

GÃ¼nther Meschke

List of Publications by Year in descending order

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177
papers

3,927
citations

117625
34
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g-index

201
all docs

201
docs citations

201
times ranked

2576
citing authors

#	ARTICLE	IF	CITATIONS
1	A 3D finite element simulation model for TBM tunnelling in soft ground. International Journal for Numerical and Analytical Methods in Geomechanics, 2004, 28, 1441-1460.	3.3	220
2	On the influence of face pressure, grouting pressure and TBM design in soft ground tunnelling. Tunnelling and Underground Space Technology, 2006, 21, 160-171.	6.2	150
3	An anisotropic elastoplastic-damage model for plain concrete. International Journal for Numerical Methods in Engineering, 1998, 42, 703-727.	2.8	146
4	Energy-based modeling of cohesive and cohesionless cracks via X-FEM. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 2338-2357.	6.6	146
5	Constitutive modeling of crimped collagen fibrils in soft tissues. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 522-533.	3.1	146
6	The collagen fibril architecture in the lamina cribrosa and peripapillary sclera predicted by a computational remodeling approach. Biomechanics and Modeling in Mechanobiology, 2011, 10, 371-382.	2.8	137
7	Crack propagation criteria in the framework of X-FEM-based structural analyses. International Journal for Numerical and Analytical Methods in Geomechanics, 2007, 31, 239-259.	3.3	124
8	Coupled chemo-mechanical deterioration of cementitious materials. Part I: Modeling. International Journal of Solids and Structures, 2004, 41, 15-40.	2.7	118
9	A numerical study of the effect of soil and grout material properties and cover depth in shield tunnelling. Computers and Geotechnics, 2006, 33, 234-247.	4.7	118
10	Lamina cribrosa thickening in early glaucoma predicted by a microstructure motivated growth and remodeling approach. Mechanics of Materials, 2012, 44, 99-109.	3.2	97
11	A computational remodeling approach to predict the physiological architecture of the collagen fibril network in corneo-scleral shells. Biomechanics and Modeling in Mechanobiology, 2010, 9, 225-235.	2.8	95
12	A new class of algorithms for classical plasticity extended to finite strains. Application to geomaterials. Computational Mechanics, 1993, 11, 253-278.	4.0	88
13	Optimization of artificial ground freezing in tunneling in the presence of seepage flow. Computers and Geotechnics, 2016, 75, 112-125.	4.7	84
14	Experimental, analytical and numerical analysis of the pullout behaviour of steel fibres considering different fibre types, inclinations and concrete strengths. Structural Concrete, 2014, 15, 126-135.	3.1	73
15	Wave dispersion and propagation in state-based peridynamics. Computational Mechanics, 2017, 60, 725-738.	4.0	71
16	Advanced finite element modeling of excavation and advancement processes in mechanized tunneling. Advances in Engineering Software, 2016, 100, 198-214.	3.8	67
17	Coupled chemo-mechanical deterioration of cementitious materials Part II: Numerical methods and simulations. International Journal of Solids and Structures, 2004, 41, 41-67.	2.7	65
18	A higher-order stress-based gradient-enhanced damage model based on isogeometric analysis. Computer Methods in Applied Mechanics and Engineering, 2016, 304, 584-604.	6.6	65

