Guozhen Wang

List of Publications by Citations

112 papers	2,297 citations	27 h-index	41 g-index
116 ext. papers	2,667 ext. citations	3.3 avg, IF	5.23 L-index

#	Paper	IF	Citations
112	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	3.1	90
111	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	5.3	79
110	Unified characterisation of in-plane and out-of-plane constraint based on crack-tip equivalent plastic strain. *Fatigue and Fracture of Engineering Materials and Structures*, **2013**, 36, 504-514	3	74
109	An experimental investigation of local fracture resistance and crack growth paths in a dissimilar metal welded joint. *Materials & Design*, **2013**, 44, 179-189		71
108	Effect and mechanism of out-of-plane constraint on creep crack growth behavior of a CrMoV steel. *Engineering Fracture Mechanics*, **2013**, 99, 324-334	4.2	68
107	Fracture behavior at crack tip a new framework for cleavage mechanism of steel. *Acta Materialia*, **2003**, 51, 1841-1855	8.4	66
106	Quantitative characterization of creep constraint induced by crack depths in compact tension specimens. *Engineering Fracture Mechanics*, **2011**, 78, 653-665	4.2	60
105	Load-independent creep constraint parameter and its application. *Engineering Fracture Mechanics*, **2014**, 116, 41-57	4.2	59
104	Unified correlation of in-plane and out-of-plane constraints with fracture toughness. *Fatigue and Fracture of Engineering Materials and Structures*, **2014**, 37, 132-145	3	52
103	Numerical investigation on the creep crack-tip constraint induced by loading configuration of specimens. *Engineering Fracture Mechanics*, **2012**, 79, 353-362	4.2	52
102	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	2.4	52
101	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	4.2	47
100	Fracture mechanism of a dissimilar metal welded joint in nuclear power plant. *Engineering Failure Analysis*, **2013**, 28, 134-148	3.2	47
99	Numerical investigation of ductile crack growth behavior in a dissimilar metal welded joint. *Nuclear Engineering and Design*, **2011**, 241, 3234-3243	1.8	47
98	Characterization and correlation of 3-D creep constraint between axially cracked pipelines and test specimens. *Engineering Fracture Mechanics*, **2015**, 136, 96-114	4.2	42
97	Prediction of creep crack growth behavior in CrMoV steel specimens with different constraints for a wide range of C*. *Engineering Fracture Mechanics*, **2014**, 132, 70-84	4.2	41
96	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	4.2	38

95	Anisotropic 3D growth of corrosion pits initiated at MnS inclusions for A537 steel during corrosion fatigue. *Corrosion Science*, **2010**, 52, 2867-2877	6.8	38
94	Advances in the mechanism of cleavage fracture of low alloy steel at low temperature. Part I: Critical event. *International Journal of Fracture*, **1997**, 83, 105-120	2.3	37
93	The influence of stress-regime dependent creep model and ductility in the prediction of creep crack growth rate in CrMoV steel. *Materials & Design*, **2015**, 65, 644-651		35
92	Creep constraint analysis and constraint parameter solutions for axial semi-elliptical surface cracks in pressurized pipes. *Engineering Fracture Mechanics*, **2014**, 132, 1-15	4.2	31
91	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	5.3	31
90	Effects of residual stress on creep damage and crack initiation in notched CT specimens of a CrMoV steel. *Engineering Fracture Mechanics*, **2013**, 97, 80-91	4.2	30
89	Out-of-plane constraint effect on local fracture resistance of a dissimilar metal welded joint. *Materials & Design*, **2014**, 55, 542-550		29
88	Correlation of creep crack-tip constraint between axially cracked pipelines and test specimens. *International Journal of Pressure Vessels and Piping*, **2012**, 98, 16-25	2.4	29
87	A finite element analysis of evolution of stress–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	5.3	29
86	Investigation of cleavage fracture initiation in notched specimens of a CMn steel with carbides and inclusions. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 369, 181-191	5.3	29
85	Effects of triaxial stress on martensite transformation, stress–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	5.3	27
84	In-plane and out-of-plane unified constraint-dependent creep crack growth rate of 316H steel. *Engineering Fracture Mechanics*, **2016**, 155, 88-101	4.2	26
83	An experimental investigation of in-plane constraint effect on local fracture resistance of a dissimilar metal welded joint. *Materials & Design*, **2014**, 53, 611-619		26
82	Creep crack growth prediction and assessment incorporating constraint effect for pressurized pipes with axial surface cracks. *Engineering Fracture Mechanics*, **2016**, 154, 92-110	4.2	25
81	Unified correlation of in-plane and out-of-plane constraints with cleavage fracture toughness. *Theoretical and Applied Fracture Mechanics*, **2015**, 80, 121-132	3.7	25
80	Effects of notch geometry on stress–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	5.3	25
79	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	2.3	24
78	Cleavag Fracture Criterion of Low Alloy Steal and Weld Metal in Notched Specimens. *International Journal of Fracture*, **1998**, 89, 269-284	2.3	24

