Brian G Falzon

List of Publications by Year
in descending order

99 papers	4,004 citations	136950 32 h-index	128289 60 g-index
100 all docs	100 docs citations	100 times ranked	2551 citing authors

#	Article	IF	Citations
1	Predicting low velocity impact damage and Compression-After-Impact (CAI) behaviour of composite laminates. Composites Part A: Applied Science and Manufacturing, 2015, 71, 212-226.	7.6	344
2	A progressive failure model for composite laminates subjected to low velocity impact damage. Computers and Structures, 2008, 86, 1232-1252.	4.4	340
3	Predicting low-velocity impact damage on a stiffened composite panel. Composites Part A: Applied Science and Manufacturing, 2010, 41, 737-749.	7.6	277
4	Structural testing and numerical simulation of a 34m composite wind turbine blade. Composite Structures, 2006, 76, 52-61.	5.8	189
5	Experimental and numerical studies on the impact response of damage-tolerant hybrid unidirectional/woven carbon-fibre reinforced composite laminates. Composites Part B: Engineering, 2018, 136, 101-118.	12.0	137
6	Delamination threshold load for dynamic impact on plates. International Journal of Solids and Structures, 2006, 43, 3124-3141.	2.7	134
7	Numerical analysis of intralaminar failure mechanisms in composite structures. Part I: FE implementation. Composite Structures, 2011, 93, 1039-1046.	5.8	107
8	An advanced anti-icing/de-icing system utilizing highly aligned carbon nanotube webs. Carbon, 2018, 136, 130-138.	10.3	106
9	The role of interfacial properties on the intralaminar and interlaminar damage behaviour of unidirectional composite laminates: Experimental characterization and multiscale modelling. Composites Part B: Engineering, 2018, 138, 206-221.	12.0	90
10	Crush responses of composite cylinder under quasi-static and dynamic loading. Composite Structures, 2015, 131, 90-98.	5.8	87
11	Predicting the Compression-After-Impact (CAI) strength of damage-tolerant hybrid unidirectional/woven carbon-fibre reinforced composite laminates. Composites Part A: Applied Science and Manufacturing, 2018, 105, 189-202.	7.6	86
12	Modelling the crush behaviour of thermoplastic composites. Composites Science and Technology, 2016, 134, 57-71.	7.8	83
13	Finite element modelling of composite structures under crushing load. Composite Structures, 2015, 131, 215-228.	5.8	79
14	An investigation of Mode I and Mode II fracture toughness enhancement using aligned carbon nanotubes forests at the crack interface. Composite Structures, 2013, 106, 65-73.	5.8	76
15	Stiffener debonding mechanisms in post-buckled CFRP aerospace panels. Composites Part A: Applied Science and Manufacturing, 2005, 36, 934-946.	7.6	71
16	Modelling the nonlinear behaviour and fracture process of AS4/PEKK thermoplastic composite under shear loading. Composites Science and Technology, 2016, 126, 60-77.	7.8	71
17	Numerical analysis of intralaminar failure mechanisms in composite structures. Part II: Applications. Composite Structures, 2011, 93, 1047-1053.	5.8	69
18	A 3-D micromechanical model for predicting the elastic behaviour of woven laminates. Composites Science and Technology, 2007, 67, 2467-2477.	7.8	56

