

Shun-Peng Zhu

List of Publications by Year in descending order

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127
papers

6,742
citations

50276

46
h-index

64796

79
g-index

129
all docs

129
docs citations

129
times ranked

2781
citing authors

#	ARTICLE	IF	CITATIONS
1	Design of robust superhydrophobic surfaces. <i>Nature</i> , 2020, 582, 55-59.	27.8	1,124
2	Probabilistic Physics of Failure-based framework for fatigue life prediction of aircraft gas turbine discs under uncertainty. <i>Reliability Engineering and System Safety</i> , 2016, 146, 1-12.	8.9	232
3	Probabilistic framework for fatigue life assessment of notched components under size effects. <i>International Journal of Mechanical Sciences</i> , 2020, 181, 105685.	6.7	226
4	Computational-experimental approaches for fatigue reliability assessment of turbine bladed disks. <i>International Journal of Mechanical Sciences</i> , 2018, 142-143, 502-517.	6.7	222
5	Fatigue reliability assessment of turbine discs under multi-source uncertainties. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 1291-1305.	3.4	158
6	Probabilistic fatigue life prediction and reliability assessment of a high pressure turbine disc considering load variations. <i>International Journal of Damage Mechanics</i> , 2018, 27, 1569-1588.	4.2	145
7	Recent advances on notch effects in metal fatigue: A review. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2020, 43, 637-659.	3.4	144
8	A generalized energy-based fatigue-creep damage parameter for life prediction of turbine disk alloys. <i>Engineering Fracture Mechanics</i> , 2012, 90, 89-100.	4.3	141
9	Probabilistic framework for multiaxial LCF assessment under material variability. <i>International Journal of Fatigue</i> , 2017, 103, 371-385.	5.7	140
10	Evaluation and comparison of critical plane criteria for multiaxial fatigue analysis of ductile and brittle materials. <i>International Journal of Fatigue</i> , 2018, 112, 279-288.	5.7	133
11	Strain energy gradient-based LCF life prediction of turbine discs using critical distance concept. <i>International Journal of Fatigue</i> , 2018, 113, 33-42.	5.7	128
12	Bivariate Analysis of Incomplete Degradation Observations Based on Inverse Gaussian Processes and Copulas. <i>IEEE Transactions on Reliability</i> , 2016, 65, 624-639.	4.6	127
13	Multiaxial fatigue analysis of notched components using combined critical plane and critical distance approach. <i>International Journal of Mechanical Sciences</i> , 2019, 160, 38-50.	6.7	125
14	Probabilistic modeling of uncertainties in fatigue reliability analysis of turbine bladed disks. <i>International Journal of Fatigue</i> , 2021, 142, 105912.	5.7	121
15	Structural reliability analysis and uncertainties-based collaborative design and optimization of turbine blades using surrogate model. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2019, 42, 1219-1227.	3.4	120
16	A modified strain energy density exhaustion model for creep-fatigue life prediction. <i>International Journal of Fatigue</i> , 2016, 90, 12-22.	5.7	116
17	Probabilistic modeling of fatigue life distribution and size effect of components with random defects. <i>International Journal of Fatigue</i> , 2019, 126, 165-173.	5.7	114
18	Mean stress effect correction in strain energy-based fatigue life prediction of metals. <i>International Journal of Damage Mechanics</i> , 2017, 26, 1219-1241.	4.2	104

