Evaluation*, **2008**, 19, 219-237	0.9	19
159	Finite Element Method Modeling of Reflective Cracking Initiation and Propagation: Investigation of the Effect of Steel Reinforcement Interlayer on Retarding Reflective Cracking in Hot-Mix Asphalt Overlay		19
158	Wander 2D: a flexible pavement design framework for autonomous and connected trucks. *International Journal of Pavement Engineering*, **2020**, 1-16	2.6	18
157	Optimizing rejuvenator content in asphalt concrete to enhance its durability. *Construction and Building Materials*, **2018**, 179, 642-648	6.7	18
156	Ground-Penetrating Radar Data to Develop Wavelet Technique for Quantifying Railroad Ballast Fouling Conditions. *Transportation Research Record*, **2012**, 2289, 95-102	1.7	18
155	Performance Characterization of Asphalt Mixtures at High Asphalt Binder Replacement with Recycled Asphalt Shingles. *Transportation Research Record*, **2013**, 2371, 105-112	1.7	18
154	Fatigue Shift Factors to Predict HMA Performance. *International Journal of Pavement Engineering*, **2003**, 4, 69-76	2.6	18
153	Using binder and mixture space diagrams to evaluate the effect of re-refined engine oil bottoms on binders and mixtures after ageing. *Road Materials and Pavement Design*, **2017**, 18, 154-182	2.6	17
152	Quantifying sustainable strategies for the construction of highway pavements in Illinois. *Transportation Research, Part D: Transport and Environment*, **2017**, 51, 1-13	6.4	17
151	System of Systems Model for Analysis of Biofuel Development. *Journal of Infrastructure Systems*, **2015**, 21, 04014050	2.9	17
150	Developing Machine-Learning Models to Predict Airfield Pavement Responses. *Transportation Research Record*, **2018**, 2672, 23-34	1.7	17
149	Development of a time-frequency approach to quantify railroad ballast fouling condition using ultra-wide band ground-penetrating radar data. *International Journal of Pavement Engineering*, **2010**, 11, 269-279	2.6	17
148	Factors Impacting Monitoring Asphalt Pavement Density by Ground Penetrating Radar. *NDT and E International*, **2020**, 115, 102296	4.1	16
147	Mechanics based model for predicting structure-induced rolling resistance (SRR) of the tire-pavement system. *Mechanics of Time-Dependent Materials*, **2016**, 20, 579-600	1.2	16
146	Scenarios Developed for Improved Sustainability of Illinois Tollway: Life-Cycle Assessment Approach. *Transportation Research Record*, **2015**, 2523, 11-18	1.7	16

145	Effects of Curing Time and Reheating on Performance of Warm Stone-Matrix Asphalt. *Journal of Materials in Civil Engineering*, **2012**, 24, 1422-1428	3	16
144	Validated Mechanistic Model for Geogrid Base Reinforced Flexible Pavements. *Journal of Transportation Engineering*, **2009**, 135, 915-926		16
143	Field and Laboratory Evaluation of Fracture Resistance of Illinois Hot-Mix Asphalt Overlay Mixtures. *Transportation Research Record*, **2009**, 2127, 146-154	1.7	16
142	Data Collection and Management of the Instrumented Smart Road Flexible Pavement Sections. *Transportation Research Record*, **2001**, 1769, 142-151	1.7	16
141	Regional upstream life-cycle impacts of petroleum products in the United States. *Journal of Cleaner Production*, **2016**, 139, 1138-1149	10.3	16
140	Early-age performance characterization of hot-mix asphalt overlay with varying amounts of asphalt binder replacement. *Construction and Building Materials*, **2017**, 153, 294-306	6.7	15
139	Impact of high recycled mixed on HMA overlay crack development rate. *Road Materials and Pavement Design*, **2017**, 18, 311-327	2.6	15
138	Analytical Approach for Predicting Three-Dimensional Tire-Pavement Contact Load. *Transportation Research Record*, **2014**, 2456, 75-84	1.7	15
137	Comparing Resilient Modulus and Dynamic Modulus of Hot-Mix Asphalt as Material Properties for Flexible Pavement Design		15
136	Baseline rolling resistance for tires□on-road fuel efficiency using finite element modeling. *International Journal of Pavement Engineering*, **2017**, 18, 424-432	2.6	14
135	Quantitative Assessment of the Effect of Wide-Base Tires on Pavement Response by Finite Element Analysis. *Transportation Research Record*, **2016**, 2590, 37-43	1.7	14
