

Franz Bamer

List of Publications by Year in descending order

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papers

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times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular dynamics simulation of interface atomic diffusion in ultrasonic metal welding. International Journal of Advanced Manufacturing Technology, 2022, 118, 2339-2353.	3.0	6
2	Training Data Selection for Machine Learning-Enhanced Monte Carlo Simulations in Structural Dynamics. Applied Sciences (Switzerland), 2022, 12, 581.	2.5	7
3	Explainable Artificial Intelligence for Mechanics: Physics-Explaining Neural Networks for Constitutive Models. Frontiers in Materials, 2022, 8, .	2.4	13
4	Self-organized criticality in fracture models at different scales. Examples and Counterexamples, 2022, 2, 100054.	0.6	6
5	Closed form solutions for the dynamics of a pressurized elastoplastic thin-walled tube. Thin-Walled Structures, 2022, 174, 109080.	5.3	0
6	Non-incremental response evaluation in geometrically nonlinear structural dynamics using a space-time stiffness operator. Computational Mechanics, 2022, 70, 309-333.	4.0	3
7	Constructing the Hamiltonian from the Behaviour of a Dynamical System by Proper Symplectic Decomposition. Lecture Notes in Computer Science, 2021, , 439-447.	1.3	0
8	A Newmark space-time approach in structural mechanics. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000304.	0.2	2
9	A machine learning enhanced structural response prediction strategy due to seismic excitation. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000294.	0.2	5
10	Machine-learning-enhanced tail end prediction of structural response statistics in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2021, 50, 2098-2114.	4.4	27
11	A Newmark space-time formulation in structural dynamics. Computational Mechanics, 2021, 67, 1331-1348.	4.0	7
12	A Monte Carlo Simulation Approach in Non-linear Structural Dynamics Using Convolutional Neural Networks. Frontiers in Built Environment, 2021, 7, .	2.3	9
13	A non-incremental numerical method for dynamic elastoplastic problems by the symplectic Brezis-Ekeland-Nayroles principle. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113908.	6.6	3
14	Data-driven classification of elementary rearrangement events in silica glass. Scripta Materialia, 2021, 205, 114179.	5.2	8
15	On the Poisson's ratio of an amorphous 2D network material. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000318.	0.2	2
16	An artificial intelligence approach to model nonlinear continua by intelligent meta-elements. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000300.	0.2	1
17	A comparison of two neural network architectures for fast structural response prediction. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	2
18	Workflow concepts to model nonlinear mechanics with computational intelligence. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	2

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19	Numerical investigation of the Poisson's ratio of an amorphous bilayer 2D network material. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	1
20	A non-incremental solution procedure for elastoplastic problems in structural mechanics. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
21	Elementary plastic events in a Zachariasen glass under shear and pressure. Materialia, 2020, 9, 100556.	2.7	18
22	Stone-Wales defect interaction in quasistatically deformed 2D silica. Journal of Materials Science, 2020, 55, 3470-3483.	3.7	12
23	Prediction of lower limb joint angles and moments during gait using artificial neural networks. Medical and Biological Engineering and Computing, 2020, 58, 211-225.	2.8	73
24	Prediction of ground reaction force and joint moments based on optical motion capture data during gait. Medical Engineering and Physics, 2020, 86, 29-34.	1.7	27
25	Origin of reversible and irreversible atomic-scale rearrangements in a model two-dimensional network glass. Physical Review E, 2020, 102, 033006.	2.1	12
26	Artificial Neural Networks in Motion Analysis—Applications of Unsupervised and Heuristic Feature Selection Techniques. Sensors, 2020, 20, 4581.	3.8	22
27	An intelligent nonlinear meta element for elastoplastic continua: deep learning using a new Time-distributed Residual U-Net architecture. Computer Methods in Applied Mechanics and Engineering, 2020, 366, 113088.	6.6	39
28	Vitreous 2D silica under tension: From brittle to ductile behaviour. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 780, 139189.	5.6	16
29	Artificial neural networks in structural dynamics: A new modular radial basis function approach vs. convolutional and feedforward topologies. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112989.	6.6	47
30	Quasistatic analysis of elastoplastic structures by the proper generalized decomposition in a space-time approach. Mechanics Research Communications, 2020, 104, 103500.	1.8	9
31	Deep convolutional neural networks in structural dynamics under consideration of viscoplastic material behaviour. Mechanics Research Communications, 2020, 108, 103565.	1.8	24
32	Estimation of Gait Mechanics Based on Simulated and Measured IMU Data Using an Artificial Neural Network. Frontiers in Bioengineering and Biotechnology, 2020, 8, 41.	4.1	92
33	Continuous Zachariasen carbon monolayers under tensile deformation: Insights from molecular dynamics simulations. Extreme Mechanics Letters, 2020, 38, 100744.	4.1	6
34	Mechanik 4.0. Künstliche Intelligenz zur Analyse mechanischer Systeme. , 2020, , 553-567.		2
35	Lebenswissenschaften 4.0—Sensorik und maschinelles Lernen in der Bewegungsanalyse. , 2020, , 1077-1093.		0
36	ON SPACE-TIME FORMULATIONS IN STRUCTURAL MECHANICS USING THE PROPER GENERALIZED DECOMPOSITION. , 2020, , .		0

