

# Martyn J Pavier

## List of Publications by Citations

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101  
papers

2,836  
citations

27  
h-index

51  
g-index

108  
ext. papers

3,207  
ext. citations

3.4  
avg, IF

5.07  
L-index

#	Paper	IF	Citations
101	The role of T-stress in brittle fracture for linear elastic materials under mixed-mode loading. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>2001</b> , 24, 137-150	3	391
100	Geometry and size effects on fracture trajectory in a limestone rock under mixed mode loading. <i>Engineering Fracture Mechanics</i> , <b>2010</b> , 77, 2200-2212	4.2	229
99	Determination of T-stress from finite element analysis for mode I and mixed mode I/II loading. <i>International Journal of Fracture</i> , <b>1998</b> , 91, 283-298	2.3	128
98	Geometry effects and statistical analysis of mode I fracture in guiting limestone. <i>International Journal of Rock Mechanics and Minings Sciences</i> , <b>2012</b> , 51, 128-135	6	109
97	Size-dependent fracture behavior of Guiting limestone under mixed mode loading. <i>International Journal of Rock Mechanics and Minings Sciences</i> , <b>2014</b> , 71, 369-380	6	109
96	Finite element micromechanical modelling of yield and collapse behaviour of metal matrix composites. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2000</b> , 48, 499-528	5	88
95	A New Procedure to Measure Near Yield Residual Stresses Using the Deep Hole Drilling Technique. <i>Experimental Mechanics</i> , <b>2009</b> , 49, 595-604	2.6	83
94	Mode I cracks subjected to large T-stresses. <i>International Journal of Fracture</i> , <b>2002</b> , 117, 159-174	2.3	75
93	The effect of delamination geometry on the compressive failure of composite laminates. <i>Composites Science and Technology</i> , <b>2001</b> , 61, 2075-2086	8.6	71
92	Experimental techniques for the investigation of the effects of impact damage on carbon-fibre composites. <i>Composites Science and Technology</i> , <b>1995</b> , 55, 157-169	8.6	68
91	On the consequences of T-stress in elastic brittle fracture. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2006</b> , 462, 2415-2437	2.4	64
90	Effect of residual stress around cold worked holes on fracture under superimposed mechanical load. <i>Engineering Fracture Mechanics</i> , <b>1999</b> , 63, 751-773	4.2	63
89	Fatigue crack growth from plain and cold expanded holes in aluminium alloys. <i>International Journal of Fatigue</i> , <b>2000</b> , 22, 189-203	5	59
88	A Finite Element Simulation of the Cold Working process for Fastener Holes. <i>Journal of Strain Analysis for Engineering Design</i> , <b>1997</b> , 32, 287-300	1.3	59
87	A comparison of two and three-dimensional analyses of fatigue crack closure. <i>International Journal of Fatigue</i> , <b>2007</b> , 29, 222-231	5	52
86	Micro-mechanics of off-axis loading of metal matrix composites using finite element analysis. <i>International Journal of Solids and Structures</i> , <b>2001</b> , 38, 3905-3925	3.1	52
85	Analytical and finite element predictions of residual stresses in cold worked fastener holes. <i>Journal of Strain Analysis for Engineering Design</i> , <b>1995</b> , 30, 291-304	1.3	50