134	Interface Layer Tack Coat Optimization. *Transportation Research Record*, **2013**, 2372, 53-60	1.7	14
133	Finite Element Method Modeling of Reflective Cracking Initiation and Propagation: Investigation of the Effect of Steel Reinforcement Interlayer on Retarding Reflective Cracking in Hot-Mix Asphalt Overlay. *Transportation Research Record*, **2006**, 1949, 32-42	1.7	14
132	A Simplified Overlay Design Model against Reflective Cracking Utilizing Service Life Prediction. *Road Materials and Pavement Design*, **2004**, 5, 169-191	2.6	14
131	Model uncertainty analysis using data analytics for life-cycle assessment (LCA) applications. *International Journal of Life Cycle Assessment*, **2019**, 24, 945-959	4.6	14
130	Efficient surrogate method for predicting pavement response to various tire configurations. *Neural Computing and Applications*, **2017**, 28, 1355-1367	4.8	13
129	One for all: Decentralized optimization of lateral position of autonomous trucks in a platoon to improve roadway infrastructure sustainability. *Transportation Research Part C: Emerging Technologies*, **2020**, 120, 102783	8.4	13
128	Modification of Bending Beam Rheometer Specimen for Low-Temperature Evaluation of Bituminous Crack Sealants. *Transportation Research Record*, **2005**, 1933, 96-106	1.7	13

127	Real-Time Density and Thickness Estimation of Thin Asphalt Pavement Overlay During Compaction Using Ground Penetrating Radar Data. *Surveys in Geophysics*, **2020**, 41, 431-445	7.6	13
126	Effects of Pavement Condition on LCCA User Costs. *Transportation Research Record*, **2019**, 2673, 339-350	1.7	12
125	New Stochastic Approach of Vehicle Energy Dissipation on Nondeformable Rough Pavements. *Journal of Engineering Mechanics - ASCE*, **2017**, 143, 04016118	2.4	12
124	Viscoelastic and Poisson's ratio characterization of asphalt materials: critical review and numerical simulations. *Materials and Structures/Materiaux Et Constructions*, **2017**, 50, 1	3.4	12
123	Effects of Pavement Surface Roughness and Congestion on Expected Freeway Traffic Energy Consumption. *Transportation Research Record*, **2015**, 2503, 10-19	1.7	12
122	Micromechanical finite element modeling of moisture damage in bituminous composite materials. *Construction and Building Materials*, **2015**, 80, 9-17	6.7	12
121	Quantification of Pavement Damage Caused by Dual and Wide-Base Tires. *Transportation Research Record*, **2005**, 1940, 125-135	1.7	12
120	Effectiveness of Steel Reinforcing Nettings in Combating Fatigue Cracking in New Flexible Pavement Systems. *Journal of Transportation Engineering*, **2005**, 131, 37-45		12
119	Quantification of Pavement Damage Caused by Dual and Wide-Base Tires		12
118	Impact of Wide-Base Tires on Pavements: A National Study. *Transportation Research Record*, **2018**, 2672, 186-196	1.7	11
117	Full-depth flexible pavement responses to different truck tyre geometry configurations. *International Journal of Pavement Engineering*, **2014**, 15, 512-520	2.6	11
116	Testing of Fine Asphalt Mixtures to Quantify Effectiveness of Asphalt Binder Replacement Using Recycled Shingles. *Transportation Research Record*, **2014**, 2445, 103-112	1.7	11
115	Stochastic Analysis of Energy Dissipation of a Half-Car Model on Nondeformable Rough Pavement. *Journal of Transportation Engineering Part B: Pavements*, **2017**, 143, 04017016	1.4	11
114	Field Aging and Development of Aging Model for Hot-Poured Crack Sealants. *Transportation Research Record*, **2015**, 2481, 90-99	1.7	11
113	Modeling of Strain Energy Absorbers for Rehabilitated Cracked Flexible Pavements. *Journal of Transportation Engineering*, **2005**, 131, 653-661		11
112	Viscoelastic Modeling of Straight Run and Modified Binders Using the Matching Function Approach. *International Journal of Pavement Engineering*, **2002**, 3, 53-61	2.6	11
111	Development of Long-Term Aging Protocol for Implementation of the Illinois Flexibility Index Test (I-FIT) **2019**,		11
110	In-Situ Validation of Three-Dimensional Pavement Finite Element Models **2016**, 145-159		11

