Samuel Forest

List of Publications by Citations

242 papers	8,917 citations	51 h-index	86 g-index
260 ext. papers	9,962 ext. citations	3 avg, IF	6.59 L-index

#	Paper	IF	Citations
242	Determination of the size of the representative volume element for random composites: statistical and numerical approach. *International Journal of Solids and Structures*, **2003**, 40, 3647-3679	3.1	1276
241	Micromorphic Approach for Gradient Elasticity, Viscoplasticity, and Damage. *Journal of Engineering Mechanics - ASCE*, **2009**, 135, 117-131	2.4	390
240	Cosserat overall modeling of heterogeneous materials. *Mechanics Research Communications*, **1998**, 25, 449-454	2.2	199
239	Elastoviscoplastic constitutive frameworks for generalized continua. *Acta Mechanica*, **2003**, 160, 71-111	2.1	185
238	Nonlinear microstrain theories. *International Journal of Solids and Structures*, **2006**, 43, 7224-7245	3.1	181
237	Intergranular and intragranular behavior of polycrystalline aggregates.Part 2: Results. *International Journal of Plasticity*, **2001**, 17, 537-563	7.6	180
236	Cosserat modelling of size effects in the mechanical behaviour of polycrystals and multi-phase materials. *International Journal of Solids and Structures*, **2000**, 37, 7105-7126	3.1	180
235	Mechanical properties and non-homogeneous deformation of open-cell nickel foams: application of the mechanics of cellular solids and of porous materials. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2000**, 289, 276-288	5.3	148
234	Apparent and effective physical properties of heterogeneous materials: Representativity of samples of two materials from food industry. *Computer Methods in Applied Mechanics and Engineering*, **2006**, 195, 3960-3982	5.7	145
233	New opportunities for 3D materials science of polycrystalline materials at the micrometre lengthscale by combined use of X-ray diffraction and X-ray imaging. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 524, 69-76	5.3	143
232	Some elements of microstructural mechanics. *Computational Materials Science*, **2003**, 27, 351-374	3.2	139
231	Asymptotic analysis of heterogeneous Cosserat media. *International Journal of Solids and Structures* , **2001**, 38, 4585-4608	3.1	138
230	Computational homogenization of elasto-plastic porous metals. *International Journal of Plasticity*, **2012**, 29, 102-119	7.6	125
229	Some links between recent gradient thermo-elasto-plasticity theories and the thermomechanics of generalized continua. *International Journal of Solids and Structures*, **2010**, 47, 3367-3376	3.1	122
228	Generalized continua and non-homogeneous boundary conditions in homogenisation methods. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2011**, 91, 90-109	1	114
227	A Geometrically Exact Micromorphic Model for Elastic Metallic Foams Accounting for Affine Microstructure. Modelling, Existence of Minimizers, Identification of Moduli and Computational Results. *Journal of Elasticity*, **2007**, 87, 239-276	1.5	111
226	Effective elastic properties of auxetic microstructures: anisotropy and structural applications. *International Journal of Mechanics and Materials in Design*, **2013**, 9, 21-33	2.5	91

225	Size effects in generalised continuum crystal plasticity for two-phase laminates. *Journal of the Mechanics and Physics of Solids*, **2010**, 58, 1963-1994	5	90
224	Micromorphic approach to single crystal plasticity and damage. *International Journal of Engineering Science*, **2011**, 49, 1311-1325	5.7	88
223	Micromorphic continuum modelling of the deformation and fracture behaviour of nickel foams. *European Journal of Mechanics, A/Solids*, **2006**, 25, 526-549	3.7	85
222	Isogeometric shape optimization of smoothed petal auxetic structures via computational periodic homogenization. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 323, 250-271	5.7	83
221	Modeling slip, kink and shear banding in classical and generalized single crystal plasticity. *Acta Materialia*, **1998**, 46, 3265-3281	8.4	83
220	Second strain gradient elasticity of nano-objects. *Journal of the Mechanics and Physics of Solids*, **2016**, 97, 92-124	5	81
