

Bob Svendsen

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

218
papers

3,781
citations

34
h-index

52
g-index

229
ext. papers

4,137
ext. citations

3.1
avg, IF

5.67
L-index

#	Paper	IF	Citations
218	Chemo-Mechanical Phase-Field Modeling of Iron Oxide Reduction with Hydrogen. <i>Acta Materialia</i> , 2022 , 117899	8.4	4
217	Finite-deformation phase-field microelasticity with application to dislocation core and reaction modeling in fcc crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 2022 , 104897	5	0
216	Modeling and simulation of microstructure in metallic systems based on multi-physics approaches. <i>Npj Computational Materials</i> , 2022 , 8,	10.9	1
215	On the higher-order pseudo-continuum characterization of discrete kinematic results from experimental measurement or discrete simulation. <i>Journal of the Mechanics and Physics of Solids</i> , 2022 , 104953	5	1
214	The hidden structure dependence of the chemical life of dislocations. <i>Science Advances</i> , 2021 , 7,	14.3	6
213	Phase-Field Modeling of Chemoelastic Binodal/Spinodal Relations and Solute Segregation to Defects in Binary Alloys. <i>Materials</i> , 2021 , 14,	3.5	2
212	Efficient two-scale FE-FFT-based mechanical process simulation of elasto-viscoplastic polycrystals at finite strains. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 374, 113566	5.7	9
211	Microstructure simulation using self-consistent clustering analysis. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021 , 20, e202000263	0.2	2
210	A geometrically adapted reduced set of frequencies for a FFT-based microstructure simulation. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 386, 114131	5.7	3
209	Effect of Twin Boundary Motion and Dislocation-Twin Interaction on Mechanical Behavior in Fcc Metals. <i>Materials</i> , 2020 , 13,	3.5	2
208	A grain boundary model considering the grain misorientation within a geometrically nonlinear gradient-extended crystal viscoplasticity theory. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020 , 476, 20190581	2.4	0
207	Constitutive relations for polar continua based on statistical mechanics and spatial averaging. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020 , 476, 20190407	2.4	0
206	Unveiling the Re effect in Ni-based single crystal superalloys. <i>Nature Communications</i> , 2020 , 11, 389	17.4	42
205	Comparative modeling of the disregistry and Peierls stress for dissociated edge and screw dislocations in Al. <i>International Journal of Plasticity</i> , 2020 , 129, 102689	7.6	22
204	Multi-component chemo-mechanics based on transport relations for the chemical potential. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 365, 113029	5.7	6
203	Non-local Thermoelasticity Based on Equilibrium Statistical Thermodynamics. <i>Journal of Elasticity</i> , 2020 , 139, 37-59	1.5	0
202	A comparison of different continuum approaches in modeling mixed-type dislocations in Al. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2019 , 27, 074004	2	24

201	Alloy design for mechanical properties: Conquering the length scales. <i>MRS Bulletin</i> , 2019 , 44, 257-265	3.2	12
200	A computational approach towards modelling dislocation transmission across phase boundaries. <i>Philosophical Magazine</i> , 2019 , 99, 2126-2151	1.6	7
199	Atomistic phase field chemomechanical modeling of dislocation-solute-precipitate interaction in NiAlCo. <i>Acta Materialia</i> , 2019 , 175, 250-261	8.4	35
198	Phase-field-based calculations of the disregistry fields of static extended dislocations in FCC metals. <i>Philosophical Magazine</i> , 2019 , 99, 1400-1428	1.6	30
197	A model order reduction method for finite strain FFT solvers using a compressed sensing technique. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019 , 19, e201900037	0.2	5
196	Investigations on enhanced Fischer-Burmeister NCP functions: application to a rate-dependent model for ferroelectrics. <i>Archive of Applied Mechanics</i> , 2019 , 89, 995-1010	2.2	5
195	A simple and flexible model order reduction method for FFT-based homogenization problems using a sparse sampling technique. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 347, 622-638	5.7	12
194	The concept of control points in hybrid discontinuous Galerkin methods—Application to geometrically nonlinear crystal plasticity. <i>International Journal for Numerical Methods in Engineering</i> , 2018 , 114, 557-579	2.4	9
193	Influence of manufacturing processes on material characterization with the grooved in-plane torsion test. <i>International Journal of Mechanical Sciences</i> , 2018 , 146-147, 544-555	5.5	15
192	Finite-deformation phase-field chemomechanics for multiphase, multicomponent solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 112, 619-636	5	26
191	Laminate-based modelling of single and polycrystalline ferroelectric materials—application to tetragonal barium titanate. <i>Mechanics of Materials</i> , 2018 , 117, 235-254	3.3	4
190	Efficient and accurate two-scale FE-FFT-based prediction of the effective material behavior of elasto-viscoplastic polycrystals. <i>Computational Mechanics</i> , 2018 , 61, 751-764	4	37
189	Tunable twin stability and an accurate magnesium interatomic potential for dislocation-twin interactions. <i>Materials and Design</i> , 2018 , 153, 232-241	8.1	9
188	Efficient Multiscale FE-FFT-Based Modeling and Simulation of Macroscopic Deformation Processes with Non-linear Heterogeneous Microstructures. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2018 , 129-146	0.3	2
187	Investigations on different Fischer-Burmeister functions applied to the modelling of ferroelectrics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018 , 18, e201800331	0.2	
186	Numerically robust two-scale full-field finite strain crystal plasticity simulations of polycrystalline materials. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018 , 18, e201800278	0.2	
185	Modelling of grain boundary dynamics using amplitude equations. <i>Continuum Mechanics and Thermodynamics</i> , 2017 , 29, 895-911	3.5	6
184	Competitive bcc and fcc crystal nucleation from non-equilibrium liquids studied by phase-field crystal simulation. <i>Acta Materialia</i> , 2017 , 139, 196-204	8.4	23

