

# Kerstin Weinberg

## List of Publications by Year in descending order

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118  
papers

1,744  
citations

257450

24  
h-index

315739

38  
g-index

120  
all docs

120  
docs citations

120  
times ranked

1402  
citing authors

#	ARTICLE	IF	CITATIONS
1	Determination of the high-strain rate elastic modulus of printing resins using two different split Hopkinson pressure bars. <i>Mechanics of Time-Dependent Materials</i> , 2022, 26, 761-773.	4.4	6
2	Pneumatic Fracture Computations with Peridynamics. <i>Procedia Structural Integrity</i> , 2022, 35, 159-167.	0.8	1
3	On the use of peridynamics in fracture of ultra-high performance concrete. <i>Mechanics Research Communications</i> , 2022, 123, 103899.	1.8	6
4	A spatially adaptive phase-field model of fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 395, 114880.	6.6	7
5	A multi-field model for charging and discharging of lithium-ion battery electrodes. <i>Continuum Mechanics and Thermodynamics</i> , 2021, 33, 661-685.	2.2	6
6	Correction of Wave Signals for PMMA Split Hopkinson Pressure Bar Setups. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000143.	0.2	2
7	Data-driven diffusion with uncertainties. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000325.	0.2	3
8	Time-dependent modeling and experimental characterization of foamed EPDM rubber. <i>Continuum Mechanics and Thermodynamics</i> , 2021, 33, 1747-1764.	2.2	7
9	A multi-level method for data-driven finite element computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 379, 113740.	6.6	20
10	Experimental Investigation of Microstructural Effects in Sn-Pb Solder Accumulated During Ten Years of Service Life. <i>Micro and Nanosystems</i> , 2021, 13, 170-179.	0.6	0
11	Structural integrity of adhesively bonded 3D-printed joints. <i>Polymer Testing</i> , 2021, 100, 107262.	4.8	39
12	A comparative accuracy and convergence study of eigenstrain and phase-field models of fracture. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 386, 114078.	6.6	11
13	A phase-field approach to pneumatic fracture with anisotropic crack resistance. <i>International Journal of Fracture</i> , 2021, 232, 135.	2.2	6
14	Dynamic phase-field fracture with a first-order discontinuous Galerkin method for elastic waves. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 389, 114330.	6.6	6
15	Phase-field fracture simulations of a four-point bending test. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 21, .	0.2	0
16	Investigation of copper lattice structures using a Split Hopkinson Pressure Bar. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 21, .	0.2	0
17	A multi-level data-driven finite element method in polymorphic uncertainty quantification. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 21, .	0.2	0
18	A detailed investigation of the model influencing parameters of the phase-field fracture approach. <i>GAMM Mitteilungen</i> , 2020, 43, e202000005.	5.5	6

#	ARTICLE	IF	CITATIONS
19	Analysis and simulations for a phase-field fracture model at finite strains based on modified invariants. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2020, 100, e201900288.	1.6	5
20	Ice Penetration by a Bluff-Body Melting Probe. Journal of Applied Mechanics, Transactions ASME, 2020, 87, .	2.2	1
21	Influence of strain rate on fracture behavior of sandwich composite T-joints. European Journal of Mechanics, A/Solids, 2019, 78, 103821.	3.7	30
22	Stereological transformation of pore size distributions with application to soft polymer and FDM-printed specimens. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2019, 99, e201800287.	1.6	2
23	On the crack-driving force of phase-field models in linearized and finite elasticity. Computer Methods in Applied Mechanics and Engineering, 2019, 353, 348-372.	6.6	36
24	Coupled Thermal and Electrochemical Diffusion in Solid State Battery Systems. Advanced Structured Materials, 2019, , 519-535.	0.5	1
25	A comparison of stochastic and data-driven FEM approaches to problems with insufficient material data. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 554-570.	6.6	15
26	A juxtaposition of data driven and stochastic finite element analyses for problems with noisy material data. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900197.	0.2	0
27	Structural optimization of electrically charged anodes. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900098.	0.2	0
28	Dynamic fracture investigations of ultra-high performance concrete by spalling tests. Engineering Structures, 2019, 201, 109844.	5.3	47
29	Phase-field Simulations of Cracks under Dynamic Loading. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900074.	0.2	0
30	Experiment on wave propagation in soft resins. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900187.	0.2	0
31	Effect of uncertain parameters on the deflection of beams. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900318.	0.2	2
32	Phase-field fracture simulations of the Brazilian splitting test. International Journal of Fracture, 2019, 220, 85-98.	2.2	23
33	Prediction of dynamic properties of ultra-high performance concrete by an artificial intelligence approach. Advances in Engineering Software, 2019, 127, 51-58.	3.8	35
34	Application of case-based reasoning in a fault detection system on production of drippers. Applied Soft Computing Journal, 2019, 75, 227-232.	7.2	44
35	Vibration analysis of stochastic open-cell foam. , 2019, , 331-331.		0
36	Thermomigration in SnPb solders: Material model. Mechanics of Materials, 2018, 121, 31-49.	3.2	9