219	Ensemble averaging stress–strain fields in polycrystalline aggregates with a constrained surface microstructure – Part 2: crystal plasticity. *Philosophical Magazine*, **2007**, 87, 1425-1446	1.6	78
218	A yield function for single crystals containing voids. *International Journal of Solids and Structures*, **2013**, 50, 2115-2131	3.1	77
217	Non-Linear Mechanics of Materials. *Solid Mechanics and Its Applications*, **2010**,	0.4	77
216	Estimating the overall properties of heterogeneous Cosserat materials. *Modelling and Simulation in Materials Science and Engineering*, **1999**, 7, 829-840	2	72
215	3D quantitative image analysis of open-cell nickel foams under tension and compression loading using X-ray microtomography. *Philosophical Magazine*, **2005**, 85, 2147-2175	1.6	70
214	Strain gradient plasticity modeling of the cyclic behavior of laminate microstructures. *Journal of the Mechanics and Physics of Solids*, **2015**, 79, 1-20	5	69
213	Deformation and fracture of aluminium foams under proportional and non proportional multi-axial loading: statistical analysis and size effect. *International Journal of Mechanical Sciences*, **2004**, 46, 217-244	2.5	68
212	A phase field model incorporating strain gradient viscoplasticity: Application to rafting in Ni-base superalloys. *Journal of the Mechanics and Physics of Solids*, **2012**, 60, 1243-1256	5	67
211	Towards gigantic RVE sizes for 3D stochastic fibrous networks. *International Journal of Solids and Structures*, **2014**, 51, 359-376	3.1	67
210	Homogenization methods and mechanics of generalized continua - part 2. *Theoretical and Applied Mechanics*, **2002**, 113-144	0.4	66
209	Strain localization at the crack tip in single crystal CT specimens under monotonous loading: 3D Finite Element analyses and application to nickel-base superalloys. *International Journal of Fracture*, **2003**, 124, 43-77	2.3	64
208	Combining phase field approach and homogenization methods for modelling phase transformation in elastoplastic media. *European Journal of Computational Mechanics*, **2009**, 18, 485-523	0.5	63

207	Nonlinear regularization operators as derived from the micromorphic approach to gradient elasticity, viscoplasticity and damage. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20150755	2.4	61
206	Finite element formulation of a phase field model based on the concept of generalized stresses. *Computational Materials Science*, **2009**, 45, 800-805	3.2	61
205	Strain localization phenomena associated with static and dynamic strain ageing in notched specimens: experiments and finite element simulations. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 387-389, 181-185	5.3	61
204	Polycrystal modelling of IF-Ti steel under complex loading path. *International Journal of Plasticity*, **2001**, 17, 65-85	7.6	61
203	Effect of secondary orientation on notch-tip plasticity in superalloy single crystals. *International Journal of Plasticity*, **2012**, 28, 102-123	7.6	60
202	Stress gradient continuum theory. *Mechanics Research Communications*, **2012**, 40, 16-25	2.2	59
201	Ensemble averaging stress–strain fields in polycrystalline aggregates with a constrained surface microstructure – Part 1: anisotropic elastic behaviour. *Philosophical Magazine*, **2007**, 87, 1401-1424	1.6	59
200	Hypertemperature in thermoelastic solids. *Comptes Rendus - Mecanique*, **2008**, 336, 347-353	2.1	57
199	Elastoplasticity of auxetic materials. *Computational Materials Science*, **2012**, 64, 57-61	3.2	55
198	Phase field modelling of grain boundary motion driven by curvature and stored energy gradients. Part I: theory and numerical implementation. *Philosophical Magazine*, **2012**, 92, 3618-3642	1.6	55
197	EVALUATION OF GENERALIZED CONTINUUM SUBSTITUTION MODELS FOR HETEROGENEOUS MATERIALS. *International Journal for Multiscale Computational Engineering*, **2012**, 10, 527-549	2.4	54
196	First vs. second gradient of strain theory for capillarity effects in an elastic fluid at small length scales. *Computational Materials Science*, **2011**, 50, 1299-1304	3.2	54
