Guozhen Wang

List of Publications by Year
in descending order

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116 papers	2,949 citations	159358 30 h-index	223531 46 g-index
116 all docs	116 docs citations	116 times ranked	678 citing authors

#	Article	IF	Citations
1	Unified characterisation of inâ€plane and outâ€ofâ€plane constraint based on crackâ€tip equivalent plastic strain. Fatigue and Fracture of Engineering Materials and Structures, 2013, 36, 504-514.	1.7	102
2	Effect of constraint induced by crack depth on creep crack-tip stress field in CT specimens. International Journal of Solids and Structures, 2010, 47, 51-57.	1.3	101
3	Local mechanical properties of a dissimilar metal welded joint in nuclear powersystems. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 568, 108-117.	2.6	100
4	An experimental investigation of local fracture resistance and crack growth paths in a dissimilar metal welded joint. Materials & Design, 2013, 44, 179-189.	5.1	87
5	Effect and mechanism of out-of-plane constraint on creep crack growth behavior of a Crâ€“Moâ€“V steel. Engineering Fracture Mechanics, 2013, 99, 324-334.	2.0	82
6	Fracture behavior at crack tip â€” a new framework for cleavage mechanism of steel. Acta Materialia, 2003, 51, 1841-1855.	3.8	76
7	Fracture mechanism of a dissimilar metal welded joint in nuclear power plant. Engineering Failure Analysis, 2013, 28, 134-148.	1.8	71
8	Load-independent creep constraint parameter and its application. Engineering Fracture Mechanics, 2014, 116, 41-57.	2.0	69
9	Unified correlation of inâ€plane and outâ€ofâ€plane constraints with fracture toughness. Fatigue and Fracture of Engineering Materials and Structures, 2014, 37, 132-145.	1.7	66
10	Quantitative characterization of creep constraint induced by crack depths in compact tension specimens. Engineering Fracture Mechanics, 2011, 78, 653-665.	2.0	65
11	Numerical investigation of ductile crack growth behavior in a dissimilar metal welded joint. Nuclear Engineering and Design, 2011, 241, 3234-3243.	0.8	62
12	Numerical investigation on the creep crack-tip constraint induced by loading configuration of specimens. Engineering Fracture Mechanics, 2012, 79, 353-362.	2.0	61
13	Three-dimensional numerical analysis of out-of-plane creep crack-tip constraint in compact tension specimens. International Journal of Pressure Vessels and Piping, 2012, 96-97, 78-89.	1.2	59
14	Unified correlation of in-plane and out-of-plane constraint with fracture resistance of a dissimilar metal welded joint. Engineering Fracture Mechanics, 2014, 115, 296-307.	2.0	59
15	Anisotropic 3D growth of corrosion pits initiated at MnS inclusions for A537 steel during corrosion fatigue. Corrosion Science, 2010, 52, 2867-2877.	3.0	56
16	High strength-toughness combination of a low-carbon medium-manganese steel plate with laminated microstructure and retained austenite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 270-279.	2.6	55
17	Unified characterization of in-plane and out-of-plane creep constraint based on crack-tip equivalent creep strain. Engineering Fracture Mechanics, 2015, 142, 1-20.	2.0	49
18	Characterization and correlation of 3-D creep constraint between axially cracked pipelines and test specimens. Engineering Fracture Mechanics, 2015, 136, 96-114.	2.0	46