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37	A Thermodynamically Consistent Approach to Phase-Separating Viscous Fluids. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2018, 43, 185-191.	4.2	2
38	Fracture studies of Ultra-High Performance Concrete using dynamic Brazilian tests. <i>Theoretical and Applied Fracture Mechanics</i> , 2018, 93, 302-310.	4.7	83
39	A phase-field approach to conchoidal fracture. <i>Meccanica</i> , 2018, 53, 1203-1219.	2.0	22
40	Experiments on wave propagation in soft materials. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800346.	0.2	1
41	Topological analysis of open-pore structures. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800270.	0.2	1
42	Identification of hyper- and viscoelastic properties of different flexible FDM printed specimens. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800382.	0.2	1
43	Prediction of fracture in sandwich-structured composite joints using case-based reasoning approach. <i>Procedia Structural Integrity</i> , 2018, 13, 168-173.	0.8	13
44	Data-driven approach to elastic problems. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800132.	0.2	0
45	Numerical Simulation of Crack Propagation in an Anisotropic Medium. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800308.	0.2	1
46	Towards structural optimization of lithium battery anodes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800227.	0.2	3
47	On the tensile resistance of UHPC at impact. <i>European Physical Journal: Special Topics</i> , 2018, 227, 167-177.	2.6	37
48	A review on split Hopkinson bar experiments on the dynamic characterisation of concrete. <i>Construction and Building Materials</i> , 2018, 190, 1264-1283.	7.2	111
49	A Chemo-Mechanical Model of Diffusion in Reactive Systems. <i>Entropy</i> , 2018, 20, 140.	2.2	8
50	Characterization of sandwich composite T-joints under different ageing conditions. <i>Composite Structures</i> , 2018, 197, 80-88.	5.8	44
51	Hopkinson bar experiments as a method to determine impact properties of brittle and ductile materials. <i>GAMM Mitteilungen</i> , 2018, 41, e201800008.	5.5	15
52	Phase-Field Fracture at Finite Strains Based on Modified Invariants: A Note on its Analysis and Simulations. <i>GAMM Mitteilungen</i> , 2018, 40, 207-237.	5.5	7
53	The phase-field approach as a tool for experimental validations in fracture mechanics. <i>Continuum Mechanics and Thermodynamics</i> , 2017, 29, 947-956.	2.2	10
54	A high-order finite deformation phase-field approach to fracture. <i>Continuum Mechanics and Thermodynamics</i> , 2017, 29, 935-945.	2.2	31