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19	Analytical Model for the Pullout Behavior of Straight and Hooked-End Steel Fibers. Journal of Engineering Mechanics - ASCE, 2014, 140, .	2.9	64
20	Recurrent neural networks and proper orthogonal decomposition with interval data for real-time predictions of mechanised tunnelling processes. Computers and Structures, 2018, 207, 258-273.	4.4	60
21	NUMERICAL ANALYSES OF TUNNEL LININGS BY MEANS OF A VISCOPLASTIC MATERIAL MODEL FOR SHOTCRETE. International Journal for Numerical Methods in Engineering, 1996, 39, 3145-3162.	2.8	54
22	Multilevel Computational Model for Failure Analysis of Steel-Fiberâ€Reinforced Concrete Structures. Journal of Engineering Mechanics - ASCE, 2016, 142, .	2.9	53
23	Numerical Modeling of Coupled Hygromechanical Degradation of Cementitious Materials. Journal of Engineering Mechanics - ASCE, 2003, 129, 383-392.	2.9	52
24	A hybrid finite element and surrogate modelling approach for simulation and monitoring supported TBM steering. Tunnelling and Underground Space Technology, 2017, 63, 12-28.	6.2	51
25	Model update and real-time steering of tunnel boring machines using simulation-based meta models. Tunnelling and Underground Space Technology, 2015, 45, 138-152.	6.2	49
26	A Generalized Finite Element Method for hydro-mechanically coupled analysis of hydraulic fracturing problems using space-time variant enrichment functions. Computer Methods in Applied Mechanics and Engineering, 2015, 290, 438-465.	6.6	45
27	Environmentally induced deterioration of concrete: physical motivation and numerical modeling. Engineering Fracture Mechanics, 2003, 70, 891-910.	4.3	44
28	An elastoâ€plastic three phase model for partially saturated soil for the finite element simulation of compressed air support in tunnelling. International Journal for Numerical and Analytical Methods in Geomechanics, 2010, 34, 605-625.	3.3	40
29	A cascade continuum micromechanics model for the effective elastic properties of porous materials. International Journal of Solids and Structures, 2016, 83, 1-12.	2.7	39
30	Simulation based evaluation of time-variant loadings acting on tunnel linings during mechanized tunnel construction. Engineering Structures, 2017, 135, 21-40.	5.3	38
31	Large-strain 3D-analysis of fibre-reinforced composites using rebar elements: hyperelastic formulations for cords. Computational Mechanics, 1994, 13, 241-254.	4.0	37
32	Expansion and deterioration of concrete due to ASR: Micromechanical modeling and analysis. Cement and Concrete Research, 2019, 115, 507-518.	11.0	37
33	Large Strain Finite-Element Analysis of Snow. Journal of Engineering Mechanics - ASCE, 1996, 122, 591-602.	2.9	35
34	A finite element model for propagating delamination in laminated composite plates based on the Virtual Crack Closure method. Composite Structures, 2016, 150, 8-19.	5.8	35
35	Parallelized computational modeling of pileâ€soil interactions in mechanized tunneling. Engineering Structures, 2013, 47, 35-44.	5.3	33
36	Geometrically nonlinear transient analysis of delaminated composite and sandwich plates using a layerwise displacement model with contact conditions. Composite Structures, 2015, 122, 67-81.	5.8	32