195	Subgrain formation during deformation: Physical origin and consequences. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 319-327	2.3	54
194	Strain gradient plasticity modeling and finite element simulation of Lüders band formation and propagation. *Continuum Mechanics and Thermodynamics*, **2015**, 27, 83-104	3.5	53
193	Crystal plasticity analysis of cylindrical indentation on a Ni-base single crystal superalloy. *International Journal of Plasticity*, **2013**, 51, 200-217	7.6	53
192	Grain size effects on plastic strain and dislocation density tensor fields in metal polycrystals. *Computational Materials Science*, **2012**, 52, 7-13	3.2	52
191	Some links between Cosserat, strain gradient crystal plasticity and the statistical theory of dislocations. *Philosophical Magazine*, **2008**, 88, 3549-3563	1.6	51
190	Portevin–LeChatelier effect in Al–Mg alloys: Influence of obstacles – experiments and modelling. *Computational Materials Science*, **2007**, 39, 106-112	3.2	50

189	An elastoviscoplastic model for porous single crystals at finite strains and its assessment based on unit cell simulations. *International Journal of Plasticity*, **2016**, 84, 58-87	7.6	50
188	Plastic slip distribution in two-phase laminate microstructures: Dislocation-based versus generalized-continuum approaches. *Philosophical Magazine*, **2003**, 83, 245-276	1.6	49
187	3D simulation of short fatigue crack propagation by finite element crystal plasticity and remeshing. *International Journal of Fatigue*, **2016**, 82, 238-246	5	48
186	Finite element simulations of the deformation of fused-cast refractories based on X-ray computed tomography. *Computational Materials Science*, **2007**, 39, 224-229	3.2	48
185	Investigation on the influence of cell shape anisotropy on the mechanical performance of closed cell aluminium foams using micro-computed tomography. *Journal of Materials Science*, **2005**, 40, 5801-5811	4.3	47
184	Modeling the mechanical behavior of a multicrystalline zinc coating on a hot-dip galvanized steel sheet. *Computational Materials Science*, **2000**, 19, 189-204	3.2	46
183	Finite element crystal plasticity analysis of spherical indentation in bulk single crystals and coatings. *Computational Materials Science*, **2009**, 45, 774-782	3.2	45
182	Phase field modelling of grain boundary motion driven by curvature and stored energy gradients. Part II: Application to recrystallisation. *Philosophical Magazine*, **2012**, 92, 3643-3664	1.6	44
181	Numerical aspects in the finite element simulation of the Portevin□le Chatelier effect. *Computer Methods in Applied Mechanics and Engineering*, **2010**, 199, 734-754	5.7	44
180	Continuum modeling of strain localization phenomena in metallic foams. *Journal of Materials Science*, **2005**, 40, 5903-5910	4.3	43
179	A reduced micromorphic single crystal plasticity model at finite deformations. Application to strain localization and void growth in ductile metals. *International Journal of Solids and Structures*, **2018**, 134, 43-69	3.1	42
178	Coupled glide-climb diffusion-enhanced crystal plasticity. *Journal of the Mechanics and Physics of Solids*, **2014**, 70, 136-153	5	41
177	Homogenization of periodic auxetic materials. *Procedia Engineering*, **2011**, 10, 1847-1852		40
176	Micro-mechanical modeling of the inelastic behavior of directionally solidified materials. *Mechanics of Materials*, **2006**, 38, 203-217	3.3	40
175	Finite element simulations of dynamic strain ageing effects at V-notches and crack tips. *Scripta Materialia*, **2005**, 52, 1181-1186	5.6	40
174	Inspection of free energy functions in gradient crystal plasticity. *Acta Mechanica Sinica/Lixue Xuebao*, **2013**, 29, 763-772	2	39
173	Numerical study of creep in two-phase aggregates with a large rheology contrast: Implications for the lower mantle. *Earth and Planetary Science Letters*, **2005**, 237, 223-238	5.3	39
172	Mechanics of generalized continua: construction by homogenizaton. *European Physical Journal Special Topics*, **1998**, 08, Pr4-39-Pr4-48		39

171	Deformation and damage mechanisms of zinc coatings on hot-dip galvanized steel sheets: Part I. Deformation modes. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 797-811	2.3	38
