# Franz Bamer

List of Publications by Year
in descending order

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Version: 2024-02-01

| 69 | 988 | 430442 | 476904 |
|---|---|---|---|
| papers | citations | 18 | 29 |
| | | h-index | g-index |

| 72 | 72 | 72 | 547 |
|---|---|---|---|
| all docs | docs citations | times ranked | 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. | 1.5 | 6 |
| 2 | Training Data Selection for Machine Learning-Enhanced Monte Carlo Simulations in Structural Dynamics. Applied Sciences (Switzerland), 2022, 12, 581. | 1.3 | 7 |
| 3 | Explainable Artificial Intelligence for Mechanics: Physics-Explaining Neural Networks for Constitutive Models. Frontiers in Materials, 2022, 8, . | 1.2 | 13 |
| 4 | Self-organized criticality in fracture models at different scales. Examples and Counterexamples, 2022, 2, 100054. | 0.3 | 6 |
| 5 | Closed form solutions for the dynamics of a pressurized elastoplastic thin-walled tube. Thin-Walled Structures, 2022, 174, 109080. | 2.7 | 0 |
| 6 | Non-incremental response evaluation in geometrically nonlinear structural dynamics using a space-time stiffness operator. Computational Mechanics, 2022, 70, 309-333. | 2.2 | 3 |
| 7 | Constructing the Hamiltonian from the Behaviour of a Dynamical System by Proper Symplectic Decomposition. Lecture Notes in Computer Science, 2021, , 439-447. | 1.0 | 0 |
| 8 | A Newmark spaceâ€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 | Machineâ€learningâ€enhanced tail end prediction of structural response statistics in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2021, 50, 2098-2114. | 2.5 | 27 |
| 11 | A Newmark space-time formulation in structural dynamics. Computational Mechanics, 2021, 67, 1331-1348. | 2.2 | 7 |
| 12 | A Monte Carlo Simulation Approach in Non-linear Structural Dynamics Using Convolutional Neural Networks. Frontiers in Built Environment, 2021, 7, . | 1.2 | 9 |
| 13 | A non-incremental numerical method for dynamic elastoplastic problems by the symplectic Brezisâ€“Ekelandâ€“Nayroles principle. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113908. | 3.4 | 3 |
| 14 | Data-driven classification of elementary rearrangement events in silica glass. Scripta Materialia, 2021, 205, 114179. | 2.6 | 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 metaâ€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 nonâ€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. | 1.3 | 18 |
| 22 | Stoneâ€“Wales defect interaction in quasistatically deformed 2D silica. Journal of Materials Science, 2020, 55, 3470-3483. | 1.7 | 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. | 1.6 | 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. | 0.8 | 27 |
| 25 | Origin of reversible and irreversible atomic-scale rearrangements in a model two-dimensional network glass. Physical Review E, 2020, 102, 033006. | 0.8 | 12 |
| 26 | Artificial Neural Networks in Motion Analysisâ€”Applications of Unsupervised and Heuristic Feature Selection Techniques. Sensors, 2020, 20, 4581. | 2.1 | 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. | 3.4 | 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. | 2.6 | 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. | 3.4 | 47 |
| 30 | Quasistatic analysis of elastoplastic structures by the proper generalized decomposition in a space-time approach. Mechanics Research Communications, 2020, 104, 103500. | 1.0 | 9 |
| 31 | Deep convolutional neural networks in structural dynamics under consideration of viscoplastic material behaviour. Mechanics Research Communications, 2020, 108, 103565. | 1.0 | 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. | 2.0 | 92 |
| 33 | Continuous Zachariasen carbon monolayers under tensile deformation: Insights from molecular dynamics simulations. Extreme Mechanics Letters, 2020, 38, 100744. | 2.0 | 6 |
| 34 | Mechanik 4.0. KÃ¼nstliche Intelligenz zur Analyse mechanischer Systeme. , 2020, , 553-567. | | 2 |
| 35 | Lebenswissenschaften 4.0Ââ€“ 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. | 1.1 | 39 |
| 38 | A visco-elastoplastic pounding damage formulation. Engineering Structures, 2019, 197, 109373. | 2.6 | 6 |
| 39 | Intelligent prediction of kinetic parameters during cutting manoeuvres. Medical and Biological Engineering and Computing, 2019, 57, 1833-1841. | 1.6 | 17 |
| 40 | Athermal mechanical analysis of Stone-Wales defects in two-dimensional silica. Computational Materials Science, 2019, 163, 301-307. | 1.4 | 18 |
| 41 | Neural network based constitutive modeling of nonlinear viscoplastic structural response. Mechanics Research Communications, 2019, 95, 85-88. | 1.0 | 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 twoâ€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. | 0.9 | 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. | 1.5 | 22 |
| 48 | Stress response of 2D silica under quasiâ€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. | 1.4 | 38 |
| 50 | Efficient solution of the multiple seismic pounding problem using hierarchical substructure techniques. Computational Mechanics, 2018, 62, 761-782. | 2.2 | 14 |
| 51 | Determination of gait parameters in realâ€world environment using lowâ€cost inertial sensors. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800014. | 0.2 | 4 |
| 52 | An intelligent metaâ€element for linear elastic continua. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800283. | 0.2 | 9 |
| 53 | On the reduced solution of the earthquakeâ€induced pounding problem. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800187. | 0.2 | 0 |
| 54 | The effect of the mediumâ€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. | 2.7 | 71 |
| 57 | A nonlinear viscoâ€elastoplastic model for structural pounding. Earthquake Engineering and Structural Dynamics, 2018, 47, 2490-2495. | 2.5 | 14 |
| 58 | A Structural Pounding Formulation Using Systematic Modal Truncation. Shock and Vibration, 2018, 2018, 1-15. | 0.3 | 5 |
| 59 | A Hertz-pounding formulation with a nonlinear damping and a dry friction element. Acta Mechanica, 2018, 229, 4485-4494. | 1.1 | 4 |
| 60 | A new model order reduction strategy adapted to nonlinear problems in earthquake engineering. Earthquake Engineering and Structural Dynamics, 2017, 46, 537-559. | 2.5 | 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 eï¬ƒcient response identification strategy for nonlinear structures subject to nonstationary generated seismic excitations. Mechanics Based Design of Structures and Machines, 2017, 45, 313-330. | 3.4 | 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 Highâ€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. | 1.1 | 35 |