183	Formulation of strongly non-local, non-isothermal dynamics for heterogeneous solids based on the GENERIC with application to phase-field modeling. <i>Materials Theory</i> , 2017 , 1,	2.2	1
182	Elasto-viscoplastic phase field modelling of anisotropic cleavage fracture. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 99, 19-34	5	67
181	Efficient and accurate two-scale simulation of non-linear heterogeneous microstructures. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2017 , 17, 803-804	0.2	
180	Nonlinear elastic effects in phase field crystal and amplitude equations: Comparison to ab initio simulations of bcc metals and graphene. <i>Physical Review B</i> , 2016 , 93,	3.3	14
179	A laminate-based framework for switching and microstructure evolution in polycrystalline ferroelectrics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2016 , 16, 323-324	0.2	
178	Theoretical and computational comparison of models for dislocation dissociation and stacking fault/core formation in fcc crystals. <i>Journal of the Mechanics and Physics of Solids</i> , 2016 , 95, 719-741	5	32
177	Strongly non-local modelling of dislocation transport and pile-up. <i>Philosophical Magazine</i> , 2016 , 96, 1171-1187	1.4	4
176	Two-scale FE-FFT- and phase-field-based computational modeling of bulk microstructural evolution and macroscopic material behavior. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016 , 305, 89-110	5.7	61
175	Linking macroscopic deformation processes to microstructure evolution using an FE-FFT-based micro-macro transition and non-conserved phase-fields. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2016 , 16, 535-536	0.2	2
174	A phase field model for damage in elasto-viscoplastic materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016 , 312, 167-185	5.7	57
173	Thermodynamic Model Formulations for Inhomogeneous Solids with Application to Non-isothermal Phase Field Modelling. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2016 , 41,	3.8	2
172	Gurson-based modelling of ductile damage and failure during cyclic loading processes at large deformation. <i>Engineering Fracture Mechanics</i> , 2016 , 160, 95-123	4.2	20
171	Comparison of two models for anisotropic hardening and yield surface evolution in bcc sheet steels. <i>European Journal of Mechanics, A/Solids</i> , 2015 , 54, 120-131	3.7	7
170	Atomistically determined phase-field modeling of dislocation dissociation, stacking fault formation, dislocation slip, and reactions in fcc systems. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 77, 109-122	5	48
169	Thermodynamic and rate variational formulation of models for inhomogeneous gradient materials with microstructure and application to phase field modeling. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2015 , 31, 162-172	2	7
168	From generalized stacking fault energies to dislocation properties: Five-energy-point approach and solid solution effects in magnesium. <i>Physical Review B</i> , 2015 , 92,	3.3	22
167	Comparison of phenomenological and laminate-based models for rate-dependent switching in ferroelectric continua. <i>GAMM Mitteilungen</i> , 2015 , 38, 147-170	1.8	9
166	A laminate-based modelling approach for rate-dependent switching in ferroelectric materials. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2015 , 15, 3-6	0.2	

