

Calvin Rans

List of Publications by Year in descending order

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58
papers

2,108
citations

218677

26
h-index

243625

44
g-index

58
all docs

58
docs citations

58
times ranked

1211
citing authors

#	ARTICLE	IF	CITATIONS
1	Fatigue performance of additively manufactured meta-biomaterials: The effects of topology and material type. <i>Acta Biomaterialia</i> , 2018, 65, 292-304.	8.3	144
2	Process and performance evaluation of ultrasonic, induction and resistance welding of advanced thermoplastic composites. <i>Journal of Thermoplastic Composite Materials</i> , 2013, 26, 1007-1024.	4.2	139
3	Misinterpreting the results: How similitude can improve our understanding of fatigue delamination growth. <i>Composites Science and Technology</i> , 2011, 71, 230-238.	7.8	137
4	The applicability of magnesium based Fibre Metal Laminates in aerospace structures. <i>Composites Science and Technology</i> , 2008, 68, 2983-2993.	7.8	107
5	Strength development versus process data in ultrasonic welding of thermoplastic composites with flat energy directors and its application to the definition of optimum processing parameters. <i>Composites Part A: Applied Science and Manufacturing</i> , 2014, 65, 27-37.	7.6	103
6	Modeling of the heating phenomena in ultrasonic welding of thermoplastic composites with flat energy directors. <i>Journal of Materials Processing Technology</i> , 2014, 214, 1361-1371.	6.3	99
7	Ultrasonic welding of advanced thermoplastic composites: An investigation on energy directing surfaces. <i>Advances in Polymer Technology</i> , 2010, 29, 112-121.	1.7	91
8	Isolated and modulated effects of topology and material type on the mechanical properties of additively manufactured porous biomaterials. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 79, 254-263.	3.1	88
9	In situ monitoring of ultrasonic welding of thermoplastic composites through power and displacement data. <i>Journal of Thermoplastic Composite Materials</i> , 2015, 28, 66-85.	4.2	87
10	Applicability of AZ31B-H24 magnesium in Fibre Metal Laminates – An experimental impact research. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012, 43, 1578-1586.	7.6	80
11	On the effect of flat energy directors thickness on heat generation during ultrasonic welding of thermoplastic composites. <i>Composite Interfaces</i> , 2017, 24, 203-214.	2.3	68
12	Riveting Process Induced Residual Stresses Around Solid Rivets in Mechanical Joints. <i>Journal of Aircraft</i> , 2007, 44, 323-329.	2.4	63
13	Mechanical behaviour of thermoplastic composites spot-welded and mechanically fastened joints: A preliminary comparison. <i>Composites Part B: Engineering</i> , 2017, 112, 224-234.	12.0	61
14	Ultrasonic Welding of Thermoplastic Composites. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	55
15	Effects of applied stress ratio on the fatigue behavior of additively manufactured porous biomaterials under compressive loading. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 70, 7-16.	3.1	54
16	Fatigue performance of auxetic meta-biomaterials. <i>Acta Biomaterialia</i> , 2021, 126, 511-523.	8.3	44
17	Application of a modified Wheeler model to predict fatigue crack growth in Fibre Metal Laminates under variable amplitude loading. <i>Engineering Fracture Mechanics</i> , 2010, 77, 1400-1416.	4.3	41
18	Towards robust sequential ultrasonic spot welding of thermoplastic composites: Welding process control strategy for consistent weld quality. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 109, 355-367.	7.6	39

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19	Ultrasonic welding of CF/PPS composites with integrated triangular energy directors: melting, flow and weld strength development. <i>Composite Interfaces</i> , 2017, 24, 515-528.	2.3	38
20	Beyond the orthogonal: on the influence of build orientation on fatigue crack growth in SLM Ti-6Al-4V. <i>International Journal of Fatigue</i> , 2018, 116, 344-354.	5.7	36
21	Predicting the influence of temperature on fatigue crack propagation in Fibre Metal Laminates. <i>Engineering Fracture Mechanics</i> , 2011, 78, 2193-2201.	4.3	34
22	On differences and similarities between static and continuous ultrasonic welding of thermoplastic composites. <i>Composites Part B: Engineering</i> , 2020, 203, 108466.	12.0	34
23	Continuous ultrasonic welding of thermoplastic composites: Enhancing the weld uniformity by changing the energy director. <i>Journal of Composite Materials</i> , 2020, 54, 2023-2035.	2.4	33
24	Further Studies into Crack Growth in Additively Manufactured Materials. <i>Materials</i> , 2020, 13, 2223.	2.9	28
25	Effect of residual stress redistribution and weld reinforcement geometry on fatigue crack growth of butt welded joints. <i>International Journal of Fatigue</i> , 2020, 139, 105780.	5.7	28
26	On sequential ultrasonic spot welding as an alternative to mechanical fastening in thermoplastic composite assemblies: A study on single-column multi-row single-lap shear joints. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 120, 1-11.	7.6	27
27	The meaning of threshold fatigue in fibre metal laminates. <i>International Journal of Fatigue</i> , 2009, 31, 213-222.	5.7	24
28	Characterizing fatigue delamination growth behaviour using specimens with multiple delaminations: The effect of unequal delamination lengths. <i>Engineering Fracture Mechanics</i> , 2013, 109, 150-160.	4.3	20
29	Modelling the Variability and the Anisotropic Behaviour of Crack Growth in SLM Ti-6Al-4V. <i>Materials</i> , 2021, 14, 1400.	2.9	20
30	Assessing the effects of riveting induced residual stresses on fatigue crack behaviour in lap joints by means of fractography. <i>International Journal of Fatigue</i> , 2009, 31, 300-308.	5.7	18
31	Predicting the influence of discretely notched layers on fatigue crack growth in fibre metal laminates. <i>Engineering Fracture Mechanics</i> , 2015, 145, 1-14.	4.3	17
32	Analytical prediction model for non-symmetric fatigue crack growth in Fibre Metal Laminates. <i>International Journal of Fatigue</i> , 2017, 103, 546-556.	5.7	17
33	Enhancing weld attributes in ultrasonic spot welding of carbon fibre-reinforced thermoplastic composites: Effect of sonotrode configurations and process control. <i>Composites Part B: Engineering</i> , 2021, 211, 108648.	12.0	17
34	Theoretical analysis of fatigue failure in mechanically fastened Fibre Metal Laminate joints containing multiple cracks. <i>Engineering Failure Analysis</i> , 2018, 91, 151-164.	4.0	16
35	Ultrasonic welding of epoxy- to polyetheretherketone- based composites: Investigation on the material of the energy director and the thickness of the coupling layer. <i>Journal of Composite Materials</i> , 2020, 54, 3081-3098.	2.4	16
36	Analytical prediction of Mode I stress intensity factors for cracked panels containing bonded stiffeners. <i>Engineering Fracture Mechanics</i> , 2013, 97, 12-29.	4.3	14

