

Michael D Lepech

List of Publications by Year in descending order

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52
papers

2,772
citations

209248

26
h-index

223255

46
g-index

54
all docs

54
docs citations

54
times ranked

2627
citing authors

#	ARTICLE	IF	CITATIONS
1	Autogenous healing of engineered cementitious composites under wet-dry cycles. Cement and Concrete Research, 2009, 39, 382-390.	11.1	535
2	Water permeability of engineered cementitious composites. Cement and Concrete Composites, 2009, 31, 744-753.	10.8	277
3	Application of ECC for bridge deck link slabs. Materials and Structures/Materiaux Et Constructions, 2009, 42, 1185-1195.	3.0	237
4	Life Cycle Modeling of Concrete Bridge Design: Comparison of Engineered Cementitious Composite Link Slabs and Conventional Steel Expansion Joints. Journal of Infrastructure Systems, 2005, 11, 51-60.	1.9	172
5	Techno-Ecological Synergy: A Framework for Sustainable Engineering. Environmental Science & Technology, 2015, 49, 1752-1760.	10.5	115
6	Cradle-to-Gate Life Cycle Assessment for a Cradle-to-Cradle Cycle: Biogas-to-Bioplastic (and Back). Environmental Science & Technology, 2012, 46, 9822-9829.	10.5	109
7	Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration. Journal of Infrastructure Systems, 2010, 16, 299-309.	1.9	108
8	Durability of strain-hardening cement-based composites (SHCC). Materials and Structures/Materiaux Et Constructions, 2012, 45, 1447-1463.	3.0	100
9	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.	9.5	100
10	Life-Cycle Optimization of Pavement Overlay Systems. Journal of Infrastructure Systems, 2010, 16, 310-322.	1.9	86
11	Network-Level Pavement Asset Management System Integrated with Life-Cycle Analysis and Life-Cycle Optimization. Journal of Infrastructure Systems, 2013, 19, 99-107.	1.9	72
12	Modeling and optimization of building mix and energy supply technology for urban districts. Applied Energy, 2015, 159, 161-177.	10.3	68
13	Bond behavior and interface modeling of reinforced high-performance fiber-reinforced cementitious composites. Cement and Concrete Composites, 2017, 83, 188-201.	10.8	61
14	Cradle-to-gate sustainable target value design: integrating life cycle assessment and construction management for buildings. Journal of Cleaner Production, 2015, 100, 107-115.	9.5	55
15	USING LIFE CYCLE ASSESSMENT METHODS TO GUIDE ARCHITECTURAL DECISION-MAKING FOR SUSTAINABLE PREFABRICATED MODULAR BUILDINGS. Journal of Green Building, 2012, 7, 151-170.	0.8	53
16	Simplified structural deterioration model for reinforced concrete bridge piers under cyclic loading. Structure and Infrastructure Engineering, 2017, 13, 55-66.	3.6	52
17	Integrating durability-based service-life predictions with environmental impact assessments of natural fiber-reinforced composite materials. Resources, Conservation and Recycling, 2015, 99, 72-83.	11.0	44
18	A multi-objective feedback approach for evaluating sequential conceptual building design decisions. Automation in Construction, 2014, 45, 136-150.	10.0	42