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19	Development and evaluation of a novel integrated anti-icing/de-icing technology for carbon fibre composite aerostructures using an electro-conductive textile. Composites Part A: Applied Science and Manufacturing, 2015, 68, 323-335.	7.6	55
20	Predicting the crushing behaviour of composite material using high-fidelity finite element modelling. International Journal of Crashworthiness, 2015, 20, 60-77.	1.9	54
21	Aligned carbon nanotube webs embedded in a composite laminate: A route towards a highly tunable electro-thermal system. Carbon, 2018, 129, 486-494.	10.3	48
22	The role of material characterisation in the crush modelling of thermoplastic composite structures. Composite Structures, 2016, 153, 914-927.	5.8	47
23	Synergistic enhancement of fracture toughness in multiphase epoxy matrices modified by thermoplastic and carbon nanotubes. Composites Science and Technology, 2021, 201, 108523.	7.8	42
24	Modelling matrix damage and fibreâ€“matrix interfacial decohesion in composite laminates via a multi-fibre multi-layer representative volume element (M2RVE). International Journal of Solids and Structures, 2014, 51, 449-461.	2.7	41
25	Enhancing the fracture toughness of hierarchical composites through aminoâ€'functionalised carbon nanotube webs. Composites Part B: Engineering, 2019, 165, 537-544.	12.0	40
26	Intralaminar toughness characterisation of unbalanced hybrid plain weave laminates. Composites Part A: Applied Science and Manufacturing, 2007, 38, 1597-1611.	7.6	38
27	An experimental and numerical study on the crush behaviour of hybrid unidirectional/woven carbon-fibre reinforced composite laminates. International Journal of Mechanical Sciences, 2019, 164, 105160.	6.7	38
28	Validation of a 3D damage model for predicting the response of composite structures under crushing loads. Composite Structures, 2016, 147, 65-73.	5.8	37
29	Compressive failure of woven fabric reinforced thermoplastic composites with an open-hole: An experimental and numerical study. Composite Structures, 2019, 213, 108-117.	5.8	37
30	Simulating Resin Infusion through Textile Reinforcement Materials for the Manufacture of Complex Composite Structures. Engineering, 2017, 3, 596-607.	6.7	36
31	Optimization Strategy for Minimizing Damage in Postbuckling Stiffened Panels. AIAA Journal, 2007, 45, 2520-2528.	2.6	35
32	Crack propagation in non-homogenous materials: Evaluation of mixed-mode SIFs, T-stress and kinking angle using a variant of EFG Method. Engineering Analysis With Boundary Elements, 2016, 72, 11-26.	3.7	35
33	Phase morphology and mechanical properties of polyetherimide modified epoxy resins: A comparative study. Polymer, 2019, 179, 121640.	3.8	35
34	Metal nanoparticleâ€hydrogel nanocomposites for biomedical applications â€“ An atmospheric pressure plasma synthesis approach. Plasma Processes and Polymers, 2018, 15, 1800112.	3.0	34
35	On the application of genetic algorithms for optimising composites against impact loading. International Journal of Impact Engineering, 2008, 35, 1293-1302.	5.0	32
36	High performance multiscale glass fibre epoxy composites integrated with cellulose nanocrystals for advanced structural applications. Composites Part A: Applied Science and Manufacturing, 2020, 131, 105801.	7.6	32

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37	The behaviour of damage tolerant hat-stiffened composite panels loaded in uniaxial compression. Composites Part A: Applied Science and Manufacturing, 2001, 32, 1255-1262.	7.6	31
38	Micromechanical modelling of the longitudinal compressive and tensile failure of unidirectional composites: The effect of fibre misalignment introduced via a stochastic process. International Journal of Solids and Structures, 2020, 203, 157-176.	2.7	31
39	Failure of thick-skinned stiffener runout sections loaded in uniaxial compression. Composite Structures, 2001, 53, 223-233.	5.8	30
40	Ultrasensitive embedded sensor for composite joints based on a highly aligned carbon nanotube web. Carbon, 2019, 149, 380-389.	10.3	30
41	Capturing mode-switching in postbuckling composite panels using a modified explicit procedure. Composite Structures, 2003, 60, 447-453.	5.8	29
42	Modelling damage in fibre-reinforced thermoplastic composite laminates subjected to three-point bend loading. Composite Structures, 2020, 236, 111889.	5.8	29
43	Assessing the current modelling approach for predicting the crashworthiness of Formula One composite structures. Composites Part B: Engineering, 2020, 201, 108242.	12.0	27
44	Enhancing the electrical conductivity of carbon fibre thin-ply laminates with directly grown aligned carbon nanotubes. Composite Structures, 2018, 206, 272-278.	5.8	26
45	On the importance of nesting considerations for accurate computational damage modelling in 2D woven composite materials. Computational Materials Science, 2020, 172, 109323.	3.0	26
46	Effects of Impactor Geometry on the Low-Velocity Impact Behaviour of Fibre-Reinforced Composites: An Experimental and Theoretical Investigation. Applied Composite Materials, 2020, 27, 533-553.	2.5	26
47	Element-Free Galerkin modelling of composite damage. Composites Science and Technology, 2009, 69, 2640-2648.	7.8	25
48	Atmospheric Pressure Plasma-Synthesized Gold Nanoparticle/Carbon Nanotube Hybrids for Photothermal Conversion. Langmuir, 2019, 35, 4577-4588.	3.5	25
49	Efficient modelling and optimisation of hybrid multilayered plates subject to ballistic impact. International Journal of Impact Engineering, 2010, 37, 605-624.	5.0	23
50	A pseudo-transient solution strategy for the analysis of delamination by means of interface elements. Finite Elements in Analysis and Design, 2006, 42, 698-708.	3.2	22
51	An experimental method to determine the intralaminar fracture toughness of high-strength carbon-fibre reinforced composite aerostructures. Aeronautical Journal, 2018, 122, 1352-1370.	1.6	22
52	Mode I intralaminar fracture toughness of 2D woven carbon fibre reinforced composites: A comparison of stable and unstable crack propagation techniques. Engineering Fracture Mechanics, 2019, 214, 427-448.	4.3	22
53	Influence on fracture toughness arising from controlled morphology of multiphase toughened epoxy resins in the presence of fibre reinforcement. Composites Science and Technology, 2022, 217, 109095.	7.8	21
54	A correction to the analytical solution of the mixed-mode bending (MMB) problem. Composites Science and Technology, 2007, 67, 662-668.	7.8	19

