

# Xin Wang

## List of Publications by Year in descending order

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123  
papers

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236925

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docs citations

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times ranked

609  
citing authors

#	ARTICLE	IF	CITATIONS
1	Elastic T-stress solutions for semi-elliptical surface cracks in finite thickness plates. <i>Engineering Fracture Mechanics</i> , 2003, 70, 731-756.	4.3	102
2	Stress intensity factors for low aspect ratio semi-elliptical surface cracks in finite-thickness plates subjected to nonuniform stresses. <i>Engineering Fracture Mechanics</i> , 1995, 51, 517-532.	4.3	99
3	Elastic T-stress for cracks in test specimens subjected to non-uniform stress distributions. <i>Engineering Fracture Mechanics</i> , 2002, 69, 1339-1352.	4.3	69
4	Fracture toughness of the materials in welded joint of X80 pipeline steel. <i>Engineering Fracture Mechanics</i> , 2015, 148, 337-349.	4.3	60
5	Elastic T-stress solutions for penny-shaped cracks under tension and bending. <i>Engineering Fracture Mechanics</i> , 2004, 71, 2283-2298.	4.3	48
6	Solutions of T-stresses for quarter-elliptical corner cracks in finite thickness plates subject to tension and bending. <i>International Journal of Pressure Vessels and Piping</i> , 2006, 83, 593-606.	2.6	45
7	Two-parameter characterization of elastic-plastic crack front fields: Surface cracked plates under tensile loading. <i>Engineering Fracture Mechanics</i> , 2009, 76, 958-982.	4.3	45
8	Ductile crack growth behaviors at different locations of a weld joint for an X80 pipeline steel: A numerical investigation using GTN models. <i>Engineering Fracture Mechanics</i> , 2019, 213, 264-279.	4.3	40
9	The effect of T-stress on crack-tip plastic zones under mixed-mode loading conditions. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2011, 34, 792-803.	3.4	39
10	Stress intensity factors and weight functions for high aspect ratio semi-elliptical surface cracks in finite-thickness plates. <i>Engineering Fracture Mechanics</i> , 1997, 57, 13-24.	4.3	37
11	Solutions of the second elastic-plastic fracture mechanics parameter in test specimens. <i>Engineering Fracture Mechanics</i> , 2010, 77, 3462-3480.	4.3	35
12	A comparison between fracture toughness at different locations of longitudinal submerged arc welded and spiral submerged arc welded joints of API X80 pipeline steels. <i>Engineering Fracture Mechanics</i> , 2015, 148, 110-121.	4.3	35
13	Fully plastic J-integral solutions for surface cracked plates under biaxial loading. <i>Engineering Fracture Mechanics</i> , 2006, 73, 1581-1595.	4.3	34
14	Elastic T-stress solutions for semi-elliptical surface cracks in finite thickness plates subject to non-uniform stress distributions. <i>Engineering Fracture Mechanics</i> , 2004, 71, 1477-1496.	4.3	33
15	Determination of approximate point load weight functions for embedded elliptical cracks. <i>International Journal of Fatigue</i> , 2009, 31, 1816-1827.	5.7	33
16	The T-stress solutions for through-wall circumferential cracks in cylinders subjected to general loading conditions. <i>Engineering Fracture Mechanics</i> , 2008, 75, 3206-3225.	4.3	32
17	Through-thickness welding residual stress and its effect on stress intensity factors for semi-elliptical surface cracks in a butt-welded steel plate. <i>Engineering Fracture Mechanics</i> , 2018, 193, 17-31.	4.3	31
18	Local weight functions for semi-elliptical surface cracks in finite thickness plates. <i>Theoretical and Applied Fracture Mechanics</i> , 1995, 23, 199-208.	4.7	30