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19	Bayesian framework for probabilistic low cycle fatigue life prediction and uncertainty modeling of aircraft turbine disk alloys. Probabilistic Engineering Mechanics, 2013, 34, 114-122.	2.7	103
20	A modified nonlinear fatigue damage accumulation model. International Journal of Damage Mechanics, 2015, 24, 168-181.	4.2	91
21	Computational framework for multiaxial fatigue life prediction of compressor discs considering notch effects. Engineering Fracture Mechanics, 2018, 202, 423-435.	4.3	89
22	Probabilistic modelling of notch fatigue and size effect of components using highly stressed volume approach. International Journal of Fatigue, 2019, 127, 110-119.	5.7	89
23	Energy field intensity approach for notch fatigue analysis. International Journal of Fatigue, 2019, 127, 190-202.	5.7	86
24	A Combined High and Low Cycle Fatigue Model for Life Prediction of Turbine Blades. Materials, 2017, 10, 698.	2.9	85
25	Probabilistic Low Cycle Fatigue Life Prediction Using an Energy-Based Damage Parameter and Accounting for Model Uncertainty. International Journal of Damage Mechanics, 2012, 21, 1128-1153.	4.2	77
26	Fatigue Life Estimation Considering Damaging and Strengthening of Low amplitude Loads under Different Load Sequences Using Fuzzy Sets Approach. International Journal of Damage Mechanics, 2011, 20, 876-899.	4.2	74
27	Probabilistic fatigue assessment of notched components under size effect using critical distance theory. Engineering Fracture Mechanics, 2020, 235, 107150.	4.3	74
28	Multiaxial Fatigue Damage Parameter and Life Prediction without Any Additional Material Constants. Materials, 2017, 10, 923.	2.9	72
29	Probabilistic S-N fields based on statistical distributions applied to metallic and composite materials: State of the art. Advances in Mechanical Engineering, 2019, 11, 168781401987039.	1.6	71
30	Probabilistic modeling of damage accumulation for time-dependent fatigue reliability analysis of railway axle steels. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2015, 229, 23-33.	2.0	69
31	Nonlinear fatigue damage accumulation: Isodamage curve-based model and life prediction aspects. International Journal of Fatigue, 2019, 128, 105185.	5.7	68
32	The effect of notch size on critical distance and fatigue life predictions. Materials and Design, 2020, 196, 109095.	7.0	68
33	High temperature fatigue and creep-fatigue behaviors in a Ni-based superalloy: Damage mechanisms and life assessment. International Journal of Fatigue, 2019, 118, 8-21.	5.7	65
34	Nonlinear fatigue damage accumulation and life prediction of metals: A comparative study. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1271-1282.	3.4	65
35	Probabilistic fatigue modelling of metallic materials under notch and size effect using the weakest link theory. International Journal of Fatigue, 2022, 159, 106788.	5.7	63
36	A New Energy-Critical Plane Damage Parameter for Multiaxial Fatigue Life Prediction of Turbine Blades. Materials, 2017, 10, 513.	2.9	60

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37	Strain energy-based multi-axial fatigue life prediction under normal/shear stress interaction. <i>International Journal of Damage Mechanics</i> , 2019, 28, 708-739.	4.2	57
38	Reliability-based structural design optimization: hybridized conjugate mean value approach. <i>Engineering With Computers</i> , 2021, 37, 381-394.	6.1	57
39	Evaluation of size effect on strain-controlled fatigue behavior of a quench and tempered rotor steel: Experimental and numerical study. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 735, 423-435.	5.6	55
40	A new critical plane-energy model for multi-axial fatigue life prediction of turbine disc alloys. <i>Engineering Failure Analysis</i> , 2018, 93, 55-63.	4.0	52
41	Recent advances on size effect in metal fatigue under defects: a review. <i>International Journal of Fracture</i> , 2022, 234, 21-43.	2.2	52
42	An efficient life prediction methodology for low cycle fatigue-creep based on ductility exhaustion theory. <i>International Journal of Damage Mechanics</i> , 2013, 22, 556-571.	4.2	51
43	A nonlinear fatigue damage accumulation model considering strength degradation and its applications to fatigue reliability analysis. <i>International Journal of Damage Mechanics</i> , 2015, 24, 646-662.	4.2	49
44	A unified criterion for fatigue-creep life prediction of high temperature components. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Aerospace Engineering</i> , 2017, 231, 677-688.	1.3	49
45	A crystal plasticity-based approach for creep-fatigue life prediction and damage evaluation in a nickel-based superalloy. <i>International Journal of Fatigue</i> , 2021, 143, 106031.	5.7	49
46	Fatigue life prediction under variable amplitude loading using a non-linear damage accumulation model. <i>International Journal of Damage Mechanics</i> , 2015, 24, 767-784.	4.2	47
47	Three-term conjugate approach for structural reliability analysis. <i>Applied Mathematical Modelling</i> , 2019, 76, 428-442.	4.2	46
48	Probabilistic modeling and simulation of multiple surface crack propagation and coalescence. <i>Applied Mathematical Modelling</i> , 2020, 78, 383-398.	4.2	46
49	Multi-axial fatigue under variable amplitude loadings: review and solutions. <i>International Journal of Structural Integrity</i> , 2022, 13, 349-393.	3.3	46
50	PSO-BP Neural Network-Based Strain Prediction of Wind Turbine Blades. <i>Materials</i> , 2019, 12, 1889.	2.9	45
51	A new approach to the investigation of load interaction effects and its application in residual fatigue life prediction. <i>International Journal of Damage Mechanics</i> , 2016, 25, 672-690.	4.2	43
52	Uncertainty-Based Design and Optimization Using First Order Saddle Point Approximation Method for Multidisciplinary Engineering Systems. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering</i> , 2020, 6, .	1.7	41
53	A Modified Nonlinear Damage Accumulation Model for Fatigue Life Prediction Considering Load Interaction Effects. <i>Scientific World Journal, The</i> , 2014, 2014, 1-7.	2.1	39
54	SVR-RSM: a hybrid heuristic method for modeling monthly pan evaporation. <i>Environmental Science and Pollution Research</i> , 2019, 26, 35807-35826.	5.3	38