#	ARTICLE	IF	CITATIONS
19	Materials design for sustainability through life cycle modeling of engineered cementitious composites. <i>Materials and Structures/Materiaux Et Constructions</i> , 2008, 41, 1117-1131.	3.0	37
20	Probabilistic design and management of environmentally sustainable repair and rehabilitation of reinforced concrete structures. <i>Cement and Concrete Composites</i> , 2014, 47, 19-31.	10.8	36
21	Limit states for sustainable reinforced concrete structures. <i>Cement and Concrete Research</i> , 2019, 122, 189-195.	11.1	34
22	Behavior of Concrete and ECC Structures under Simulated Earthquake Motion. <i>Journal of Structural Engineering</i> , 2013, 139, 389-399.	3.5	33
23	A novel approach to district heating and cooling network design based on life cycle cost optimization. <i>Energy</i> , 2020, 194, 116837.	9.0	33
24	Firm-level ecosystem service valuation using mechanistic biogeochemical modeling and functional substitutability. <i>Ecological Economics</i> , 2014, 100, 63-73.	5.9	31
25	Development of time-dependent fragility functions for deteriorating reinforced concrete bridge piers. <i>Structure and Infrastructure Engineering</i> , 2017, 13, 67-83.	3.6	30
26	Incorporating multi-physics deterioration analysis in building information modeling for life-cycle management of durability performance. <i>Automation in Construction</i> , 2020, 110, 103004.	10.0	30
27	Measuring the impact of dynamic life cycle performance feedback on conceptual building design. <i>Journal of Cleaner Production</i> , 2017, 164, 726-735.	9.5	28
28	Experimental Testing of Reinforced ECC Beams Subjected to Various Cyclic Deformation Histories. <i>Journal of Structural Engineering</i> , 2018, 144, .	3.5	19
29	Prediction of micrometeoroid damage to lunar construction materials using numerical modeling of hypervelocity impact events. <i>International Journal of Impact Engineering</i> , 2020, 138, 103499.	5.0	18
30	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.	4.8	17
31	Incorporating pavement deterioration uncertainty into pavement management optimization. <i>International Journal of Pavement Engineering</i> , 2022, 23, 2062-2073.	4.2	16
32	Incorporating spatiotemporal effects and moisture diffusivity into a multi-criteria materials selection methodology for wood-polymer composites. <i>Construction and Building Materials</i> , 2014, 71, 589-601.	7.2	14
33	Hypervelocity Impact Performance of Biopolymer-Bound Soil Composites for Space Construction. <i>Journal of Aerospace Engineering</i> , 2020, 33, .	1.4	13
34	Micromechanics modeling and homogenization of glass fiber reinforced polymer composites subject to synergistic deterioration. <i>Composites Science and Technology</i> , 2021, 203, 108629.	8.0	13
35	Sustainability Assessment of Protein-Soil Composite Materials for Limited Resource Environments. <i>Journal of Renewable Materials</i> , 2015, 3, 183-194.	2.3	12
36	On Designing Biopolymer-Bound Soil Composites (BSC) for Peak Compressive Strength. <i>Journal of Renewable Materials</i> , 2020, 8, 845-861.	2.3	11

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37	Influence of carbon feedstock on potentially net beneficial environmental impacts of bio-based composites. <i>Journal of Cleaner Production</i> , 2016, 132, 266-278.	9.5	8
38	Prediction of ultimate compressive strength for biopolymer-bound soil composites (BSC) using sliding wingtip crack analysis. <i>Engineering Fracture Mechanics</i> , 2019, 218, 106570.	4.3	7
39	Development of a multiphysics model of synergistic effects between environmental exposure and damage in woven glass fiber reinforced polymeric composites. <i>Composite Structures</i> , 2021, 258, 113230.	5.9	7
40	Static versus Time-Dependent Material Selection Charts and Application in Wood Flour Composites. <i>Journal of Biobased Materials and Bioenergy</i> , 2015, 9, 273-283.	0.3	7
41	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.	5.7	6
42	How "Belt and Road" initiative implementation has influenced R&D outcomes of Chinese enterprises: asset exploitation or knowledge transfer?. <i>R and D Management</i> , 2021, 51, 273-292.	5.1	6
43	Determining the yield stress of a Biopolymer-bound Soil Composite for extrusion-based 3D printing applications. <i>Construction and Building Materials</i> , 2021, 305, 124730.	7.2	6
44	Creation of Statistically Equivalent Periodic Unit Cells for Protein-Bound Soils. , 2015, , .		4
45	A shape stability model for 3D printable biopolymer-bound soil composite. <i>Construction and Building Materials</i> , 2022, 321, 126337.	7.2	4
46	Scaling Impact Crater Dimensions to Predict Micrometeorite Damage of Biopolymer-Stabilized Regolith. , 2018, , .		3
47	Performance-Based Engineering Framework to Quantify Micrometeoroid Damage to Lunar Surface Structures. <i>Journal of Aerospace Engineering</i> , 2021, 34, .	1.4	1
48	A framework for multiphysics modeling of natural environments for valuation of privately owned ecosystem services. , 2011, , .		0
49	Probabilistic Design of Sustainable Reinforced Concrete Infrastructure Repairs Using SIPmath. , 2019, , .		0
50	Prediction of Micrometeoroid Damage to Lunar Construction Materials using Numerical Modeling of Hypervelocity Impact Events. , 2019, , .		0
51	Are private investors overcompensated in infrastructure projects?. <i>Transport Policy</i> , 2024, 152, 1-8.	6.7	0
52	Life cycle assessment and design of LignoBlock: A lignin bound block on the path towards a green transition of the construction industry. <i>Journal of Cleaner Production</i> , 2024, 474, 143610.	9.5	0