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37	Extrusion process simulation and layer shape prediction during 3D-concrete-printing using the Particle Finite Element Method. Automation in Construction, 2022, 136, 104173.	9.8	32
38	Processâ€œoriented numerical simulation of shieldâ€œsupported tunnelling in soft soils /. Geomechanik Und Tunnelbau, 2010, 3, 268-282.	0.3	30
39	Computational Simulation of Mechanized Tunneling as Part of an Integrated Decision Support Platform. International Journal of Geomechanics, 2011, 11, 519-528.	2.7	30
40	Computationally Efficient Simulation in Urban Mechanized Tunneling Based on Multilevel BIM Models. Journal of Computing in Civil Engineering, 2019, 33, .	4.7	29
41	Grout and bentonite flow around a TBM: Computational modeling and simulation-based assessment of influence on surface settlements. Tunnelling and Underground Space Technology, 2011, 26, 445-452.	6.2	28
42	A re-formulation of the exponential algorithm for finite strain plasticity in terms of cauchy stresses. Computer Methods in Applied Mechanics and Engineering, 1999, 173, 167-187.	6.6	26
43	An edgeâ€œbased smoothed finite element method for 3D analysis ofâ€œsolid mechanics problems. International Journal for Numerical Methods in Engineering, 2013, 94, 715-739.	2.8	25
44	Beamâ€œsolid contact formulation for finite element analysis of pileâ€œsoil interaction with arbitrary discretization. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1453-1476.	3.3	25
45	A hybrid RNN-GPOD surrogate model for real-time settlement predictions in mechanised tunnelling. Advanced Modeling and Simulation in Engineering Sciences, 2016, 3, .	1.7	25
46	A multiscale homogenization model for strength predictions of fully and partially frozen soils. Acta Geotechnica, 2018, 13, 175-193.	5.7	21
47	Variational approach to interface element modeling of brittle fracture propagation. Computer Methods in Applied Mechanics and Engineering, 2018, 328, 452-476.	6.6	21
48	Finite Element Analyses of Cracked Cooling Tower Shell. Journal of Structural Engineering, 1991, 117, 2620-2638.	3.4	20
49	Hybrid surrogate modelling for mechanised tunnelling simulations with uncertain data. International Journal of Reliability and Safety, 2015, 9, 154.	0.2	20
50	Computational Generation of Virtual Concrete Mesostructures. Materials, 2021, 14, 3782.	2.9	20
51	Multilevel surrogate modeling approach for optimization problems with polymorphic uncertain parameters. International Journal of Approximate Reasoning, 2020, 119, 81-91.	3.3	19
52	BIM-to-IGA: A fully automatic design-through-analysis workflow for segmented tunnel linings. Advanced Engineering Informatics, 2020, 46, 101137.	8.0	19
53	Strength homogenization of matrix-inclusion composites using the linear comparison composite approach. International Journal of Solids and Structures, 2014, 51, 259-273.	2.7	18
54	Strong discontinuity approaches: An algorithm for robust performance and comparative assessment of accuracy. International Journal of Solids and Structures, 2016, 96, 355-379.	2.7	18

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55	From digital models to numerical analysis for mechanised tunnelling: A fully automated design-through-analysis workflow. Tunnelling and Underground Space Technology, 2021, 107, 103622.	6.2	18
56	Friction Mechanism of Tread Blocks on Snow Surfaces. Tire Science and Technology, 1997, 25, 245-264.	0.4	17
57	Computational modeling of fiber flow during casting of fresh concrete. Computational Mechanics, 2019, 63, 1111-1129.	4.0	17
58	Deterioration of concrete due to ASR: Experiments and multiscale modeling. Cement and Concrete Research, 2021, 149, 106575.	11.0	17
59	Peridynamic analysis of dynamic fracture: influence of peridynamic horizon, dimensionality and specimen size. Computational Mechanics, 2021, 67, 1719-1745.	4.0	16
60	Consistent micro-macro transitions at large objective strains in curvilinear convective coordinates. International Journal for Numerical Methods in Engineering, 2008, 73, 805-824.	2.8	14
61	Numerical Simulation of Interactions between the Shield-Supported Tunnel Construction Process and the Response of Soft Water-Saturated Soils. International Journal of Geomechanics, 2012, 12, 689-696.	2.7	14
62	A holistic approach for the investigation of lining response to mechanized tunneling induced construction loadings. Underground Space (China), 2018, 3, 45-60.	7.5	14
63	A Shear-Slip Mesh Update “ Immersed Boundary Finite Element model for computational simulations of material transport in EPB tunnel boring machines. Finite Elements in Analysis and Design, 2018, 142, 1-16.	3.2	14
64	Fatigue behavior of HPC and FRC under cyclic tensile loading: Experiments and modeling. Structural Concrete, 2019, 20, 1265-1278.	3.1	14
65	Numerical analysis of dissolution processes in cementitious materials using discontinuous and continuous Galerkin time integration schemes. International Journal for Numerical Methods in Engineering, 2007, 69, 1775-1803.	2.8	13
66	An ALE“PFEM method for the numerical simulation of two-phase mixture flow. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 599-620.	6.6	13
67	Hypoplastic particle finite element model for cutting tool-soil interaction simulations: Numerical analysis and experimental validation. Underground Space (China), 2018, 3, 61-71.	7.5	12
68	Efficient cut-cell quadrature based on moment fitting for materially nonlinear analysis. Computer Methods in Applied Mechanics and Engineering, 2020, 366, 113050.	6.6	12
69	A mixed “p edge-based smoothed particle finite element formulation for viscous flow simulations. Computational Mechanics, 2022, 69, 891-910.	4.0	12
70	A hybrid modeling concept for ultra low cycle fatigue of metallic structures based on micropore damage and unit cell models. International Journal of Fatigue, 2010, 32, 1885-1894.	5.7	11
71	An Edge-based Imbricate Finite Element Method (EI-FEM) with full and reduced integration. Computers and Structures, 2012, 106-107, 154-175.	4.4	11
72	Cascade Lattice Micromechanics Model for the Effective Permeability of Materials with Microcracks. Journal of Nanomechanics & Micromechanics, 2016, 6, .	1.4	11