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19	The effects of in-plane and out-of-plane constraints on J-R curves for X80 steel: A study using clamped SENT specimens. <i>Engineering Fracture Mechanics</i> , 2019, 206, 342-358.	4.3	29
20	Determination of ductile fracture properties of 16MND5 steels under varying constraint levels using machine learning methods. <i>International Journal of Mechanical Sciences</i> , 2022, 224, 107331.	6.7	29
21	T-stress solutions for two-dimensional crack problems in anisotropic elasticity using the boundary element method. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2006, 29, 343-356.	3.4	28
22	Through-thickness distribution of residual stresses in Q345qD butt-welded steel plates. <i>Journal of Materials Processing Technology</i> , 2018, 251, 54-64.	6.3	28
23	The use of quarter-point crack-tip elements for T-stress determination in boundary element method analysis. <i>Engineering Fracture Mechanics</i> , 2003, 70, 2247-2252.	4.3	27
24	An estimation method for the determination of the second elastic-plastic fracture mechanics parameters. <i>Engineering Fracture Mechanics</i> , 2012, 79, 295-311.	4.3	27
25	Stress intensity factors and weight functions for longitudinal semi-elliptical surface cracks in thin pipes. <i>International Journal of Pressure Vessels and Piping</i> , 1996, 65, 75-87.	2.6	25
26	Approximate weight functions for embedded elliptical cracks. <i>Engineering Fracture Mechanics</i> , 1998, 59, 381-392.	4.3	25
27	Simulation of ductile crack propagation and determination of CTOAs in pipeline steels using cohesive zone modelling. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2014, 37, 592-602.	3.4	25
28	Characteristics of crack front stress fields in three-dimensional single edge cracked plate specimens under general loading conditions. <i>Theoretical and Applied Fracture Mechanics</i> , 2015, 77, 14-34.	4.7	25
29	WEIGHT FUNCTIONS AND STRESS INTENSITY FACTORS FOR SEMI-ELLIPTICAL CRACKS IN PLATE WELDED JOINTS. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 1998, 21, 99-117.	3.4	22
30	Weight functions for the determination of stress intensity factor and T-stress for semi-elliptical cracks in finite thickness plate. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2013, 36, 1051-1066.	3.4	22
31	Estimations of the T-stress for small cracks at notches. <i>Engineering Fracture Mechanics</i> , 2006, 73, 366-375.	4.3	21
32	Effect of shot peening coverage on residual stress field and surface roughness. <i>Surface Engineering</i> , 2018, 34, 938-945.	2.2	19
33	Stress intensity factor and T-stress solutions for three-dimensional clamped single edge notched tension (SENT) specimens. <i>International Journal of Pressure Vessels and Piping</i> , 2018, 168, 11-23.	2.6	19
34	Ductile fracture properties of 16MND5 bainitic forging steel under different in-plane and out-of-plane constraint conditions: Experiments and predictions. <i>Engineering Fracture Mechanics</i> , 2021, 241, 107359.	4.3	19
35	Two-parameter characterization of elastic-plastic crack front fields: Surface cracked plates under uniaxial and biaxial bending. <i>Engineering Fracture Mechanics</i> , 2012, 96, 122-146.	4.3	18
36	Solutions of the second elastic-plastic fracture mechanics parameter in test specimens under biaxial loading. <i>International Journal of Pressure Vessels and Piping</i> , 2013, 111-112, 279-294.	2.6	18