#	Article	IF	Citations
19	Prediction of creep crack growth behavior in Crâ€“Moâ€“V steel specimens with different constraints for a wide range of Câˆ—. Engineering Fracture Mechanics, 2014, 132, 70-84.	2.0	45
20	Effect of microstructure on fatigue crack propagation behavior in a steam turbine rotor steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 515, 85-92.	2.6	42
21	Title is missing!. International Journal of Fracture, 1997, 83, 105-120.	1.1	41
22	The influence of stress-regime dependent creep model and ductility in the prediction of creep crack growth rate in Crâ€“Moâ€“V steel. Materials & Design, 2015, 65, 644-651.	5.1	38
23	Investigation of cleavage fracture initiation in notched specimens of a Câ€“Mn steel with carbides and inclusions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 369, 181-191.	2.6	36
24	Correlation of creep crack-tip constraint between axially cracked pipelines and test specimens. International Journal of Pressure Vessels and Piping, 2012, 98, 16-25.	1.2	36
25	Effects of residual stress on creep damage and crack initiation in notched CT specimens of a Crâ€“Moâ€“V steel. Engineering Fracture Mechanics, 2013, 97, 80-91.	2.0	35
26	Out-of-plane constraint effect on local fracture resistance of a dissimilar metal welded joint. Materials & Design, 2014, 55, 542-550.	5.1	33
27	Unified correlation of in-plane and out-of-plane constraints with cleavage fracture toughness. Theoretical and Applied Fracture Mechanics, 2015, 80, 121-132.	2.1	33
28	Creep constraint analysis and constraint parameter solutions for axial semi-elliptical surface cracks in pressurized pipes. Engineering Fracture Mechanics, 2014, 132, 1-15.	2.0	32
29	Threeâ€dimensional analyses of inâ€plane and outâ€ofâ€plane crackâ€tip constraint characterization for fracture specimens. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 1461-1476.	1.7	32
30	A finite element analysis of evolution of stressâ€“strain and martensite transformation in front of a notch in shape memory alloy NiTi. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 460-461, 383-391.	2.6	31
31	Effects of triaxial stress on martensite transformation, stressâ€“strain and failure behavior in front of crack tips in shape memory alloy NiTi. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1529-1536.	2.6	31
32	In-plane and out-of-plane unified constraint-dependent creep crack growth rate of 316H steel. Engineering Fracture Mechanics, 2016, 155, 88-101.	2.0	31
33	Unified constraint parameter based on crack-tip opening displacement. Engineering Fracture Mechanics, 2018, 200, 175-188.	2.0	31
34	A statistical model for cleavage fracture of low alloy steel. Acta Materialia, 1996, 44, 3979-3989.	3.8	30
35	An experimental investigation of in-plane constraint effect on local fracture resistance of a dissimilar metal welded joint. Materials & Design, 2014, 53, 611-619.	5.1	30
36	Cleavag Fracture Criterion of Low Alloy Steal and Weld Metal in Notched Specimens. International Journal of Fracture, 1998, 89, 269-284.	1.1	29

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37	Local fracture resistance behavior of interface regions in a dissimilar metal welded joint. Engineering Fracture Mechanics, 2015, 136, 279-291.	2.0	29
38	Local Mechanical Properties and Microstructures of Alloy52M Dissimilar Metal Welded Joint between A508 Ferritic Steel and 316L Stainless Steel. Advanced Materials Research, 2012, 509, 103-110.	0.3	28
39	Characterization of 3-D creep constraint and creep crack growth rate in test specimens in ASTM-E1457 standard. Engineering Fracture Mechanics, 2016, 168, 131-146.	2.0	28
40	Unified parameter of in-plane and out-of-plane constraint effects and its correlation with brittle fracture toughness of steel. International Journal of Fracture, 2014, 190, 87-98.	1.1	27
41	Effects of creep ductility and notch constraint on creep fracture behavior in notched bar specimens. Materials at High Temperatures, 2016, 33, 198-207.	0.5	27
42	Creep crack growth prediction and assessment incorporating constraint effect for pressurized pipes with axial surface cracks. Engineering Fracture Mechanics, 2016, 154, 92-110.	2.0	27
43	Title is missing!. International Journal of Fracture, 1997, 83, 139-157.	1.1	26
44	Mismatch effect in creep properties on creep crack growth behavior in welded joints. Materials & Design, 2014, 63, 600-608.	5.1	26
45	Effects of notch geometry on stressâ€“strain distribution, martensite transformation and fracture behavior in shape memory alloy NiTi. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 434, 269-279.	2.6	25
46	Local failure behavior of a dissimilar metal interface region with mechanical heterogeneity. Engineering Failure Analysis, 2016, 59, 419-433.	1.8	25
47	Effect of constraint on creep crack initiation time in test specimens in ASTM-E1457 standard. Engineering Fracture Mechanics, 2017, 176, 61-73.	2.0	25
48	Effects of work hardening mismatch on fracture resistance behavior of bi-material interface regions. Materials & Design, 2015, 68, 186-194.	5.1	24
49	In-plane and out-of-plane constraint effects on creep crack growth rate in Crâ€“Moâ€“V steel for wide range of C*. Materials at High Temperatures, 2015, 32, 512-523.	0.5	24
50	Ductile fracture prediction based on J-integral and unified constraint parameters for cracked pipes. Engineering Fracture Mechanics, 2019, 215, 1-15.	2.0	24
51	Title is missing!. International Journal of Fracture, 1997, 83, 121-138.	1.1	22
52	Three-dimensional finite element analyses of in-plane and out-of-plane creep crack-tip constraints for different specimen geometries. Engineering Fracture Mechanics, 2015, 133, 264-280.	2.0	22
53	Engineering estimation method of unified constraint parameters for semi-elliptical surface cracks in plates. Engineering Fracture Mechanics, 2020, 229, 106935.	2.0	22
54	On scattering of measured values of fracture toughness parameters. International Journal of Fracture, 1998, 94, 33-50.	1.1	20