165	Phase-field modeling of martensitic phase transformations in polycrystals coupled with crystal plasticity – A spectral-based approach. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2015 , 15, 317-318	0.2	18
164	Coordinate-invariant phase field modeling of ferro-electrics, part II: Application to composites and poly-crystals. <i>GAMM Mitteilungen</i> , 2015 , 38, 115-131	1.8	17
163	Rapid theory-guided prototyping of ductile Mg alloys: from binary to multi-component materials. <i>New Journal of Physics</i> , 2015 , 17, 093009	2.9	29
162	Thermomechanical characterization of Portevin-Chérel bands in AlMg3 (AA5754) and modeling based on a modified Estrin-McCormick approach. <i>International Journal of Plasticity</i> , 2015 , 67, 192-216	7.6	47
161	Coordinate-invariant phase field modeling of ferro-electrics, part I: Model formulation and single-crystal simulations. <i>GAMM Mitteilungen</i> , 2015 , 38, 102-114	1.8	12
160	Modeling and finite element simulation of loading-path-dependent hardening in sheet metals during forming. <i>International Journal of Plasticity</i> , 2014 , 63, 64-93	7.6	23
159	Two-dimensional elastic phase-field simulation of fcc to bcc martensitic phase transformations in polycrystals. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014 , 14, 397-398	0.2	3
158	Laminate-based modelling of microstructure and switching in ferroelectrics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014 , 14, 407-408	0.2	
157	Microstructure evolution during dynamic discontinuous recrystallization in particle-containing Cu. <i>Computational Materials Science</i> , 2014 , 84, 327-338	3.2	27
156	Quasi-linear versus potential-based formulations of force-flux relations and the GENERIC for irreversible processes: comparisons and examples. <i>Continuum Mechanics and Thermodynamics</i> , 2013 , 25, 803-816	3.5	26
155	Application of non-convex rate dependent gradient plasticity to the modeling and simulation of inelastic microstructure development and inhomogeneous material behavior. <i>Computational Materials Science</i> , 2013 , 80, 51-60	3.2	20
154	Modeling and simulation of deformation behavior, orientation gradient development and heterogeneous hardening in thin sheets with coarse texture. <i>International Journal of Plasticity</i> , 2013 , 50, 109-126	7.6	32
153	Model of mismatched contact for dislocation generation during coalescence of grains. <i>Philosophical Magazine Letters</i> , 2013 , 93, 246-253	1	1
152	Modeling of a thermomechanical process chain for sheet steels. <i>International Journal of Mechanical Sciences</i> , 2013 , 74, 46-54	5.5	11
151	Experimental characterization of microstructure development during loading path changes in bcc sheet steels. <i>Journal of Materials Science</i> , 2013 , 48, 674-689	4.3	13
150	Ab initio and atomistic study of generalized stacking fault energies in Mg and Mg-Zn alloys. <i>New Journal of Physics</i> , 2013 , 15, 043020	2.9	80
149	Analysis and comparison of two finite element algorithms for dislocation density based crystal plasticity. <i>GAMM Mitteilungen</i> , 2013 , 36, 219-238	1.8	5
148	Modeling Dislocation-Stacking Fault Interaction Using Molecular Dynamics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2013 , 13, 11-14	0.2	1