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55	A framework for polyconvex large strain phase-field methods to fracture. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 649-683.	6.6	53
56	Experimental investigations of the environmental effects on stability and integrity of composite sandwich T-joints. Materialwissenschaft Und Werkstofftechnik, 2017, 48, 753-759.	0.9	34
57	Fracture mechanics and mechanical fault detection by artificial intelligence methods: A review. Engineering Failure Analysis, 2017, 81, 270-293.	4.0	119
58	A phase-field approach to pneumatic fracture. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 71-74.	0.2	4
59	A numerical analysis of the fracture toughness in phase-field modelling of adhesive fracture. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 249-250.	0.2	11
60	A stereologic approach for the spherical void size distribution in Polyurea. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 459-460.	0.2	0
61	Investigations on dynamic fracture of ultra-high performance concrete by Brazilian tests. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 251-252.	0.2	1
62	Diffusion induced void nucleation in SnPb solder joints. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 573-574.	0.2	0
63	Experimental and numerical investigation of PUR foam under dynamic loading. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 309-310.	0.2	0
64	A Material Model for Electroactive Polymers. Advanced Structured Materials, 2016, , 119-131.	0.5	3
65	Effect of prestress on the stability of electrode-electrolyte interfaces during charging in lithium batteries. Journal of the Mechanics and Physics of Solids, 2016, 95, 92-111.	4.8	45
66	Thermomigration in Sn-Pb solder bumps: Modelling and simulation. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 483-484.	0.2	0
67	Void dynamics in lead-free Sn-Ag-Cu solder joints. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 615-616.	0.2	1
68	Modeling and numerical simulation of crack growth and damage with a phase field approach. GAMM Mitteilungen, 2016, 39, 55-77.	5.5	18
69	Experimental characterization of dynamic properties of honeycomb sandwich joints and plates. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 145-146.	0.2	0
70	A polyconvex strain-energy split for a high-order phase-field approach to fracture. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 427-428.	0.2	0
71	Isogeometric analysis and hierarchical refinement for higher-order phase-field models. Computer Methods in Applied Mechanics and Engineering, 2016, 303, 185-207.	6.6	43
72	Thermal Diffusion in a Polymer Blend. Lecture Notes in Applied and Computational Mechanics, 2016, , 285-307.	2.2	0

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73	A micromechanical damage and fracture model for polymers based on fractional strain-gradient elasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 74, 175-195.	4.8	20
74	Using Martensite Formation during Tube Forming to Optimize Fatigue Strength. <i>Steel Research International</i> , 2014, 85, 1355-1363.	1.8	2
75	Thermodynamically consistent algorithms for a finite deformation phase field approach to fracture. <i>International Journal for Numerical Methods in Engineering</i> , 2014, 99, 906-924.	2.8	133
76	Identification of Viscoelastic Properties and Damaging Effects of Highly Extensible Polyurea. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 343-344.	0.2	0
77	Viscoelastic modelling and experimental results of a dielectric electro-active polymer diaphragm actuator. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 475-476.	0.2	1
78	Numerical simulations of spalling tests in order to investigate material properties of UHPC. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 137-138.	0.2	0
79	Fracture toughness investigations on UHPC by spalling tests. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 139-140.	0.2	1
80	An extended stochastic diffusion model for ternary mixtures. <i>Mechanics of Materials</i> , 2013, 56, 122-130.	3.2	2
81	A micromechanical model of distributed damage due to void growth in general materials and under general deformation histories. <i>International Journal for Numerical Methods in Engineering</i> , 2013, 93, 575-611.	2.8	18
82	Investigating a flexible wind turbine using consistent time stepping schemes. <i>Engineering Computations</i> , 2012, 29, 661-688.	1.4	1
83	Deformation induced martensite transformation in a cold-worked forming process of austenitic stainless steel. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012, 12, 321-324.	0.2	0
84	Application of Buckingham $\pi$ -theorem to asymmetric plate rolling processes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012, 12, 647-648.	0.2	0
85	Isogeometric analysis of thermal diffusion in binary blends. <i>Computational Materials Science</i> , 2012, 52, 182-188.	3.0	26
86	A higher order finite element approach to the Kuramoto-Sivashinsky equation. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2012, 92, 599-607.	1.6	13
87	Computational modeling of phase separation and coarsening in solder alloys. <i>International Journal of Solids and Structures</i> , 2012, 49, 1557-1572.	2.7	34
88	Thermophoresis in binary blends. <i>Mechanics of Materials</i> , 2012, 47, 33-50.	3.2	16
89	A dimensional analysis of front-end bending in plate rolling applications. <i>Journal of Materials Processing Technology</i> , 2012, 212, 1387-1398.	6.3	37
90	Numerical simulation of diffusion induced phase separation and coarsening in binary alloys. <i>Computational Materials Science</i> , 2011, 50, 1359-1364.	3.0	24