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37	Point Load Weight Functions for Semi-Elliptical Cracks in Finite Thickness Plate. Journal of ASTM International, 2012, 9, 1-14.	0.2	18
38	Determination of weight functions for elastic T-stress from reference T-stress solutions. Fatigue and Fracture of Engineering Materials and Structures, 2002, 25, 965-973.	3.4	17
39	On the Assessment of Through-Wall Circumferential Cracks in Steam Generator Tubes With Tube Supports. Journal of Pressure Vessel Technology, Transactions of the ASME, 2003, 125, 85-90.	0.6	17
40	Weight functions for the determination of stress intensity factor and T-stress for edge-cracked plates with built-in ends. International Journal of Pressure Vessels and Piping, 2004, 81, 285-296.	2.6	16
41	Evaluating stress intensity factors for surface cracks in an orthotropic steel deck accounting for the welding residual stresses. Theoretical and Applied Fracture Mechanics, 2020, 110, 102827.	4.7	16
42	Application of modified normalization method for J-R curve determination using clamped SENT specimens with varying in-plane and out-of-plane constraints. Engineering Fracture Mechanics, 2020, 230, 106968.	4.3	15
43	Semi-elliptical surface cracks in finite-thickness plates with built-in ends. II. Weight function solutions. Engineering Fracture Mechanics, 2001, 68, 1743-1754.	4.3	14
44	Simulation of ductile fracture in pipeline steels under varying constraint conditions using cohesive zone modeling. International Journal of Pressure Vessels and Piping, 2018, 162, 86-97.	2.6	14
45	Analysis of semi-elliptical surface cracks in the interface of bimaterial plates under tension and bending. Theoretical and Applied Fracture Mechanics, 2018, 93, 155-169.	4.7	14
46	Sintering Modeling of Thermal Barrier Coatings at Elevated Temperatures: A Review of Recent Advances. Coatings, 2021, 11, 1214.	2.6	13
47	On the all components of T-stress for an external circular crack under tension and bending. Engineering Fracture Mechanics, 2014, 119, 29-42.	4.3	11
48	On the calculation of stress intensity factors for surface cracks in welded pipe-plate and tubular joints. International Journal of Fatigue, 2003, 25, 89-96.	5.7	10
49	Three-dimensional mixed mode (I and II) crack front fields in ductile thin plates – effects of T-stress. Fatigue and Fracture of Engineering Materials and Structures, 2017, 40, 349-363.	3.4	10
50	Numerical verification of stress intensity factor solution for clamped single edge notched tension (SENT) specimens. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 494-499.	3.4	10
51	Semi-elliptical surface cracks in finite-thickness plates with built-in ends. I. Stress intensity factor solutions. Engineering Fracture Mechanics, 2001, 68, 1723-1741.	4.3	9
52	Stress intensity factors and weight functions for deep semi-elliptical surface cracks in finite-thickness plates. Fatigue and Fracture of Engineering Materials and Structures, 2002, 25, 291-304.	3.4	9
53	Deformation behavior of woven glass/epoxy composite substrate under thermo-mechanical loading. Materials and Design, 2015, 82, 130-135.	7.0	9
54	Three-Dimensional analysis of mixed mode Compact-Tension-Shear (CTS) Specimens: Stress intensity Factors, T-stresses and crack initiation angles. Theoretical and Applied Fracture Mechanics, 2022, 118, 103218.	4.7	9

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55	Weight functions for T-stress for semi-elliptical surface cracks in finite-thickness plates. <i>Journal of Strain Analysis for Engineering Design</i> , 2005, 40, 403-418.	1.8	8
56	The stress intensity factor solutions for edge cracks in a padded plate geometry under general loading conditions. <i>International Journal of Fatigue</i> , 2007, 29, 481-488.	5.7	8
57	The effects of nonproportional loading on the elastic-plastic crack-tip fields. <i>Engineering Fracture Mechanics</i> , 2017, 169, 18-34.	4.3	8
58	Effect of single initial overload and mean load on the low-cycle fatigue life of normalized 300â€™M alloy steel. <i>International Journal of Fatigue</i> , 2020, 130, 105273.	5.7	8
59	Fast ductile fracture: Effect of inertia on propagation resistance and CTOA in pipe steels. <i>International Journal of Pressure Vessels and Piping</i> , 2020, 187, 104163.	2.6	8
60	Constraint-based fracture mechanics analysis of cylinders with internal circumferential cracks. <i>Structural Engineering and Mechanics</i> , 2013, 47, 131-147.	1.0	8
61	Weight functions and stress intensity factors for quarter-elliptical corner cracks in fastener holes. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2004, 27, 701-712.	3.4	7
62	T-stress Solutions for Cracks Emanating from a Circular Hole in a Finite Plate. <i>International Journal of Fracture</i> , 2006, 140, 293-298.	2.2	7
63	Elastic compliance of single-edge-notched tension SE(T) (or SENT) specimens. <i>Frattura Ed Integrita Strutturale</i> , 2014, 8, 95-100.	0.9	7
64	Fracture Toughness of Different Locations of Spiral Submerged Arc Welded Joints in API X80 Pipeline Steels. <i>Procedia Engineering</i> , 2015, 130, 828-834.	1.2	7
65	Determination of R-curves for thermal aged 16MND5 bainitic forging steel using 3D constraint-based fracture mechanics. <i>Theoretical and Applied Fracture Mechanics</i> , 2021, 116, 103084.	4.7	7
66	Weight Functions for T-Stress for Edge Cracks in Thick-Walled Cylinders. <i>Journal of Pressure Vessel Technology</i> , Transactions of the ASME, 2005, 127, 457-463.	0.6	6
67	Comments on CTOA transferability in "Crack tip opening angle during unstable ductile crack propagation of a high-pressure gas pipeline" [204 (2018) 434â€“453]. <i>Engineering Fracture Mechanics</i> , 2019, 214, 335-338.	4.3	6
68	Fracture toughness of thermal aged 16MND5 bainitic forging steel under varying 3D constraint conditions: An experimental study using SENT specimens. <i>Theoretical and Applied Fracture Mechanics</i> , 2021, 114, 103025.	4.7	6
69	T-stress solutions for cracks in rectangular plates with multiple holes. <i>Structural Engineering and Mechanics</i> , 2007, 26, 557-568.	1.0	6
70	Numerical Simulation of Ductile Crack Growth in Pipeline Steels. , 2007, , 105.		3
71	Evaluation of crack opening displacement of through-wall circumferential-cracked pipe using direct weight function method. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 108, 102595.	4.7	3
72	Determination of complex stress intensity factors for interface cracks in bi-material specimens subjected to ununiform stresses. <i>Engineering Fracture Mechanics</i> , 2021, 246, 107619.	4.3	3