77	Three-dimensional analyses of in-plane and out-of-plane crack-tip constraint characterization for fracture specimens. *Fatigue and Fracture of Engineering Materials and Structures*, **2016**, 39, 1461-1476	3	24
76	Mismatch effect in creep properties on creep crack growth behavior in welded joints. *Materials & Design*, **2014**, 63, 600-608		23
75	A statistical model for cleavage fracture of low alloy steel. *Acta Materialia*, **1996**, 44, 3979-3989	8.4	23
74	Local fracture resistance behavior of interface regions in a dissimilar metal welded joint. *Engineering Fracture Mechanics*, **2015**, 136, 279-291	4.2	22
73	Effects of creep ductility and notch constraint on creep fracture behavior in notched bar specimens. *Materials at High Temperatures*, **2016**, 33, 198-207	1.1	22
72	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	4.2	21
71	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	5.3	21
70	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	0.5	21
69	Effect of constraint on creep crack initiation time in test specimens in ASTM-E1457 standard. *Engineering Fracture Mechanics*, **2017**, 176, 61-73	4.2	20
68	Effects of work hardening mismatch on fracture resistance behavior of bi-material interface regions. *Materials & Design*, **2015**, 68, 186-194		20
67	Advances in the mechanism of cleavage fracture of low alloy steel at low temperature. Part III: Local fracture stress □*International Journal of Fracture*, **1997**, 83, 139-157	2.3	20
66	In-plane and out-of-plane constraint effects on creep crack growth rate in Cr□Mo□V steel for wide range of C*. *Materials at High Temperatures*, **2015**, 32, 512-523	1.1	19
65	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	4.2	19
64	Creep constraint analysis and constraint parameter solutions for circumferential surface cracks in pressurized pipes. *Engineering Fracture Mechanics*, **2015**, 148, 1-14	4.2	18
63	Investigation of residual stress effects on creep crack initiation and growth using local out-of-plane compression. *Engineering Fracture Mechanics*, **2015**, 149, 45-57	4.2	17
62	Unified constraint parameter based on crack-tip opening displacement. *Engineering Fracture Mechanics*, **2018**, 200, 175-188	4.2	17
61	Local failure behavior of a dissimilar metal interface region with mechanical heterogeneity. *Engineering Failure Analysis*, **2016**, 59, 419-433	3.2	16
60	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	1.8	16

