Stefan Diebels

List of Publications by Year in descending order

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STEEAN DIEREIS

#	Article	IF	CITATIONS
1	A method for determining the parameters in a rheological model for viscoelastic materials by minimizing Tikhonov functionals. , 2022, 30, 141-165.		2
2	Concepts and clinical aspects of active implants for the treatment of bone fractures. Acta Biomaterialia, 2022, 146, 1-9.	8.3	5
3	New Investigations of Adhesives for Tear Repair of Canvas Paintings. Studies in Conservation, 2021, 66, 321-341.	1.1	1
4	A multiphase model for the crossâ€linking of ultraâ€high viscous alginate hydrogels. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000254.	0.2	0
5	Numerical simulation of dual-phase steel based on real and virtual three-dimensional microstructures. Continuum Mechanics and Thermodynamics, 2021, 33, 1989-2006.	2.2	3
6	A mixture theory for the moisture transport in polyamide. Continuum Mechanics and Thermodynamics, 2021, 33, 1891-1905.	2.2	3
7	Individualized Determination of the Mechanical Fracture Environment After Tibial Exchange Nailing—A Simulation-Based Feasibility Study. Frontiers in Surgery, 2021, 8, 749209.	1.4	9
8	Numerical and experimental investigations of the electrodeposition process on open porous foams, determination of the parameter influence on the coating homogeneity. International Journal of Heat and Mass Transfer, 2021, 180, 121791.	4.8	8
9	Thread-by-thread tear mendings in conservation of canvas paintings: a problem of reproducibility in bonding qualities. Journal of Adhesion, 2021, 97, 1336-1357.	3.0	1
10	Blast wave mitigation with galvanised polyurethane foam in a sandwich cladding. Shock Waves, 2021, 31, 525-540.	1.9	4
11	A microsphere-based material model for open cell metal foams. Continuum Mechanics and Thermodynamics, 2020, 32, 255-267.	2.2	13
12	Uniaxial and biaxial testing of 3D printed hyperelastic photopolymers. Journal of Applied Polymer Science, 2020, 137, 48400.	2.6	11
13	Moisture transport in PA6 and its influence on the mechanical properties. Continuum Mechanics and Thermodynamics, 2020, 32, 307-325.	2.2	10
14	Multiscale microsphere modelling of open-cell metal foams enriched by statistical analysis of geometric parameters. Mechanics of Materials, 2020, 142, 103295.	3.2	9
15	Micromechanical Characterisation of Ni/PU Hybrid Foams. Materials, 2020, 13, 3746.	2.9	1
16	Experimental investigation of initial yield surfaces of solid foams and their evolution under subsequent loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 791, 139762.	5.6	4
17	A GPU-based caching strategy for multi-material linear elastic FEM on regular grids. PLoS ONE, 2020, 15, e0240813.	2.5	0
18	An individualized simulation model based on continuous, independent, ground force measurements after intramedullary stabilization of a tibia fracture. Archive of Applied Mechanics, 2019, 89, 2351-2360.	2.2	5

