Emilio Martnez Paeda

List of Publications by Year in Descending Order

69 papers	1,348 citations	20 h-index	35 g-index
76 ext. papers	1,927 ext. citations	4.2 avg, IF	6.09 L-index

#	Paper	IF	Citations
69	Phase field fracture predictions of microscopic bridging behaviour of composite materials. *Composite Structures*, **2022**, 286, 115242	5.3	2
68	A generalised phase field model for fatigue crack growth in elastic–plastic solids with an efficient monolithic solver. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 388, 114286	5.7	4
67	Comparison of hydrogen diffusivities measured by electrochemical permeation and temperature-programmed desorption in cold-rolled pure iron. *Journal of Natural Gas Science and Engineering*, **2022**, 98, 104365	4.6	1
66	A phase field model for hydrogen-assisted fatigue. *International Journal of Fatigue*, **2022**, 154, 106521	5	8
65	Cracking predictions of lithium-ion battery electrodes by X-ray computed tomography and modelling. *Journal of Power Sources*, **2022**, 526, 231119	8.9	0
64	Micromechanics-based phase field fracture modelling of CNT composites. *Composites Part B: Engineering*, **2022**, 236, 109788	10	1
63	Cohesive zone modelling of hydrogen assisted fatigue crack growth: The role of trapping. *International Journal of Fatigue*, **2022**, 162, 106935	5	2
62	A generalised, multi-phase-field theory for dissolution-driven stress corrosion cracking and hydrogen embrittlement. *Journal of the Mechanics and Physics of Solids*, **2022**, 104951	5	2
61	Interaction of Void Spacing and Material Size Effect on Inter-Void Flow Localization. *Journal of Applied Mechanics, Transactions ASME*, **2021**, 88,	2.7	2
60	CFD simulations of turbulent dust dispersion in the 20 L vessel using OpenFOAM. *Powder Technology*, **2021**, 397, 117033	5.2	1
59	Mode I and mode II stress intensity factors and dislocation density behaviour in strain gradient plasticity. *Theoretical and Applied Fracture Mechanics*, **2021**, 116, 103128	3.7	1
58	A Unified Abaqus Implementation of the Phase Field Fracture Method Using Only a User Material Subroutine. *Materials*, **2021**, 14,	3.5	11
57	A simple and robust Abaqus implementation of the phase field fracture method. *Applications in Engineering Science*, **2021**, 6, 100050	0.4	6
56	An assessment of phase field fracture: crack initiation and growth. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20210021	3	19
55	Adaptive phase field modelling of crack propagation in orthotropic functionally graded materials. *Defence Technology*, **2021**, 17, 185-195	3	14
54	Crack tip fields and fracture resistance parameters based on strain gradient plasticity. *International Journal of Solids and Structures*, **2021**, 208-209, 63-82	3.1	8
53	A phase field formulation for dissolution-driven stress corrosion cracking. *Journal of the Mechanics and Physics of Solids*, **2021**, 147, 104254	5	28

52	Phase field predictions of microscopic fracture and R-curve behaviour of fibre-reinforced composites. *Composites Science and Technology*, **2021**, 202, 108539	8.6	21
51	Mode II fracture of an MMA adhesive layer: Theory versus experiment. *European Journal of Mechanics, A/Solids*, **2021**, 86, 104133	3.7	7
50	Phase field modelling of fracture and fatigue in Shape Memory Alloys. *Computer Methods in Applied Mechanics and Engineering*, **2021**, 373, 113504	5.7	18
49	Essential work of fracture assessment of acrylonitrile butadiene styrene (ABS) processed via fused filament fabrication additive manufacturing. *International Journal of Advanced Manufacturing Technology*, **2021**, 113, 771-784	3.2	2
48	A mechanism-based multi-trap phase field model for hydrogen assisted fracture. *International Journal of Plasticity*, **2021**, 144, 103044	7.6	11
47	A mechanism-based gradient damage model for metallic fracture. *Engineering Fracture Mechanics*, **2021**, 255, 107927	4.2	4
46	Simulation of hydrogen permeation through pure iron for trapping and surface phenomena characterisation. *Theoretical and Applied Fracture Mechanics*, **2020**, 110, 102818	3.7	3
45	Generalised boundary conditions for hydrogen transport at crack tips. *Corrosion Science*, **2020**, 173, 108698	6.8	16
44	Numerical study of interface cracking in composite structures using a novel geometrically nonlinear Linear Elastic Brittle Interface Model: Mixed-mode fracture conditions and application to structured interfaces. *Composite Structures*, **2020**, 248, 112495	5.3	6
43	Creep behaviour and tensile response of adhesively bonded polyethylene joints: Single-Lap and Double-Strap. *International Journal of Adhesion and Adhesives*, **2020**, 102, 102666	3.4	4
42	Mode II Fracture of an Elastic-Plastic Sandwich Layer. *Journal of Applied Mechanics, Transactions ASME*, **2020**, 87,	2.7	3
41	On the suitability of slow strain rate tensile testing for assessing hydrogen embrittlement susceptibility. *Corrosion Science*, **2020**, 163, 108291	6.8	38
40	Phase field fracture modelling using quasi-Newton methods and a new adaptive step scheme. *Theoretical and Applied Fracture Mechanics*, **2020**, 107, 102446	3.7	66
39	Analysis of hydrogen permeation tests considering two different modelling approaches for grain boundary trapping in iron. *International Journal of Fracture*, **2020**, 223, 17-35	2.3	8
38	Influence of charging conditions on simulated temperature-programmed desorption for hydrogen in metals. *International Journal of Hydrogen Energy*, **2020**, 45, 23704-23720	6.7	5
37	A phase field model for elastic-gradient-plastic solids undergoing hydrogen embrittlement. *Journal of the Mechanics and Physics of Solids*, **2020**, 143, 104093	5	40
36	Applications of phase field fracture in modelling hydrogen assisted failures. *Theoretical and Applied Fracture Mechanics*, **2020**, 110, 102837	3.7	20
35	Analysis of the influence of microstructural traps on hydrogen assisted fatigue. *Acta Materialia*, **2020**, 199, 253-263	8.4	21