59	Mechanism of effects of warm prestressing on apparent toughness of precracked specimens of HSLA steels. *Engineering Fracture Mechanics*, **2001**, 68, 1669-1686	4.2	16
58	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	2.4	16
57	Ductile fracture prediction based on J-integral and unified constraint parameters for cracked pipes. *Engineering Fracture Mechanics*, **2019**, 215, 1-15	4.2	15
56	Effects of initial crack positions and load levels on creep failure behavior in P92 steel welded joint. *Engineering Failure Analysis*, **2015**, 47, 56-66	3.2	15
55	Prediction of creep crack initiation behavior considering constraint effects for cracked pipes. *Engineering Fracture Mechanics*, **2018**, 190, 213-231	4.2	15
54	Inferring the temperature dependence of Beremin cleavage model parameters from the Master Curve. *Nuclear Engineering and Design*, **2011**, 241, 39-45	1.8	15
53	Advances in the mechanism of cleavage fracture of low alloy steel at low temperature. Part II: Fracture model. *International Journal of Fracture*, **1997**, 83, 121-138	2.3	15
52	Effects of precracked specimen geometry on local cleavage fracture stress of low alloy steel. *International Journal of Fracture*, **2001**, 112, 183-196	2.3	15
51	Three-dimensional analyses of unified characterization parameter of in-plane and out-of-plane creep constraint. *Fatigue and Fracture of Engineering Materials and Structures*, **2016**, 39, 251-263	3	15
50	Unified constraint parameter solutions for axial and circumferential surface cracks in pressurized pipes under creep condition. *Engineering Fracture Mechanics*, **2018**, 189, 307-329	4.2	15
49	Effect of stress dependent creep ductility on creep crack growth behaviour of steels for wide range of C*. *Materials at High Temperatures*, **2015**, 32, 369-376	1.1	14
48	Effects of geometry of notched specimens on the local cleavage fracture stress of C-Mn steel. *Engineering Fracture Mechanics*, **2003**, 70, 2499-2512	4.2	14
47	Fracture assessment based on unified constraint parameter for pressurized pipes with circumferential surface cracks. *Engineering Fracture Mechanics*, **2017**, 175, 201-218	4.2	13
46	On scattering of measured values of fracture toughness parameters. *International Journal of Fracture*, **1998**, 94, 33-50	2.3	13
45	On the measurement and physical meaning of the cleavage fracture stress in steel. *International Journal of Fracture*, **2002**, 118, 211-227	2.3	13
44	On the characteristic distance and minimum fracture toughness for cleavage fracture in a C-Mn steel. *International Journal of Fracture*, **2002**, 118, 57-76	2.3	12
43	Derivation of constraint-dependent JR curves based on modified (T)-stress parameter and GTN model for a low-alloy steel. *International Journal of Fracture*, **2013**, 183, 155-168	2.3	11
42	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	1.8	11

41	Unified correlation of geometry and material constraints with creep crack growth rate of welded joints. *Engineering Fracture Mechanics*, **2016**, 163, 220-235	4.2	11
40	Effects of loading rate on the local cleavage fracture stress in notched specimens. *Engineering Fracture Mechanics*, **2005**, 72, 675-689	4.2	10
39	Geometry and material constraint effects on fracture resistance behavior of bi-material interfaces. *International Journal of Fracture*, **2016**, 201, 143-155	2.3	10
38	Creep constraint and fracture parameter C* for axial semi-elliptical surface cracks with high aspect ratio in pressurized pipes. *Engineering Fracture Mechanics*, **2018**, 199, 358-371	4.2	9
37	Local fracture properties and dissimilar weld integrity in nuclear power plants. *Frontiers of Mechanical Engineering*, **2013**, 8, 283-290	3.3	9
36	Study on cleavage fracture criteria of the quasi-brittle and micro-inhomogeneous materials. *International Journal of Fracture*, **2001**, 108, 143-164	2.3	9
35	Prediction of creep crack initiation in CrMoV steel specimens with different geometries. *Materials at High Temperatures*, **2017**, 34, 87-96	1.1	8
34	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	2.3	8
33	On locations initiating cleavage fracture in precracked specimens of low alloy steel and weld metal. *International Journal of Fracture*, **2001**, 108, 235-250	2.3	8
32	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	1.9	7
31	Effects of side-groove depth on creep crack-tip constraint and creep crack growth rate in C(T) specimens. *Fatigue and Fracture of Engineering Materials and Structures*, **2018**, 41, 260-272	3	7
30	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	4.2	6
29	Engineering estimation method of unified constraint parameters for semi-elliptical surface cracks in plates. *Engineering Fracture Mechanics*, **2020**, 229, 106935	4.2	6
28	Effects of Toughness Mismatch on Failure Behavior of Bi-Material Interfaces. *Procedia Engineering*, **2015**, 130, 754-762		6
27	Mechanism of effects of warm prestressing (WPS) on apparent toughness of notched steel specimens Part II: Calculations and analyses. *International Journal of Fracture*, **2002**, 117, 375-392	2.3	6
26	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	3	6
25	A creep crack growth life assessment method for pressurized pipes based on a two-parameter approach. *Engineering Fracture Mechanics*, **2019**, 220, 106676	4.2	5
24	Validation and application of a two-parameter J-Ad approach for fracture behaviour prediction. *Fatigue and Fracture of Engineering Materials and Structures*, **2020**, 43, 2998-3011	3	5