170	Strain Gradient Crystal Plasticity: Thermomechanical Formulations and Applications. *Journal of the Mechanical Behavior of Materials*, **2002**, 13, 219-232	1.9	37
169	Crack-tip stress–strain fields in single crystal nickel-base superalloys at high temperature under cyclic loading. *Computational Materials Science*, **2006**, 37, 42-50	3.2	36
168	Impact of material processing and deformation on cell morphology and mechanical behavior of polyurethane and nickel foams. *International Journal of Solids and Structures*, **2012**, 49, 2714-2732	3.1	35
167	Computational homogenization of porous materials of Green type. *Computational Mechanics*, **2013**, 52, 121-134	4	33
166	A multiscale microstructure model of carbon black distribution in rubber. *Journal of Microscopy*, **2011**, 241, 243-60	1.9	33
165	Strain localization patterns at a crack tip in generalized single crystal plasticity. *Scripta Materialia*, **2001**, 44, 953-958	5.6	33
164	Crystal plasticity simulation of strain aging phenomena in α-titanium at room temperature. *International Journal of Plasticity*, **2016**, 85, 1-33	7.6	32
163	Mechanical behavior and crack tip plasticity of a strain aging sensitive steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 526, 156-165	5.3	32
162	Overspeed burst of elastoviscoplastic rotating disks—Part I: Analytical and numerical stability analyses. *European Journal of Mechanics, A/Solids*, **2009**, 28, 36-44	3.7	32
161	Mechanisms and Modeling of Bake-Hardening Steels: Part I. Uniaxial Tension. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 1367-1374	2.3	31
160	Computational homogenisation of periodic cellular materials: Application to structural modelling. *International Journal of Mechanical Sciences*, **2015**, 93, 240-255	5.5	30
159	The thermodynamics of gradient elastoplasticity. *Continuum Mechanics and Thermodynamics*, **2014**, 26, 269-286	3.5	28
158	Homogenization of viscoplastic constitutive laws within a phase field approach. *Journal of the Mechanics and Physics of Solids*, **2016**, 88, 291-319	5	27
157	A fully coupled diffusional-mechanical formulation: numerical implementation, analytical validation, and effects of plasticity on equilibrium. *Archive of Applied Mechanics*, **2014**, 84, 1647-1664	2.2	27
156	Portevin–le Chatelier (PLC) instabilities and slant fracture in CMn steel round tensile specimens. *Scripta Materialia*, **2011**, 64, 430-433	5.6	27
155	Strain localization phenomena under cyclic loading: application to fatigue of single crystals. *Computational Materials Science*, **2003**, 26, 61-70	3.2	27
154	A Cosserat crystal plasticity and phase field theory for grain boundary migration. *Journal of the Mechanics and Physics of Solids*, **2018**, 115, 167-194	5	26

153	Effects of inclusions on the very high cycle fatigue behaviour of steels. *Fatigue and Fracture of Engineering Materials and Structures*, **2017**, 40, 1694-1707	3	26
152	Deformation and damage mechanisms of zinc coatings on hot-dip galvanized steel sheets: Part II. Damage modes. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 813-823	2.3	26
151	Crystal plasticity modeling of the cyclic behavior of polycrystalline aggregates under non-symmetric uniaxial loading: Global and local analyses. *International Journal of Plasticity*, **2020**, 126, 102619	7.6	26
150	Crack growth modelling in single crystals based on higher order continua. *Computational Materials Science*, **2009**, 45, 756-761	3.2	25
149	Phase field modeling of elasto-plastic deformation induced by diffusion controlled growth of a misfitting spherical precipitate. *Philosophical Magazine Letters*, **2011**, 91, 164-172	1	25
148	Crystal plasticity finite element simulation of crack growth in single crystals. *Computational Materials Science*, **2014**, 94, 191-197	3.2	24
147	Analysis of particle induced dislocation structures using three-dimensional dislocation dynamics and strain gradient plasticity. *Computational Materials Science*, **2012**, 52, 33-39	3.2	24