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55	The use of a genetic algorithm to improve the postbuckling strength of stiffened composite panels susceptible to secondary instabilities. Composite Structures, 2012, 94, 883-895.	5.8	19
56	Efficiency improvement study for small wind turbines through flow control. Sustainable Energy Technologies and Assessments, 2014, 7, 195-208.	2.7	19
57	Comment on â€œA tensorial based progressive damage model for fibre reinforced polymersâ€. Composite Structures, 2017, 176, 877-882.	5.8	19
58	Infrared Thermography assisted evaluation of static and fatigue Mode II fracture toughness in FRP composites. Composite Structures, 2019, 226, 111220.	5.8	19
59	The Behavior of Compressively Loaded Stiffener Runout Specimens â€“ Part II: Finite Element Analysis. Journal of Composite Materials, 2003, 37, 481-501.	2.4	18
60	Micromechanical analysis of interlaminar crack propagation between angled plies in mode I tests. Composite Structures, 2019, 220, 827-841.	5.8	18
61	Orthotropic electro-thermal behaviour of highly-aligned carbon nanotube web based composites. Composites Science and Technology, 2019, 170, 157-164.	7.8	18
62	Experimental determination of mode I fracture parameters in orthotropic materials by means of Digital Image Correlation. Theoretical and Applied Fracture Mechanics, 2020, 108, 102663.	4.7	18
63	Compressive intralaminar fracture toughness and residual strength of 2D woven carbon fibre reinforced composites: New developments on using the size effect method. Theoretical and Applied Fracture Mechanics, 2020, 106, 102487.	4.7	18
64	Fracture mechanics using a 3D composite element. Composite Structures, 1999, 45, 29-39.	5.8	17
65	The Behavior of Compressively Loaded Stiffener Runout Specimens â€“ Part I: Experiments. Journal of Composite Materials, 2003, 37, 381-400.	2.4	17
66	Modified crack closure integral technique for extraction of SIFs in meshfree methods. Finite Elements in Analysis and Design, 2014, 78, 25-39.	3.2	17
67	An automated hybrid procedure for capturing mode-jumping in postbuckling composite stiffened structures. Composite Structures, 2006, 73, 186-195.	5.8	16
68	Numerical Analysis of Stiffener Runout Sections. Applied Composite Materials, 2007, 14, 145-158.	2.5	15
69	Thermoresponsive nanocomposites incorporating microplasma synthesized magnetic nanoparticlesâ€”Synthesis and potential applications. Plasma Processes and Polymers, 2019, 16, 1800128.	3.0	15
70	Design of composite stiffener run-outs for damage tolerance. Finite Elements in Analysis and Design, 2011, 47, 949-954.	3.2	14
71	Study of localized damage in composite laminates using microâ€“macro approach. Composite Structures, 2014, 113, 1-11.	5.8	12
72	Welding of thermoplastics by means of carbon-nanotube web. Composites Communications, 2020, 17, 56-60.	6.3	12

