

Georges Cailletaud

List of Publications by Year in descending order

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55
papers

2,438
citations

218677

26
h-index

197818

49
g-index

60
all docs

60
docs citations

60
times ranked

1553
citing authors

#	ARTICLE	IF	CITATIONS
1	Intergranular and intragranular behavior of polycrystalline aggregates. Part 1: F.E. model. International Journal of Plasticity, 2001, 17, 513-536.	8.8	309
2	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.	2.7	204
3	Intergranular and intragranular behavior of polycrystalline aggregates. Part 2: Results. International Journal of Plasticity, 2001, 17, 537-563.	8.8	201
4	Macro versus micro-scale constitutive models in simulating proportional and nonproportional cyclic and ratcheting responses of stainless steel 304. International Journal of Plasticity, 2009, 25, 1910-1949.	8.8	123
5	Non-Linear Mechanics of Materials. Solid Mechanics and Its Applications, 2010, , .	0.2	108
6	Transformation kinetics and microstructures of Ti17 titanium alloy during continuous cooling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 448, 135-145.	5.6	102
7	Cyclic accumulation of the inelastic strain in the 304L SS under stress control at room temperature: Ratcheting or creep?. International Journal of Plasticity, 2011, 27, 1936-1958.	8.8	96
8	On the selection of active slip systems in crystal plasticity. International Journal of Plasticity, 2005, 21, 2212-2231.	8.8	84
9	Constitutive modeling of the creep behavior of single crystal superalloys under non-isothermal conditions inducing phase transformations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6300-6312.	5.6	77
10	Simulation of inter- and transgranular crack propagation in polycrystalline aggregates due to stress corrosion cracking. Acta Materialia, 2009, 57, 3840-3855.	7.9	75
11	Object-Oriented Programming Applied to the Finite Element Method Part II. Application to Material Behaviors. Revue Europeenne Des Elements, 1998, 7, 567-588.	0.1	71
12	An updated version of the multimechanism model for cyclic plasticity. International Journal of Plasticity, 2010, 26, 859-874.	8.8	71
13	Rough surface contact analysis by means of the Finite Element Method and of a new reduced model. Comptes Rendus - Mecanique, 2011, 339, 473-490.	2.1	70
14	Finite element formulation of a phase field model based on the concept of generalized stresses. Computational Materials Science, 2009, 45, 800-805.	3.0	68
15	Combining phase field approach and homogenization methods for modelling phase transformation in elastoplastic media. European Journal of Computational Mechanics, 2009, 18, 485-523.	0.6	67
16	Numerical simulation of complex ratcheting tests with a multi-mechanism model type. International Journal of Plasticity, 2006, 22, 724-753.	8.8	64
17	Utilisation de modèles polycristallins pour le calcul par Éléments finis. Revue Europeenne Des Elements, 1994, 3, 515-541.	0.1	60
18	Tension-torsion behavior of single-crystal superalloys: Experiment and finite element analysis. International Journal of Plasticity, 1995, 11, 451-470.	8.8	56

