

Michael D Lepech

List of Publications by Year in descending order

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51
papers

2,621
citations

218381

26
h-index

223531

46
g-index

51
all docs

51
docs citations

51
times ranked

2221
citing authors

#	ARTICLE	IF	CITATIONS
1	Incorporating pavement deterioration uncertainty into pavement management optimization. International Journal of Pavement Engineering, 2022, 23, 2062-2073.	2.2	15
2	A shape stability model for 3D printable biopolymer-bound soil composite. Construction and Building Materials, 2022, 321, 126337.	3.2	2
3	Development of a multiphysics model of synergistic effects between environmental exposure and damage in woven glass fiber reinforced polymeric composites. Composite Structures, 2021, 258, 113230.	3.1	7
4	How "Belt and Road" initiative implementation has influenced R&D outcomes of Chinese enterprises: asset exploitation or knowledge transfer?. R and D Management, 2021, 51, 273-292.	3.0	5
5	Micromechanics modeling and homogenization of glass fiber reinforced polymer composites subject to synergistic deterioration. Composites Science and Technology, 2021, 203, 108629.	3.8	13
6	Performance-Based Engineering Framework to Quantify Micrometeoroid Damage to Lunar Surface Structures. Journal of Aerospace Engineering, 2021, 34, .	0.8	1
7	Determining the yield stress of a Biopolymer-bound Soil Composite for extrusion-based 3D printing applications. Construction and Building Materials, 2021, 305, 124730.	3.2	5
8	Incorporating multi-physics deterioration analysis in building information modeling for life-cycle management of durability performance. Automation in Construction, 2020, 110, 103004.	4.8	29
9	Hypervelocity Impact Performance of Biopolymer-Bound Soil Composites for Space Construction. Journal of Aerospace Engineering, 2020, 33, .	0.8	10
10	Prediction of micrometeoroid damage to lunar construction materials using numerical modeling of hypervelocity impact events. International Journal of Impact Engineering, 2020, 138, 103499.	2.4	14
11	A novel approach to district heating and cooling network design based on life cycle cost optimization. Energy, 2020, 194, 116837.	4.5	29
12	On Designing Biopolymer-Bound Soil Composites (BSC) for Peak Compressive Strength. Journal of Renewable Materials, 2020, 8, 845-861.	1.1	10
13	Prediction of ultimate compressive strength for biopolymer-bound soil composites (BSC) using sliding wingtip crack analysis. Engineering Fracture Mechanics, 2019, 218, 106570.	2.0	7
14	Limit states for sustainable reinforced concrete structures. Cement and Concrete Research, 2019, 122, 189-195.	4.6	32
15	Probabilistic Design of Sustainable Reinforced Concrete Infrastructure Repairs Using SIPmath. , 2019, , .		0
16	Prediction of Micrometeoroid Damage to Lunar Construction Materials using Numerical Modeling of Hypervelocity Impact Events. , 2019, , .		0
17	Experimental Testing of Reinforced ECC Beams Subjected to Various Cyclic Deformation Histories. Journal of Structural Engineering, 2018, 144, .	1.7	18
18	Scaling Impact Crater Dimensions to Predict Micrometeorite Damage of Biopolymer-Stabilized Regolith. , 2018, , .		3

