Sarah Simko

List of Publications by Year
in descending order

68 papers	2,846 citations	172207 29 h-index	174990 52 g-index
68 all docs	68 docs citations	68 times ranked	2374 citing authors

#	Article	IF	Citations
1	A Renewable Ligninâ€“Lactide Copolymer and Application in Biobased Composites. ACS Sustainable Chemistry and Engineering, 2013, 1, 1231-1238.	3.2	282
2	Cyclic Response of Unbonded Posttensioned Precast Columns with Ductile Fiber-Reinforced Concrete. Journal of Bridge Engineering, 2004, 9, 353-363.	1.4	254
3	A lignin-epoxy resin derived from biomass as an alternative to formaldehyde-based wood adhesives. Green Chemistry, 2018, 20, 1459-1466.	4.6	182
4	Design Concepts for Controlled Rocking of Self-Centering Steel-Braced Frames. Journal of Structural Engineering, 2014, 140, .	1.7	150
5	Mechanisms and impact of fiberâ€“matrix compatibilization techniques on the material characterization of PHBV/oak wood flour engineered biobased composites. Composites Science and Technology, 2012, 72, 708-715.	3.8	111
6	Tension stiffening in reinforced high performance fiber reinforced cement-based composites. Cement and Concrete Composites, 2014, 50, 36-46.	4.6	104
7	Bond behavior of steel reinforcement in high-performance fiber-reinforced cementitious composite flexural members. Materials and Structures/Materiaux Et Constructions, 2016, 49, 71-86.	1.3	93
8	Unbonded Posttensioned Concrete Bridge Piers. I: Monotonic and Cyclic Analyses. Journal of Bridge Engineering, 2003, 8, 92-101.	1.4	89
9	Investigation of Infill Panels Made from Engineered Cementitious Composites for Seismic Strengthening and Retrofit. Journal of Structural Engineering, 2005, 131, 1712-1720.	1.7	87
10	Mechanical response of PHB- and cellulose acetate natural fiber-reinforced composites for construction applications. Composites Part B: Engineering, 2011, 42, 1920-1928.	5.9	74
11	Characterization of poly-hydroxybutyrate films and hemp fiber reinforced composites exposed to accelerated weathering. Polymer Degradation and Stability, 2012, 97, 870-878.	2.7	65
12	Influence of Hysteretic Behavior on Equivalent Period and Damping of Structural Systems. Journal of Structural Engineering, 2003, 129, 576-585.	1.7	62
13	Characterizing the effects of ambient aging on the mechanical and physical properties of two commercially available bacterial thermoplastics. Polymer Degradation and Stability, 2012, 97, 1922-1929.	2.7	58
14	Impact of Reinforcement Ratio and Loading Type on the Deformation Capacity of High-Performance Fiber-Reinforced Cementitious Composites Reinforced with Mild Steel. Journal of Structural Engineering, 2016, 142, .	1.7	56
15	Bond behavior and interface modeling of reinforced high-performance fiber-reinforced cementitious composites. Cement and Concrete Composites, 2017, 83, 188-201.	4.6	56
16	Historical Analysis of Hydraulic Bridge Collapses in the Continental United States. Journal of Infrastructure Systems, 2017, 23, .	1.0	55
17	Performanceâ€based earthquake engineering assessment of a selfâ€centering, postâ€tensioned concrete bridge system. Earthquake Engineering and Structural Dynamics, 2011, 40, 887-902.	2.5	53
18	Unbonded Posttensioned Concrete Bridge Piers. II: Seismic Analyses. Journal of Bridge Engineering, 2003, 8, 102-111.	1.4	52