109	Real-Time Monitoring of Asphalt Concrete Pavement Density during Construction using Ground Penetrating Radar: Theory to Practice. *Transportation Research Record*, **2019**, 2673, 329-338	1.7	10
108	Impact of Pavement Roughness and Deflection on Fuel Consumption Using Energy Dissipation. *Journal of Engineering Mechanics - ASCE*, **2019**, 145, 04019080	2.4	10
107	Field Validation of Laboratory-Predicted Low-Temperature Performance of Hot-Poured Crack Sealants. *Transportation Research Record*, **2014**, 2431, 57-66	1.7	10
106	Threshold Identification and Field Validation of Performance-Based Guidelines to Select Hot-Poured Crack Sealants. *Transportation Research Record*, **2010**, 2150, 87-95	1.7	10
105	Construction and Instrumentation of Geosynthetically Stabilized Secondary Road Test Sections		10
104	Measuring Rebar Cover Depth in Rigid Pavements with Ground-Penetrating Radar		10
103	Super-Resolution of 3-D GPR Signals to Estimate Thin Asphalt Overlay Thickness Using the XCMP Method. *IEEE Transactions on Geoscience and Remote Sensing*, **2019**, 57, 893-901	8.1	10
102	Development of Adjustment Factors for MEPDG Pavement Responses Utilizing Finite-Element Analysis. *Journal of Transportation Engineering Part A: Systems*, **2017**, 143, 04017022	1.5	9
101	Development of a Life-Cycle Assessment Tool to Quantify the Environmental Impacts of Airport Pavement Construction. *Transportation Research Record*, **2017**, 2603, 89-97	1.7	9
100	Semicoupled Modeling of Interaction between Deformable Tires and Pavements. *Journal of Transportation Engineering Part A: Systems*, **2017**, 143, 04016015	1.5	9
99	Short-Term Performance of Plant-Mixed Warm Stone Mastic Asphalt: Laboratory Testing and Field Evaluation. *Transportation Research Record*, **2012**, 2306, 86-94	1.7	9
98	Accuracy of Ground-Penetrating Radar for Estimating Rigid and Flexible Pavement Layer Thicknesses. *Transportation Research Record*, **2005**, 1940, 69-78	1.7	9
97	Influence of mix design parameters on asphalt concrete aging rate using I-FIT specimens. *Construction and Building Materials*, **2019**, 200, 181-187	6.7	9
96	Life-cycle economic and environmental assessment of warm stone mastic asphalt. *Transportmetrica A: Transport Science*, **2018**, 14, 562-575	2.5	8
95	4.75 mm SMA Performance and Cost-Effectiveness for Asphalt Thin Overlays. *International Journal of Pavement Engineering*, **2016**, 17, 799-809	2.6	8
94	Environmental and economic impact of using new-generation wide-base tires. *International Journal of Life Cycle Assessment*, **2019**, 24, 753-766	4.6	8
93	Impact of Specimen Configuration and Characteristics on Illinois Flexibility Index. *Transportation Research Record*, **2018**, 2672, 383-393	1.7	8
92	Stochastic Analysis of Rolling Resistance Energy Dissipation for a Tractor-Trailer Model. *Transportation Research Record*, **2019**, 2673, 593-603	1.7	7

91	Optimal pavement design and rehabilitation planning using a mechanistic-empirical approach. *EURO Journal on Transportation and Logistics*, **2015**, 4, 57-73	2.4	7
90	Effect of Chemical Composition of Bio- and Petroleum-Based Modifiers on Asphalt Binder Rheology. *Applied Sciences (Switzerland)*, **2020**, 10, 3249	2.6	7
89	Effects of Nonuniform and Three-Dimensional Contact Stresses on Near-Surface Cracking. *Transportation Research Record*, **2011**, 2210, 97-105	1.7	7
88	Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature. *Journal of Materials in Civil Engineering*, **2010**, 22, 996-1004	3	7
87	Finite Element Modeling of Reflective Cracking under Moving Vehicular Loading: Investigation of the Mechanism of Reflective Cracking in Hot-Mix Asphalt Overlays Reinforced with Interlayer Systems **2008**,		7
86	In Situ Assessment of Interlayer Systems to Abate Reflective Cracking in Hot-Mix Asphalt Overlays. *Transportation Research Record*, **2008**, 2084, 104-113	1.7	7
85	Viscosity Determination of Hot-Poured Bituminous Sealants. *Transportation Research Record*, **2006**, 1958, 74-81	1.7	7
84	Accuracy of Ground-Penetrating Radar for Estimating Rigid and Flexible Pavement Layer Thicknesses		7