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73	Elastic-Plastic Finite Element Analyses of 3D Constraint Effects in Single Edge Cracked Plate Specimens. <i>Materials Performance and Characterization</i> , 2015, 4, 20140027.	0.3	3
74	Simulation of Ductile Crack Propagation in Pipeline Steels Using Cohesive Zone Modeling. , 2012, , .		2
75	Three-Dimensional Finite Element Analysis of a Mixed Mode I/II Fracture Test Specimen: Asymmetric Four-Point Shear Specimen. , 2017, , .		2
76	J-Resistance Curve Testing Using Modified Normalization Method for SENT Specimens. <i>Key Engineering Materials</i> , 2019, 795, 367-374.	0.4	2
77	On the quantification of the constraint effect along a three-dimensional crack front. <i>Journal of ASTM International</i> , 2008, 5, 1-12.	0.2	2
78	On the Constraint-Based Failure Assessment of Surface Cracked Plates under Biaxial Loading. <i>Journal of ASTM International</i> , 2005, 2, 12038.	0.2	2
79	Recent Progress in Development of Ductile Fracture Arrest Methodology Based on CTOA: Test Standard, Transferability and Methodology. , 2020, , .		2
80	Analysis of dynamic fracture propagation in steel pipes using a shell-based constant-CTOA fracture model. <i>International Journal of Pressure Vessels and Piping</i> , 2022, 198, 104677.	2.6	2
81	STRESS INTENSITY FACTORS AND WEIGHT FUNCTIONS FOR SEMI-ELLIPTICAL SURFACE CRACKS IN FINITE-THICKNESS PLATES UNDER TWO-DIMENSIONAL STRESS DISTRIBUTION. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 1997, 20, 1637-1655.	3.4	1
82	T-Stress Solutions for Multiple Edge Cracks in Thick-Walled Cylinders. , 2005, , 253.		1
83	Simulation of Ductile Fracture in Pipeline Steels Under Varying Constraint Conditions Using Cohesive Zone Modeling. , 2015, , .		1
84	Region-Specified Ratcheting Behavior of API X80 Welded Joint Under Uniaxial Cyclic Loading. , 2016, , .		1
85	On the transferability of CTOA from small-scale DWTT to full-scale pipe using a cohesive zone model. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 2591-2594.	3.4	1
86	Weight Functions for T-Stress for Edge Cracks in Thick-Walled Cylinders. , 2004, , .		1
87	On the Constraint-Based Failure Assessment of Surface Cracked Plates under Biaxial Loading. , 0, , 245-245-15.		1
88	On the Constraint-Based Failure Assessment for Surface Cracked Welded Plates Under Tension. , 2003, , .		1
89	Stress Intensity Factors and T-Stress Solutions for 3D Asymmetric Four-Point Shear Specimens. <i>Metals</i> , 2022, 12, 1068.	2.3	1
90	Modelling the Effect of Backfill on Dynamic Fracture Propagation in Steel Pipelines. <i>Journal of Pipeline Science and Engineering</i> , 2022, , 100069.	4.8	1

