Pierre-Olivier Bouchard

List of Publications by Year
in descending order

62	1,404	331670 21	345221 36
papers	citations	h-index	g-index

64	64	64	1098
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	3D fracture modeling based on the coupling between damage criteria, phase field and crack propagation. IOP Conference Series: Materials Science and Engineering, 2022, 1238, 012022.	0.6	0
2	3D crack initiation and propagation applied to metal forming processes. International Journal of Material Forming, 2022, 15, .	2.0	5
3	Phase field modeling of ductile fracture at large plastic strains using adaptive isotropic remeshing. Computational Mechanics, 2021, 67, 763-783.	4.0	17
4	A numerical, theoretical and experimental study of the effect of thermocycling on the matrix-filler interface of dental restorative materials. Dental Materials, 2021, 37, 772-782.	3.5	9
5	Diurnal temperature variation as the source of the preferential direction of fractures on asteroids: Theoretical model for the case of Bennu. Icarus, 2021, 360, 114347.	2.5	5
6	Ductile failure prediction of pipe-ring notched AISI 316L using uncoupled ductile failure criteria. International Journal of Pressure Vessels and Piping, 2021, 191, 104333.	2.6	2
7	CIPFAR: A 3D unified numerical framework for the modeling of ductile fracture based on the phase field model and adaptive remeshing. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114171.	6.6	5
8	Numerical Modelling of the Flow Forming Process: Computation Time Optimization and Accuracy Analysis. Minerals, Metals and Materials Series, 2021, , 493-506.	0.4	1
9	Viscoplastic and temperature behavior of Znâ€“Cuâ€“Ti alloy sheets: experiments, characterization, and modeling. Journal of Materials Research and Technology, 2021, 15, 3759-3772.	5.8	3
10	Impact of strain rate sensitivity on the identification of the material parameters scattering and on the formability of zinc sheet. International Journal of Material Forming, 2020, 13, 203-218.	2.0	1
11	Theoretical prediction of dental composites yield stress and flexural modulus based on filler volume ratio. Dental Materials, 2020, 36, 97-107.	3.5	13
12	Damage in metal forming. CIRP Annals - Manufacturing Technology, 2020, 69, 600-623.	3.6	64
13	Numerical modeling of crack propagation with dynamic insertion of cohesive elements. Engineering Fracture Mechanics, 2020, 227, 106918.	4.3	16
14	Computational Methods for Ductile Fracture Modeling at the Microscale. Archives of Computational Methods in Engineering, 2019, 26, 1153-1192.	10.2	12
15	A comparative study of image segmentation methods for micromechanical simulations of ductile damage. Computational Materials Science, 2019, 159, 43-65.	3.0	12
16	Experimental-Numerical Validation Framework for Micromechanical Simulations. Lecture Notes in Applied and Computational Mechanics, 2018, , 147-161.	2.2	0
17	Ductile fracture of a metal matrix composite studied using 3D numerical modeling of void nucleation and coalescence. Engineering Fracture Mechanics, 2018, 189, 110-132.	4.3	31
18	Recent advances in finite element modelling of ductile fracture at mesoscale. Procedia Manufacturing, 2018, 15, 39-45.	1.9	2

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19	On the calibration of elastoplastic parameters at the microscale via X-ray microtomography and digital volume correlation for the simulation of ductile damage. European Journal of Mechanics, A/Solids, 2018, 72, 287-297.	3.7	24
20	An adaptive levelâ€set method with enhanced volume conservation for simulations in multiphase domains. International Journal for Numerical Methods in Engineering, 2017, 109, 555-576.	2.8	26
21	On the choice of boundary conditions for micromechanical simulations based on 3DÂimaging. International Journal of Solids and Structures, 2017, 112, 83-96.	2.7	37
22	Accounting for material parameters scattering in rolled zinc formability. Journal of Materials Processing Technology, 2017, 245, 134-148.	6.3	9
23	Numerical validation framework for micromechanical simulations based on synchrotron 3D imaging. Computational Mechanics, 2017, 59, 419-441.	4.0	43
24	Influence of Lode angle on modelling of void closure in hot metal forming processes. Finite Elements in Analysis and Design, 2017, 126, 13-25.	3.2	20
25	Analysis and modeling of the failure behavior of carbonitrided parts. Procedia Engineering, 2017, 207, 2030-2035.	1.2	1
26	Numerical modeling of ductile fracture at the microscale combined with X-ray laminography and digital volume correlation. AIP Conference Proceedings, 2017, , .	0.4	0
27	New finite element developments for the full field modeling of microstructural evolutions using the level-set method. Computational Materials Science, 2015, 109, 388-398.	3.0	52
28	On the interest of using full field measurements in ductile damage model calibration. International Journal of Solids and Structures, 2015, 72, 50-62.	2.7	15
29	A new body-fitted immersed volume method for the modeling of ductile fracture at the microscale: Analysis of void clusters and stress state effects on coalescence. Engineering Fracture Mechanics, 2015, 147, 398-417.	4.3	34
30	Qualification of bumping processes: Experimental and numerical investigations on mechanical stress and failure modes induced by shear test. Microelectronics Reliability, 2015, 55, 980-989.	1.7	6
31	An efficient and parallel level set reinitialization method â€“ Application to micromechanics and microstructural evolutions. Applied Mathematical Modelling, 2015, 39, 7291-7302.	4.2	63
32	A geometry-dependent model for void closure in hot metal forming. Finite Elements in Analysis and Design, 2015, 105, 63-78.	3.2	31
33	A comparative study of three ductile damage approaches for fracture prediction in cold forming processes. Journal of Materials Processing Technology, 2015, 216, 385-404.	6.3	45
34	Comparison of reduction ability between multi-stage cold drawing and rolling of stainless steel wire â€“ Experimental and numerical investigations of damage. Journal of Materials Processing Technology, 2015, 217, 30-47.	6.3	21
35	Improved fracture criterion to chain forming stage and in use mechanical strength computations of metallic parts â€“ Application to half-blanked components. Journal of Materials Processing Technology, 2015, 216, 260-277.	6.3	8
36	Damage Prediction Using Several Types of Macro-scale Damage Models in Different Cold Wire Production Lines. Procedia Engineering, 2014, 81, 185-190.	1.2	2