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19	Multiaxial failure surface of PVC foams and monitoring of deformation bands by three-dimensional digital image correlation. Journal of the Mechanics and Physics of Solids, 2019, 130, 195-215.	4.8	6
20	Micromechanical Characterization of Metal Foams. Advanced Engineering Materials, 2019, 21, 1900237.	3.5	19
21	Correlative digital image correlation and infrared thermography measurements for the investigation of the mesoscopic deformation behaviour of foams. Journal of the Mechanics and Physics of Solids, 2019, 130, 165-180.	4.8	19
22	Hammer blows to the head. Forensic Science International, 2019, 301, 358-370.	2.2	3
23	Development of a simulation model for the automatic optimization of tools for multiâ€dimensional tube forming. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900185.	0.2	Ο
24	Noise reduction for DIC measurements. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900077.	0.2	1
25	Modelling of cellular materials by a microsphereâ€based material model. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900081.	0.2	0
26	Effect of crystallographic orientation in modelling of anisotropic plasticity with an analytical yield function. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900349.	0.2	0
27	Investigation of the Electrodeposition Parameters on the Coating Process on Open Porous Media. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900106.	0.2	2
28	Experimental Studies. Mathematical Engineering, 2019, , 143-175.	0.2	2
29	Influence of the material parameter mapping from computed tomography data on the simulation of a boneâ€implant system. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800386.	0.2	0
30	Modelling and Simulation of the Coating Process on Open Porous Metal Foams. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800254.	0.2	2
31	Yield surfaces for solid foams: A review on experimental characterization and modeling. GAMM Mitteilungen, 2018, 41, e201800002.	5.5	13
32	Identifying Elastic and Viscoelastic Material Parameters by Means of a Tikhonov Regularization. Mathematical Problems in Engineering, 2018, 2018, 1-11.	1.1	3
33	Preface to Special Issue on Experimental Solid Mechanics. GAMM Mitteilungen, 2018, 41, e201800005.	5.5	Ο
34	Flexible Beam-Like Structures - Experimental Investigation and Modeling of Cables. Advanced Structured Materials, 2018, , 27-46.	0.5	7
35	Mechanical characterization of a short fiber-reinforced polymer at room temperature: experimental setups evaluated by an optical measurement system. Continuum Mechanics and Thermodynamics, 2017, 29, 1093-1111.	2.2	10
36	Microstructural characterisation and experimental determination of a multiaxial yield surface for open-cell aluminium foams. Materials and Design, 2017, 131, 252-264.	7.0	44

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37	Personalized simulation of a bone-implant-system during a step forward. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 217-218.	0.2	0
38	Bending of Viscoplastic Cables. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 293-294.	0.2	1
39	Combination of experimental and numerical methods for mechanical characterization of Al-Si alloys. IOP Conference Series: Materials Science and Engineering, 2017, 258, 012004.	0.6	1
40	Synthesis and Mechanical Properties of Novel Ni/PU Hybrid Foams: A New Economic Composite Material for Energy Absorbers. Advanced Engineering Materials, 2016, 18, 532-541.	3.5	20
41	Thermoâ€mechanically coupled modelling of cellular MgO refractories under thermal shock. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 429-430.	0.2	0
42	Experimental and numerical investigation of metal foams undergoing large deformations. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 345-346.	0.2	1
43	3D connectivity of eutectic Si as a key property defining strength of Al–Si alloys. Computational Materials Science, 2016, 120, 99-107.	3.0	22
44	Modelling of metal foams by a modified elastic law. Mechanics of Materials, 2016, 101, 61-70.	3.2	10
45	Comparison of two different modeling approaches to describe the nonâ€linear viscoelastic behavior of filled rubber material. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 389-390.	0.2	1
46	Highâ€resolution simulation of microstructures in dualâ€phase steel. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 391-392.	0.2	4
47	Thermomechanical characterisation of cellular rubber. Continuum Mechanics and Thermodynamics, 2016, 28, 1495-1509.	2.2	8
48	Micromechanical characterisation of Ni/Al hybrid foams by nano- and microindentation coupled with EBSD. Acta Materialia, 2016, 102, 38-48.	7.9	37
49	Modeling the moisture and temperature dependent material behavior of adhesive bonds. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 295-296.	0.2	2
50	Numerical analysis of Ni/Al hybrid metal foams using the finite cell method. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 299-300.	0.2	1
51	Characterization of short fiber reinforced polymers. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 349-350.	0.2	1
52	Characterisation of filled rubber with a pronounced nonâ€linear viscoelasticity. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 353-354.	0.2	2
53	Thermo-mechanical modelling of cellular ceramic composites by a multiphase approach of porous media. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 393-394.	0.2	1
54	An algorithmic strategy for the simulation of bone healing directly on computed tomography data. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 105-106.	0.2	1