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37	Fatigue crack growth of butt welded joints subjected to mixed mode loading and overloading. <i>Engineering Fracture Mechanics</i> , 2021, 241, 107376.	4.3	14
38	Improving the quality of continuous ultrasonically welded thermoplastic composite joints by adding a consolidator to the welding setup. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 155, 106808.	7.6	14
39	Prediction methodology for fatigue crack growth behaviour in Fibre Metal Laminates subjected to tension and pin loading. <i>Composite Structures</i> , 2017, 182, 176-182.	5.8	13
40	On the onset of the asymptotic stable fracture region in the mode II fatigue delamination growth behaviour of composites. <i>Journal of Composite Materials</i> , 2015, 49, 685-697.	2.4	12
41	Effect of surface morphology on the Ti-Ti adhesive bond performance of Ti6Al4V parts fabricated by selective laser melting. <i>International Journal of Adhesion and Adhesives</i> , 2021, 110, 102918.	2.9	12
42	An experimental investigation into pin loading effects on fatigue crack growth in Fibre Metal Laminates. <i>Procedia Structural Integrity</i> , 2016, 2, 3361-3368.	0.8	11
43	Two engineering models for predicting the retardation of fatigue crack growth caused by mixed mode overload. <i>International Journal of Fatigue</i> , 2020, 132, 105378.	5.7	11
44	A Study on Through-the-Thickness Heating in Continuous Ultrasonic Welding of Thermoplastic Composites. <i>Materials</i> , 2021, 14, 6620.	2.9	11
45	Analytical prediction model for fatigue crack growth in Fibre Metal Laminates with MSD scenario. <i>International Journal of Fatigue</i> , 2017, 104, 263-272.	5.7	9
46	Experimental evaluation of fatigue behaviour of thin Al5456 welded joints. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2020, 43, 965-977.	3.4	8
47	Avoiding knife-edge countersinks in GLARE through dimpling. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2005, 28, 633-640.	3.4	7
48	Fatigue Behavior of Fiber/Metal Laminate Panels Containing Internal Carbon Tear Straps. <i>Journal of Aircraft</i> , 2011, 48, 2122-2129.	2.4	6
49	Analytical solutions for crack opening displacements of eccentric cracks in thin-walled metallic plates. <i>Thin-Walled Structures</i> , 2018, 123, 371-381.	5.3	6
50	Evaluation of mode II fatigue disbonding using Central Cut Plies specimen and distributed strain sensing technology. <i>Journal of Adhesion</i> , 2019, 95, 259-285.	3.0	6
51	The influence of grit blasting and UV/Ozone treatments on Ti-Ti adhesive bonds and their durability after sol-gel and primer application. <i>International Journal of Adhesion and Adhesives</i> , 2021, 104, 102750.	2.9	6
52	The dangers of single-lap shear testing in understanding polymer composite welded joints. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200296.	3.4	6
53	Effects of Rivet Installation on Residual Stresses and Secondary Bending Stresses in a Riveted Lap Joint. , 2007, , .		5
54	Finite Element Modeling of Fatigue in Fiber-Metal Laminates. <i>AIAA Journal</i> , 2015, 53, 2228-2236.	2.6	4

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55	Fatigue crack growth of Al 5083-H111 subjected to mixed-mode loading. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	1.6	4
56	Accuracy of strain measurement systems on a non-isotropic material and its uncertainty on finite element analysis. Journal of Strain Analysis for Engineering Design, 2021, 56, 76-95.	1.8	3
57	Residual stress evaluation of adhesively bonded composite using central cut plies specimens. Journal of Adhesion, 2020, 96, 1355-1384.	3.0	2
58	Forensic Engineering: Learning by Accident Teaching Investigation Skills to Graduate Students using Real-Life Accident Simulations. , 2015, , .		1