

Orion L Kafka

List of Publications by Year in descending order

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Version: 2024-02-01

21
papers

1,129
citations

623734

14
h-index

713466

21
g-index

22
all docs

22
docs citations

22
times ranked

921
citing authors

#	ARTICLE	IF	CITATIONS
1	Linking process, structure, property, and performance for metal-based additive manufacturing: computational approaches with experimental support. <i>Computational Mechanics</i> , 2016, 57, 583-610.	4.0	190
2	Data-driven multi-scale multi-physics models to derive process-structure-property relationships for additive manufacturing. <i>Computational Mechanics</i> , 2018, 61, 521-541.	4.0	162
3	Multi-scale modeling of electron beam melting of functionally graded materials. <i>Acta Materialia</i> , 2016, 115, 403-412.	7.9	118
4	Universal scaling laws of keyhole stability and porosity in 3D printing of metals. <i>Nature Communications</i> , 2021, 12, 2379.	12.8	105
5	An integrated process-structure-property modeling framework for additive manufacturing. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 339, 184-204.	6.6	98
6	Hierarchical Deep Learning Neural Network (HiDeNN): An artificial intelligence (AI) framework for computational science and engineering. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 373, 113452.	6.6	77
7	Clustering discretization methods for generation of material performance databases in machine learning and design optimization. <i>Computational Mechanics</i> , 2019, 64, 281-305.	4.0	74
8	Modeling process-structure-property relationships for additive manufacturing. <i>Frontiers of Mechanical Engineering</i> , 2018, 13, 482-492.	4.3	64
9	Self-consistent clustering analysis for multiscale modeling at finite strains. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 349, 339-359.	6.6	53
10	Grain growth prediction in selective electron beam melting of Ti-6Al-4V with a cellular automaton method. <i>Materials and Design</i> , 2021, 199, 109410.	7.0	38
11	Data science for finite strain mechanical science of ductile materials. <i>Computational Mechanics</i> , 2019, 64, 33-45.	4.0	26
12	Data-Driven Self-consistent Clustering Analysis of Heterogeneous Materials with Crystal Plasticity. <i>Computational Methods in Applied Sciences (Springer)</i> , 2018, , 221-242.	0.3	25
13	Data-Driven Mechanistic Modeling of Influence of Microstructure on High-Cycle Fatigue Life of Nickel Titanium. <i>Jom</i> , 2018, 70, 1154-1158.	1.9	24
14	Cooling rate effect on tensile strength of laser deposited Inconel 718. <i>Procedia Manufacturing</i> , 2018, 26, 912-919.	1.9	18
15	Image-based multiscale modeling with spatially varying microstructures from experiments: Demonstration with additively manufactured metal in fatigue and fracture. <i>Journal of the Mechanics and Physics of Solids</i> , 2021, 150, 104350.	4.8	17
16	Multiresolution clustering analysis for efficient modeling of hierarchical material systems. <i>Computational Mechanics</i> , 2021, 67, 1293-1306.	4.0	14
17	Evaluation of a modified void descriptor function to uniquely characterize pore networks and predict fracture-related properties in additively manufactured metals. <i>Acta Materialia</i> , 2022, 223, 117464.	7.9	9
18	Microscale Structure to Property Prediction for Additively Manufactured IN625 through Advanced Material Model Parameter Identification. <i>Integrating Materials and Manufacturing Innovation</i> , 2021, 10, 142-156.	2.6	8

#	ARTICLE	IF	CITATIONS
19	Macroscale Property Prediction for Additively Manufactured IN625 from Microstructure Through Advanced Homogenization. Integrating Materials and Manufacturing Innovation, 2021, 10, 360-372.	2.6	5
20	Implementation and application of the multiresolution continuum theory. Computational Mechanics, 2019, 63, 631-647.	4.0	2
21	Surface globularization generated by standard PBF-EB Ti-6Al-4V processing achieves an improvement in fatigue performance. International Journal of Fatigue, 2022, 159, 106810.	5.7	1