Silvestre Pinho

List of Publications by Year in descending order

116 papers	7,480 citations	50276 46 h-index	54911 84 g-index
120 all docs	120 docs citations	120 times ranked	3727 citing authors

#	Article	IF	Citations
1	The influence of temperature and moisture on the mode I fracture toughness and associated fracture morphology of a highly toughened aerospace CFRP. Composites Part A: Applied Science and Manufacturing, 2021, 142, 106241.	7.6	24
2	Learning from nature: Bio-inspiration for damage-tolerant high-performance fibre-reinforced composites. Composites Science and Technology, 2021, 208, 108669.	7.8	45
3	Hygrothermal effects on the translaminar fracture toughness of a highly toughened aerospace CFRP: Experimental characterisation and model prediction. Composites Part A: Applied Science and Manufacturing, 2021, 150, 106582.	7.6	12
4	Ultra-thin-ply CFRP Bouligand bio-inspired structures with enhanced load-bearing capacity, delayed catastrophic failure and high energy dissipation capability. Composites Part A: Applied Science and Manufacturing, 2020, 129, 105655.	7.6	50
5	A novel formulation for the explicit discretisation of evolving boundaries with application to topology optimisation. Computer Methods in Applied Mechanics and Engineering, 2020, 367, 113077.	6.6	2
6	A floating connector element formulation for multi-level modelling of composite structures. Composite Structures, 2020, 251, 112532.	5.8	3
7	Herringbone-Bouligand CFRP structures: A new tailorable damage-tolerant solution for damage containment and reduced delaminations. Composites Science and Technology, 2020, 190, 108047.	7.8	34
8	The effect of tab orientation on the toughening mechanisms produced by interlocked interlaminar thin-ply CFRP reinforcements. Composite Structures, 2020, 238, 111932.	5.8	2
9	On the electrical conductivity of composites with a polymeric matrix and a non-uniform concentration of carbon nanotubes. Composites Science and Technology, 2020, 188, 108003.	7.8	20
10	Bio-inspired armour: CFRP with scales for perforation resistance. Materials Letters, 2020, 273, 127966.	2.6	11
11	3D printed continuous fibre-reinforced composites: Bio-inspired microstructures for improving the translaminar fracture toughness. Composites Science and Technology, 2019, 182, 107731.	7.8	21
12	Staggered ply discontinuities for tailoring the tensile behavior of hybrid carbon fiber/self-reinforced polypropylene composites: A study of pattern parameters. Composites Part A: Applied Science and Manufacturing, 2019, 125, 105551.	7.6	4
13	Fractographic study to characterise the interaction between intralaminar and interlaminar fracture from embedded defects under compression loading. Composites Part A: Applied Science and Manufacturing, 2019, 125, 105557.	7.6	3
14	A novel aluminium/CFRP hybrid composite with a bio-inspired crossed-lamellar microstructure for preservation of structural integrity. Composites Science and Technology, 2019, 182, 107760.	7.8	10
15	Realising bio-inspired impact damage-tolerant thin-ply CFRP Bouligand structures via promoting diffused sub-critical helicoidal damage. Composites Science and Technology, 2019, 182, 107684.	7.8	67
16	A three-level hybrid metal/in-plane-CFRP/crossed-lamellar microstructure concept for containment applications. Composites Part A: Applied Science and Manufacturing, 2019, 126, 105609.	7.6	6
17	Engineering tensile behavior of hybrid carbon fiber/self-reinforced polypropylene composites by bio-inspired fiber discontinuities. Composites Part B: Engineering, 2019, 178, 107502.	12.0	11
18	Application of machine learning to predict the multiaxial strain-sensing response of CNT-polymer composites. Carbon, 2019, 146, 265-275.	10.3	66