83	Railway Ballast Fouling Detection Using GPR Data: Introducing a Combined Time–Frequency and Discrete Wavelet Techniques. *Near Surface Geophysics*, **2016**, 14, 145-153	1.6	7
82	Importance of Heterogeneity in Asphalt Pavement Modeling. *Journal of Engineering Mechanics - ASCE*, **2018**, 144, 04018060	2.4	7
81	Contact Phenomenon of Free-Rolling Wide-Base Tires: Effect of Speed and Temperature. *Journal of Transportation Engineering*, **2016**, 142, 04016060		6
80	Micromechanical modeling of I-FIT asphalt concrete specimens. *Engineering Fracture Mechanics*, **2018**, 200, 234-250	4.2	6
79	Content-based image retrieval approaches to interpret ground penetrating radar data. *Construction and Building Materials*, **2014**, 69, 10-17	6.7	6
78	Development of a Modified Adhesion Test for Hot-Poured Asphalt Crack Sealants. *Transportation Research Record*, **2017**, 2612, 85-95	1.7	6
77	Innovative Sprinkle Treatment for Thin Durable Asphalt Overlays. *Transportation Research Record*, **2013**, 2366, 87-97	1.7	6
76	Sand Mix Interlayer to Control Reflective Cracking in Hot-Mix Asphalt Overlay. *Transportation Research Record*, **2011**, 2227, 53-60	1.7	6
75	Effect of Bituminous Material Rheology on Adhesion. *Transportation Research Record*, **2008**, 2044, 96-104	1.7	6
74	Effectiveness of Geogrid Base-Reinforcement in Low-Volume Flexible Pavements **2008**,		6

73	Cracking prediction of asphalt concrete using fracture and strength tests. *International Journal of Pavement Engineering*,1-13	2.6	6
72	Signal Stability and the Height-Correction Method for Ground-Penetrating Radar In Situ Asphalt Concrete Density Prediction. *Transportation Research Record*,036119812110045	1.7	6
71	Development of a Simulated Three-Dimensional Truck Model to Predict Excess Fuel Consumption Resulting from Pavement Roughness. *Transportation Research Record*,036119812110078	1.7	6
70	Development of a Numerical Model to Predict the Dielectric Properties of Heterogeneous Asphalt Concrete. *Sensors*, **2021**, 21,	3.8	6
69	Effect of Moisture Content on Calculated Dielectric Properties of Asphalt Concrete Pavements from Ground-Penetrating Radar Measurements. *Remote Sensing*, **2022**, 14, 34	5	6
68	Quantification of the Effect of Binder Source on Flexibility of Long-Term Aged Asphalt Concrete. *Transportation Research Record*, **2020**, 2674, 605-616	1.7	5
67	Dilatancy in the Analysis of Interlayer Cyclic Shear Test Results. *Journal of Materials in Civil Engineering*, **2016**, 28, 04016171	3	5
66	Development of Domain Analysis for Determining Potential Pavement Damage. *Journal of Transportation Engineering Part B: Pavements*, **2018**, 144, 04018030	1.4	5
65	Total Recycled Asphalt Mixes: Characteristics and Field Performance. *Transportation Research Record*, **2019**, 2673, 149-162	1.7	5
64	Prediction of Fatigue Failure at Asphalt Concrete Layer Interface from Monotonic Testing. *Transportation Research Record*, **2015**, 2507, 50-56	1.7	5
63	Impact of High Asphalt Binder Replacement on Level Binder Properties for Controlling Reflective Cracking. *Transportation Research Record*, **2017**, 2630, 118-127	1.7	5
62	Engineering CostBenefit Analysis of Thin, Durable Asphalt Overlays. *Transportation Research Record*, **2014**, 2456, 135-145	1.7	5
61	Accelerated aging of bituminous sealants: small kettle aging. *International Journal of Pavement Engineering*, **2008**, 9, 365-371	2.6	5
60	Fatigue Tolerance of Aged Asphalt Binders Modified with Softeners. *Transportation Research Record*,036119812110255	1.7	5
59	Computational micromechanical analysis of the representative volume element of bituminous composite materials. *Mechanics of Time-Dependent Materials*, **2016**, 20, 441-453	1.2	5
58	Airfield Pavement Response Caused by Heavy Aircraft Takeoff: Advanced Modeling for Consideration of Wheel Interaction. *Transportation Research Record*, **2015**, 2471, 40-47	1.7	4
57	Impact of Non-Uniform Aircraft Tire Pressure on Airfield Pavement Responses **2011**,		4
56	Evaluation of Pavement Layer Response at the Virginia Smart Road **2000**, 104		4