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19	Moisture diffusion and its impact on uniaxial tensile response of biobased composites. Composites Part B: Engineering, 2012, 43, 2303-2312.	5.9	51
20	Shake-Table Tests of a 3-Story Masonry-Infilled RC Frame Retrofitted with Composite Materials. Journal of Structural Engineering, 2013, 139, 1340-1351.	1.7	46
21	Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements. Journal of Bridge Engineering, 2010, 15, 240-249.	1.4	45
22	Modeling the kinetics of water transport and hydroexpansion in a lignocellulose-reinforced bacterial copolyester. Polymer, 2012, 53, 2152-2161.	1.8	43
23	Cyclic Response of Nonductile Reinforced Concrete Frames with Unreinforced Masonry Infills Retrofitted with Engineered Cementitious Composites. Journal of Structural Engineering, 2014, 140, .	1.7	43
24	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
25	Predicting the two predominant flexural failure paths of longitudinally reinforced high-performance fiber-reinforced cementitious composite structural members. Engineering Structures, 2019, 199, 109581.	2.6	40
26	A micromechanical model for moisture-induced deterioration in fully biorenewable woodâ€“plastic composites. Composites Part A: Applied Science and Manufacturing, 2013, 50, 81-92.	3.8	32
27	Impact of cyclic loading on longitudinally-reinforced UHPC flexural members with different fiber volumes and reinforcing ratios. Engineering Structures, 2021, 241, 112454.	2.6	32
28	Extruded foams from microbial poly(3â€hydroxybutyrateâ€coâ€3â€hydroxyvalerate) and its blends with cellulose acetate butyrate. Polymer Engineering and Science, 2012, 52, 1495-1508.	1.5	30
29	Behavior of Concrete and ECC Structures under Simulated Earthquake Motion. Journal of Structural Engineering, 2013, 139, 389-399.	1.7	30
30	Impact of fiber distribution and cyclic loading on the bond behavior of steel-reinforced UHPC. Cement and Concrete Composites, 2022, 126, 104338.	4.6	30
31	Assessment of models for anaerobic biodegradation of a model bioplastic: Poly(hydroxybutyrate-co-hydroxyvalerate). Bioresource Technology, 2017, 227, 205-213.	4.8	29
32	Simulation of Unreinforced Masonry Beams Retrofitted with Engineered Cementitious Composites in Flexure. Journal of Materials in Civil Engineering, 2012, 24, 506-515.	1.3	27
33	Seismic Retrofit of Steel Moment-Resisting Frames with High-Performance Fiber-Reinforced Concrete Infill Panels: Large-Scale Hybrid Simulation Experiments. Journal of Structural Engineering, 2014, 140, .	1.7	26
34	Gradual Crushing of Steel Reinforced HPFRCC Beams: Experiments and Simulations. Journal of Structural Engineering, 2021, 147, .	1.7	25
35	Simulation of Deformation Capacity in Reinforced High-Performance Fiber-Reinforced Cementitious Composite Flexural Members. Journal of Structural Engineering, 2018, 144, .	1.7	24
36	Impact of UHPC Tensile Behavior on Steel Reinforced UHPC Flexural Behavior. Journal of Structural Engineering, 2022, 148, .	1.7	24