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73	Particle Finite Element Simulation of Fresh Cement Paste â€“ Inspired by Additive Manufacturing Techniques. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900198.	0.2	11
74	Influence of muck properties and chamber design on pressure distribution in EPB pressure chambers â€“ Insights from computational flow simulations. Tunnelling and Underground Space Technology, 2020, 99, 103333.	6.2	11
75	Structural forces in segmental linings: process-oriented tunnel advance simulations vs. conventional structural analysis. Tunnelling and Underground Space Technology, 2021, 111, 103836.	6.2	11
76	Computer-Aided Retrofitting of a Damaged RC Cooling Tower Shell. Journal of Structural Engineering, 1999, 125, 328-337.	3.4	10
77	Extended Finite Element Method for hygroâ€mechanical analysis of crack propagation in porous materials. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 161-162.	0.2	10
78	Degradation in concrete structures due to cyclic loading and its effect on transport processesâ€”Experiments and modeling. Structural Concrete, 2017, 18, 519-527.	3.1	10
79	Cascade continuum micromechanics model for the effective permeability of solids with distributed microcracks: Self-similar mean-field homogenization and image analysis. Mechanics of Materials, 2017, 104, 60-72.	3.2	10
80	Cementitious Composites with High Compaction Potential: Modeling and Calibration. Materials, 2020, 13, 4989.	2.9	10
81	Blind competition on the numerical simulation of steelâ€fiberâ€reinforced concrete beams failing in shear. Structural Concrete, 2021, 22, 939-967.	3.1	10
82	Nonlinear finite element analysis of reinforced and prestressed concrete structures. Engineering Structures, 1991, 13, 211-226.	5.3	9
83	Effective Diffusivity of Porous Materials with Microcracks: Self-Similar Mean-Field Homogenization and Pixel Finite Element Simulations. Transport in Porous Media, 2018, 125, 413-434.	2.6	9
84	Active Learning for Accurate Settlement Prediction Using Numerical Simulations in Mechanized Tunneling. Procedia CIRP, 2019, 81, 1052-1058.	1.9	9
85	A 3D particle finite element model for the simulation of soft soil excavation using hypoplasticity. Computational Particle Mechanics, 2020, 7, 151-172.	3.0	9
86	A parallelization strategy for hydro-mechanically coupled mechanized tunneling simulations. Computers and Geotechnics, 2020, 120, 103378.	4.7	9
87	A hysteresis model for the unfrozen liquid content in freezing porous media. Computers and Geotechnics, 2021, 134, 104048.	4.7	9
88	A micromechanics model for molecular diffusion in materials with complex pore structure. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 686-712.	3.3	8
89	Adaptive Crack Modeling with Interface Solid Elements for Plain and Fiber Reinforced Concrete Structures. Materials, 2017, 10, 771.	2.9	8
90	A fuzzy surrogate modelling approach for real-time predictions in mechanised tunnelling. International Journal of Reliability and Safety, 2018, 12, 187.	0.2	8