#	ARTICLE	IF	CITATIONS
19	A mean-field model for transformation induced plasticity including backstress effects for non-proportional loadings. <i>International Journal of Plasticity</i> , 2012, 37, 53-71.	8.8	45
20	Crystal plasticity modeling of the cyclic behavior of polycrystalline aggregates under non-symmetric uniaxial loading: Global and local analyses. <i>International Journal of Plasticity</i> , 2020, 126, 102619.	8.8	44
21	An evaluation of the competition between wear and crack initiation in fretting conditions for Ti-6Al-4V alloy. <i>Wear</i> , 2015, 328-329, 443-455.	3.1	42
22	Numerical investigations of the free surface effect in three-dimensional polycrystalline aggregates. <i>Computational Materials Science</i> , 2013, 70, 150-162.	3.0	37
23	Experimental and numerical analysis about the cyclic behavior of the 304L and 316L stainless steels at 350°C. <i>International Journal of Plasticity</i> , 2014, 61, 32-48.	8.8	37
24	Three-dimensional characterization of strain localization bands in high-resolution elastoplastic polycrystals. <i>Mechanics Research Communications</i> , 2009, 36, 762-768.	1.8	30
25	Numerical simulation of the third body in fretting problems. <i>Wear</i> , 2011, 270, 876-887.	3.1	27
26	FE simulation of macro-, meso- and micro-scales in polycrystalline plasticity. <i>Computational Materials Science</i> , 1999, 16, 383-390.	3.0	26
27	Phase field modeling of elasto-plastic deformation induced by diffusion controlled growth of a misfitting spherical precipitate. <i>Philosophical Magazine Letters</i> , 2011, 91, 164-172.	1.2	26
28	A micromechanical constitutive modeling of WC hardmetals using finite-element and uniform field models. <i>Mechanics of Materials</i> , 2017, 105, 166-187.	3.2	22
29	Numerical simulation of the anisotropic behavior of 2017 aluminum alloy. <i>Computational Materials Science</i> , 2012, 65, 48-57.	3.0	21
30	Crystal plasticity modeling and characterization of the deformation twinning and strain hardening in Hadfield steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 720, 145-159.	5.6	21
31	Multiscale modeling of cemented tungsten carbide in hard rock drilling. <i>International Journal of Solids and Structures</i> , 2017, 128, 282-295.	2.7	19
32	Numerical analysis of the effect of surface roughness on mechanical fields in polycrystalline aggregates. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2018, 26, 045004.	2.0	16
33	On the effect of deformation twinning and microstructure to strain hardening of high manganese austenitic steel 3D microstructure aggregates at large strains. <i>International Journal of Solids and Structures</i> , 2017, 125, 68-76.	2.7	13
34	F.E. computation of a triaxial specimen using a polycrystalline model. <i>Computational Materials Science</i> , 1997, 9, 141-157.	3.0	12
35	Transformation Induced Plasticity in Maraging Steel: An Experimental Study. <i>Key Engineering Materials</i> , 2000, 177-180, 443-448.	0.4	12
36	An Overview of the Anatomy of Crystal Plasticity Models. <i>Advanced Engineering Materials</i> , 2009, 11, 710-716.	3.5	12

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37	Multi-mechanism modeling of proportional and non-proportional ratchetting of stainless steel 304. Acta Mechanica, 2014, 225, 3265-3283.	2.1	12
38	Theory, experiments and numerical modelling of phase transformations with emphasis on TRIP. Steel Research = Archiv Für Das Eisenhüttenwesen, 2002, 73, 225-235.	0.3	11
39	Numerical modeling of stress build up during nickel silicidation under anisothermal annealing. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2006, 135, 95-102.	3.5	6
40	Toward "green" mechanical simulations in materials science. European Journal of Computational Mechanics, 2010, 19, 365-388.	0.6	6
41	On the Algorithmic Implementation of a Material Model Accounting for the Effects of Martensitic Transformation. Steel Research International, 2006, 77, 733-740.	1.8	5
42	Brittle Failure Prediction of Ceramics Using a Multiscale Approach. Journal of the American Ceramic Society, 1996, 79, 2825-2832.	3.8	4
43	Three-level multi-scale modeling of electrical contacts sensitivity study and experimental validation. , 2015, , .		4
44	Effects of surface roughness on plastic strain localization in polycrystalline aggregates. MATEC Web of Conferences, 2014, 12, 06009.	0.2	3
45	Capabilities of the Multi-mechanism Model in the Prediction of the Cyclic Behavior of Various Classes of Metals. Advanced Structured Materials, 2015, , 413-439.	0.5	3
46	Ageing and Fatigue Behaviour in Cast Aluminium Alloys. Materials Science Forum, 2002, 396-402, 1365-1370.	0.3	2
47	Transformation hardening and kinetics for stress assisted and temperature driven martensitic transformation in steels. Mechanics Research Communications, 2013, 47, 84-88.	1.8	2
48	Crystalline Viscoplasticity Applied to Single Crystals. , 2001, , 308-317.		2
49	Experimental and Numerical Approach of Inter- and Transgranular Stress- and Rotation Heterogeneities in the Plastic Behaviour of a Multicrystal. Materials Science Forum, 2000, 347-349, 60-65.	0.3	1
50	Investigation of Oxide Film Growth Stresses by Finite Element Modeling and Deflection Tests. Materials Science Forum, 2001, 369-372, 563-570.	0.3	1
51	Identification of crystal plasticity parameters for a non-irradiated and irradiated A508 bainite steel. Metallurgical Research and Technology, 2021, 118, 204.	0.7	1
52	A pruning algorithm preserving modeling capabilities for polycrystalline data. Computational Mechanics, 2021, 68, 1407-1419.	4.0	1
53	Scale Transition Rules Applied to Crystal Plasticity. Springer Tracts in Mechanical Engineering, 2016, , 1-15.	0.3	1
54	Crystal plasticity models: phenomenological approach. , 2022, , 429-455.		0

#	ARTICLE	IF	CITATIONS
55	Basic ingredients, development of phenomenological models and practical use of crystal plasticity. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 271-326.	0.6	0