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55	Investigation of elastoplastic effects of cables under large spatial deformation. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 185-186.	0.2	3
56	Characterization of Ni/Al hybrid foam from atomic to microscale. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 283-284.	0.2	1
57	Thermal shock resistivity of hybrid carbon foam materials: Experiments and model predictions. Mechanics of Materials, 2015, 82, 13-27.	3.2	6
58	Micro-structural motivated phenomenological modelling of metal foams: experiments and modelling. Archive of Applied Mechanics, 2015, 85, 1147-1160.	2.2	10
59	An automated workflow for the biomechanical simulation of a tibia with implant using computed tomography and the finite element method. Computers and Mathematics With Applications, 2015, 70, 903-916.	2.7	12
60	An optimization algorithm for individualized biomechanical analysis and simulation of tibia fractures. Journal of Biomechanics, 2015, 48, 1119-1124.	2.1	9
61	Modelling and numerical investigations of the mechanical behavior of polyurethane under the influence of moisture. Archive of Applied Mechanics, 2015, 85, 1035-1042.	2.2	9
62	Numerical simulation and comparison of a real Al–Si alloy with virtually generated alloys. Archive of Applied Mechanics, 2015, 85, 1161-1171.	2.2	8
63	Indentation of PU at different scales and computational modeling: identification of viscoelasticity and quantification of adhesion effects. Archive of Applied Mechanics, 2015, 85, 1225-1243.	2.2	5
64	Modeling the moisture dependent material behavior of adhesive bonds close to the glass transition temperature. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 339-340.	0.2	0
65	Micromechanical and macromechanical modelling of foams: Identification of Cosserat parameters. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2014, 94, 414-420.	1.6	12
66	NUMERICAL SIMULATION OF AL-SI ALLOYS WITH AND WITHOUT A DIRECTIONAL SOLIDIFICATION. Image Analysis and Stereology, 2014, 33, 29.	0.9	5
67	Microstructural Analysis of Electrochemical Coated Open ell Metal Foams by <scp>EBSD</scp> and Nanoindentation. Advanced Engineering Materials, 2014, 16, 15-20.	3.5	27
68	New hybrid foam materials for impact protection. International Journal of Impact Engineering, 2014, 64, 30-38.	5.0	55
69	Computational homogenisation of composite plates: Consideration of the thickness change with a modified projection strategy. Computers and Mathematics With Applications, 2014, 67, 1116-1129.	2.7	15
70	Improved Process Control and Model of Axial Forces of One-way Abrasive Flow Machining. Procedia CIRP, 2014, 14, 19-24.	1.9	4
71	Material modelling of a filled rubber material with different approaches in the representation of a statical hysteresis. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 345-346.	0.2	0
72	Parameter reâ€identification in nanoindentation problems of viscoelastic polymer layers: small deformation. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2013, 93, 88-101.	1.6	11

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73	Optimisation of a pretreatment method to reach the basic elasticity of filled rubber materials. Archive of Applied Mechanics, 2013, 83, 1659-1678.	2.2	11
74	Macroindentation of a soft polymer: Identification of hyperelasticity and validation by uni/biaxial tensile tests. Mechanics of Materials, 2013, 64, 111-127.	3.2	36
75	Identification of finite viscoelasticity and adhesion effects in nanoindentation of a soft polymer by inverse method. Computational Materials Science, 2013, 72, 127-139.	3.0	24
76	A numerical homogenisation method for sandwich plates based on a plate theory with thickness change. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2013, 93, 113-125.	1.6	18
77	Simulation of the abrasive flow machining process. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2013, 93, 147-153.	1.6	6
78	MICROMORPHIC TWO-SCALE MODELLING OF PERIODIC GRID STRUCTURES. International Journal for Multiscale Computational Engineering, 2013, 11, 161-176.	1.2	11
79	Macroscopic Modeling of Size Effects in Foams Using an Order-Parameter Approach. Advanced Structured Materials, 2013, , 237-254.	0.5	Ο
80	Surface Roughness Effects in Nanoindentation of Soft Polymers. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 297-298.	0.2	3
81	Zur Abtragssimulation beim Strömungsschleifen. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 301-302.	0.2	Ο
82	Nanoindentation of hyperelastic polymer layers at finite deformation and parameter re-identification. Archive of Applied Mechanics, 2012, 82, 1041-1056.	2.2	22
83	Investigation of the thermoviscoelastic material behaviour of adhesive bonds close to the glass transition temperature. Archive of Applied Mechanics, 2012, 82, 1089-1102.	2.2	10
84	Modelling Inhomogeneous Mechanical Properties in Adhesive Bonds. Journal of Adhesion, 2012, 88, 924-940.	3.0	8
85	Modelling and parameter re-identification of nanoindentation of soft polymers taking into account effects of surface roughness. Computers and Mathematics With Applications, 2012, 64, 2775-2786.	2.7	24
86	Compressible rubber materials: experiments and simulations. Archive of Applied Mechanics, 2012, 82, 1117-1132.	2.2	6
87	Pressure Dependent Properties of a Compressible Polymer. Experimental Mechanics, 2012, 52, 257-264.	2.0	3
88	Effective Mechanical Behavior of Filled Polymers. Mechanics of Advanced Materials and Structures, 2011, 18, 106-114.	2.6	5
89	CHARACTERIZING THE TIME DEPENDENCE OF FILLED EPDM. Rubber Chemistry and Technology, 2011, 84, 147-165.	1.2	22
90	Characterisation of a polymer using biaxial tension tests. Part I: Hyperelasticity. Archive of Applied Mechanics, 2011, 81, 1333-1349.	2.2	59