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91	Configurational-force interface model for brittle fracture propagation. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 351-378.	6.6	8
92	Real-Time Risk Assessment of Tunneling-Induced Building Damage Considering Polymorphic Uncertainty. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2022, 8, .	1.7	8
93	A new mixed finite-element approach for the elastoplastic analysis of Mindlin plates. Journal of Engineering Mathematics, 2016, 99, 137-155.	1.2	7
94	The intrinsic permeability of microcracks in porous solids: Analytical models and Lattice Boltzmann simulations. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 1138-1154.	3.3	7
95	Building Information Modelling in mechanised shield tunnelling â€“ A practitioner's outlook to the near future. Geomechanik Und Tunnelbau, 2018, 11, 34-49.	0.3	7
96	An algorithm based on incompatible modes for the global tracking of strong discontinuities in shear localization analyses. Computer Methods in Applied Mechanics and Engineering, 2018, 330, 33-63.	6.6	7
97	Optimization Approaches for the Numerical Design of Structures Under Consideration of Polymorphic Uncertain Data. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2019, 5, .	1.1	7
98	Algorithmic stabilization of FE analyses of 2D frictional contact problems with large slip. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 2099-2124.	6.6	6
99	Numerical Modeling of Artificial Ground Freezing: Multiphase Modeling and Strength Upscaling. , 2014, , .		6
100	A COUPLED COMPUTATIONAL APPROACH FOR THE SIMULATION OF SOIL EXCAVATION AND TRANSPORT IN EARTH-PRESSURE BALANCE SHIELD MACHINES. International Journal for Multiscale Computational Engineering, 2017, 15, 239-264.	1.2	6
101	A CutFEM based framework for numerical simulations of machine driven tunnels with arbitrary alignments. Computers and Geotechnics, 2022, 144, 104637.	4.7	6
102	Micromechanics model for tortuosity and homogenized diffusion properties of porous materials with distributed micro-cracks. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 555-556.	0.2	5
103	Sensitivity of Ultrasonic Coda Wave Interferometry to Material Damageâ€”Observations from a Virtual Concrete Lab. Materials, 2021, 14, 4033.	2.9	5
104	Numerical Simulation-Based Damage Identification in Concrete. Modelling, 2021, 2, 355-369.	1.4	5
105	Reliability based optimization of steel-fibre segmental tunnel linings subjected to thrust jack loadings. Engineering Structures, 2022, 254, 113752.	5.3	5
106	Experimental and Numerical Investigations on High Performance SFRC: Cyclic Tensile Loading and Fatigue. Materials, 2021, 14, 7593.	2.9	5
107	Coupled material modelling and multifield structural analyses in civil engineering. Engineering Computations, 2003, 20, 524-558.	1.4	4
108	A three-phase FE-model for the simulation of partially saturated soils. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4070009-4070010.	0.2	4

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109	Coupled Computational Simulation of Excavation and Soil Transport in Earth-Pressure Balance Shield Tunneling Machines Using a Viscous Two-Phase Fluid Model for Soil-Foam Mixtures. , 2014, , .		4
110	Glaucoma and Structure-Based Mechanics of the Lamina Cribrosa at Multiple Scales. , 2016, , 93-122.		4
111	A rateâ€dependent damage model for prediction of highâ€speed cracks. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800330.	0.2	4
112	Robust segmental lining design â€ Potentials of advanced numerical simulations for the design of TBM driven tunnels. Geomechanik Und Tunnelbau, 2019, 12, 484-490.	0.3	4
113	Interaction of cutting disc with heterogeneous ground. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000060.	0.2	4
114	Variational Extended Finite Element Model for Cohesive Cracks: Influence of Integration and Interface Law. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2007, , 283-301.	0.2	3
115	A Simulation Model for Shield Tunnelling and its Interactions with Partially Saturated Soil. Proceedings in Applied Mathematics and Mechanics, 2009, 9, 215-216.	0.2	3
116	Numerical modelling of coupling mechanisms during freezing in porous materials. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 495-496.	0.2	3
117	Diffusion in Fracturing Porous Materials: Characterizing Topological Effects using Cascade Micromechanics and Phase-Field Models. , 2013, , .		3
118	Adaptive Computational Simulation of TBM-Soil Interactions during Machine-Driven Tunnel Construction in Saturated Soft Soils. , 2014, , .		3
119	Cascade Continuum Micromechanics Model for the Effective Diffusivity of Porous Materials: Exponential Hierarchy across Cascade Levels. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 471-472.	0.2	3
120	Computational Excavation Analysis of a Single Cutting Tool using a Hypoplastic Constitutive Model. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 369-370.	0.2	3
121	Cascade Continuum Micromechanics model for the effective permeability of solids with distributed microcracks: Comparison with numerical homogenization. Mechanics of Materials, 2017, 115, 64-75.	3.2	3
122	Reliability Analysis and Real-Time Predictions in Mechanized Tunneling. , 2018, , .		3
123	Peridynamic investigation of dynamic brittle fracture. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900180.	0.2	3
124	Reinforcing bars modelling using a rodâ€solid interface element without the need for mesh compatibility. Finite Elements in Analysis and Design, 2021, 197, 103634.	3.2	3
125	Multiâ€level approach for modelling the postâ€cracking response of steel fibre reinforced concrete under monotonic and cyclic loading. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	3
126	Determination of homogenized diffusion properties in micro-cracked porous materials. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 429-430.	0.2	2