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37	Strain rate dependence of HPFRCC cylinders in monotonic tension. Materials and Structures/Materiaux Et Constructions, 2011, 44, 391-404.	1.3	23
38	Flexural performance of steel-reinforced engineered cementitious composites with different reinforcing ratios and steel types. Construction and Building Materials, 2020, 231, 117159.	3.2	23
39	Experimental testing of reinforced concrete and reinforced ECC flexural members subjected to various cyclic deformation histories. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	22
40	Biocomposite Fiber-Matrix Treatments that Enhance In-Service Performance Can Also Accelerate End-of-Life Fragmentation and Anaerobic Biodegradation to Methane. Journal of Polymers and the Environment, 2018, 26, 1715-1726.	2.4	22
41	Seismic Performance of Non-Ductile RC Frames with Brick Infill. , 2009, , .		19
42	Mechanics and failure characteristics of hybrid fiber-reinforced concrete (HyFRC) composites with longitudinal steel reinforcement. Engineering Structures, 2019, 183, 243-254.	2.6	19
43	Behavior of unreinforced masonry prisms and beams retrofitted with engineered cementitious composites. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1573-1587.	1.3	18
44	Experimental Testing of Reinforced ECC Beams Subjected to Various Cyclic Deformation Histories. Journal of Structural Engineering, 2018, 144, .	1.7	18
45	Improvement in environmental performance of poly(Î²-hydroxybutyrate)-co-(Î²-hydroxyvalerate) composites through process modifications. Journal of Cleaner Production, 2013, 40, 190-198.	4.6	17
46	Evaluation of a Sprayable, Ductile Cement-Based Composite for the Seismic Retrofit of Unreinforced Masonry Infills. , 2009, , .		16
47	Influence of temporal resolution and processing of exposure data on modeling of chloride ingress and reinforcement corrosion in concrete. Materials and Structures/Materiaux Et Constructions, 2014, 47, 729-748.	1.3	16
48	A modular framework for performance-based durability engineering: From exposure to impacts. Structural Safety, 2014, 50, 78-93.	2.8	16
49	Application of multi-criteria material selection techniques to constituent refinement in biobased composites. Materials & Design, 2013, 52, 1043-1051.	5.1	15
50	Cost-effectiveness analysis of abiraterone, docetaxel or placebo plus androgen deprivation therapy for hormone-sensitive advanced prostate cancer. Einstein (Sao Paulo, Brazil), 2019, 17, eGS4414.	0.3	15
51	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
52	Experimental Response of Precast Infill Panel Connections and Panels Made with DFRCC. Journal of Advanced Concrete Technology, 2003, 1, 327-333.	0.8	12
53	Methodology to assess end-of-life anaerobic biodegradation kinetics and methane production potential for composite materials. Composites Part A: Applied Science and Manufacturing, 2017, 95, 388-399.	3.8	12
54	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

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55	Nonlinear Constitutive Model for Anisotropic Biobased Composite Materials. Journal of Engineering Mechanics - ASCE, 2014, 140, .	1.6	7
56	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
57	Use of Crowdsourced Online Surveys to Study the Impact of Architectural and Design Choices on Wellbeing. Frontiers in Sustainable Cities, 2022, 4, .	1.2	6
58	Mechanical characterization and modeling of poly (Î²â€hydroxybutyrate)â€coâ€poly(Î²â€hydroxyvalerate)â€“Alfa fiberâ€reinforced composites. Polymer Composites, 2014, 35, 1758-1766.	2.3	5
59	Simulation of self-centring fibre-reinforced concrete columns. Proceedings of the Institution of Civil Engineers: Engineering and Computational Mechanics, 2008, 161, 77-84.	0.4	4
60	Engineered Biomaterials for Construction: A Cradle-to-Cradle Design Methodology for Green Material Development. International Journal of Environmental, Cultural, Economic and Social Sustainability, 2011, 7, 157-166.	0.1	3
61	Comparison of Retrofitting Techniques for Existing Steel Moment Resisting Frames. , 2009, , .		2
62	Effect of bubble nucleating agents derived from biochar on the foaming mechanism of poly lactic acid foams. Applied Surface Science Advances, 2021, 3, 100059.	2.9	2
63	Evaluation of Functional Units Including Time-Dependent Properties for Environmental Impact Modeling of Biobased Composites. Journal of Biobased Materials and Bioenergy, 2013, 7, 588-599.	0.1	2
64	Comparison of nanocrystalline cellulose dispersion versus surface nucleation in poly(3â€hydroxybutyrateâ€coâ€3â€hydroxyvalerate) crystallization. SPE Polymers, 2020, 1, 15-25.	1.4	1
65	Introduction: Special Issue on â€œBiobased Construction Materialsâ€•in the Journal of Renewable Materials. Journal of Renewable Materials, 2015, 3, 161-162.	1.1	0
66	Integrating a Digital Textbook into a Statics Course. , 2018, , .		0
67	IMPLEMENTATION OF MULTISCALE MODELS IN A PROBABILISTIC FRAMEWORK FOR PERFORMANCE-BASED DURABILITY ENGINEERING. Springer Series in Geomechanics and Geoengineering, 2011, , 173-176.	0.0	0
68	NONLINEAR MICROMECHANICAL MODELING OF HYGROTHERMAL EFFECTS ON STRUCTURAL BIOBASED COMPOSITE MATERIALS. Springer Series in Geomechanics and Geoengineering, 2011, , 189-192.	0.0	0