#	Article	IF	Citations
19	Interlocking thin-ply reinforcement concept for improved fracture toughness and damage tolerance. Composites Science and Technology, 2019, 181, 107681.	7.8	15
20	On the effect of electric field application during the curing process on the electrical conductivity of single-walled carbon nanotubesâ€“epoxy composites. Carbon, 2019, 150, 153-167.	10.3	26
21	Predictions of the electrical conductivity of composites of polymers and carbon nanotubes by an artificial neural network. Scripta Materialia, 2019, 166, 117-121.	5.2	37
22	Bio-inspired design for enhanced damage tolerance of self-reinforced polypropylene/carbon fibre polypropylene hybrid composites. Composites Part A: Applied Science and Manufacturing, 2019, 121, 341-352.	7.6	17
23	A polymorphic element formulation towards multiscale modelling of composite structures. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 359-387.	6.6	9
24	Failure mechanisms of biological crossed-lamellar microstructures applied to synthetic high-performance fibre-reinforced composites. Journal of the Mechanics and Physics of Solids, 2019, 125, 53-73.	4.8	22
25	Hot spot analysis in complex composite material structures. Composite Structures, 2019, 207, 776-786.	5.8	4
26	Predictions of the electro-mechanical response of conductive CNT-polymer composites. Journal of the Mechanics and Physics of Solids, 2018, 114, 84-96.	4.8	54
27	A meso-scale simulation framework for predicting the mechanical response of triaxial braided composites. Composites Part A: Applied Science and Manufacturing, 2018, 107, 489-506.	7.6	32
28	Realising damage-tolerant nacre-inspired CFRP. Journal of the Mechanics and Physics of Solids, 2018, 116, 391-402.	4.8	25
29	Interface micro-texturing for interlaminar toughness tailoring: a film-casting technique. Composites Science and Technology, 2018, 156, 203-214.	7.8	29
30	Interaction between nacre-like CFRP mesolayers and long-fibre interlayers. Composite Structures, 2018, 200, 921-928.	5.8	17
31	Towards quasi isotropic laminates with engineered fracture behaviour for industrial applications. Composites Science and Technology, 2018, 165, 290-306.	7.8	17
32	Predicting the non-linear mechanical response of triaxial braided composites. Composites Part A: Applied Science and Manufacturing, 2018, 114, 117-135.	7.6	23
33	Modelling delamination migration in angle-ply laminates. Composites Science and Technology, 2017, 142, 145-155.	7.8	46
34	Stress redistribution around clusters of broken fibres in a composite. Composite Structures, 2017, 168, 226-233.	5.8	29
35	Exploiting nacre-inspired crack deflection mechanisms in CFRP via micro-structural design. Composites Science and Technology, 2017, 153, 178-189.	7.8	42
36	The importance of translaminar fracture toughness for the penetration impact behaviour of woven carbon/glass hybrid composites. Composites Part A: Applied Science and Manufacturing, 2017, 103, 1-8.	7.6	43