#	ARTICLE	IF	CITATIONS
19	Simplified structural deterioration model for reinforced concrete bridge piers under cyclic loading1. Structure and Infrastructure Engineering, 2017, 13, 55-66.	2.0	47
20	Bond behavior and interface modeling of reinforced high-performance fiber-reinforced cementitious composites. Cement and Concrete Composites, 2017, 83, 188-201.	4.6	56
21	Measuring the impact of dynamic life cycle performance feedback on conceptual building design. Journal of Cleaner Production, 2017, 164, 726-735.	4.6	22
22	Development of time-dependent fragility functions for deteriorating reinforced concrete bridge piers¹. Structure and Infrastructure Engineering, 2017, 13, 67-83.	2.0	27
23	Influence of carbon feedstock on potentially net beneficial environmental impacts of bio-based composites. Journal of Cleaner Production, 2016, 132, 266-278.	4.6	8
24	Creation of Statistically Equivalent Periodic Unit Cells for Protein-Bound Soils. , 2015, , .		4
25	Sustainability Assessment of Protein-Soil Composite Materials for Limited Resource Environments. Journal of Renewable Materials, 2015, 3, 183-194.	1.1	12
26	Techno-Ecological Synergy: A Framework for Sustainable Engineering. Environmental Science & Technology, 2015, 49, 1752-1760.	4.6	110
27	Integrating durability-based service-life predictions with environmental impact assessments of natural fiberâ€“reinforced composite materials. Resources, Conservation and Recycling, 2015, 99, 72-83.	5.3	42
28	Cradle-to-gate sustainable target value design: integrating life cycle assessment and construction management for buildings. Journal of Cleaner Production, 2015, 100, 107-115.	4.6	53
29	Modeling and optimization of building mix and energy supply technology for urban districts. Applied Energy, 2015, 159, 161-177.	5.1	66
30	Sustainable target value design: integrating life cycle assessment and target value design to improve building energy and environmental performance. Journal of Cleaner Production, 2015, 88, 43-51.	4.6	98
31	Static versus Time-Dependent Material Selection Charts and Application in Wood Flour Composites. Journal of Biobased Materials and Bioenergy, 2015, 9, 273-283.	0.1	7
32	Firm-level ecosystem service valuation using mechanistic biogeochemical modeling and functional substitutability. Ecological Economics, 2014, 100, 63-73.	2.9	31
33	Incorporating spatiotemporal effects and moisture diffusivity into a multi-criteria materials selection methodology for woodâ€“polymer composites. Construction and Building Materials, 2014, 71, 589-601.	3.2	14
34	A multi-objective feedback approach for evaluating sequential conceptual building design decisions. Automation in Construction, 2014, 45, 136-150.	4.8	36
35	Probabilistic design and management of environmentally sustainable repair and rehabilitation of reinforced concrete structures. Cement and Concrete Composites, 2014, 47, 19-31.	4.6	34
36	The Role of Concrete Industry Standards as Institutional Barriers to More Sustainable Concrete Bridge Infrastructure. Advances in Civil Engineering Materials, 2014, 3, 338-354.	0.2	1

#	ARTICLE	IF	CITATIONS
37	Network-Level Pavement Asset Management System Integrated with Life-Cycle Analysis and Life-Cycle Optimization. <i>Journal of Infrastructure Systems</i> , 2013, 19, 99-107.	1.0	71
38	Behavior of Concrete and ECC Structures under Simulated Earthquake Motion. <i>Journal of Structural Engineering</i> , 2013, 139, 389-399.	1.7	30
39	Cradle-to-Gate Life Cycle Assessment for a Cradle-to-Cradle Cycle: Biogas-to-Bioplastic (and Back). <i>Environmental Science & Technology</i> , 2012, 46, 9822-9829.	4.6	104
40	Durability of strain-hardening cement-based composites (SHCC). <i>Materials and Structures/Materiaux Et Constructions</i> , 2012, 45, 1447-1463.	1.3	96
41	Project-Level Assessment of Environmental Impact: Ecosystem Services Approach to Sustainable Management and Development. <i>Journal of Management in Engineering - ASCE</i> , 2012, 28, 5-12.	2.6	17
42	Human Health Impact as a Boundary Selection Criterion in the Life Cycle Assessment of Pultruded Fiber Reinforced Polymer Composite Materials. <i>Journal of Industrial Ecology</i> , 2012, 16, 266-275.	2.8	6
43	USING LIFE CYCLE ASSESSMENT METHODS TO GUIDE ARCHITECTURAL DECISION-MAKING FOR SUSTAINABLE PREFABRICATED MODULAR BUILDINGS. <i>Journal of Green Building</i> , 2012, 7, 151-170.	0.4	48
44	A framework for multiphysics modeling of natural environments for valuation of privately owned ecosystem services. , 2011, , .		0
45	Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration. <i>Journal of Infrastructure Systems</i> , 2010, 16, 299-309.	1.0	106
46	Life-Cycle Optimization of Pavement Overlay Systems. <i>Journal of Infrastructure Systems</i> , 2010, 16, 310-322.	1.0	82
47	Water permeability of engineered cementitious composites. <i>Cement and Concrete Composites</i> , 2009, 31, 744-753.	4.6	259
48	Autogenous healing of engineered cementitious composites under wet-dry cycles. <i>Cement and Concrete Research</i> , 2009, 39, 382-390.	4.6	512
49	Application of ECC for bridge deck link slabs. <i>Materials and Structures/Materiaux Et Constructions</i> , 2009, 42, 1185-1195.	1.3	221
50	Materials design for sustainability through life cycle modeling of engineered cementitious composites. <i>Materials and Structures/Materiaux Et Constructions</i> , 2008, 41, 1117-1131.	1.3	37
51	Life Cycle Modeling of Concrete Bridge Design: Comparison of Engineered Cementitious Composite Link Slabs and Conventional Steel Expansion Joints. <i>Journal of Infrastructure Systems</i> , 2005, 11, 51-60.	1.0	164