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55	Effects of precracked specimen geometry on local cleavage fracture stress Ïƒf of low alloy steel. International Journal of Fracture, 2001, 112, 183-196.	1.1	20
56	Investigation of residual stress effects on creep crack initiation and growth using local out-of-plane compression. Engineering Fracture Mechanics, 2015, 149, 45-57.	2.0	20
57	Mechanism of effects of warm prestressing on apparent toughness of precracked specimens of HSLA steels. Engineering Fracture Mechanics, 2001, 68, 1669-1686.	2.0	19
58	Inferring the temperature dependence of Beremin cleavage model parameters from the Master Curve. Nuclear Engineering and Design, 2011, 241, 39-45.	0.8	19
59	Effects of initial crack positions and load levels on creep failure behavior in P92 steel welded joint. Engineering Failure Analysis, 2015, 47, 56-66.	1.8	19
60	Threeâ€dimensional analyses of unified characterization parameter of inâ€plane and outâ€ofâ€plane creep constraint. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 251-263.	1.7	19
61	Unified correlation of in-plane and out-of-plane creep constraints with creep crack growth rate. International Journal of Pressure Vessels and Piping, 2016, 139-140, 47-60.	1.2	19
62	Creep constraint analysis and constraint parameter solutions for circumferential surface cracks in pressurized pipes. Engineering Fracture Mechanics, 2015, 148, 1-14.	2.0	18
63	Prediction of creep crack initiation behavior considering constraint effects for cracked pipes. Engineering Fracture Mechanics, 2018, 190, 213-231.	2.0	18
64	Unified constraint parameter solutions for axial and circumferential surface cracks in pressurized pipes under creep condition. Engineering Fracture Mechanics, 2018, 189, 307-329.	2.0	18
65	Effects of geometry of notched specimens on the local cleavage fracture stress Ïƒf of Câ€“Mn steel. Engineering Fracture Mechanics, 2003, 70, 2499-2512.	2.0	17
66	Leak-before-break analysis of a dissimilar metal welded joint for connecting pipe-nozzle in nuclear power plants. Nuclear Engineering and Design, 2013, 255, 1-8.	0.8	17
67	Fracture assessment based on unified constraint parameter for pressurized pipes with circumferential surface cracks. Engineering Fracture Mechanics, 2017, 175, 201-218.	2.0	17
68	Effect of stress dependent creep ductility on creep crack growth behaviour of steels for wide range ofC*. Materials at High Temperatures, 2015, 32, 369-376.	0.5	16
69	Unified correlation of geometry and material constraints with creep crack growth rate of welded joints. Engineering Fracture Mechanics, 2016, 163, 220-235.	2.0	15
70	On the measurement and physical meaning of the cleavage fracture stress in steel. International Journal of Fracture, 2002, 118, 211-227.	1.1	14
71	Derivation of constraint-dependent Jâ€“R curves based on modified $$T$$ T -stress parameter and GTN model for a low-alloy steel. International Journal of Fracture, 2013, 183, 155-168.	1.1	14
72	Geometry and material constraint effects on fracture resistance behavior of bi-material interfaces. International Journal of Fracture, 2016, 201, 143-155.	1.1	14