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37	An efficient Monte Carlo strategy for elasto-plastic structures based on recurrent neural networks. Acta Mechanica, 2019, 230, 3279-3293.	2.1	39
38	A visco-elastoplastic pounding damage formulation. Engineering Structures, 2019, 197, 109373.	5.3	6
39	Intelligent prediction of kinetic parameters during cutting manoeuvres. Medical and Biological Engineering and Computing, 2019, 57, 1833-1841.	2.8	17
40	Athermal mechanical analysis of Stone-Wales defects in two-dimensional silica. Computational Materials Science, 2019, 163, 301-307.	3.0	18
41	Neural network based constitutive modeling of nonlinear viscoplastic structural response. Mechanics Research Communications, 2019, 95, 85-88.	1.8	44
42	Modelling silica bilayers based on experimental data. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900475.	0.2	1
43	On the fracture behavior of vitreous two-dimensional silica. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900460.	0.2	0
44	A damage detection study of a bridge using bypassing vehicles and computational intelligence. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900301.	0.2	0
45	Artificial neural networks in structural dynamics. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900128.	0.2	0
46	Assessment of the measurement accuracy of inertial sensors during different tasks of daily living. Journal of Biomechanics, 2019, 84, 81-86.	2.1	32
47	Plasticity in vitreous silica induced by cyclic tension considering rate-dependence: Role of the network topology. Journal of Non-Crystalline Solids, 2019, 503-504, 176-181.	3.1	22
48	Stress response of 2D silica under quasi-static tension. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900467.	0.2	0
49	The influence of the network topology on the deformation and fracture behaviour of silica glass: A molecular dynamics study. Computational Materials Science, 2018, 149, 162-169.	3.0	38
50	Efficient solution of the multiple seismic pounding problem using hierarchical substructure techniques. Computational Mechanics, 2018, 62, 761-782.	4.0	14
51	Determination of gait parameters in real-world environment using low-cost inertial sensors. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800014.	0.2	4
52	An intelligent meta-element for linear elastic continua. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800283.	0.2	9
53	On the reduced solution of the earthquake-induced pounding problem. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800187.	0.2	0
54	The effect of the medium-range configuration on the atomistic fracture behaviour of vitreous silica. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800418.	0.2	0

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55	Investigation of the network topology of vitreous silica during cyclic tensile loading. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800441.	0.2	3
56	Artificial neural networks and intelligent finite elements in non-linear structural mechanics. Thin-Walled Structures, 2018, 131, 102-106.	5.3	71
57	A nonlinear visco-elastoplastic model for structural pounding. Earthquake Engineering and Structural Dynamics, 2018, 47, 2490-2495.	4.4	14
58	A Structural Pounding Formulation Using Systematic Modal Truncation. Shock and Vibration, 2018, 2018, 1-15.	0.6	5
59	A Hertz-pounding formulation with a nonlinear damping and a dry friction element. Acta Mechanica, 2018, 229, 4485-4494.	2.1	4
60	A new model order reduction strategy adapted to nonlinear problems in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2017, 46, 537-559.	4.4	41
61	Neural network representation of a phase-field model for brittle fracture. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 253-254.	0.2	12
62	Biomechanical evaluation of a femoral neck fracture implant using a novel test-stand. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 209-210.	0.2	1
63	An efficient Monte Carlo simulation strategy based on model order reduction and artificial neural networks. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 287-288.	0.2	12
64	An explicit reduced order integration scheme for contact problems in structural dynamics. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 349-350.	0.2	2
65	An efficient response identification strategy for nonlinear structures subject to nonstationary generated seismic excitations. Mechanics Based Design of Structures and Machines, 2017, 45, 313-330.	4.7	25
66	Model reduction and submodelling using neural networks. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 537-538.	0.2	8
67	A Nonlinear Deterministic Mode Decomposition Strategy for High-Dimensional Monte Carlo Simulations. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 187-188.	0.2	5
68	AN EFFICIENT ORDER REDUCTION STRATEGY IN EARTHQUAKE NONLINEAR RESPONSE ANALYSIS OF STRUCTURES. , 2016, , .		0
69	Application of the proper orthogonal decomposition for linear and nonlinear structures under transient excitations. Acta Mechanica, 2012, 223, 2549-2563.	2.1	35