147	Modeling of Sheet Metals with Coarse Texture via Crystal Plasticity. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 101-110	0.3	
146	Homogenization modeling of thin-layer-type microstructures. <i>International Journal of Solids and Structures</i> , 2012 , 49, 1828-1838	3.1	7
145	Homogenization methods for multi-phase elastic composites with non-elliptical reinforcements: Comparisons and benchmarks. <i>European Journal of Mechanics, A/Solids</i> , 2012 , 34, 21-37	3.7	67
144	Investigation of PLC band nucleation in AA5754. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 539, 205-210	5.3	23
143	A new method for determining dynamic grain structure evolution during hot aluminum extrusion. <i>Journal of Materials Processing Technology</i> , 2012 , 212, 323-330	5.3	56
142	Microstructure-Based Modeling of Residual Stresses in WC-12Co-Sprayed Coatings. <i>Journal of Thermal Spray Technology</i> , 2012 , 21, 96-107	2.5	25
141	Two model formulations for gradient crystal plasticity. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012 , 12, 815-818	0.2	
140	Investigation of the deformation behavior of Fe-3Si sheet metal with large grains via crystal plasticity and finite-element modeling. <i>Computational Materials Science</i> , 2012 , 52, 25-32	3.2	35
139	Two models for gradient inelasticity based on non-convex energy. <i>Computational Materials Science</i> , 2012 , 64, 96-100	3.2	15
138	THEORETICAL AND ALGORITHMIC FORMULATION OF MODELS FOR ENERGETIC GND-BASED HARDENING IN SINGLE CRYSTALS. <i>International Journal for Multiscale Computational Engineering</i> , 2012 , 10, 551-565	2.4	3
137	Thermodynamic model formulation for viscoplastic solids as general equations for non-equilibrium reversible-irreversible coupling. <i>Continuum Mechanics and Thermodynamics</i> , 2012 , 24, 211-227	3.5	18
136	Modeling Induced Flow Anisotropy and Phase Transformations in Air Hardening Steels. <i>Key Engineering Materials</i> , 2012 , 504-506, 443-448	0.4	
135	Modeling of dynamic microstructure evolution of EN AW-6082 alloy during hot forward extrusion. <i>Computational Materials Science</i> , 2011 , 50, 1520-1525	3.2	11
134	On the Formulation of Continuum Thermodynamic Models for Solids as General Equations for Non-equilibrium Reversible-Irreversible Coupling. <i>Journal of Elasticity</i> , 2011 , 104, 357-368	1.5	12
133	An extended crystal plasticity model for latent hardening in polycrystals. <i>Computational Mechanics</i> , 2011 , 48, 631-645	4	40
132	Phenomenological modeling of anisotropy induced by evolution of the dislocation structure on the macroscopic and microscopic scale. <i>International Journal of Material Forming</i> , 2011 , 4, 141-154	2	17
131	Analysis of the Mechanical Properties of an Arc-Sprayed WC-FeCSiMn Coating: Nanoindentation and Simulation. <i>Journal of Thermal Spray Technology</i> , 2011 , 20, 328-335	2.5	30
130	Towards the simulation of grinding processes – a thermoplastic single grain approach. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2011 , 11, 385-386	0.2	3

129	FE-modeling of ideal grain growth based on preprocessed EBSD data. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2011 , 11, 471-472	0.2	
128	Modeling and numerical simulation of multiscale behavior in polycrystals via extended crystal plasticity. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2011 , 11, 531-532	0.2	
127	Fast, curvature-based prediction of rolling forces for porous media based on a series of detailed simulations. <i>Advances in Engineering Software</i> , 2011 , 42, 142-150	3.6	4
126	Thermodynamic and relaxation-based modeling of the interaction between martensitic phase transformations and plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 1004-1019	5	45
125	Continuum Thermodynamic and Rate Variational Formulation of Models for Extended Continua. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2011 , 1-18	0.3	3
124	Modeling of polycrystals with gradient crystal plasticity: A comparison of strategies. <i>Philosophical Magazine</i> , 2010 , 90, 1263-1288	1.6	58
123	Efficient and reliable finite element techniques for phase field models. <i>International Journal of Materials Research</i> , 2010 , 101, 498-502	0.5	1
122	An image morphing method for 3D reconstruction and FE-analysis of pore networks in thermal spray coatings. <i>Computational Materials Science</i> , 2010 , 47, 881-889	3.2	28
121	Lengthscale-dependent modelling of ductile failure in metallic microstructures. <i>International Journal of Materials and Structural Integrity</i> , 2010 , 4, 141	0.3	1
120	Characterization of grain microstructure development in the aluminum alloy EN AW-6060 during extrusion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 6568-6573	5.3	28
119	Modelling and simulation of dynamic microstructure evolution of aluminium alloys during thermomechanically coupled extrusion process. <i>International Journal of Material Forming</i> , 2010 , 3, 363-366		2
118	Effect of surface energy on the plastic behavior of crystalline thin films under plane strain constrained shear. <i>International Journal of Fracture</i> , 2010 , 166, 173-178	2.3	7
117	Thermo-mechanically coupled modeling and simulation of hot metal-forming processes using adaptive remeshing method. <i>GAMM Mitteilungen</i> , 2010 , 33, 95-115	1.8	2
116	Experimental characterization and modeling of the hardening behavior of the sheet steel LH800. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 2515-2526	5.3	32
115	On the continuum thermodynamic rate variational formulation of models for extended crystal plasticity at large deformation. <i>Journal of the Mechanics and Physics of Solids</i> , 2010 , 58, 1253-1271	5	64
114	Experimental characterization and model identification of directional hardening effects in metals for complex strain path changes. <i>International Journal of Solids and Structures</i> , 2010 , 47, 1361-1374	3.1	17
113	Homogenization Approach Based on Laminates. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2010 , 10, 419-420	0.2	
112	Modeling and Simulation of Microstructure Evolution in Extruded Aluminum Profiles. <i>Key Engineering Materials</i> , 2009 , 424, 43-50	0.4	