34	Fracture in distortion gradient plasticity. *International Journal of Engineering Science*, **2020**, 156, 103369	5.7	10
33	Cold Isostatic Pressing to Improve the Mechanical Performance of Additively Manufactured Metallic Components. *Materials*, **2019**, 12,	3.5	4
32	Steady-state fracture toughness of elastic-plastic solids: Isotropic versus kinematic hardening. *Engineering Fracture Mechanics*, **2019**, 207, 254-268	4.2	6
31	The Essential Work of Fracture parameters for 3D printed polymer sheets. *Materials and Design*, **2019**, 181, 107968	8.1	11
30	Gradient-enhanced statistical analysis of cleavage fracture. *European Journal of Mechanics, A/Solids*, **2019**, 77, 103785	3.7	7
29	Phase field modelling of crack propagation in functionally graded materials. *Composites Part B: Engineering*, **2019**, 169, 239-248	10	82
28	Mode I crack tip fields: Strain gradient plasticity theory versus J2 flow theory. *European Journal of Mechanics, A/Solids*, **2019**, 75, 381-388	3.7	19
27	The role of plastic strain gradients in the crack growth resistance of metals. *Journal of the Mechanics and Physics of Solids*, **2019**, 126, 136-150	5	38
26	On the Finite Element Implementation of Functionally Graded Materials. *Materials*, **2019**, 12,	3.5	20
25	Pre-notched dog bone small punch specimens for the estimation of fracture properties. *Engineering Failure Analysis*, **2019**, 96, 236-240	3.2	4
24	Mechanism-Based Crack Tip Characterization. *Springer Theses*, **2018**, 69-81	0.1	
23	Numerical Implementation. *Springer Theses*, **2018**, 33-66	0.1	
22	The Role of Energetic and Dissipative Length Parameters. *Springer Theses*, **2018**, 97-111	0.1	
21	A phase field formulation for hydrogen assisted cracking. *Computer Methods in Applied Mechanics and Engineering*, **2018**, 342, 742-761	5.7	120
20	Size effects in elastic-plastic functionally graded materials. *Composite Structures*, **2018**, 204, 43-51	5.3	16
19	Crack Growth Resistance in Metallic Alloys: The Role of Isotropic Versus Kinematic Hardening. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	11
18	SGP-Based Modeling of HEAC. *Springer Theses*, **2018**, 129-153	0.1	
17	Gradient Plasticity Formulations. *Springer Theses*, **2018**, 13-31	0.1	

16	Hydrogen Diffusion Towards the Fracture Process Zone. *Springer Theses*, **2018**, 113-128	0.1	
15	On Fracture in Finite Strain Gradient Plasticity. *Springer Theses*, **2018**, 83-95	0.1	
14	Abaqus2Matlab: A suitable tool for finite element post-processing. *Advances in Engineering Software*, **2017**, 105, 9-16	3.6	87
13	Gradient plasticity crack tip characterization by means of the extended finite element method. *Computational Mechanics*, **2017**, 59, 831-842	4	25
12	A cohesive zone framework for environmentally assisted fatigue. *Engineering Fracture Mechanics*, **2017**, 185, 210-226	4.2	52
11	Non-local plasticity effects on notch fracture mechanics. *Theoretical and Applied Fracture Mechanics* , **2017**, 92, 276-287	3.7	20
10	Strain gradient plasticity-based modeling of hydrogen environment assisted cracking. *Acta Materialia*, **2016**, 117, 321-332	8.4	80
9	A finite element framework for distortion gradient plasticity with applications to bending of thin foils. *International Journal of Solids and Structures*, **2016**, 96, 288-299	3.1	34
8	Fracture toughness characterization through notched small punch test specimens. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 657, 422-430	5.3	33
7	On fracture in finite strain gradient plasticity. *International Journal of Plasticity*, **2016**, 80, 154-167	7.6	72
6	Strain gradient plasticity modeling of hydrogen diffusion to the crack tip. *International Journal of Hydrogen Energy*, **2016**, 41, 10265-10274	6.7	50
5	Damage modeling in Small Punch Test specimens. *Theoretical and Applied Fracture Mechanics*, **2016**, 86, 51-60	3.7	26
4	Modeling damage and fracture within strain-gradient plasticity. *International Journal of Solids and Structures*, **2015**, 59, 208-215	3.1	62
3	Numerical analysis of quasi-static fracture in functionally graded materials. *International Journal of Mechanics and Materials in Design*, **2015**, 11, 405-424	2.5	47
2	Modelling fatigue crack growth in shape memory alloys. *Fatigue and Fracture of Engineering Materials and Structures*,	3	3
1	Progress and opportunities in modelling environmentally assisted cracking. *RILEM Technical Letters* ,6, 70-77		4