146	Methodology for studying strain inhomogeneities in polycrystalline thin films during in situ thermal loading using coherent x-ray diffraction. *New Journal of Physics*, **2010**, 12, 035018	2.9	24
145	Overspeed burst of elastoviscoplastic rotating disks: Part II Burst of a superalloy turbine disk. *European Journal of Mechanics, A/Solids*, **2009**, 28, 428-432	3.7	24
144	Intragranular localization induced by softening crystal plasticity: Analysis of slip and kink bands localization modes from high resolution FFT-simulations results. *Acta Materialia*, **2019**, 175, 262-275	8.4	23
143	Identification of a strain-aging model accounting for Lüders behavior in a C-Mn steel. *Philosophical Magazine*, **2012**, 92, 3589-3617	1.6	22
142	Numerical Modeling of Fatigue Crack Growth in Single Crystals Based on Microdamage Theory. *International Journal of Damage Mechanics*, **2011**, 20, 681-705	3	22
141	LARGE-SCALE COMPUTATIONS OF EFFECTIVE ELASTIC PROPERTIES OF RUBBER WITH CARBON BLACK FILLERS. *International Journal for Multiscale Computational Engineering*, **2011**, 9, 271-303	2.4	22
140	Systematic design of tetra-petals auxetic structures with stiffness constraint. *Materials and Design*, **2019**, 170, 107669	8.1	21
139	Experimental and numerical study of dynamic strain ageing and its relation to ductile fracture of a C-Mn steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 547, 19-31	5.3	21
138	A rate-independent crystal plasticity model with a smooth elastic-plastic transition and no slip indeterminacy. *European Journal of Mechanics, A/Solids*, **2016**, 55, 278-288	3.7	20
137	Stress Gradient Elasticity Theory: Existence and Uniqueness of Solution. *Journal of Elasticity*, **2016**, 123, 179-201	1.5	20
136	Thermodynamical Frameworks for Higher Grade Material Theories with Internal Variables or Additional Degrees of Freedom. *Journal of Non-Equilibrium Thermodynamics*, **2006**, 31,	3.8	20

135	Finite element simulations of the cyclic elastoplastic behaviour of copper thin films. *Modelling and Simulation in Materials Science and Engineering*, **2007**, 15, S217-S238	2	20
134	Non-Local Plasticity at Microscale: A Dislocation-Based and a Cosserat Model. *Physica Status Solidi (B): Basic Research*, **2000**, 221, 583-596	1.3	20
133	Microdamage modelling of crack initiation and propagation in FCC single crystals under complex loading conditions. *Computer Methods in Applied Mechanics and Engineering*, **2016**, 312, 468-491	5.7	20
132	Simulation of Short Fatigue Crack Propagation in a 3D Experimental Microstructure . *Advanced Engineering Materials*, **2017**, 19, 1600721	3.5	19
131	Experimental and numerical analysis of the Lüders phenomenon in simple shear. *International Journal of Solids and Structures*, **2017**, 106-107, 305-314	3.1	19
130	Generalised continuum modelling of grain size effects in polycrystals. *Comptes Rendus - Mecanique*, **2012**, 340, 261-274	2.1	19
129	Comparison of mechanical behaviour of thin film simulated by discrete dislocation dynamics and continuum crystal plasticity. *Computational Materials Science*, **2009**, 45, 793-799	3.2	19
128	The Micromorphic Approach to Generalized Heat Equations. *Journal of Non-Equilibrium Thermodynamics*, **2017**, 42,	3.8	18
127	Coupling Diffraction Contrast Tomography with the Finite Element Method . *Advanced Engineering Materials*, **2016**, 18, 903-912	3.5	18
126	Modelling inheritance of plastic deformation during migration of phase boundaries using a phase field method. *Meccanica*, **2014**, 49, 2699-2717	2.1	18
125	Micromorphic Media. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2013**, 249-300	300	18
124	Multiscale modeling of the elastic behavior of architectured and nanostructured Cu–Nb composite wires. *International Journal of Solids and Structures*, **2017**, 121, 148-162	3.1	17
123	Size-dependent energy in crystal plasticity and continuum dislocation models. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20140868	2.4	17
122	Micromorphic modelling of grain size effects in metal polycrystals. *GAMM Mitteilungen*, **2013**, 36, 186-202	2.8	17