111	Thermodynamic multifield modeling of electromagnetic metal forming. <i>International Journal of Material Forming</i> , 2009 , 2, 907-910	2	
110	Comparison of two models for anisotropic hardening evolution in metals during complex loading. <i>International Journal of Material Forming</i> , 2009 , 2, 395-398	2	2
109	On constitutive and configurational aspects of models for gradient continua with microstructure. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2009 , 89, 687-697	1	30
108	Effect of surface energy on dislocation-induced field in half-space with application to thin film-substrate systems. <i>Acta Mechanica Solida Sinica</i> , 2009 , 22, 436-442	2	2
107	Formulation and application of models for anisotropic hardening in sheet metals subject to complex loading-path changes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2009 , 9, 329-330	0.2	
106	Thermomechanically coupled modeling and simulation of aluminum alloys during hot forming processes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2009 , 9, 375-376	0.2	
105	Modeling and simulation of the microstructural behaviour in thermal sprayed coatings. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2009 , 9, 421-422	0.2	
104	Thermomechanical modeling and simulation of aluminum alloy behavior during extrusion and cooling. <i>Journal of Materials Processing Technology</i> , 2009 , 209, 876-883	5.3	27
103	An arbitrary Lagrangian Eulerian approach to the three-dimensional simulation of electromagnetic forming. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009 , 198, 1535-1547	5.7	20
102	On Configurational Aspects of Finite Deformation Inelasticity: A Variational Approach Versus the Transformation of Balance of Momentum. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2009 , 37-46	0.3	
101	Nonlocal Modeling and Simulation of Ductile Damage and Failure in Metal Matrix Composites. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2008 , 130,	1.8	10
100	Thermographic study of nucleation and propagation of Portevin-Le Châtelier bands. <i>Quantitative InfraRed Thermography Journal</i> , 2008 , 5, 231-248	1.1	3
99	Application of Adaptive Mesh and ALE Method in Simulation of Extrusion of Aluminum Alloys. <i>Key Engineering Materials</i> , 2008 , 367, 117-123	0.4	3
98	Efficient Modelling and Simulation of Process Chains in Sheet Metal Forming and Processing. <i>Steel Research International</i> , 2008 , 79, 731-737	1.6	7
97	Modeling of sheet metal forming processes taking into account distortional hardening. <i>International Journal of Material Forming</i> , 2008 , 1, 105-108	2	6
96	Modelling and Simulation of 3D electromagnetic metal forming processes. <i>International Journal of Material Forming</i> , 2008 , 1, 1399-1402	2	2
95	Combined unstructured and hanging-node-based remeshing with boundary control for metal forming simulations. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10277-10278	0.2	
94	Features of an adaptive remeshing strategy in the context of deformation localization and high speed cutting. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10287-10288	0.2	