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73	Two-parameter fracture prediction for cracked plates under bending. Engineering Fracture Mechanics, 2021, 255, 107974.	2.0	14
74	On the characteristic distance and minimum fracture toughness for cleavage fracture in a C-Mn steel. International Journal of Fracture, 2002, 118, 57-76.	1.1	13
75	Local fracture properties and dissimilar weld integrity in nuclear power plants. Frontiers of Mechanical Engineering, 2013, 8, 283-290.	2.5	13
76	Validation and application of a twoâ€parameter Jâ€A_d approach for fracture behaviour prediction. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2998-3011.	1.7	13
77	In-plane and out-of-plane constraint characterization of different constraint parameters for semi-elliptical surface cracks in pipes. Engineering Fracture Mechanics, 2020, 235, 107161.	2.0	13
78	On locations initiating cleavage fracture in precracked specimens of low alloy steel and weld metal. International Journal of Fracture, 2001, 108, 235-250.	1.1	12
79	Effects of sideâ€groove depth on creep crackâ€tip constraint and creep crack growth rate in C(T) specimens. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 260-272.	1.7	12
80	Study on cleavage fracture criteria of the quasi-brittle and micro-inhomogeneous materials. International Journal of Fracture, 2001, 108, 143-164.	1.1	11
81	Effects of loading rate on the local cleavage fracture stress Ïƒf in notched specimens. Engineering Fracture Mechanics, 2005, 72, 675-689.	2.0	11
82	Effects of local mechanical and fracture properties on LBB behavior of a dissimilar metal welded joint in nuclear power plants. Nuclear Engineering and Design, 2013, 265, 145-153.	0.8	11
83	Prediction of creep crack initiation in Crâ€“Moâ€“V steel specimens with different geometries. Materials at High Temperatures, 2017, 34, 87-96.	0.5	11
84	Creep constraint and fracture parameter Câˆ— for axial semi-elliptical surface cracks with high aspect ratio in pressurized pipes. Engineering Fracture Mechanics, 2018, 199, 358-371.	2.0	11
85	Title is missing!. International Journal of Fracture, 2002, 117, 375-392.	1.1	10
86	Effects of HAZ widths on creep crack growth properties of welded joints. Welding in the World, Le Soudage Dans Le Monde, 2015, 59, 851-860.	1.3	9
87	Correlation of material constraint with fracture toughness of interface regions in a dissimilar metal welded joint. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 1251-1262.	1.7	9
88	Unified constraint-based FAD assessments for ductile fracture in cracked pipes. International Journal of Pressure Vessels and Piping, 2020, 185, 104132.	1.2	9
89	Correlation of the Master curve reference temperature T with unified constraint parameter. Engineering Fracture Mechanics, 2021, 253, 107867.	2.0	9
90	Effects of sizes of ferrite grains and carbide particles on toughness of notched and precracked specimens of low-alloy steels. International Journal of Fracture, 2004, 126, 223-241.	1.1	8