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91	Modelling of a Cellular Rubber with Nonlinear Viscosity Functions. Experimental Mechanics, 2011, 51, 749-765.	2.0	18
92	FE2 Modelling of Hybrid Sandwich Composites. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 505-506.	0.2	0
93	Numerical investigation of nanoindentation of viscoelastic polymer layers and parameters re-identification. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 765-766.	0.2	3
94	Nanonickel Coated Aluminum Foam for Enhanced Impact Energy Absorption. Advanced Engineering Materials, 2011, 13, 23-28.	3.5	60
95	From Lattice Models to Extended Continua. Lecture Notes in Applied and Computational Mechanics, 2011, , 19-45.	2.2	5
96	Electrodeposition of Nanocrystalline Metals on Open Cell Metal Foams: Improved Mechanical Properties. ECS Transactions, 2010, 25, 165-172.	0.5	20
97	Modelling of thermoâ€viscoelastic material behaviour of polyurethane close to the glass transition temperature. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2010, 90, 387-398.	1.6	17
98	A EVI-space-time Galerkin method for dynamics at finite deformation in porous media. Computational Mechanics, 2009, 43, 585-601.	4.0	6
99	Numerical investigations of foam-like materials by nested high-order finite element methods. Computational Mechanics, 2009, 45, 45-59.	4.0	21
100	Two-scale modelling of micromorphic continua. Continuum Mechanics and Thermodynamics, 2009, 21, 297-315.	2.2	57
101	A numerical homogenisation strategy for micromorphic continua. Proceedings in Applied Mathematics and Mechanics, 2009, 9, 437-438.	0.2	3
102	A space-time discontinuous Galerkin method applied to single-phase flow in porous media. Computational Geosciences, 2008, 12, 525-539.	2.4	13
103	Size effects in polyurethane bonds: experiments, modelling and parameter identification. Journal of Materials Science, 2008, 43, 4768-4779.	3.7	22
104	Generalized EVI-space-time Galerkin method for dynamical modeling in porous media. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10491-10492.	0.2	0
105	Investigations on an elastic micropolar continuum model for large deformations. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10549-10550.	0.2	0
106	A new hybrid velocity integration method applied to elastic wave propagation. International Journal for Numerical Methods in Engineering, 2008, 74, 56-79.	2.8	11
107	Effective properties and size effects in filled polymers. GAMM Mitteilungen, 2008, 31, 210-224.	5.5	5
108	A continuum-based model capturing size effects in polymer bonds. Journal of Physics: Conference Series, 2007, 62, 34-42.	0.4	8