93	Comparison of two different models to account for induced flow anisotropy during complex loading processes. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10405-10406	0.2	
92	Experimental and theoretical investigation on the microstructure of aluminum alloys during extrusion. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10431-10432	0.2	
91	Micromechanically motivated macroscopic modeling and simulation of induced flow anisotropy in sheet metals with application to springback. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10479-10480	0.2	
90	Thermomechanical modeling and simulation of aluminum alloys during extrusion process. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10517-10518	0.2	
89	Phase-field-based modeling and simulation of solidification and deformation behavior of technological alloys. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2008 , 8, 10547-10548	0.2	
88	Thermodynamic multifield modeling and simulation of electromagnetic, thermoelastic, viscoplastic solids. <i>GAMM Mitteilungen</i> , 2008 , 31, 192-209	1.8	
87	Strategies for 3D simulation of electromagnetic forming processes. <i>Journal of Materials Processing Technology</i> , 2008 , 199, 341-362	5.3	31
86	Inverse error propagation and model identification for coupled dynamic problems with application to electromagnetic metal forming. <i>International Journal of Solids and Structures</i> , 2008 , 45, 442-459	3.1	13
85	On the modeling of hardening in metals during non-proportional loading. <i>International Journal of Plasticity</i> , 2008 , 24, 1039-1070	7.6	50
84	A logarithmic-exponential backward-Euler-based split of the flow rule for anisotropic inelastic behaviour at small elastic strain. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 70, 496-504	2.4	7
83	Simulation of chip formation during high-speed cutting. <i>Journal of Materials Processing Technology</i> , 2007 , 186, 66-76	5.3	82
82	Modeling and simulation of extrusion of aluminum alloys. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 4060017-4060018	0.2	
81	Application of the R-functions method to the solution of elliptic PDEs (Poster Presentation). <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 2010033-2010034	0.2	
80	Accurate hardening modeling as basis for the realistic simulation of sheet forming processes with complex strain-path changes. <i>AIP Conference Proceedings</i> , 2007 ,	0	7
79	Accurate Hardening Modeling As Basis For The Realistic Simulation Of Sheet Forming Processes With Complex Strain-Path Changes. <i>AIP Conference Proceedings</i> , 2007 ,	0	8
78	Application of the concept of evolving structure tensors to the modeling of initial and induced anisotropy at large deformation. <i>Computers and Structures</i> , 2006 , 84, 1077-1085	4.5	12
77	Algorithmic formulation and numerical implementation of coupled electromagnetic-inelastic continuum models for electromagnetic metal forming. <i>International Journal for Numerical Methods in Engineering</i> , 2006 , 68, 1301-1328	2.4	33
76	Unit-cell simulations of damage and failure in PRMMCs. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 159-160	0.2	

75	Non-local modeling of thermomechanical localization in metals. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 369-370	0.2	1
74	Adaptivity in the context of high speed cutting. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 381-382	0.2	
73	Modeling and simulation of extrusion of aluminum alloys. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 389-390	0.2	
72	Experimental and theoretical investigation of PLC bands. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 435-436	0.2	2
71	ALE-based 3D FE simulation of electromagnetic forming. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 459-460	0.2	5
70	On the influence of electric currents on plastic deformation. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 461-462	0.2	
69	High Performance Computing Techniques for the FEM Simulation in Structural Mechanics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2006 , 6, 773-774	0.2	0
68	On the large-deformation- and continuum-based formulation of models for extended crystal plasticity. <i>International Journal of Solids and Structures</i> , 2006 , 43, 7246-7267	3.1	35
67	Simulation of deformation and lifetime behavior of a fcc single crystal superalloy at high temperature under low-cycle fatigue loading. <i>International Journal of Fatigue</i> , 2006 , 28, 1791-1802	5	39
66	Multifield modeling of electromagnetic metal forming processes. <i>Journal of Materials Processing Technology</i> , 2006 , 177, 270-273	5.3	34
65	Modeling and simulation of directional hardening in metals during non-proportional loading. <i>Journal of Materials Processing Technology</i> , 2006 , 177, 430-432	5.3	25
64	Non-Local Damage Simulation in Composites Using Crack Propagation and Mesh Adaptivity 2006 , 389-390		
63	Application of extended crystal plasticity to the modeling of glide and kink bands and of crack opening in single crystals. <i>Computational Materials Science</i> , 2005 , 32, 426-434	3.2	2
62	Phase-Field Extension of Crystal Plasticity with Application to Hardening Modeling 2005 , 501-511		1
61	Continuum thermodynamic formulation of models for electromagnetic thermoelastic solids with application in electromagnetic metal forming. <i>Continuum Mechanics and Thermodynamics</i> , 2005 , 17, 1-16	3.5	38
60	On a new finite element technology for electromagnetic metal forming processes. <i>Archive of Applied Mechanics</i> , 2005 , 74, 834-845	2.2	13
59	On the modeling and simulation of induced anisotropy in polycrystalline metals with application to springback. <i>Archive of Applied Mechanics</i> , 2005 , 74, 890-899	2.2	3
58	Simulation of Fatigue Crack Propagation in Ductile Metals by Blunting and Re-sharpening. <i>International Journal of Fracture</i> , 2005 , 136, 207-220	2.3	22