84	An assessment of residual-stress measurements around cold-worked holes. <i>Experimental Mechanics</i> , <b>1995</b> , 35, 361-366	2.6	48
83	A Comparison Between Measured and Modeled Residual Stresses in a Circumferentially Butt-Welded P91 Steel Pipe. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , <b>2010</b> , 132,	1.2	47
82	The effect of cold expansion on fatigue crack growth from open holes at room and high temperature. <i>International Journal of Fatigue</i> , <b>2001</b> , 23, 161-170	5	47
81	Fracture of aluminium alloy 2024 under biaxial and triaxial loading. <i>Engineering Fracture Mechanics</i> , <b>2011</b> , 78, 1705-1716	4.2	46
80	Residual stresses created during curing of a polymer matrix composite using a viscoelastic model. <i>Composites Science and Technology</i> , <b>2016</b> , 130, 20-27	8.6	40
79	A new procedure based on Sachs boring for measuring non-axisymmetric residual stresses. <i>International Journal of Mechanical Sciences</i> , <b>2000</b> , 42, 1027-1047	5.5	38
78	Measurement of residual stress in thick section composite laminates using the deep-hole method. <i>International Journal of Mechanical Sciences</i> , <b>2005</b> , 47, 1718-1739	5.5	31
77	Crack-tip constraint in mode II deformation. <i>International Journal of Fracture</i> , <b>2002</b> , 113, 153-173	2.3	30
76	Compressive failure of composite laminates containing multiple delaminations. <i>Composites Science and Technology</i> , <b>2005</b> , 65, 191-200	8.6	29
75	Prediction of the growth rate for fatigue cracks emanating from cold expanded holes. <i>International Journal of Fatigue</i> , <b>2004</b> , 26, 585-595	5	27
74	Experimental and theoretical simulations of climbing falls. <i>Sports Engineering</i> , <b>1999</b> , 1, 79-91	1.4	27
73	Compression failure of carbon fibre-reinforced coupons containing central delaminations. <i>Composites</i> , <b>1990</b> , 21, 23-31		27
72	Delaminations in flat and curved composite laminates subjected to compressive load. <i>Composite Structures</i> , <b>2002</b> , 58, 249-258	5.3	26
71	Experimental study of modulus, strength and toughness of 2D triangular lattices. <i>International Journal of Solids and Structures</i> , <b>2018</b> , 152-153, 207-216	3.1	26
70	An assessment of the Sachs method for measuring residual stresses in cold worked fastener holes. <i>Journal of Strain Analysis for Engineering Design</i> , <b>1998</b> , 33, 263-274	1.3	25
69	Creep Relaxation of Residual Stresses Around Cold Expanded Holes. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2001</b> , 123, 125-131	1.8	24
68	Finite element modelling of the interaction of residual stress with mechanical load for a crack emanating from a cold worked fastener hole. <i>Journal of Strain Analysis for Engineering Design</i> , <b>1998</b> , 33, 275-289	1.3	24
67	Rock interface strength influences fluid-filled fracture propagation pathways in the crust. <i>Journal of Structural Geology</i> , <b>2014</b> , 63, 68-75	3	22

66	Three dimensional finite element prediction of crack closure and fatigue crack growth rate for a corner crack. <i>International Journal of Fatigue</i> , <b>2006</b> , 28, 335-345	5	22
65	Post-impact compressive strength of curved GFRP laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2002</b> , 33, 1487-1495	8.4	22
64	Finite element prediction of the post-impact compressive strength of fibre composites. <i>Composite Structures</i> , <b>1996</b> , 36, 141-153	5.3	21
63	In situ neutron diffraction measurement of residual stress relaxation in a welded steel pipe during heat treatment. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 590, 374-383	5.3	20
62	The effect of plasticity on the ability of the deep hole drilling technique to measure axisymmetric residual stress. <i>International Journal of Mechanical Sciences</i> , <b>2011</b> , 53, 978-988	5.5	20
61	Edge impact to composite laminates: experiments and simulations. <i>Journal of Materials Science</i> , <b>2008</b> , 43, 6661-6667	4.3	20
60	Residual stress measurements in a ferritic steel/In625 superalloy dissimilar metal weldment using neutron diffraction and deep-hole drilling. <i>International Journal of Pressure Vessels and Piping</i> , <b>2013</b> , 101, 143-153	2.4	19
59	A micromechanical fracture criterion accounting for in-plane and out-of-plane constraint. <i>Computational Materials Science</i> , <b>2011</b> , 50, 2759-2770	3.2	19
58	Impact damage to thick carbon fibre reinforced plastic composite laminates. <i>Journal of Materials Science</i> , <b>2006</b> , 41, 6718-6724	4.3	18
57	A specialized composite plate element for problems of delamination buckling and growth. <i>Composite Structures</i> , <b>1996</b> , 34, 43-53	5.3	17
56	The effect of specimen dimensions on mixed mode ductile fracture. <i>Engineering Fracture Mechanics</i> , <b>2008</b> , 75, 4394-4409	4.2	16
55	Fracture of three-dimensional lattices manufactured by selective laser melting. <i>International Journal of Solids and Structures</i> , <b>2019</b> , 180-181, 147-159	3.1	15
54	Spatial variation of residual stresses in a welded pipe for high temperature applications. <i>International Journal of Pressure Vessels and Piping</i> , <b>2009</b> , 86, 748-756	2.4	15
53	Residual stress in laser clad rail. <i>Tribology International</i> , <b>2019</b> , 140, 105844	4.9	14
52	Prediction of fatigue crack growth rates using crack closure finite element analysis. <i>International Journal of Fatigue</i> , <b>2007</b> , 29, 1711-1715	5	14
51	Artificial damage techniques for low velocity impact in carbon fibre composites. <i>Composite Structures</i> , <b>1993</b> , 25, 113-120	5.3	14
50	A new procedure based on Sachs boring for measuring non-axisymmetric residual stresses: experimental application. <i>International Journal of Mechanical Sciences</i> , <b>2001</b> , 43, 2753-2768	5.5	13
49	Comparison of measured and modelled residual stresses in a welded P91 steel pipe undergoing post weld heat treatment. <i>International Journal of Pressure Vessels and Piping</i> , <b>2020</b> , 181, 104076	2.4	11

