

Heiko Andrae

List of Publications by Year in descending order

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38
papers

1,597
citations

687363

13
h-index

414414

32
g-index

38
all docs

38
docs citations

38
times ranked

1237
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Shrinkable Objects as Obtained from 4D Printing. <i>Macromolecular Materials and Engineering</i> , 2022, 307, 2100619.	3.6	11
2	A multiscale high-cycle fatigue-damage model for the stiffness degradation of fiber-reinforced materials based on a mixed variational framework. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 388, 114198.	6.6	13
3	Parametric optimization of the effective thermal conductivity for a three-phase particle-filled composite. <i>Computational Materials Science</i> , 2022, 205, 111214.	3.0	2
4	A space-time upscaling technique for modeling high-cycle fatigue-damage of short-fiber reinforced composites. <i>Composites Science and Technology</i> , 2022, 222, 109340.	7.8	11
5	An efficient semi-implicit solver for solid electrolyte interphase growth in Li-ion batteries. <i>Applied Mathematical Modelling</i> , 2022, 109, 741-759.	4.2	3
6	Optimal design of shape changing mechanical metamaterials at finite strains. <i>International Journal of Solids and Structures</i> , 2022, 252, 111769.	2.7	6
7	A computational multi-scale model for the stiffness degradation of short-fiber reinforced plastics subjected to fatigue loading. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 373, 113522.	6.6	27
8	Optimal design of unit-cell based programmable materials. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000010.	0.2	0
9	A fast numerical method of introducing the strengthening effect of residual stress and strain to tensile behavior of metal matrix composites. <i>Journal of Materials Science and Technology</i> , 2021, 87, 167-175.	10.7	15
10	A multi-scale fatigue-damage model for fiber-reinforced polymers. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000091.	0.2	0
11	Electro-chemo-mechanical simulation for lithium ion batteries across the scales. <i>International Journal of Solids and Structures</i> , 2020, 184, 24-39.	2.7	27
12	An enhanced finite element model considering multi strengthening and damage mechanisms in particle reinforced metal matrix composites. <i>Composite Structures</i> , 2019, 226, 111281.	5.8	40
13	Additive Manufacturing of Information Carriers Based on Shape Memory Polyester Urethane. <i>Polymers</i> , 2019, 11, 1005.	4.5	17
14	A contact algorithm for voxel-based meshes using an implicit boundary representation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 352, 276-299.	6.6	8
15	Efficient Multiscale Methods for Viscoelasticity and Fatigue of Short Fiber-Reinforced Polymers. <i>Key Engineering Materials</i> , 2019, 809, 473-479.	0.4	2
16	Domain decomposition preconditioners for multiscale problems in linear elasticity. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2171.	1.6	1
17	Fiber orientation interpolation for the multiscale analysis of short fiber reinforced composite parts. <i>Computational Mechanics</i> , 2018, 61, 729-750.	4.0	56
18	Modelling the microstructure and computing effective elastic properties of sand core materials. <i>International Journal of Solids and Structures</i> , 2018, 143, 1-17.	2.7	27

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19	Fast FFT based solver for rate-dependent deformations of composites and nonwovens. International Journal of Solids and Structures, 2018, 154, 33-42.	2.7	15
20	Virtual characterization of MDF fiber network. European Journal of Wood and Wood Products, 2017, 75, 397-407.	2.9	13
21	A fast immersed interface method for the Cahn-Hilliard equation with arbitrary boundary conditions in complex domains. Computational Materials Science, 2017, 140, 22-31.	3.0	3
22	Contact Mechanics in Computational Homogenization. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 607-608.	0.2	0
23	Numerical Solution of Contact Problems using Level Set Methods on Voxel Discretizations. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 541-542.	0.2	0
24	Kombination von Thermografieaufnahmen mit numerischen Strömungssimulationen zur Bestimmung des Volumenstroms durch Leckagen. Bauphysik, 2016, 38, 222-230.	0.5	1
25	Estimation of fiber orientation and fiber bundles of MDF. Materials and Structures/Materiaux Et Constructions, 2016, 49, 4003-4012.	3.1	10
26	Multiscale modeling of macroscopic and microscopic residual stresses in metal matrix composites using 3D realistic digital microstructure models. Composite Structures, 2016, 137, 18-32.	5.8	25
27	Microscopic Simulation of Thermally-Induced 2nd Order Eigenstresses in AlSi-Alloys. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 165-166.	0.2	0
28	The topological gradient in anisotropic elasticity with an eye towards lightweight design. Mathematical Methods in the Applied Sciences, 2014, 37, 1624-1641.	2.3	5
29	Numerical prediction of the stiffness and strength of medium density fiberboards. Mechanics of Materials, 2014, 79, 73-84.	3.2	34
30	An accelerated simulation method of medium density wood fiber boards. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 555-556.	0.2	1
31	Voxel-based fast solution of the Lippmann-Schwinger equation with smooth material interfaces. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 579-580.	0.2	6
32	Digital rock physics benchmarks—Part I: Imaging and segmentation. Computers and Geosciences, 2013, 50, 25-32.	4.2	493
33	Digital rock physics benchmarks—part II: Computing effective properties. Computers and Geosciences, 2013, 50, 33-43.	4.2	442
34	Fluid-structure interaction in porous media for loaded filter pleats. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 489-490.	0.2	1
35	Structural Simulation of a Bone-Prosthesis System of the Knee Joint. Sensors, 2008, 8, 5897-5926.	3.8	5
36	A new algorithm for topology optimization using a level-set method. Journal of Computational Physics, 2006, 216, 573-588.	3.8	263

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37	Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity. Computer Methods in Applied Mechanics and Engineering, 1998, 157, 239-249.	6.6	10
38	Material Characterization and Compression Molding Simulation of CF-SMC Materials in a Press Rheometry Test. Key Engineering Materials, 0, 809, 467-472.	0.4	4