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55	Reliability-based optimisation for offshore structures using saddlepoint approximation. Proceedings of the Institution of Civil Engineers: Maritime Engineering, 2020, 173, 33-42.	0.2	38
56	Reliability analysis of corroded pipelines: Novel adaptive conjugate first order reliability method. Journal of Loss Prevention in the Process Industries, 2019, 62, 103986.	3.3	36
57	Cyclic plastic zone-based notch analysis and damage evolution model for fatigue life prediction of metals. Materials and Design, 2020, 191, 108639.	7.0	35
58	Machine learning assisted probabilistic creep-fatigue damage assessment. International Journal of Fatigue, 2022, 156, 106677.	5.7	34
59	Assessment of notch fatigue and size effect using stress field intensity approach. International Journal of Fatigue, 2021, 149, 106279.	5.7	33
60	Hybrid intelligent method for fuzzy reliability analysis of corroded X100 steel pipelines. Engineering With Computers, 2021, 37, 2559-2573.	6.1	31
61	Stress-strain calculation and fatigue life assessment of V-shaped notches of turbine disk alloys. Engineering Failure Analysis, 2019, 106, 104187.	4.0	30
62	Evaluation of multiaxial high-cycle fatigue criteria under proportional loading for S355 steel. Engineering Failure Analysis, 2021, 120, 105037.	4.0	29
63	Optimization of Load-Carrying Hierarchical Stiffened Shells: Comparative Survey and Applications of Six Hybrid Heuristic Models. Archives of Computational Methods in Engineering, 2021, 28, 4153-4166.	10.2	29
64	A Practical Method for Determining the Corten-Dolan Exponent and Its Application to Fatigue Life Prediction. International Journal of Turbo and Jet Engines, 2012, 29, .	0.7	28
65	The transformed inverse Gaussian process as an age- and state-dependent degradation model. Applied Mathematical Modelling, 2019, 75, 837-852.	4.2	27
66	The role of tension-compression asymmetrical microcrack evolution in the ignition of polymer-bonded explosives under low-velocity impact. Journal of Applied Physics, 2021, 129, .	2.5	27
67	An Enhanced Reliability Index Method and Its Application in Reliability-Based Collaborative Design and Optimization. Mathematical Problems in Engineering, 2019, 2019, 1-10.	1.1	26
68	Critical plane-based multiaxial fatigue life prediction of turbine disk alloys by refining normal stress sensitivity. Journal of Strain Analysis for Engineering Design, 2018, 53, 719-729.	1.8	25
69	Fatigue assessment of EA4T railway axles under artificial surface damage. International Journal of Fatigue, 2021, 146, 106157.	5.7	25
70	Combined TCD and HSV approach for probabilistic assessment of notch fatigue considering size effect. Engineering Failure Analysis, 2021, 120, 105093.	4.0	24
71	Fatigue and damage tolerance assessment of induction hardened S38C axles under different foreign objects. International Journal of Fatigue, 2021, 149, 106276.	5.7	24
72	Reliability assessment of measurement accuracy for FBG sensors used in structural tests of the wind turbine blades based on strain transfer laws. Engineering Failure Analysis, 2020, 112, 104506.	4.0	23