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37	Understanding and Modeling of Void Closure Mechanisms in Hot Metal Forming Processes: A Multiscale Approach. Procedia Engineering, 2014, 81, 137-142.	1.2	12
38	A new finite element approach for modelling ductile damage void nucleation and growthâ€"analysis of loading path effect on damage mechanisms. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 075001.	2.0	26
39	Characterization of ductile damage for a high carbon steel using 3D X-ray micro-tomography and mechanical tests â€" Application to the identification of a shear modified GTN model. Computational Materials Science, 2014, 84, 175-187.	3.0	59
40	A Lode-dependent enhanced Lemaitre model for ductile fracture prediction at low stress triaxiality. Engineering Fracture Mechanics, 2014, 124-125, 80-96.	4.3	122
41	Fracture mechanisms under monotonic and non-monotonic low Lode angle loading. Engineering Fracture Mechanics, 2014, 124-125, 121-141.	4.3	9
42	Efficient numerical integration of an elasticâ€"plastic damage law within a mixed velocityâ€"pressure formulation. Mathematics and Computers in Simulation, 2013, 94, 145-158.	4.4	5
43	Three-dimensional analysis of real void closure at the meso-scale during hot metal forming processes. Computational Materials Science, 2013, 77, 194-201.	3.0	34
44	Identification methodology and comparison of phenomenological ductile damage models via hybrid numericalâ€"experimental analysis of fracture experiments conducted on a zirconium alloy. International Journal of Solids and Structures, 2013, 50, 3984-3999.	2.7	55
45	Kriging metamodel global optimization of clinching joining processes accounting for ductile damage. Journal of Materials Processing Technology, 2013, 213, 1038-1047.	6.3	70
46	Analysis of stress intensity factors and T-stress to control crack propagation for kerf-less spalling of single crystal silicon foils. Computational Materials Science, 2013, 69, 243-250.	3.0	16
47	Thermo-mechanical fatigue behaviour of welded tubular parts made of ferritic stainless steel. International Journal of Fatigue, 2013, 54, 84-98.	5.7	6
48	Identification of glass pad lubricant viscosity using a trapping thermomechanical test. Journal of Materials Processing Technology, 2013, 213, 392-400.	6.3	7
49	A detailed description of the Gursonâ€"Tvergaardâ€"Needleman model within a mixed velocityâ€"pressure finite element formulation. International Journal for Numerical Methods in Engineering, 2013, 96, 561-583.	2.8	14
50	Comparison of stress distribution in the temporomandibular joint during jaw closing before and after symphyseal distraction: a finite element study. International Journal of Oral and Maxillofacial Surgery, 2012, 41, 1474-1482.	1.5	11
51	An enhanced Lemaitre model formulation for materials processing damage computation. International Journal of Material Forming, 2011, 4, 299-315.	2.0	84
52	Ductile damage parameters identification for cold metal forming applications. , 2011, , .		5
53	Determination of Young's modulus of mandibular bone using inverse analysis. Medical Engineering and Physics, 2010, 32, 630-637.	1.7	62
54	Determining the initial viscosity of 4 dentinal adhesives. Relationship with their penetration into tubuli. International Journal of Adhesion and Adhesives, 2010, 30, 393-402.	2.9	2

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55	Approche multi-Ã©chelles pour lâ€™Ã©tude de lâ€™anisotropie induite par le forgeage en fatigue Ã grand nombre de cycles. Revue De Metallurgie, 2010, 107, 353-361.	0.3	0
56	Plastic instabilities analysis during T-shaped tubes hydro-forming process. International Journal of Material Forming, 2009, 2, 131-144.	2.0	6
57	On the role of particles distribution on damage and fatigue mechanisms. International Journal of Material Forming, 2009, 2, 935-938.	2.0	2
58	Determination of plastic properties of metals by instrumented indentation using a stochastic optimization algorithm. Journal of Materials Research, 2009, 24, 936-947.	2.6	14
59	Development and validation of a 3D computational tool to describe concrete behaviour at mesoscale. Application to the alkali-silica reaction. Computational Materials Science, 2009, 46, 1163-1177.	3.0	86
60	Behaviour of oxide scales in hot steel strip rolling. International Journal of Material Forming, 2008, 1, 1227-1230.	2.0	5
61	Mechanical behaviour of iron oxide scale: Experimental and numerical study. Wear, 2006, 260, 231-242.	3.1	37
62	Quantitative analysis of the impact of forging operations on fatigue properties of steel components. Journal of Materials Processing Technology, 2006, 177, 202-205.	6.3	10