121	Finite-deformation second-order micromorphic theory and its relations to strain and stress gradient models. *Mathematics and Mechanics of Solids*, **2020**, 25, 1429-1449	2.3	17
120	Investigation and modeling of the anomalous yield point phenomenon in pure tantalum. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 615, 283-295	5.3	16
119	Simulations of stress–strain heterogeneities in copper thin films: Texture and substrate effects. *Computational Materials Science*, **2007**, 39, 137-141	3.2	16
118	Multiscale modeling of the anisotropic electrical conductivity of architectured and nanostructured Cu-Nb composite wires and experimental comparison. *Acta Materialia*, **2017**, 141, 131-141	8.4	15

117	Generalization of the polycrystalline model: Finite element assessment and application to softening material behavior. *Computational Materials Science*, **2009**, 45, 1104-1112	3.2	15
116	Questioning size effects as predicted by strain gradient plasticity. *Journal of the Mechanical Behavior of Materials*, **2013**, 22, 101-110	1.9	14
115	FFT-based simulations of slip and kink bands formation in 3D polycrystals: Influence of strain gradient crystal plasticity. *Journal of the Mechanics and Physics of Solids*, **2021**, 149, 104295	5	14
114	Void growth and coalescence in triaxial stress fields in irradiated FCC single crystals. *Journal of Nuclear Materials*, **2017**, 492, 157-170	3.3	13
113	Multiscale modeling of the elasto-plastic behavior of architectured and nanostructured Cu-Nb composite wires and comparison with neutron diffraction experiments. *International Journal of Plasticity*, **2019**, 122, 1-30	7.6	13
112	Strain gradient crystal plasticity with evolving length scale: Application to voided irradiated materials. *European Journal of Mechanics, A/Solids*, **2019**, 77, 103768	3.7	13
111	Field theory and diffusion creep predictions in polycrystalline aggregates. *Modelling and Simulation in Materials Science and Engineering*, **2015**, 23, 055006	2	13
110	On the design of single crystal turbine blades. *Revue De Metallurgie*, **2003**, 100, 165-172		13
109	Cosserat continuum modelling of grain size effects in metal polycrystals. *Proceedings in Applied Mathematics and Mechanics*, **2005**, 5, 79-82	0.2	13
108	Modelling Finite Deformation of Polycrystals Using Local Objective Frames. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **1999**, 79, 199-202	1	13
107	Micromorphic vs. Phase-Field Approaches for Gradient Viscoplasticity and Phase Transformations. *Lecture Notes in Applied and Computational Mechanics*, **2011**, 69-88	0.3	13
106	Finite element simulations of the Portevin-Le Chatelier effect in metal-matrix composites. *Philosophical Magazine*, **2008**, 88, 3389-3414	1.6	12
105	Finite-element calculations of the lattice rotation field of a tensile-loaded nickel-based alloy multicrystal and comparison with topographical X-ray diffraction measurements. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 2825-2833	2.3	12
104	Incipient Bulk Polycrystal Plasticity Observed by Synchrotron In-Situ Topotomography. *Materials*, **2018**, 11,	3.5	12
103	On the Size of the Representative Volume Element for Isotropic Elastic Polycrystalline Copper. *Solid Mechanics and Its Applications*, **2007**, 171-180	0.4	12
102	A micromorphic crystal plasticity model with the gradient-enhanced incremental hardening law. *International Journal of Plasticity*, **2020**, 128, 102655	7.6	11
101	Mechanisms and Modeling of Bake-Hardening Steels: Part II. Complex Loading Paths. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 1375-1382	2.3	11
100	Thermoelasticity of second-grade media. *Solid Mechanics and Its Applications*, **2000**, 163-176	0.4	11

99	Interaction of the Portevin Le Chatelier phenomenon with ductile fracture of a thin aluminum CT specimen: experiments and simulations. *International Journal of Fracture*, **2017**, 206, 95-122	2.3	10
98	Well-posedness for the microcurl model in both single and polycrystal gradient plasticity. *International Journal of Plasticity*, **2018**, 107, 1-26	7.6	10
97	Micromorphic crystal plasticity versus discrete dislocation dynamics analysis of multilayer pile-up hardening in a narrow channel. *Archive of Applied Mechanics*, **2016**, 86, 21-38	2.2	10