#	Article	IF	Citations
37	Damage and failure of triaxial braided composites under multi-axial stress states. Composites Science and Technology, 2017, 150, 32-44.	7.8	60
38	Thickness-dependence of the translaminar fracture toughness: Experimental study using thin-ply composites. Composites Part A: Applied Science and Manufacturing, 2016, 90, 33-44.	7.6	57
39	Modelling the tensile failure of composites with the floating node method. Computer Methods in Applied Mechanics and Engineering, 2016, 308, 414-442.	6.6	84
40	Engineering the translaminar fracture behaviour of thin-ply composites. Composites Science and Technology, 2016, 131, 110-122.	7.8	60
41	Translaminar fracture toughness of NCF composites with multiaxial blankets. Materials and Design, 2016, 94, 410-416.	7.0	11
42	Prediction of the post-crushing compressive response of progressively crushable sandwich foam cores. Composites Part A: Applied Science and Manufacturing, 2016, 80, 148-158.	7.6	5
43	Exploiting symmetries in solid-to-shell homogenization, with application to periodic pin-reinforced sandwich structures. Composite Structures, 2015, 132, 995-1005.	5.8	7
44	Virtual Testing of Large Composite Structures: A Multiple Length/Time-Scale Framework. Journal of Multiscale Modeling, 2015, 06, 1550008.	1.1	7
45	Multiple length/time-scale simulation of localized damage in composite structures using a Mesh Superposition Technique. Composite Structures, 2015, 121, 395-405.	5.8	23
46	Modeling delamination migration in cross-ply tape laminates. Composites Part A: Applied Science and Manufacturing, 2015, 71, 192-203.	7.6	69
47	Combining damage and friction to model compressive damage growth in fibre-reinforced composites. Journal of Composite Materials, 2015, 49, 2483-2495.	2.4	30
48	MECHANICAL RESPONSE AND FAILURE OF 2D WOVEN COMPOSITES UNDER COMPRESSION. Computational and Experimental Methods in Structures, 2015, , 75-107.	0.3	1
49	Exploring the potential of interleaving to delay catastrophic failure in unidirectional composites under tensile loading. Composites Science and Technology, 2015, 106, 100-109.	7.8	20
50	Recycling of Carbon Fibers. , 2014, , 269-283.		9
51	A floating node method for the modelling of discontinuities in composites. Engineering Fracture Mechanics, 2014, 127, 104-134.	4.3	136
52	A coupled mechanicalâ€charge/dipole molecular dynamics finite element method, with multiâ€scale applications to the design of graphene nanoâ€devices. International Journal for Numerical Methods in Engineering, 2014, 100, 243-276.	2.8	6
53	An analytical model for the translaminar fracture toughness of fibre composites with stochastic quasi-fractal fracture surfaces. Journal of the Mechanics and Physics of Solids, 2014, 66, 78-102.	4.8	45
54	The influence of micromechanical properties and reinforcement architecture on the mechanical response of recycled composites. Composites Part A: Applied Science and Manufacturing, 2014, 56, 213-225.	7.6	20

#	Article	IF	Citations
55	Intralaminar fracture toughness characterisation of woven composite laminates. Part I: Design and analysis of a compact tension (CT) specimen. Engineering Fracture Mechanics, 2014, 131, 349-360.	4.3	30
56	Intralaminar fracture toughness characterisation of woven composite laminates. Part II: Experimental characterisation. Engineering Fracture Mechanics, 2014, 131, 361-370.	4.3	28
57	The relationship between mixed-mode II/III delamination and delamination migration in composite laminates. Composites Science and Technology, 2014, 105, 102-109.	7.8	24
58	Material and structural response of polymer-matrix fibre-reinforced composites: Part B. Journal of Composite Materials, 2013, 47, 679-696.	2.4	50
59	A detailed finite element investigation of composite bolted joints with countersunk fasteners. Composites Part A: Applied Science and Manufacturing, 2013, 52, 143-150.	7.6	58
60	A New Multi-Physics Molecular Dynamics Finite Element Method for designing graphene based nano-structures. , 2013, , .		0
61	Delamination growth directionality and the subsequent migration processes â€“ The key to damage tolerant design. Composites Part A: Applied Science and Manufacturing, 2013, 54, 79-87.	7.6	47
62	Numerical analysis of size effects on open-hole tensile composite laminates. Composites Part A: Applied Science and Manufacturing, 2013, 47, 52-62.	7.6	122
63	Homogenisation of slender periodic composite structures. International Journal of Solids and Structures, 2013, 50, 1473-1481.	2.7	14
64	Micromechanical analysis of polymer composites reinforced by unidirectional fibres: Part I â€“ Constitutive modelling. International Journal of Solids and Structures, 2013, 50, 1897-1905.	2.7	221
65	Micromechanical analysis of polymer composites reinforced by unidirectional fibres: Part II â€“ Micromechanical analyses. International Journal of Solids and Structures, 2013, 50, 1906-1915.	2.7	200
66	Hierarchical scaling law for the strength of composite fibre bundles. Journal of the Mechanics and Physics of Solids, 2013, 61, 1337-1356.	4.8	70
67	Investigating the use of compliant webs in the damage-tolerant design of stiffener run-outs. Composites Part B: Engineering, 2013, 45, 70-77.	12.0	9
68	Mixed-mode translaminar fracture of CFRP: Failure analysis and fractography. Composite Structures, 2013, 95, 135-141.	5.8	10
69	Response and damage propagation of polymer-matrix fibre-reinforced composites: Predictions for WWFE-III Part A. Journal of Composite Materials, 2013, 47, 2595-2612.	2.4	25
70	Fibre-dominated compressive failure in polymer matrix composites. , 2012, , 183-223.		2
71	Homogenization of slender periodic composite structures. , 2012, , .		0
72	On longitudinal compressive failure of carbon-fibre-reinforced polymer: from unidirectional to woven, and from virgin to recycled. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 1871-1895.	3.4	29

