Zeliang Liu

List of Publications by Year
in descending order

20 papers	1,782 citations	516681 16 h-index	794568 19 g-index
20 all docs	20 docs citations	20 times ranked	1191 citing authors

#	Article	IF	Citations
1	A framework for data-driven analysis of materials under uncertainty: Countering the curse of dimensionality. Computer Methods in Applied Mechanics and Engineering, 2017, 320, 633-667.	6.6	350
2	Self-consistent clustering analysis: An efficient multi-scale scheme for inelastic heterogeneous materials. Computer Methods in Applied Mechanics and Engineering, 2016, 306, 319-341.	6.6	298
3	A deep material network for multiscale topology learning and accelerated nonlinear modeling of heterogeneous materials. Computer Methods in Applied Mechanics and Engineering, 2019, 345, 1138-1168.	6.6	190
4	Machine learning for metal additive manufacturing: predicting temperature and melt pool fluid dynamics using physics-informed neural networks. Computational Mechanics, 2021, 67, 619-635.	4.0	176
5	Data-driven multi-scale multi-physics models to derive processâ€“structureâ€“property relationships for additive manufacturing. Computational Mechanics, 2018, 61, 521-541.	4.0	162
6	Exploring the 3D architectures of deep material network in data-driven multiscale mechanics. Journal of the Mechanics and Physics of Solids, 2019, 127, 20-46.	4.8	117
7	Microstructural material database for self-consistent clustering analysis of elastoplastic strain softening materials. Computer Methods in Applied Mechanics and Engineering, 2018, 330, 547-577.	6.6	115
8	An integrated processâ€“structureâ€“property modeling framework for additive manufacturing. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 184-204.	6.6	98
9	Modeling process-structure-property relationships for additive manufacturing. Frontiers of Mechanical Engineering, 2018, 13, 482-492.	4.3	64
10	Transfer learning of deep material network for seamless structureâ€“property predictions. Computational Mechanics, 2019, 64, 451-465.	4.0	39
11	Deep material network with cohesive layers: Multi-stage training and interfacial failure analysis. Computer Methods in Applied Mechanics and Engineering, 2020, 363, 112913.	6.6	33
12	An extended micromechanics method for probing interphase properties in polymer nanocomposites. Journal of the Mechanics and Physics of Solids, 2016, 95, 663-680.	4.8	32
13	Data-Driven Self-consistent Clustering Analysis of Heterogeneous Materials with Crystal Plasticity. Computational Methods in Applied Sciences (Springer), 2018, , 221-242.	0.3	25
14	Data-Driven Mechanistic Modeling of Influence of Microstructure on High-Cycle Fatigue Life of Nickel Titanium. Jom, 2018, 70, 1154-1158.	1.9	24
15	A statistical descriptor based volume-integral micromechanics model of heterogeneous material with arbitrary inclusion shape. Computational Mechanics, 2015, 55, 963-981.	4.0	17
16	Cell division in deep material networks applied to multiscale strain localization modeling. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113914.	6.6	16
17	Microstructure-guided deep material network for rapid nonlinear material modeling and uncertainty quantification. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115197.	6.6	12
18	Modular-based multiscale modeling on viscoelasticity of polymer nanocomposites. Computational Mechanics, 2017, 59, 187-201.	4.0	9

#	Article	IF	Citations
19	A Data-Driven Multiscale Theory for Modeling Damage and Fracture of Composite Materials. Lecture Notes in Computational Science and Engineering, 2019, , 135-148.	0.3	3
20	Multiscale Modeling of Carbon Fiber Reinforced Polymer (CFRP) for Integrated Computational Materials Engineering Process. , 0, , .		2