96	Modelling the effects of various contents of fillers on the relaxation rate of elastomers. *Materials & Design*, **2012**, 33, 75-82		10
95	Formulations of Strain Gradient Plasticity. *Advanced Structured Materials*, **2011**, 137-149	0.6	10
94	Lagrange multiplier based vs micromorphic gradient-enhanced rate-(in)dependent crystal plasticity modelling and simulation. *Computer Methods in Applied Mechanics and Engineering*, **2020**, 372, 113426	5.7	10
93	Effect of Lüders and Portevin Le Chatelier localization bands on plasticity and fracture of notched steel specimens studied by DIC and FE simulations. *International Journal of Plasticity*, **2021**, 136, 102880	7.6	10
92	A constitutive model accounting for strain ageing effects on work-hardening. Application to a CMn steel. *Comptes Rendus - Mecanique*, **2017**, 345, 908-921	2.1	9
91	Three-dimensional characterization of fatigue-relevant intermetallic particles in high-strength aluminium alloys using synchrotron X-ray nanotomography. *Philosophical Magazine*, **2015**, 95, 2731-2746	1.6	9
90	Virtual improvement of ice cream properties by computational homogenization of microstructures. *Mechanics Research Communications*, **2011**, 38, 136-140	2.2	9
89	Micromorphic approach to crystal plasticity and phase transformation. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2014**, 131-198	0.6	9
88	The Micromorphic versus Phase Field Approach to Gradient Plasticity and Damage with Application to Cracking in Metal Single Crystals. *Lecture Notes in Applied and Computational Mechanics*, **2011**, 135-153	0.3	9
87	Cosserat Media **2001**, 1715-1717		9
86	A Cosserat phase-field theory of crystal plasticity and grain boundary migration at finite deformation. *Continuum Mechanics and Thermodynamics*, **2019**, 31, 1109-1141	3.5	8
85	Kinematics and constitutive relations in the stress-gradient theory: interpretation by homogenization. *International Journal of Solids and Structures*, **2020**, 193-194, 90-97	3.1	8
84	On the creep deformation of nickel foams under compression. *Comptes Rendus Physique*, **2014**, 15, 705-718	1.4	8
83	Modeling Strain Localization Bands in Metal Foams. *Journal of Computational and Theoretical Nanoscience*, **2010**, 7, 360-366	0.3	8
82	Numerical modelling of the Portevin-Le Chatelier effect. *European Journal of Computational Mechanics*, **2008**, 17, 761-772	0.5	8

81	Computation of coarse grain structures using a homogeneous equivalent medium. *European Physical Journal Special Topics*, **1998**, 08, Pr8-197-Pr8-205		8
80	Portevin-Le Chatelier effect triggered by complex loading paths in an Al□Cu aluminium alloy. *Philosophical Magazine*, **2019**, 99, 659-678	1.6	8
79	Local Ratcheting Phenomena in the Cyclic Behavior of Polycrystalline Tantalum. *Jom*, **2019**, 71, 2586-2592	2.1	7
78	Phase field approaches of bone remodeling based on TIP. *Journal of Non-Equilibrium Thermodynamics*, **2016**, 41,	3.8	7
77	An estimation of overall properties of heterogeneous Cosserat materials. *European Physical Journal Special Topics*, **1998**, 08, Pr8-111-Pr8-118		7
76	A strain gradient plasticity model of porous single crystal ductile fracture. *Journal of the Mechanics and Physics of Solids*, **2021**, 156, 104606	5	7
75	Thermomechanics of Cosserat medium: modeling adiabatic shear bands in metals. *Continuum Mechanics and Thermodynamics*, **2020**, 1	3.5	6
74	Continuum thermomechanics of nonlinear micromorphic, strain and stress gradient media. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2020**, 378, 20190169	3	5
73	Generalized Continuum Modelling of Crystal Plasticity **2012**, 181-287		5
72	Modeling of Deformation of FCC Polycrystalline Aggregates Using a Dislocation-based Crystal Plasticity Model. *AIP Conference Proceedings*, **2007**,	0	5
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70	Introduction au calcul de microstructuresElements of microstructural mechanics. *Mecanique Et Industries*, **2002**, 3, 439-439		5
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