55	Performance of Geocomposite Membrane as Pavement Moisture Barrier. *Transportation Research Record*, **2001**, 1772, 168-173	1.7	4
54	Brittleness progression for short- and long-term aged asphalt binders with various levels of recycled binders. *International Journal of Pavement Engineering*, **2020**, 1-11	2.6	4
53	Thermomechanical Coupling of a Hyper-viscoelastic Truck Tire and a Pavement Layer and its Impact on Three-dimensional Contact Stresses. *Transportation Research Record*,036119812110171	1.7	4
52	Predicting Pavement Roughness Using Deep Learning Algorithms. *Transportation Research Record*,0361198121 10237	1.7	4
51	Structural and environmental impact of new-generation wide-base tires in New Brunswick, Canada. *Road Materials and Pavement Design*, **2020**, 21, 1968-1984	2.6	4
50	Development of Domain Analysis to Predict Multi-Axial Flexible Airfield Pavement Responses Due to Gear and Environmental Loadings. *Transportation Research Record*, **2018**, 2672, 326-335	1.7	3
49	Homogeneous versus Heterogeneous Response of a Flexible Pavement Structure: Strain and Domain Analyses. *Journal of Engineering Mechanics - ASCE*, **2019**, 145, 04019068	2.4	3
48	Rutting Potential of Thin and Durable Asphalt Wearing Courses: Laboratory Prediction and Field Performance **2013**,		3
47	Integrated Vehicle□Tire□Pavement Approach for Determining Pavement Structure□Induced Rolling Resistance under Dynamic Loading. *Transportation Research Record*,036119812110677	1.7	3
46	Prediction of flexible pavement 3-D finite element responses using Bayesian neural networks. *International Journal of Pavement Engineering*,1-11	2.6	3
45	Illinois Flexibility Index Test: Effect of Specimen Geometry and Test Configuration on the Asphalt Concrete Damage Zone. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147, 04020085	1.4	3
44	Flexibility Index Threshold Optimization for Various Asphalt Concrete Mixes and Climatic Conditions. *Transportation Research Record*, **2020**, 2674, 104-112	1.7	2
43	Effect of Methodological Choices on Pavement Life-Cycle Assessment. *Transportation Research Record*, **2018**, 2672, 78-87	1.7	2
42	Concrete Pavement Blowup Considering Generalized Boundary Conditions. *Journal of Transportation Engineering Part B: Pavements*, **2018**, 144, 04018038	1.4	2
41	Simulation of Shakedown Behavior for Flexible Pavements□Unbound Granular Layer **2015**,		2
40	Comparison between Mechanistic Analysis and In-Situ Response of Full-Depth Flexible Pavements **2008**,		2
39	Viscoelastic Model to Describe Mechanical Response of Bituminous Sealants at Low Temperature. *Transportation Research Record*, **2006**, 1958, 82-89	1.7	2
38	Relationship Between Backcalculated and Laboratory-Measured Resilient Moduli of Unbound Materials. *Transportation Research Record*, **2003**, 1849, 177-182	1.7	2

37	Quantitative Field Evaluation and Effectiveness of Fine Mix Under Hot-Mix Asphalt Base in Flexible Pavements. *Transportation Research Record*, **2003**, 1823, 133-140	1.7	2
36	Three-dimensional tire-pavement contact stresses prediction by deep learning approach. *International Journal of Pavement Engineering*,1-12	2.6	2
35	Effects of Interface Conditions on Reflective Cracking Development in Hot-Mix Asphalt Overlays. *Road Materials and Pavement Design*, **2010**, 11, 307-334	2.6	2
34	Evaluation of Surface-Related Pavement Damage due to Tire Braking. *Road Materials and Pavement Design*, **2010**, 11, 101-121	2.6	2
33	Impact of dynamic wheel load on roadway infrastructure sustainability. *Transportation Research, Part D: Transport and Environment*, **2021**, 94, 102811	6.4	2
32	Impact of New Generation Wide-Base Tires on Fuel Consumption. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147,	1.4	2
31	Variable impact transportation (VIT) model for energy and environmental impact of hauling truck operation. *International Journal of Life Cycle Assessment*, **2019**, 24, 1154-1168	4.6	2
30	Closed-Form Solution for Curling Responses in Rigid Pavements. *Journal of Engineering Mechanics - ASCE*, **2019**, 145, 04018133	2.4	2