57	Local and extended models for high-speed, dynamic loading of metals. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2005 , 5, 267-268	0.2	
56	Modeling and simulation of chip formation in high speed cutting. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2005 , 5, 275-276	0.2	
55	Modeling and simulation of induced anisotropy and directional hardening effects due to an evolving microstructure in metals. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2005 , 5, 281-282	0.2	
54	Continuum Thermodynamic and Variational Models for Continua with Microstructure and Material Inhomogeneity 2005 , 173-180		2
53	Identifikation von Materialparametern. <i>ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb</i> , 2005 , 100, 435-438	0.5	
52	Reply to RIVLIN'S Material symmetry revisited or Much Ado About Nothing. <i>GAMM Mitteilungen</i> , 2004 , 27, 88-93	1.8	5
51	On thermodynamic- and variational-based formulations of models for inelastic continua with internal lengthscales. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 5429-5452	5.7	30
50	On the use of evolving structure tensors to model initial and induced elastic and inelastic anisotropy at finite deformation. <i>European Physical Journal Special Topics</i> , 2003 , 105, 31-37		5
49	Local and non-local Gurson-based ductile damage and failure modelling at large deformation. <i>European Journal of Mechanics, A/Solids</i> , 2003 , 22, 779-792	3.7	78
48	On the variational formulation of models for materials with microstructure. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2003 , 3, 220-221	0.2	
47	Local and non-local ductile damage and failure modelling at large deformation with applications to engineering. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2003 , 3, 232-235	0.2	2
46	A non-local extension of Gurson-based ductile damage modeling. <i>Computational Materials Science</i> , 2003 , 26, 219-229	3.2	57
45	Continuum Thermodynamic Modeling and Simulation of Additional Hardening due to Deformation Incompatibility. <i>Solid Mechanics and Its Applications</i> , 2003 , 141-150	0.4	3
44	Continuum thermodynamic models for crystal plasticity including the effects of geometrically-necessary dislocations. <i>Journal of the Mechanics and Physics of Solids</i> , 2002 , 50, 1297-1329 ⁵		107
43	On the continuum modeling of materials with kinematic structure. <i>Acta Mechanica</i> , 2001 , 152, 49-79	2.1	18
42	Formulation of balance relations and configurational fields for continua with microstructure and moving point defects via invariance. <i>International Journal of Solids and Structures</i> , 2001 , 38, 1183-1200	3.1	10
41	On the modelling of anisotropic elastic and inelastic material behaviour at large deformation. <i>International Journal of Solids and Structures</i> , 2001 , 38, 9579-9599	3.1	75
40	Crystal-plasticity based modeling and simulation of geometrically-necessary dislocations at a crack front in ductile single crystals. <i>European Physical Journal Special Topics</i> , 2001 , 11, Pr5-171-Pr5-177		1

39	Classical mixture models for polythermal ice 1999 , 197-214		
38	A thermodynamic approach to elastic and plastic anisotropy. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 1999 , 79, 207-210	1	
37	On frame-indifference and form-invariance in constitutive theory. <i>Acta Mechanica</i> , 1999 , 132, 195-207	2.1	60
36	On the thermodynamics of thermoelastic materials with additional scalar degrees of freedom. <i>Continuum Mechanics and Thermodynamics</i> , 1999 , 11, 247-262	3.5	43
35	Constitutive models for granular materials including quasi-static frictional behaviour: Toward a thermodynamic theory of plasticity. <i>Continuum Mechanics and Thermodynamics</i> , 1999 , 11, 263-275	3.5	33
34	A Statistical Mechanical Formulation of Continuum Fields and Balance Relations for Granular and Other Materials with Internal Degrees of Freedom 1999 , 245-308		3
33	Hyperelastic models for elastoplasticity with non-linear isotropic and kinematic hardening at large deformation. <i>International Journal of Solids and Structures</i> , 1998 , 35, 3363-3389	3.1	24
32	A thermodynamic formulation of finite-deformation elastoplasticity with hardening based on the concept of material isomorphism. <i>International Journal of Plasticity</i> , 1998 , 14, 473-488	7.6	47
31	On shear flow of a saturated ice-sediment mixture with thermodynamic equilibrium pressure and momentum exchange. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 1998 , 454, 71-88	2.4	5
30	On the Constituent Structure of a Classical Mixture. <i>Meccanica</i> , 1997 , 32, 13-32	2.1	2
29	Interaction models for mixtures with application to phase transitions. <i>International Journal of Engineering Science</i> , 1997 , 35, 55-74	5.7	6
28	On the role of mechanical interactions in the steady-state gravity flow of a two-constituent mixture down an inclined plane. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 1996 , 452, 1189-1205	2.4	9
27	A continuum approach for modelling induced anisotropy in glaciers and ice sheets*. <i>Annals of Glaciology</i> , 1996 , 23, 262-269	2.5	28
26	On the gravity-driven shear flow of an ice-sediment mixture. <i>Annals of Glaciology</i> , 1996 , 23, 124-128	2.5	6
25	A continuum approach for modelling induced anisotropy in glaciers and ice sheets*. <i>Annals of Glaciology</i> , 1996 , 23, 262-269	2.5	35
24	Balance relations for classical mixtures containing a moving non-material surface with application to phase transitions. <i>Continuum Mechanics and Thermodynamics</i> , 1996 , 8, 171-187	3.5	7
23	A thermodynamic formulation of the equations of motion and buoyancy frequency for Earth's fluid outer core. <i>Continuum Mechanics and Thermodynamics</i> , 1996 , 8, 75-101	3.5	
22	On the gravity-driven shear flow of an ice-sediment mixture. <i>Annals of Glaciology</i> , 1996 , 23, 124-128	2.5	1