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91	On the Analysis of Crack Interactions Using Weight Function Method. , 2002, , 205.		0
92	On the Constraint-Based Failure Assessment of Surface Cracks in T-Plate Welded Joints. , 2003, , 193.		0
93	Determination of Weight Functions for Cracks Under Mode-II Loading. , 2006, , 443.		0
94	Effect of Constraint on Fatigue Crack Propagation in T-Plate Welded Joints. , 2007, , 67.		0
95	Fatigue life prediction of cracked padded plates. Fatigue and Fracture of Engineering Materials and Structures, 2008, 31, 234-241.	3.4	0
96	Constraint-Based Fracture Mechanics Analysis of Cylinders With Circumferential Cracks. , 2009, , .		0
97	Effect of Constraint on Fatigue Crack Propagation in Notched Plates. , 2010, , .		0
98	The Investigation of the Triaxial Residual Stress in the Friction Stir Welded Lap Joint Using Neutron Diffraction. Materials Science Forum, 0, 768-769, 589-596.	0.3	0
99	The Effect of T-Stress on Crack-Tip Plastic Zones Under Cyclic Mixed-Mode Loading Conditions. , 2013, , .		0
100	Fracture Toughness of Different Locations in API X80 Pipeline Steel on Low Constraint SENT Specimens. Applied Mechanics and Materials, 0, 853, 251-255.	0.2	0
101	The Effects of Nonproportional Loading on the Elastic-Plastic Crack-Fronts Fields. , 2016, , .		0
102	Three-Dimensional Finite Element Analysis of Antisymmetric Four-Point Shear Specimen. , 2016, , .		0
103	A Simplified Small Scale Yielding Estimate Method for Determination of Second Elastic-Plastic Fracture Mechanics Parameter. , 2018, , .		0
104	Small Scale Yielding Estimate of Second Elastic-Plastic Fracture Mechanics Parameter for 3D Crack Specimens. , 2018, , .		0
105	Analysis of Three-Dimensional Clamped Single Edge Notched Tension (SENT) Specimens. , 2018, , .		0
106	Fast Ductile Fracture: Dependence of Propagation Resistance on Crack Velocity. , 2018, , .		0
107	Effect of Welding Residual Stress on Stress Intensity Factors for Semi-Elliptical Surface Cracks in a Butt-Welded Steel Plate. , 2018, , .		0
108	An Estimate Method of EPFM Constraint Parameter in 3D Cracked Structures for Sensor Structure Design. IEEE Access, 2019, 7, 112054-112066.	4.2	0

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109	A Simplified SSY Estimate Method to Determine EPFM Constraint Parameter for Sensor Design. Sensors, 2019, 19, 717.	3.8	0
110	3D SSY Estimate of EPFM Constraint Parameter under Biaxial Loading for Sensor Structure Design. Sensors, 2019, 19, 735.	3.8	0
111	Analytical Limit Loads for Tube Sections With Circumferential Degradation. , 2004, , .		0
112	Estimations of the T-Stress for Small Cracks at Notches. , 2004, , .		0
113	Finite Element Analyses of Circumferential Cracks in Thin-Walled Cylinders: T-Stress Solutions. , 2006, , .		0
114	Two-Parameter Elastic-Plastic Fracture Mechanics Analysis of Surface Cracked Plates Under Uniaxial and Biaxial Loading. , 2011, , .		0
115	Point Load Weight Functions for Semi-Elliptical Cracks in Finite Thickness Plate. , 2012, , 338-356.		0
116	Three-Dimensional Fracture Mechanics Analyses of Single-Edge Cracked Plate Specimens. , 2014, , .		0
117	Effective Modulus for Crack Size Measurement With SE(T) Specimens using Unloading Compliance. Journal of Testing and Evaluation, 2017, 45, 1090-1098.	0.7	0
118	Numerical Investigation of Ductile Crack Growth Behavior at Different Locations of Weld Joint for X80 Pipeline Steel. , 2019, , .		0
119	The Effects of Non-Proportional Biaxial Loading Paths on Ductile Fracture Initiation: A Void Growth Analysis. , 2019, , .		0
120	The Effects of Nonproportional Biaxial Loading Paths on Ductile Fracture Initiation: A Void Growth Analysis. Materials Performance and Characterization, 2020, 9, 627-645.	0.3	0
121	Application of a Simplified Constant Crack Tip Opening Angle Model to Crack Propagation Analyses in Steel Pipelines. , 2020, , .		0
122	Analysis of Full-Scale Burst Tests by FE Modelling using Constant CTOA Fracture Criterion. Journal of Pipeline Science and Engineering, 2022, , .	4.8	0
123	Elastic $T$ -Stress Solutions of Embedded Elliptical Cracks Subjected to Uniaxial and Biaxial Loadings. , 2007, , 295-308.		0