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109	Dynamic analysis of porous materials: Numerical simulation with an adaptive space-time FEM. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4070035-4070036.	0.2	0
110	A second-order homogenization procedure for multi-scale analysis based on micropolar kinematics. International Journal for Numerical Methods in Engineering, 2007, 69, 2485-2512.	2.8	81
111	Dynamic analysis of porous materials: Numerical modeling with a space-time FEM. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4070011-4070012.	0.2	2
112	Experimental and theoretical investigation of nonlinear viscoelastic polyurethane systems. Journal of Materials Science, 2007, 42, 9894-9904.	3.7	40
113	Numerical Homogenization Techniques Applied to Growth and Remodelling Phenomena. Computational Mechanics, 2007, 39, 815-830.	4.0	8
114	A time-discontinuous Galerkin method for the dynamical analysis of porous media. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 1113-1134.	3.3	26
115	An anisotropic damage model of foams on the basis of a micromechanical description. Journal of Materials Science, 2005, 40, 5919-5924.	3.7	8
116	Modeling macroscopic extended continua with the aid of numerical homogenization schemes. Computational Materials Science, 2005, 32, 337-347.	3.0	30
117	A particle center based homogenization strategy for granular assemblies. Engineering Computations, 2004, 21, 360-383.	1.4	29
118	Modeling thin films applying an extended continuum theory based on a scalar-valued order parameter International Journal of Solids and Structures, 2004, 41, 5071-5085.	2.7	27
119	From particle ensembles to Cosserat continua: homogenization of contact forces towards stresses and couple stresses. International Journal of Solids and Structures, 2003, 40, 6681-6702.	2.7	132
120	Microscopic and macroscopic modelling of foams. Proceedings in Applied Mathematics and Mechanics, 2003, 2, 156-157.	0.2	3
121	Galerkin-type space-time finite elements for volumetrically coupled problems. Proceedings in Applied Mathematics and Mechanics, 2003, 2, 264-265.	0.2	2
122	A thermodynamic-consistent model describing growth and remodeling phenomena. Computational Materials Science, 2003, 28, 597-607.	3.0	30
123	Stress and couple stress in foams. Computational Materials Science, 2003, 28, 714-722.	3.0	52
124	A comparative study of Biot's theory and the linear Theory of Porous Media for wave propagation problems. Acta Mechanica, 2003, 161, 213-235.	2.1	82
125	The size effect in foams and its theoretical and numerical investigation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 2869-2883.	2.1	88
126	h-Adaptive FE methods applied to single- and multiphase problems. International Journal for Numerical Methods in Engineering, 2002, 54, 219-239.	2.8	17

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127	Parallel 3-d simulations for porous media models in soil mechanics. Computational Mechanics, 2002, 29, 75-87.	4.0	22
128	Neglect of the Fluid Extra Stresses in Volumetrically Coupled Solid-Fluid Problems. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2001, 81, 521-522.	1.6	11
129	From discrete element simulations to a continuum model. Computer Methods in Applied Mechanics and Engineering, 2001, 191, 21-28.	6.6	61
130	A macroscopic description of the quasi-static behavior of granular materials based on the theory of porous media. Granular Matter, 2000, 2, 143-152.	2.2	11
131	A Micropolar Theory of Porous Media: Constitutive Modelling. Transport in Porous Media, 1999, 34, 193-208.	2.6	37
132	DYNAMIC ANALYSIS OF A FULLY SATURATED POROUS MEDIUM ACCOUNTING FOR GEOMETRICAL AND MATERIAL NON-LINEARITIES. International Journal for Numerical Methods in Engineering, 1996, 39, 81-97.	2.8	102
133	Dynamic Deformations in the Theory of Fluid-Saturated Porous Solid Materials. Solid Mechanics and Its Applications, 1995, , 241-246.	0.2	3
134	Nonlinear internal waves over variable topography. Geophysical and Astrophysical Fluid Dynamics, 1994, 76, 165-192.	1.2	18
135	Effects of the horizontal component of the Earth's rotation on wave propagation on an f-plane. Geophysical and Astrophysical Fluid Dynamics, 1994, 76, 95-119.	1.2	14
136	Nonlinear internal waves in ideal rotating basins. Geophysical and Astrophysical Fluid Dynamics, 1994, 78, 21-46.	1.2	6