23	Effects of creep properties of materials on creep crack-tip constraint parameter R*. *Materials at High Temperatures*, **2016**, 33, 208-217	1.1	5
22	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	2.4	4
21	Establishment of Unified Correlation of In-Plane and Out-of-Plane Constraints with Ductile Fracture Toughness of Steel. *Applied Mechanics and Materials*, **2016**, 853, 22-27	0.3	4
20	Crack-tip constraint analyses and constraint-dependent LBB curves for circumferential through-wall cracked pipes. *Nuclear Engineering and Design*, **2015**, 285, 75-83	1.8	4
19	Effects of creep properties of materials on unified creep constraint parameter Ac for cracked pipes. *Materials at High Temperatures*, **2019**, 36, 417-429	1.1	3
18	Change of critical events of cleavage fracture with variation of loading rate in notched specimens of steel. *International Journal of Fracture*, **2003**, 119, 61-66	2.3	3
17	Unified constraint-based FAD assessments for ductile fracture in cracked pipes. *International Journal of Pressure Vessels and Piping*, **2020**, 185, 104132	2.4	3
16	Geometry and Material Constraint Effects on Creep Crack Growth Behavior in Welded Joints. *High Temperature Materials and Processes*, **2017**, 36, 155-162	0.9	2
15	A comparison between two parameter and ductility exhaustion approaches for creep life assessment. *Theoretical and Applied Fracture Mechanics*, **2020**, 108, 102598	3.7	2
14	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		2
13	Effects of void damage induced by warm prestressing (WPS) on cleavage fracture of notched steel specimens. *Engineering Fracture Mechanics*, **2009**, 76, 1010-1023	4.2	2
12	Cleavage fracture behavior of a CMn vessel steel at various loading rates in notched specimens. *International Journal of Pressure Vessels and Piping*, **2008**, 85, 720-727	2.4	2
11	Mechanism of effects of warm prestressing(WPS) on apparent toughness of notched steel specimens: Part I: Experimental. *International Journal of Fracture*, **2002**, 117, 359-373	2.3	2
10	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	4.2	2
9	Creep fracture parameter C* solutions for axial internal and external surface cracks in pressurized cylinders. *Engineering Fracture Mechanics*, **2020**, 231, 107026	4.2	1
8	Correlation of the Master curve reference temperature T with unified constraint parameter. *Engineering Fracture Mechanics*, **2021**, 253, 107867	4.2	1
7	Two-parameter fracture prediction for cracked plates under bending. *Engineering Fracture Mechanics*, **2021**, 255, 107974	4.2	1
6	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	2.4	1

5	Creep fracture parameter C* solutions for circumferential surface cracks in pressurized cylinders. *Engineering Fracture Mechanics*, **2020**, 236, 107204	4.2	0
4	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	2.4	0
3	Effects of material properties and mismatch on unified constraint parameter. *Engineering Fracture Mechanics*, **2022**, 269, 108526	4.2	0
2	Unified Correlation of Wide Range of In-Plane and Out-of-Plane Constraints with Cleavage Fracture Toughness. *Procedia Engineering*, **2015**, 130, 803-819		
1	Unified Correlation of In-Plane and Out-of-Plane Creep Constraints with Creep Crack Growth Rate. *Procedia Engineering*, **2015**, 130, 1677-1685		