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73	A Bayesian optimal design for degradation tests based on the inverse Gaussian process. Journal of Mechanical Science and Technology, 2014, 28, 3937-3946.	1.5	22
74	Fatigue Life Estimation of an Aircraft Engine Under Different Load Spectrums. International Journal of Turbo and Jet Engines, 2012, 29, .	0.7	20
75	Fatigue reliability design and assessment of reactor pressure vessel structures: Concepts and validation. International Journal of Fatigue, 2021, 153, 106524.	5.7	19
76	Evaluation of critical distance, highly stressed volume, and weakest-link methods in notch fatigue analysis. International Journal of Fatigue, 2022, 162, 106950.	5.7	19
77	A New Ductility Exhaustion Model for High Temperature Low Cycle Fatigue Life Prediction of Turbine Disk Alloys. International Journal of Turbo and Jet Engines, 2011, 28, .	0.7	18
78	Probabilistic fatigue life prediction of notched components using strain energy density approach. Engineering Failure Analysis, 2021, 124, 105375.	4.0	18
79	Foreign object damage tolerance and fatigue analysis of induction hardened S38C axles. Materials and Design, 2021, 202, 109488.	7.0	16
80	Fatigue life prediction of notched components under size effect using stress gradient-based approach. International Journal of Fracture, 2022, 234, 249-261.	2.2	16
81	Reliability Analysis of FRP-Confined Concrete at Ultimate using Conjugate Search Direction Method. Polymers, 2020, 12, 707.	4.5	15
82	Collaborative maritime design using sequential optimisation and reliability assessment. Proceedings of the Institution of Civil Engineers: Maritime Engineering, 2020, 173, 3-12.	0.2	15
83	Probabilistic fatigue assessment of notched components under size effect using generalized weakest-link model. International Journal of Fatigue, 2022, 162, 107005.	5.7	15
84	Probabilistic modeling of fatigue crack growth and experimental verification. Engineering Failure Analysis, 2020, 118, 104862.	4.0	14
85	Cyclic plastic zone modified critical distance theory for notch fatigue analysis of metals. Engineering Failure Analysis, 2021, 121, 105163.	4.0	12
86	Fatigue Life Analysis of Turbine Disks Based on Load Spectra of Aero-engines. International Journal of Turbo and Jet Engines, 2016, 33, .	0.7	10
87	Contact stress analysis and fatigue life prediction of turbine discâ€“blade attachment with firâ€“tree tenon structure. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 1014-1026.	3.4	10
88	Fuzzy Reliability Analysis Using Genetic Optimization Algorithm Combined with Adaptive Descent Chaos Control. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2020, 6, 04020022.	1.7	9
89	Fatigue Reliability Analysis of Turbine Disk Alloy Using Saddlepoint Approximation. International Journal of Turbo and Jet Engines, 2013, 30, .	0.7	8
90	Stochastic fatigue life and reliability prediction based on residual strength. Journal of Shanghai Jiaotong University (Science), 2015, 20, 331-337.	0.9	8