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91	Application of operator-scaling anisotropic random fields to binary mixtures. Philosophical Magazine, 2011, 91, 3766-3792.	1.6	10
92	A variational approach to the decomposition of unstable viscous fluids and its consistent numerical approximation. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2011, 91, 609-629.	1.6	15
93	A numerical approach to the analysis of failure modes in anisotropic plates. Engineering Fracture Mechanics, 2011, 78, 2052-2069.	4.3	20
94	Fracture and Fragmentation of Silicon Dies. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 123-124.	0.2	0
95	Numerical and experimental investigations of phase segregation effects in binary brazing solders. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 695-696.	0.2	0
96	Numerical investigation of diffusion induced coarsening processes in binary alloys. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012100.	0.6	4
97	Kidney damage in extracorporeal shock wave lithotripsy: a numerical approach for different shock profiles. Biomechanics and Modeling in Mechanobiology, 2009, 8, 285-299.	2.8	16
98	A physico-mechanical approach to modeling of metal forming processes – Part II: damage analysis in processes with plastic flow of metals. Continuum Mechanics and Thermodynamics, 2009, 20, 509-521.	2.2	4
99	Numerical modeling of diffusion induced phase transformations in mechanically stressed lead-free alloys. Computational Materials Science, 2009, 45, 837-844.	3.0	7
100	Kirkendall voids in the intermetallic layers of solder joints in MEMS. Computational Materials Science, 2009, 45, 827-831.	3.0	32
101	Condensation and Growth of Kirkendall Voids in Intermetallic Compounds. IEEE Transactions on Components and Packaging Technologies, 2009, 32, 684-692.	1.3	32
102	A physico-mechanical approach to modeling of metal forming processes – part I: theoretical framework. Continuum Mechanics and Thermodynamics, 2008, 20, 231-254.	2.2	8
103	Void nucleation by vacancy condensation. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10249-10250.	0.2	5
104	A geometrically exact thin membrane model – investigation of large deformations and wrinkling. International Journal for Numerical Methods in Engineering, 2008, 74, 871-893.	2.8	20
105	A strategy for damage assessment of thermally stressed copper vias in microelectronic printed circuit boards. Microelectronics Reliability, 2008, 48, 68-82.	1.7	23
106	Assessing failure in microelectronic compounds. Computational Materials Science, 2008, 43, 229-234.	3.0	1
107	Mesoscopic Modeling for Continua with Pores: Application in Biological Soft Tissue. Journal of Non-Equilibrium Thermodynamics, 2008, 33, 1-24.	4.2	7
108	Mesoscopic Modeling for Continua with Pores: Dynamic Void Growth in Viscoplastic Materials. Journal of Non-Equilibrium Thermodynamics, 2008, 33, 25-45.	4.2	4

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109	A Higher Gradient Theory of Multiphase Solid Mixtures and its Application to Lead-Free Solder Micro-Morphology. , 2007, , .		1
110	A geometrically exact membrane model for isotropic foils and fabrics. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4030007-4030008.	0.2	0
111	A variational constitutive model for porous metal plasticity. Computational Mechanics, 2006, 37, 142-152.	4.0	70
112	Shock wave induced damage in kidney tissue. Computational Materials Science, 2005, 32, 588-593.	3.0	12
113	An adaptive non-conforming finite-element method for Reissner-Mindlin plates. International Journal for Numerical Methods in Engineering, 2003, 56, 2313-2330.	2.8	4
114	An adaptive pN-h technique for global-local finite element analysis. Engineering Computations, 2002, 19, 485-500.	1.4	6
115	An adaptive finite element approach for a mixed Reissner-Mindlin plate formulation. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 4999-5008.	6.6	3
116	Adaptive mixed finite element method for Reissner-Mindlin plate. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 6895-6908.	6.6	7
117	Calculating the energy-norm FEM-error for Reissner-Mindlin plates without known reference solution. Computational Mechanics, 2000, 26, 566-570.	4.0	5
118	Cohesive Elements or Phase-Field Fracture: Which Method Is Better for Dynamic Fracture Analyses?. , 0, , .		2