#	Article	IF	Citations
73	Material and structural response of polymer-matrix fibre-reinforced composites. Journal of Composite Materials, 2012, 46, 2313-2341.	2.4	180
74	Stochastic failure modelling of unidirectional composite ply failure. Reliability Engineering and System Safety, 2012, 108, 1-9.	8.9	27
75	Numerical simulation of the non-linear deformation of 5-harness satin weaves. Computational Materials Science, 2012, 61, 116-126.	3.0	62
76	Numerical modelling of woven composites: Biaxial loading. Composites Part A: Applied Science and Manufacturing, 2012, 43, 1326-1337.	7.6	44
77	Influence of geometrical parameters on the elastic response of unidirectional composite materials. Composite Structures, 2012, 94, 3223-3231.	5.8	75
78	Mesh generation and geometrical modelling of 3D woven composites with variable tow cross-sections. Computational Materials Science, 2012, 51, 103-111.	3.0	50
79	Computational implementation of a novel constitutive model for multidirectional composites. Computational Materials Science, 2012, 51, 217-224.	3.0	18
80	Measurement of the fracture toughness associated with the longitudinal fibre compressive failure mode of laminated composites. Composites Part A: Applied Science and Manufacturing, 2012, 43, 1930-1938.	7.6	51
81	The effect of recycling on the mechanical response of carbon fibres and their composites. Composite Structures, 2012, 94, 3669-3684.	5.8	95
82	Damage-Tolerant Design of Stiffener Run-Outs: A Finite Element Approach. , 2012, , .		1
83	Analytical modelling of the compressive and tensile response of woven composites. Composite Structures, 2012, 94, 2724-2735.	5.8	13
84	Translaminar fracture toughness testing of composites: A review. Polymer Testing, 2012, 31, 481-489.	4.8	154
85	A finite fracture mechanics formulation to predict fibre kinking and splitting in CFRP under combined longitudinal compression and in-plane shear. Mechanics of Materials, 2011, 43, 730-739.	3.2	32
86	Translaminar fracture toughness: The critical notch tip radius of 0Â° plies in CFRP. Composites Science and Technology, 2011, 72, 97-102.	7.8	53
87	Design of composite stiffener run-outs for damage tolerance. Finite Elements in Analysis and Design, 2011, 47, 949-954.	3.2	14
88	Modelling the R-curve effect and its specimen-dependence. International Journal of Solids and Structures, 2011, 48, 1767-1777.	2.7	70
89	Reducing the domain in the mechanical analysis of periodic structures, with application to woven composites. Composites Science and Technology, 2011, 71, 969-979.	7.8	44
90	Constitutive modelling of fibre-reinforced composites with unidirectional plies using a plasticity-based approach. Composites Science and Technology, 2011, 71, 1068-1074.	7.8	68