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91	New strain energy-based critical plane approach for multiaxial fatigue life prediction. Journal of Strain Analysis for Engineering Design, 2019, 54, 310-319.	1.8	8
92	An Application of Fuzzy Fault Tree Analysis to Uncontained Events of an Aero-Engine Rotor. International Journal of Turbo and Jet Engines, 2012, 29, .	0.7	7
93	Fatigue reliability analysis of a turbine disc under multi-source uncertainties. Procedia Structural Integrity, 2017, 5, 967-972.	0.8	7
94	Structural dynamic probabilistic evaluation using a surrogate model and genetic algorithm. Proceedings of the Institution of Civil Engineers: Maritime Engineering, 2020, 173, 13-27.	0.2	7
95	Civil Aircraft Spare Parts Prediction and Configuration Management Techniques: Review and Prospect. Advances in Mechanical Engineering, 2021, 13, 168781402110261.	1.6	7
96	Combined notch and size effect modeling of metallic materials for LCF using plasticity reformulated critical distance theory. Journal of Materials Research and Technology, 2022, 18, 470-484.	5.8	7
97	Residual life prediction based on nonlinear fatigue damage accumulation model. Journal of Shanghai Jiaotong University (Science), 2015, 20, 449-453.	0.9	6
98	Advanced Simulation Tools Applied to Materials Development and Design Predictions. Materials, 2020, 13, 147.	2.9	6
99	Uncertainty Analysis in Fatigue Life Prediction of Gas Turbine Blades Using Bayesian Inference. International Journal of Turbo and Jet Engines, 2015, 32, .	0.7	5
100	Multidisciplinary design optimization under correlated uncertainties. Concurrent Engineering Research and Applications, 2017, 25, 262-275.	3.2	5
101	Renewable Energy and Oceanic Structures: Part III. Proceedings of the Institution of Civil Engineers: Maritime Engineering, 2020, 173, 1-2.	0.2	5
102	Nonlinear modeling for bar bond stress using dynamical self-adjusted harmony search optimization. Engineering With Computers, 2021, 37, 409-420.	6.1	4
103	Probabilistic fatigue modeling of notched components under size effect using modified energy field intensity approach. Mechanics of Advanced Materials and Structures, 2022, 29, 6379-6389.	2.6	4
104	Notice of Retraction A novel dynamic fault tree analysis method. , 2013, , .		3
105	A new energy gradient-based model for LCF life prediction of turbine discs. Procedia Structural Integrity, 2017, 5, 856-860.	0.8	3
106	Probabilistic modelling of notch and size effect of components under fatigue loadings. Procedia Structural Integrity, 2019, 22, 70-77.	0.8	3
107	Data-driven predicting the ignition of polymer-bonded explosives with heterogeneous microcracks. Journal of Energetic Materials, 0, , 1-28.	2.0	3
108	Finite Element Analysis for Turbine Blades with Contact Problems. International Journal of Turbo and Jet Engines, 2016, 33, .	0.7	2

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109	Advances in structural integrity and reliability analysis for critical components. Advances in Mechanical Engineering, 2018, 10, 168781401881640.	1.6	2
110	Renewable Energy and Oceanic Structures: Part IV. Proceedings of the Institution of Civil Engineers: Maritime Engineering, 2020, 173, 31-32.	0.2	2
111	Probabilistic modeling of damage accumulation for fatigue reliability analysis. , 2012, , .		1
112	Notice of Retraction A study on vibration fatigue of engineering structures. , 2013, , .		1
113	Notice of Retraction Fatigue life assessment of welded structures by effective notch stress approach. , 2013, , .		1
114	Notice of Retraction Creep life prediction model of aircraft turbine disc alloy based on continuum damage mechanics. , 2013, , .		1
115	Reliability analysis of an electric control system based on type I censored test zero-failure data using Bayesian methods. , 2013, , .		1
116	Weighted Fuzzy Risk Priority Number Evaluation of Turbine and Compressor Blades Considering Failure Mode Correlations. International Journal of Turbo and Jet Engines, 2014, 31, .	0.7	1
117	Human Reliability Assessment of Ergonomic Interaction Design for Engineering Software Based on Entropyâ€“FTAâ€“Delphi. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2020, 6, 04020035.	1.7	1
118	Fuzzy fault tree analysis of uncontained event of an aero-engine rotor. , 2012, , .		0
119	A study on uncertainty analysis of fatigue reliability. , 2012, , .		0
120	Notice of Retraction A study on Bayesian design of degradation tests with the inverse Gaussian processes. , 2013, , .		0
121	Notice of Retraction A nonlinear fatigue damage accumulation model accounting for load interaction effects. , 2013, , .		0
122	Notice of Retraction A modified non-linear damage accumulation model considering load interaction effects under two-level loading. , 2013, , .		0
123	Notice of Retraction A fusion method of zero-failure data in different environments for reliability assessment of success-failure type products. , 2013, , .		0
124	Probabilistic Fatigue Life Prediction of Turbine Disc Considering Model Parameter Uncertainty. International Journal of Turbo and Jet Engines, 2016, 33, .	0.7	0
125	Contact Stress Analysis and Fatigue Life Prediction of a Turbine Fan Disc. International Journal of Turbo and Jet Engines, 2016, 33, .	0.7	0
126	Multiaxial fatigue life evaluation using strain energy-based critical plane approach. Procedia Structural Integrity, 2019, 22, 78-83.	0.8	0

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127	Preface to the special issue: structural integrity. International Journal of Fracture, 0, , .	2.2	0