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127	A micromechanics model for FRC composites. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 543-544.	0.2	2
128	Multiscale modelling of alkali transport and ASR in concrete structures. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800235.	0.2	2
129	Object-oriented framework for 3D bending and free vibration analysis of multilayer plates: Application to cross-laminated timber and soft-core sandwich panels. Composite Structures, 2021, 255, 112859.	5.8	2
130	Variational interface element model for 2D and 3D hydraulic fracturing simulations. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113450.	6.6	2
131	Numerical analysis of plain and fiber reinforced concrete structures during cyclic loading: Influence of frictional sliding and crack roughness. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000167.	0.2	2
132	Reduced Order Multiscale Simulation of Diffuse Damage in Concrete. Materials, 2021, 14, 3830.	2.9	2
133	A comparison of coupled chemo-mechanical damage models of concrete using phenomenological chemistry and reaction kinetics. , 2001, , 1278-1280.		2
134	A fuzzy surrogate modelling approach for real-time predictions in mechanised tunnelling. International Journal of Reliability and Safety, 2018, 12, 187.	0.2	2
135	A variationally consistent hyperstatic reaction method for tunnel lining design. International Journal for Numerical and Analytical Methods in Geomechanics, 2022, 46, 205-217.	3.3	2
136	Advanced models for fracture in quasi-brittle materials. International Journal for Numerical and Analytical Methods in Geomechanics, 2007, 31, 109-109.	3.3	1
137	Anisotropic and field-specific higher order spatial discretization methods for multiphase durability analyses. Computers and Structures, 2009, 87, 1349-1359.	4.4	1
138	An Imbricate Finite Element Method (I-FEM) using full, reduced, and smoothed integration. Computational Mechanics, 2013, 52, 993-1021.	4.0	1
139	Hydraulic effects of fracture in brittle porous materials. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 135-136.	0.2	1
140	Computational Modeling of Concrete Degradation Due to Alkali Silica Reaction. , 2015, , .		1
141	Wave dispersion and propagation in a linear peridynamic solid. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 409-410.	0.2	1
142	Application of the Finite Cell Method to Tunnel Engineering Simulation. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800011.	0.2	1
143	Optimization Approaches for Durable Reinforced Concrete Structures considering Interval and Stochastic Parameter Uncertainty. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800444.	0.2	1
144	Simulation-based investigation of the influence of the microstructure and disorder on damage evolution in concrete. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800380.	0.2	1