#	Article	IF	Citations
91	An experimental study of failure initiation and propagation in 2D woven composites under compression. Composites Science and Technology, 2011, 71, 1316-1325.	7.8	67
92	Recycling carbon fibre reinforced polymers for structural applications: Technology review and market outlook. Waste Management, 2011, 31, 378-392.	7.4	677
93	On acoustic emission for failure investigation in CFRP: Pattern recognition and peak frequency analyses. Mechanical Systems and Signal Processing, 2011, 25, 1393-1407.	8.0	440
94	Measurement of the in situ ply fracture toughness associated with mode I fibre tensile failure in FRP. Part II: Size and lay-up effects. Composites Science and Technology, 2010, 70, 614-621.	7.8	88
95	On the transition from shear-driven fibre compressive failure to fibre kinking in notched CFRP laminates under longitudinal compression. Composites Science and Technology, 2010, 70, 1223-1231.	7.8	123
96	Mechanical analysis and toughening mechanisms of a multiphase recycled CFRP. Composites Science and Technology, 2010, 70, 1713-1725.	7.8	48
97	Measurement of the in situ ply fracture toughness associated with mode I fibre tensile failure in FRP. Part I: Data reduction. Composites Science and Technology, 2010, 70, 606-613.	7.8	107
98	Micro-mechanical modelling of shear-driven fibre compressive failure and of fibre kinking for failure envelope generation in CFRP laminates. Composites Science and Technology, 2010, 70, 1214-1222.	7.8	78
99	A micromechanical model for kink-band formation: Part IIâ€"Analytical modelling. Composites Science and Technology, 2009, 69, 956-964.	7.8	84
100	Effect of variation in fibre volume fraction on modes I and II delamination behaviour of 5HS woven composites manufactured by RTM. Composites Science and Technology, 2009, 69, 2368-2375.	7.8	49
101	A micromechanical model for kink-band formation: Part I â€" Experimental study and numerical modelling. Composites Science and Technology, 2009, 69, 948-955.	7.8	138
102	Developing a four point bend specimen to measure the mode I intralaminar fracture toughness of unidirectional laminated composites. Composites Science and Technology, 2009, 69, 1303-1309.	7.8	53
103	Generation of random distribution of fibres in long-fibre reinforced composites. Composites Science and Technology, 2008, 68, 2092-2102.	7.8	269
104	A Numerical Material Model for Predicting the High Velocity Impact Behaviour of Polymer Composites. Computational Methods in Applied Sciences (Springer), 2008, , 161-177.	0.3	6
105	Physically-based failure models and criteria for laminated fibre-reinforced composites with emphasis on fibre kinking: Part I: Development. Composites Part A: Applied Science and Manufacturing, 2006, 37, 63-73.	7.6	347
106	Prediction of in situ strengths and matrix cracking in composites under transverse tension and in-plane shear. Composites Part A: Applied Science and Manufacturing, 2006, 37, 165-176.	7.6	348
107	Formulation and implementation of decohesion elements in an explicit finite element code. Composites Part A: Applied Science and Manufacturing, 2006, 37, 778-789.	7.6	125
108	Physically based failure models and criteria for laminated fibre-reinforced composites with emphasis on fibre kinking. Part II: FE implementation. Composites Part A: Applied Science and Manufacturing, 2006, 37, 766-777.	7.6	291

#	Article	IF	Citations
109	Fracture toughness of the tensile and compressive fibre failure modes in laminated composites. Composites Science and Technology, 2006, 66, 2069-2079.	7.8	444
110	Residual stress field and reduction of stress intensity factors in cold-worked holes. Theoretical and Applied Fracture Mechanics, 2005, 44, 168-177.	4.7	19
111	Manufacture of a Fin-Box Made by RTM. Materials Science Forum, 2004, 455-456, 890-0.	0.3	0
112	Numerical simulation of the crushing process of composite materials. International Journal of Crashworthiness, 2004, 9, 263-276.	1.9	58
113	Fracture analysis of composite coâ€cured structural joints using decohesion elements. Fatigue and Fracture of Engineering Materials and Structures, 2004, 27, 745-757.	3.4	64
114	The residual stress intensity factors for coldâ€worked cracked holes: a technical note. Fatigue and Fracture of Engineering Materials and Structures, 2004, 27, 879-886.	3.4	13
115	Permeability Tests of Carbon Fibre Preforms. Key Engineering Materials, 2002, 230-232, 331-334.	0.4	0
116	TiGr Nacre: Damage Tolerance through Damage Diffusion. , 0, , .		0