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73	Progressive failure in interply hybrid composites of self-reinforced polypropylene and glass fibre. Polymer, 2020, 195, 122411.	3.8	11
74	Permeability characterization of sheared carbon fiber textile preform. Polymer Composites, 2018, 39, 2287-2298.	4.6	10
75	Microplasma assisted synthesis of gold nanoparticle/graphene oxide nanocomposites and their potential application in SERS sensing. Nanotechnology, 2019, 30, 455603.	2.6	10
76	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
77	Predicting Impact Damage, Residual Strength and Crashworthiness of Composite Structures. SAE International Journal of Materials and Manufacturing, 2016, 9, 718-728.	0.3	9
78	Implementation of a Non-Orthogonal Constitutive Model for the Finite Element Simulation of Textile Composite Draping. Applied Mechanics and Materials, 2014, 553, 76-81.	0.2	8
79	Axisymmetric structural optimization design and void control for selective laser melting. Structural and Multidisciplinary Optimization, 2017, 56, 1027-1043.	3.5	8
80	On the importance of finite element mesh alignment along the fibre direction for modelling damage in fibre-reinforced polymer composite laminates. Composite Structures, 2021, 278, 114694.	5.8	7
81	Implementing a structural continuity constraint and a halting method for the topology optimization of energy absorbers. Structural and Multidisciplinary Optimization, 2016, 54, 429-448.	3.5	6
82	Thermosetting Composite Materials in Aerostructures. , 2020, , 57-86.		6
83	Web-assisted first-year undergraduate teaching in engineering. Computer Applications in Engineering Education, 2005, 13, 125-132.	3.4	5
84	A crystal plasticity phenomenological model to capture the non-linear shear response of carbon fibre reinforced composites. International Journal of Lightweight Materials and Manufacture, 2021, 4, 99-109.	2.1	5
85	Modelling electro-impulse de-icing process in leading edge structure and impact fatigue life prediction of rivet holes in critical areas. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2020, 234, 1117-1131.	1.3	4
86	Effect of precursor pH on AuNP/MWCNT nanocomposites synthesized by plasma-induced non-equilibrium electrochemistry. Journal Physics D: Applied Physics, 2020, 53, 425207.	2.8	4
87	The effect of processing on the mechanical properties of self-reinforced composites. AIP Conference Proceedings, 2018, , .	0.4	3
88	Predicting the ultimate load of a CFRP wingbox. Composites Part A: Applied Science and Manufacturing, 2004, 35, 895-903.	7.6	2
89	Integrating Allowable Design Strains in Composites with Whole Life Value. Procedia CIRP, 2013, 11, 278-283.	1.9	2
90	An Application of Bi-Directional Evolutionary Structural Optimisation for Optimising Energy Absorbing Structures Using a Material Damage Model. Applied Mechanics and Materials, 0, 553, 836-841.	0.2	2

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91	Phase morphology and fracture behaviour of CNT and thermoplastic modified epoxy ternary nanocomposite by different processing methods. AIP Conference Proceedings, 2020, , .	0.4	2
92	Investigation on the influence of multi-step processing on the mechanical and thermal properties of cellulose reinforced EVOH composites. AIP Conference Proceedings, 2020, , .	0.4	2
93	Modelling the longitudinal failure of fibre-reinforced composites at microscale. , 2021, , 349-378.		2
94	Optimization of Composite Structures to Delay Mode Jump Instabilities. AIAA Journal, 2011, 49, 703-711.	2.6	1
95	Numerical prediction of the low-velocity impact damage and compression after impact strength of composite laminates. IOP Conference Series: Materials Science and Engineering, 2015, 74, 012015.	0.6	1
96	Virtual Testing of Composite Structures: Progress and Challenges in Predicting Damage, Residual Strength and Crashworthiness. , 2017, , 699-743.		1
97	Micromechanical modelling of interlaminar damage propagation and migration. , 2021, , 307-347.		1
98	Identification of Dynamics of Surface Suction Over an Airfoil at Low Reynolds Numbers. , 2013, , .		0
99	A repairable carbon nanotube web-based electro-thermal heater and damage sensor for aerospace applications. Aeronautical Journal, 0, , 1-11.	1.6	0