48	Quantification of constraint effects in fracture mechanism transition for cracked structures under mixed mode loading. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>2009</b> , 32, 5-17	3	11
47	Investigation of non-uniform gelation effects on residual stresses of thick laminates based on tailed FBG sensor. <i>Composite Structures</i> , <b>2018</b> , 202, 1361-1372	5.3	11
46	Measurement of assembly stress in composite structures using the deep-hole drilling technique. <i>Composite Structures</i> , <b>2018</b> , 202, 119-126	5.3	10
45	Residual stress measurements in a P92 steel-In625 superalloy metal weldment in the as-welded and after post weld heat treated conditions. <i>International Journal of Pressure Vessels and Piping</i> , <b>2014</b> , 123-124, 10-18	2.4	10
44	Fatigue crack closure of a corner crack: A comparison of experimental results with finite element predictions. <i>International Journal of Fatigue</i> , <b>2005</b> , 27, 914-919	5	10
43	On mixed mode loading of a single edge notched specimen. <i>International Journal of Fracture</i> , <b>1996</b> , 82, R61-R66	2.3	10
42	Brittle fracture of three-dimensional lattice structure. <i>Engineering Fracture Mechanics</i> , <b>2019</b> , 219, 106598	4.2	9
41	ENGIN-X Instrument for materials science and engineering research. <i>Neutron News</i> , <b>2013</b> , 24, 22-26	0.4	9
40	Residual stress measurement by deep hole drilling and trepanning analysis with distributed dislocations. <i>Journal of Strain Analysis for Engineering Design</i> , <b>2009</b> , 44, 45-54	1.3	9
39	Residual stresses in environmental and thermal barrier coatings on curved superalloy substrates: Experimental measurements and modelling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 606, 117-126	5.3	7
38	Measurement of Highly Non-Uniform Residual Stress Fields with Reduced Plastic Error. <i>Experimental Mechanics</i> , <b>2015</b> , 55, 1211-1224	2.6	7
37	Reduction of measured toughness due to out-of-plane constraint in ductile fracture of aluminium alloy specimens. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>2010</b> , 33, no-no	3	7
36	Asymmetric behaviour of fibrous metal matrix composites. <i>Materials Science and Technology</i> , <b>2001</b> , 17, 1153-1157	1.5	7
35	Redistribution of residual stress by thermal shock in reactor pressure vessel steel clad with nickel alloy. <i>International Journal of Pressure Vessels and Piping</i> , <b>2019</b> , 169, 37-47	2.4	7
34	Closed-form solutions of hole distortion for use in deep-hole drilling measurements of residual stress in orthotropic plates. <i>Journal of Strain Analysis for Engineering Design</i> , <b>2017</b> , 52, 77-82	1.3	6
33	Thermal and stress analyses of a novel coated steam dual pipe system for use in advanced ultra-supercritical power plant. <i>International Journal of Pressure Vessels and Piping</i> , <b>2019</b> , 176, 103933	2.4	5
32	A Procedure to Measure Biaxial Near Yield Residual Stresses Using the Deep Hole Drilling Technique. <i>Experimental Mechanics</i> , <b>2013</b> , 53, 1223-1231	2.6	5
31	Application of the Modified Deep Hole Drilling Technique (iDHD) for Measuring Near Yield Non-Axisymmetric Residual Stresses <b>2009</b> ,		5