29	Impact and Removal of Ground-Penetrating Radar Vibration on Continuous Asphalt Concrete Pavement Density Prediction. *IEEE Transactions on Geoscience and Remote Sensing*, **2021**, 1-14	8.1	2
28	Impact of Autonomous and Human-Driven Trucks on Flexible Pavement Design. *Transportation Research Record*,036119812210770	1.7	2
27	Turning Maneuver Effect on Near-Surface Airfield Pavement Responses. *Transportation Research Record*, **2019**, 2673, 275-283	1.7	1
26	Pavement-Dependent Load Limits: Case Study in South Dakota for Different Tire Configurations. *Transportation Research Record*, **2014**, 2456, 107-114	1.7	1
25	Pavement responses as function of truck tire type **2014**, 1125-1134		1
24	Pavement Layer Interface Shear Strength Using a Hyperbolic Mohr-Coulomb Model and Finite Element Analysis **2013**,		1
23	A three-dimensional generalised finite element analysis for the near-surface cracking problem in flexible pavements. *International Journal of Pavement Engineering*, **2011**, 12, 407-419	2.6	1
22	Tire Type Effect on Pavement Responses; Accelerated Pavement Testing Results **2016**, 277-288		1
21	Sand Mix Interlayer Retarding Reflective Cracking in Asphalt Concrete Overlay **2012**, 1241-1250		1
20	Development of a Crack Sealant Adhesion Test (CSADT) Specification for Hot-Poured Bituminous Sealants. *Journal of Testing and Evaluation*, **2011**, 39, 103108	1	1

19	Laboratory Characterization of Low-Rolling Resistance Danish Stone-Matrix Asphalt. *Journal of Transportation Engineering Part B: Pavements*, **2019**, 145, 04018060	1.4	1
18	Benchmarking pavement practices in data-scarce regions: case of Saudi Arabia. *International Journal of Pavement Engineering*, **2021**, 22, 294-306	2.6	1
17	Impact of Dynamic Loading on Confined Asphalt Concrete Surface. *Transportation Research Record*,036119812210779	1.7	1
16	Impact of rest period on asphalt concrete permanent deformation. *Construction and Building Materials*, **2022**, 332, 127329	6.7	1
15	Statistical Analysis of Hot-Mix Asphalt Pay for Performance versus Quality Control for Performance. *Journal of Transportation Engineering Part B: Pavements*, **2022**, 148,	1.4	1
14	Economic and Environmental Impacts of Platoon Trucks on Pavements. *Transportation Research Record*,036119812210902	1.7	1
13	Impacts of Field and Laboratory Long-Term Aging on Asphalt Binders. *Transportation Research Record*,036119812210836	1.7	1
12	Development of a Simulation-Based Approach for Cold In-Place Recycled Pavement Moisture-Content Prediction Using Ground-Penetrating Radar. *Transportation Research Record*,036119812210909	1.7	1
11	Iterative Framework for Performance and Environmental Impacts of Airfields. *Transportation Research Record*, **2019**, 2673, 179-187	1.7	0
10	Fracture Degradation of Asphalt Concrete under Repeated Loading. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147, 04021032	1.4	0
9	Determining Road Networks' Platoonability. *Journal of Transportation Engineering Part A: Systems*, **2021**, 147, 04021060	1.5	0
8	Albedo Change Mechanism of Asphalt Concrete Surfaces. *Transportation Research Record*,036119812210825	1.7	0
7	Geomaterial Characterizations of Full Scale Pavement Test Sections for Mechanistic Analysis and Design **2007**, 1		
6	Combined Life Cycle Cost Analysis and Life Cycle Assessment of Road Pavements. *Lecture Notes in Civil Engineering*, **2020**, 123-132	0.3	
5	Effect of joint rotation on curling responses in airfield rigid pavements. *International Journal of Pavement Engineering*, **2020**, 1-8	2.6	
4	Mechanical modelling of asphalt concrete using grid division. *International Journal of Pavement Engineering*, **2020**, 21, 1012-1023	2.6	
3	Effect of Pavement Responses on Fatigue Cracking and Cement-Treated Reflective Cracking Failure Mechanisms. *Journal of Transportation Engineering Part B: Pavements*, **2021**, 147, 04021056	1.4	
2	Field factors impacting incentives of quality control for performance (QCP) and pay for performance (PFP) specifications for hot-mix asphalt in Illinois. *Road Materials and Pavement Design*,1-15	2.6	

1 Optimization of Platoons Lateral Position Based on Damage Estimation. *Transportation Research Record*,036119812210957 1.7