Geralf HÃ¼tter

List of Publications by Year
in descending order

45 papers	815 citations	430754 18 h-index	501076 28 g-index
46 all docs	46 docs citations	46 times ranked	549 citing authors

#	Article	IF	Citations
1	Analytical solution of the cylindrical torsion problem for the relaxed micromorphic continuum and other generalized continua (including full derivations). Mathematics and Mechanics of Solids, 2022, 27, 507-553.	1.5	9
2	Influence of the Foam Morphology on the Mechanical Behavior of Flowâ€Through Foam Filters During Filtration Processes. Advanced Engineering Materials, 2022, 24, 2100784.	1.6	3
3	A Hybrid Approach Employing Neural Networks to Simulate the Elastoâ€Plastic Deformation Behavior of 3Dâ€Foam Structures. Advanced Engineering Materials, 2022, 24, 2100641.	1.6	9
4	Micromechanical simulation of fatigue in nodular cast iron under stressâ€controlled loading. Material Design and Processing Communications, 2021, 3, e214.	0.5	2
5	A hybrid approach for the multiâ€scale simulation of irreversible material behavior incorporating neural networks. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000248.	0.2	1
6	Analytical solutions of the simple shear problem for micromorphic models and other generalized continua. Archive of Applied Mechanics, 2021, 91, 2237-2254.	1.2	18
7	Influence of topology and porosity on size effects in stripes of cellular material with honeycomb structure under shear, tension and bending. Mechanics of Materials, 2021, 154, 103727.	1.7	8
8	Analytical solutions of the cylindrical bending problem for the relaxed micromorphic continuum and other generalized continua. Continuum Mechanics and Thermodynamics, 2021, 33, 1505-1539.	1.4	16
9	An efficient monolithic solution scheme for FE2 problems. Computer Methods in Applied Mechanics and Engineering, 2021, 382, 113886.	3.4	21
10	Efficient monolithic solution of FE2 problems. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
11	A hybrid approach to simulate the homogenized irreversible elasticâ€“plastic deformations and damage of foams by neural networks. International Journal of Plasticity, 2020, 126, 102624.	4.1	60
12	Kinematics and constitutive relations in the stress-gradient theory: interpretation by homogenization. International Journal of Solids and Structures, 2020, 193-194, 90-97.	1.3	8
13	On the identification and uniqueness of constitutive parameters for a non-local GTN-model. Engineering Fracture Mechanics, 2020, 229, 106817.	2.0	26
14	On the micro-macro relation for the microdeformation in the homogenization towards micromorphic and micropolar continua. Journal of the Mechanics and Physics of Solids, 2019, 127, 62-79.	2.3	26
15	Characterising Fatigue Behaviour of Nodular Cast Iron Using Micromechanical Simulations. MATEC Web of Conferences, 2019, 300, 13002.	0.1	0
16	Numerical investigation of low cycle fatigue mechanism in nodular cast iron. International Journal of Fatigue, 2018, 113, 290-298.	2.8	15
17	An efficient FE-implementation of implicit gradient-enhanced damage models to simulate ductile failure. Engineering Fracture Mechanics, 2018, 199, 41-60.	2.0	54
18	Colemanâ€“Noll Procedure for Classical and Generalized Continuum Theories. , 2018, , 1-8.		1

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19	A Novel Micromechanics Approach for Understanding of Fatigue in Nodular Cast Iron. Procedia Structural Integrity, 2018, 13, 607-612.	0.3	2
20	Effect of Gradient Plasticity on Crack Initiation and Propagation in the Ductile-Brittle Transition Region of Ferritic Steel. Procedia Structural Integrity, 2018, 13, 45-50.	0.3	1
21	Dislocation pile-up and cleavage: effects of strain gradient plasticity on micro-crack initiation in ferritic steel. International Journal of Fracture, 2018, 214, 1-15.	1.1	9
22	A micromechanical gradient extension of Gursonâ€™s model of ductile damage within the theory of microdilatational media. International Journal of Solids and Structures, 2017, 110-111, 15-23.	1.3	19
23	Influence of carbide particles on crack initiation and propagation with competing ductile-brittle transition in ferritic steel. Theoretical and Applied Fracture Mechanics, 2017, 92, 89-98.	2.1	24
24	Homogenization of a Cauchy continuum towards a micromorphic continuum. Journal of the Mechanics and Physics of Solids, 2017, 99, 394-408.	2.3	47
25	Micromorphic homogenisation and its application to a model of ductile damage. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 599-600.	0.2	6
26	Micromechanical Modeling of Crack Initiation and Propagation in the Ductile-Brittle Transition Region. Key Engineering Materials, 2016, 713, 58-61.	0.4	0
27	An extended Colemanâ€“Noll procedure for generalized continuum theories. Continuum Mechanics and Thermodynamics, 2016, 28, 1935-1941.	1.4	11
28	Micromorphic Homogenisation of a Porous Medium: Application to Size Effects and Quasiâ€Brittle Damage. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 347-348.	0.2	0
29	Meinhard Kuna: Physics and Engineering at the Crack Tipâ€"A Retrospective. , 2016, , 3-22.		0
30	Application of a microstrain continuum to size effects in bending and torsion of foams. International Journal of Engineering Science, 2016, 101, 81-91.	2.7	16
31	Micromechanisms of fracture in nodular cast iron: From experimental findings towards modeling strategies â€“ A review. Engineering Fracture Mechanics, 2015, 144, 118-141.	2.0	75
32	Micromechanical modeling of crack propagation in nodular cast iron with competing ductile and cleavage failure. Engineering Fracture Mechanics, 2015, 147, 388-397.	2.0	20
33	Micromorphic homogenization of a porous medium: elastic behavior and quasi-brittle damage. Continuum Mechanics and Thermodynamics, 2015, 27, 1059-1072.	1.4	19
34	A modeling approach for the complete ductileâ€“brittle transition region: cohesive zone in combination with a non-local Gurson-model. International Journal of Fracture, 2014, 185, 129-153.	1.1	33
35	Size effects in ductile failure of porous materials containing two populations of voids. European Journal of Mechanics, A/Solids, 2014, 45, 8-19.	2.1	33
36	Simulation of fatigue crack growth with a cyclic cohesive zone model. International Journal of Fracture, 2014, 188, 23-45.	1.1	61

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37	Size effects due to secondary voids during ductile crack propagation. International Journal of Solids and Structures, 2014, 51, 839-847.	1.3	17
38	Micromechanical Modeling of Crack Propagation with Competing Ductile and Cleavage Failure. , 2014, 3, 428-433.		6
39	A first-order strain gradient damage model for simulating quasi-brittle failure in porous elastic solids. Archive of Applied Mechanics, 2013, 83, 955-967.	1.2	9
40	Simulation of ductile crack initiation and propagation by means of a non-local Gurson-model. International Journal of Solids and Structures, 2013, 50, 662-671.	1.3	53
41	Consistent simulation of ductile crack propagation with discrete 3D voids. Computational Materials Science, 2013, 80, 61-70.	1.4	19
42	Simulation of crack propagation using a gradient-enriched ductile damage model based on dilatational strain. Engineering Fracture Mechanics, 2012, 95, 13-28.	2.0	40
43	Ductile crack propagation by plastic collapse of the intervoid ligaments. International Journal of Fracture, 2012, 176, 81-96.	1.1	11
44	Simulation of Crack Propagation under Small-Scale Yielding by means of a Non-local GTN-Model. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 157-158.	0.2	0
45	Simulation of local instabilities during crack propagation in the ductileâ€"brittle transition region. European Journal of Mechanics, A/Solids, 2011, 30, 195-203.	2.1	7