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91	Effects of Toughness Mismatch on Failure Behavior of Bi-Material Interfaces. Procedia Engineering, 2015, 130, 754-762.	1.2	8
92	A creep crack growth life assessment method for pressurized pipes based on a two-parameter approach. Engineering Fracture Mechanics, 2019, 220, 106676.	2.0	7
93	Comparisons of creep constraint and fracture parameter C* of different types of surface cracks in pressurized pipes. International Journal of Pressure Vessels and Piping, 2019, 172, 360-372.	1.2	7
94	Limit loads of dissimilar metal welded joints for joining safe end to pipe-nozzle of nuclear pressure vessel. International Journal of Pressure Vessels and Piping, 2021, 194, 104554.	1.2	7
95	Effects of material properties and mismatch on unified constraint parameter. Engineering Fracture Mechanics, 2022, 269, 108526.	2.0	7
96	Effects of creep properties of materials on creep crack-tip constraint parameterR*. Materials at High Temperatures, 2016, 33, 208-217.	0.5	6
97	Creep fracture parameter C* solutions for axial internal and external surface cracks in pressurized cylinders. Engineering Fracture Mechanics, 2020, 231, 107026.	2.0	6
98	Effects of Residual Stress on Creep Crack Initiation and Growth of Cr-Mo-V Steel in Cracked C(T) Specimen. Procedia Engineering, 2015, 130, 1770-1778.	1.2	5
99	Effects of creep properties of materials on unified creep constraint parameter A_c for cracked pipes. Materials at High Temperatures, 2019, 36, 417-429.	0.5	5
100	A comparison between two parameter and ductility exhaustion approaches for creep life assessment. Theoretical and Applied Fracture Mechanics, 2020, 108, 102598.	2.1	5
101	Crack-tip constraint analyses and constraint-dependent LBB curves for circumferential through-wall cracked pipes. Nuclear Engineering and Design, 2015, 285, 75-83.	0.8	4
102	Establishment of Unified Correlation of In-Plane and Out-of-Plane Constraints with Ductile Fracture Toughness of Steel. Applied Mechanics and Materials, 0, 853, 22-27.	0.2	4
103	Geometry and material unified constraint-dependent J-R curves of a dissimilar metal welded joint. Theoretical and Applied Fracture Mechanics, 2022, 121, 103456.	2.1	4
104	Application of unified constraint-dependent Master Curve in fracture assessment of cracked pressure vessels. International Journal of Pressure Vessels and Piping, 2022, 199, 104741.	1.2	4
105	Title is missing!. International Journal of Fracture, 2002, 117, 359-373.	1.1	3
106	Title is missing!. International Journal of Fracture, 2003, 119, 61-66.	1.1	3
107	Cleavage fracture behavior of a Câ€“Mn vessel steel at various loading rates in notched specimens. International Journal of Pressure Vessels and Piping, 2008, 85, 720-727.	1.2	3
108	Geometry and Material Constraint Effects on Creep Crack Growth Behavior in Welded Joints. High Temperature Materials and Processes, 2017, 36, 155-162.	0.6	3

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109	Creep fracture parameter C* solutions for circumferential surface cracks in pressurized cylinders. Engineering Fracture Mechanics, 2020, 236, 107204.	2.0	3
110	Prediction of creep crack initiation time based on constraint parameters in specimens with different geometries. International Journal of Pressure Vessels and Piping, 2021, 192, 104430.	1.2	3
111	Effects of void damage induced by warm prestressing (WPS) on cleavage fracture of notched steel specimens. Engineering Fracture Mechanics, 2009, 76, 1010-1023.	2.0	2
112	Creep constraint analysis for test specimens with a wide range of dimensions and comparison with constraint of cracked pipes. Engineering Fracture Mechanics, 2018, 204, 454-468.	2.0	2
113	Creep fracture parameter C* solutions for semiâ€elliptical surface cracks in plates under tensile and bending loads. Fatigue and Fracture of Engineering Materials and Structures, 0, , .	1.7	2
114	Unified creep constraint parameter solutions for surface cracks in plates under tensile and bending loads. Fatigue and Fracture of Engineering Materials and Structures, 2022, 45, 1703-1718.	1.7	1
115	Unified Correlation of Wide Range of In-Plane and Out-of-Plane Constraints with Cleavage Fracture Toughness. Procedia Engineering, 2015, 130, 803-819.	1.2	0
116	Unified Correlation of In-Plane and Out-of-Plane Creep Constraints with Creep Crack Growth Rate. Procedia Engineering, 2015, 130, 1677-1685.	1.2	0