21	A thermodynamic formulation of the equations of motion and buoyancy frequency for Earth's fluid outer core 1996 , 8, 75		0
20	A local frame formulation of dual stress-strain pairs and time derivatives. <i>Acta Mechanica</i> , 1995 , 111, 13-40	2.1	3
19	On the thermodynamics of a mixture of isotropic materials with constraints. <i>International Journal of Engineering Science</i> , 1995 , 33, 2021-2054	5.7	89
18	On the representation of constitutive relations using structure tensors. <i>International Journal of Engineering Science</i> , 1994 , 32, 1889-1892	5.7	14
17	On interfacial transition conditions in two phase gravity flow. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1994 , 45, 746-762	1.6	20
16	Debris flow modeling: A review. <i>Continuum Mechanics and Thermodynamics</i> , 1994 , 8, 1-35	3.5	105
15	A local superposed-constituent volume-fraction mixture theory based on relative motion. <i>International Journal of Non-Linear Mechanics</i> , 1994 , 29, 845-860	2.8	
14	Debris flow modeling: A review 1994 , 8, 1		15
13	Shock-induced temperatures of CaMgSi ₂ O ₆ . <i>Journal of Geophysical Research</i> , 1990 , 95, 6943		14
12	Optical radiation from shock-compressed materials and interfaces. <i>Physics Reports</i> , 1989 , 180, 333-416	27.7	7
11	Phase relations in iron-rich systems and implications for the Earth's core. <i>Physics of the Earth and Planetary Interiors</i> , 1989 , 55, 208-220	2.3	14
10	Ideal Fe ₂ FeS, Fe ₂ FeO phase relations and Earth's core. <i>Physics of the Earth and Planetary Interiors</i> , 1989 , 55, 154-186	2.3	21
9	Shock-induced melting and shear banding in single-crystal NaCl. <i>Journal of Applied Physics</i> , 1988 , 63, 99-106		18
8	The Temperature of Shock Compressed Iron 1988 , 532-541		
7	The Melting Curve of Iron to 250 Gigapascals: A Constraint on the Temperature at Earth's Center. <i>Science</i> , 1987 , 236, 181-2	33.3	315
6	The Temperature of Shock Compressed Iron. <i>Geophysical Monograph Series</i> , 1987 , 393-402	1.1	18
5	Optical Radiation from Shock-Compressed Materials and Interfaces. <i>Geophysical Monograph Series</i> , 1987 , 403-423	1.1	5
4	Shock-induced temperatures of MgO. <i>Geophysical Journal International</i> , 1987 , 91, 667-691	2.6	55

3	Shock Induced Radiation from Minerals 1986 , 261-265		14
2	Dynamic compression of diopside and salite to 200 GPa. <i>Geophysical Research Letters</i> , 1983 , 10, 501-504	4.9	56
1	A Review of FE-FFT-Based Two-Scale Methods for Computational Modeling of Microstructure Evolution and Macroscopic Material Behavior. <i>Archives of Computational Methods in Engineering</i> , 1	7.8	1