30	Compressive behaviours of octet-truss lattices. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , <b>2020</b> , 234, 3257-3269	1.3	5
29	Reducing steam transport pipe temperatures in power plants. <i>Energy</i> , <b>2019</b> , 183, 127-141	7.9	4
28	Effect of Constraint on the Initiation of Ductile Fracture in Shear Loading. <i>Key Engineering Materials</i> , <b>2004</b> , 261-263, 183-188	0.4	4
27	Residual Stress Creep Relaxation Around Cold Expanded Holes in an Aluminium Alloy. <i>AIAA Journal</i> , <b>2004</b> , 42, 1444-1449	2.1	4
26	Micromechanical modelling of layered systems containing titanium alloy and titanium MMC subjected to bending. <i>Materials Science and Technology</i> , <b>2000</b> , 16, 848-852	1.5	3
25	Optimisation and thermo-mechanical analysis of a coated steam dual pipe system for use in advanced ultra-supercritical power plant. <i>International Journal of Pressure Vessels and Piping</i> , <b>2020</b> , 186, 104157	2.4	3
24	On stability of a new side cut destructive method for measuring non-uniform residual stress in thin plates. <i>International Journal of Solids and Structures</i> , <b>2016</b> , 100-101, 223-233	3.1	3
23	Measurement of Partial Slip at the Interface of a Shrink Fit Assembly under Axial Load. <i>Experimental Mechanics</i> , <b>2018</b> , 58, 407-415	2.6	2
22	Effects of Load and Displacement Controlled Bending on Plastic Collapse of Pressurized Pipes <b>2014</b> , 3, 1204-1209		2
21	Measuring and modelling residual stresses in a butt-welded P91 steel pipe <b>2009</b> ,		2
20	Fatigue properties of aluminium triangular lattice plates. <i>Procedia Structural Integrity</i> , <b>2020</b> , 28, 1148-1159		2
19	In-situ measurements of stress during thermal shock in clad pressure vessel steel using synchrotron X-ray diffraction. <i>International Journal of Mechanical Sciences</i> , <b>2021</b> , 192, 106136	5.5	2
18	Measurement of manufacture assembly stresses in thick composite components using a modified DHD method. <i>Composites Part A: Applied Science and Manufacturing</i> , <b>2020</b> , 135, 105922	8.4	1
17	Plasticity and Stress Heterogeneity Influence on Mechanical Stress Relaxation Residual Stress Measurements. <i>Advanced Materials Research</i> , <b>2014</b> , 996, 249-255	0.5	1
16	Evolution of residual stress distribution and microstructure in a platinum-aluminide coating. <i>Materials Science and Technology</i> , <b>2013</b> , 29, 797-803	1.5	1
15	Measuring and modelling residual stresses in butt welded P91 steel pipe including effects of phase transformations. <i>Energy Materials</i> , <b>2009</b> , 4, 124-132		1
14	Analysis for Determining Non-Axisymmetric Residual Stresses. <i>Materials Science Forum</i> , <b>2000</b> , 347-349, 119-124	0.4	1
13	Experimental Measurements of Non-Axisymmetric Residual Stresses. <i>Materials Science Forum</i> , <b>2000</b> , 347-349, 125-130	0.4	1

12	A use of linear programming for the analysis of plane strain rigid-plastic flow. <i>International Journal for Numerical Methods in Engineering</i> , <b>1990</b> , 30, 1-12	2.4	1
11	Fatigue of thin periodic triangular lattice plates. <i>MATEC Web of Conferences</i> , <b>2019</b> , 300, 03002	0.3	1
10	Mixed-mode brittle fracture test of polymethylmethacrylate with a new specimen. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , <b>2021</b> , 44, 1027-1040	3	1
9	Measurements of Stress During Thermal Shock in Clad Reactor Pressure Vessel Material Using Time-Resolved In-Situ Synchrotron X-Ray Diffraction <b>2018</b> ,		1
8	The effect of residual stress on a centre-cracked plate under uniaxial loading. <i>International Journal of Fracture</i> , <b>2019</b> , 219, 101-121	2.3	0
7	A new specimen for mixed mode I/II fracture of brittle and quasi-brittle materials. <i>Procedia Structural Integrity</i> , <b>2020</b> , 28, 1140-1147	1	0
6	Compressive fatigue characteristics of octet-truss lattices in different orientations. <i>Mechanics of Advanced Materials and Structures</i> , 1-13	1.8	0
5	Experimental study on fatigue crack propagation of octet-truss lattice. <i>Procedia Structural Integrity</i> , <b>2022</b> , 37, 41-48	1	0
4	Fracture behaviour of octet-truss lattices in different orientations. <i>Procedia Structural Integrity</i> , <b>2022</b> , 37, 49-56	1	0
3	Failure Modes of a Platinum Aluminide Environmental Coating <b>2014</b> , 3, 1729-1735		
2	The influence of long-range residual stress on plastic collapse of pressurised pipes with and without flaws. <i>International Journal of Pressure Vessels and Piping</i> , <b>2013</b> , 111-112, 54-62	2.4	
1	Collapse of a Factory Chimney: An Example Problem for a Course in Dynamics. <i>International Journal of Mechanical Engineering Education</i> , <b>1996</b> , 24, 153-163	0.6	