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145	Modeling of structures with polymorphic uncertainties at different length scales. GAMM Mitteilungen, 2019, 42, e201900006.	5.5	1
146	Multiscale modeling of Retinal Hypoxia due to Age-related Macular Degeneration. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000297.	0.2	1
147	Computational analysis of the influence of drusen growth on the morphology of RPE due to Age-related Macular Degeneration. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000298.	0.2	1
148	Smeared Crack and X-FEM Models in the Context of Poromechanics. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2011, , 265-327.	0.6	1
149	A Multiscale Model for High Performance FRC. RILEM Bookseries, 2018, , 97-105.	0.4	1
150	Hybrid RNN-GPOD Surrogate Model for Simulation and Monitoring Supported TBM Steering. , 0, , .		1
151	Competici3n a ciegas de simulaciones num3ricas de vigas de hormig3n reforzado con fibras que fallan a cortante. Hormigon Y Acero, 2022, 73, 17-39.	0.2	1
152	Finite elements in shell analysis: A comparison of 3D-p- and higher order shell elements. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 250-251.	0.2	0
153	Preface to computational mechanics of concrete and concrete structures. International Journal for Numerical and Analytical Methods in Geomechanics, 2004, 28, 563-564.	3.3	0
154	Aspects of crack propagation and hygro-mechanical coupling using X-FEM. , 2006, , 254-254.		0
155	Computational micro-macro transitions at large strains for curvilinear physical directions. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4080009-4080010.	0.2	0
156	A two-phase Finite Element model for coupled heat flux and water flow in fully saturated soils. Proceedings in Applied Mathematics and Mechanics, 2009, 9, 391-392.	0.2	0
157	Strength Homogenization for Partially Frozen Soil using Linear Comparison Composite Approach. , 2013, , .		0
158	Numerical Assessment of Stabilization Techniques for Coupled Poro-plastic Analysis using Low-Order Finite Elements. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 503-504.	0.2	0
159	Surrogate Modelling for Real-time Predictions of Mechanised Tunnelling Processes with Interval Data. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 35-38.	0.2	0
160	Modeling the effective permeability of microcracked materials using continuum and lattice micromechanics. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 555-556.	0.2	0
161	Variational interface zone model for modeling of fluid induced fracture propagation. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 99-102.	0.2	0
162	The effective thermal conductivity of carbon nanotube composites. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 613-614.	0.2	0

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163	Extended hypoplastic model incorporating the coordination number for the simulation of granular flow. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900309.	0.2	0
164	Reduced order voxel-based model for computational modelling of highly compressible composite materials. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000056.	0.2	0
165	Multiscale modeling of distributed microcracking in concrete. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000228.	0.2	0
166	Comparison of Hilbert Transform and Complex Demodulation for Defect Identification in Cutting Discs using Vibration-Based Feature Extraction. Lecture Notes in Civil Engineering, 2021, , 564-572.	0.4	0
167	Numerical Multi-level Model for Fibre Reinforced Concrete: Validation and Comparison with Fib Model Code. RILEM Bookseries, 2022, , 365-376.	0.4	0
168	Erschütterungsprognose für dynamische Verdichtungsgeräte unter Berücksichtigung der bodenabhängigen Kraftermission/Prediction of vibration caused by dynamic compactors considering soil-dependent force emission. Bauingenieur, 2021, 96, 143-155.	0.1	0
169	Galerkin time integration of chemical dissolution and species transport in porous media. , 2005, , .		0
170	Homogenization-based model for reinforced concrete. , 2010, , 217-224.		0
171	Lining Induced Stresses for Mechanized Tunneling Along Curved Alignment. Sustainable Civil Infrastructures, 2018, , 36-52.	0.2	0
172	Computational Homogenization in Multi-scale Shell Analysis at Large Strains. , 2006, , 592-592.		0
173	A Multiscale drusen growth model for Age-related Macular Degeneration. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
174	Influence of dimensionality and specimen size on dynamic fracture. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
175	Computational modelling of compressible cementitious composite materials. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
176	Damage identification in concrete using multiscale computational modeling and convolutional neural networks. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
177	Algorithm for aging materials with evolving stiffness based on a multiplicative split. Computer Methods in Applied Mechanics and Engineering, 2022, 397, 115080.	6.6	0