

Gh Farrahi

List of Publications by Year in descending order

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111
papers

2,491
citations

201674

27
h-index

265206

42
g-index

113
all docs

113
docs citations

113
times ranked

1622
citing authors

#	ARTICLE	IF	CITATIONS
1	EFFECT OF SHOT PEENING ON RESIDUAL STRESS AND FATIGUE LIFE OF A SPRING STEEL. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 1995, 18, 211-220.	3.4	150
2	An approach to relate shot peening finite element simulation to the actual coverage. <i>Surface and Coatings Technology</i> , 2014, 243, 39-45.	4.8	85
3	A comprehensive experimental and numerical study on redistribution of residual stresses by shot peening. <i>Materials and Design</i> , 2016, 90, 478-487.	7.0	83
4	Thermo-mechanical stress analysis of thermal barrier coating system considering thickness and roughness effects. <i>Surface and Coatings Technology</i> , 2014, 243, 91-99.	4.8	82
5	Applications of ultrasonic testing and machine learning methods to predict the static & fatigue behavior of spot-welded joints. <i>Journal of Manufacturing Processes</i> , 2020, 52, 26-34.	5.9	70
6	Thermodynamically consistent and scale-dependent phase field approach for crack propagation allowing for surface stresses. <i>International Journal of Plasticity</i> , 2018, 111, 1-35.	8.8	67
7	An investigation into the effect of various surface treatments on fatigue life of a tool steel. <i>Journal of Materials Processing Technology</i> , 2006, 174, 318-324.	6.3	64
8	Experimental measurement and finite element simulation of the interaction between residual stresses and mechanical loading. <i>International Journal of Fatigue</i> , 2001, 23, 293-302.	5.7	61
9	Modification of fretting fatigue behavior of AL7075â€”T6 alloy by the application of titanium coating using IBED technique and shot peening. <i>Tribology International</i> , 2009, 42, 121-129.	5.9	52
10	Failure analysis of a gas turbine compressor. <i>Engineering Failure Analysis</i> , 2011, 18, 474-484.	4.0	52
11	Effects of Conventional and Severe Shot Peening on Residual Stress and Fatigue Strength of Steel AISI 1060 and Residual Stress Relaxation Due to Fatigue Loading: Experimental and Numerical Simulation. <i>Metals and Materials International</i> , 2021, 27, 2575-2591.	3.4	51
12	Shot peening coverage effect on residual stress profile by FE random impact analysis. <i>Surface Engineering</i> , 2016, 32, 861-870.	2.2	50
13	Experimental evaluation of the effect of thread pitch on fatigue life of bolts. <i>International Journal of Fatigue</i> , 2005, 27, 189-196.	5.7	48
14	Multiple laser shock peening effects on residual stress distribution and fatigue crack growth behaviour of 316L stainless steel. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 105, 102429.	4.7	48
15	An inverse approach to determination of residual stresses induced by shot peening in round bars. <i>International Journal of Mechanical Sciences</i> , 2009, 51, 726-731.	6.7	43
16	Duffing equations with cubic and quintic nonlinearities. <i>Computers and Mathematics With Applications</i> , 2009, 57, 500-506.	2.7	43
17	Phase field approach for nanoscale interactions between crack propagation and phase transformation. <i>Nanoscale</i> , 2019, 11, 22243-22247.	5.6	43
18	Measurement, analysis and reconstruction of residual stresses. <i>Journal of Strain Analysis for Engineering Design</i> , 2012, 47, 254-264.	1.8	38

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19	Reconstruction of residual stresses in autofrettaged thick-walled tubes from limited measurements. <i>International Journal of Pressure Vessels and Piping</i> , 2009, 86, 777-784.	2.6	37
20	Effects of preheating temperature and cooling rate on two-step residual stress in thermal barrier coatings considering real roughness and porosity effect. <i>Ceramics International</i> , 2014, 40, 15925-15940.	4.8	37
21	Experimental measurement and analytical determination of shot peening residual stresses considering friction and real unloading behavior. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 657, 309-321.	5.6	37
22	The effect of shot peening on fatigue life of welded tubular joint in offshore structure. <i>Materials & Design</i> , 2012, 36, 250-257.	5.1	35
23	An Inverse Method for Reconstruction of the Residual Stress Field in Welded Plates. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2010, 132, .	0.6	33
24	Semi-exact elastic solutions for thermo-mechanical analysis of functionally graded rotating disks. <i>Composite Structures</i> , 2011, 93, 3239-3251.	5.8	33
25	Fatigue life estimation of bolt clamped and interference fitted-bolt clamped double shear lap joints using multiaxial fatigue criteria. <i>Materials & Design</i> , 2013, 43, 327-336.	5.1	32
26	Effect of initial surface treatment on shot peening residual stress field: Analytical approach with experimental verification. <i>International Journal of Mechanical Sciences</i> , 2018, 137, 171-181.	6.7	32
27	A new energy-based isothermal and thermo-mechanical fatigue lifetime prediction model for aluminium-silicon-magnesium alloy. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2013, 36, 1323-1335.	3.4	31
28	A finite element simulation and an experimental study of autofrettage for strain hardened thick-walled cylinders. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 359, 326-331.	5.6	30
29	Finite element analysis of shot-peening effect on fretting fatigue parameters. <i>Tribology International</i> , 2011, 44, 1583-1588.	5.9	29
30	Nonlinear free vibration of conservative oscillators with inertia and static type cubic nonlinearities using homotopy analysis method. <i>Journal of Sound and Vibration</i> , 2008, 316, 263-273.	3.9	28
31	Thermo-mechanical analysis of rotating disks with non-uniform thickness and material properties. <i>International Journal of Pressure Vessels and Piping</i> , 2012, 98, 95-101.	2.6	28
32	Semi-exact solution for thermo-mechanical analysis of functionally graded elastic-strain hardening rotating disks. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012, 17, 3747-3762.	3.3	27
33	Fatigue lifetime of AZ91 magnesium alloy subjected to cyclic thermal and mechanical loadings. <i>Materials & Design</i> , 2014, 53, 639-644.	5.1	27
34	Simulation of vehicle body spot weld failures due to fatigue by considering road roughness and vehicle velocity. <i>Simulation Modelling Practice and Theory</i> , 2020, 105, 102168.	3.8	27
35	On the large amplitude free vibrations of tapered beams: an analytical approach. <i>Mechanics Research Communications</i> , 2009, 36, 892-897.	1.8	26
36	Residual stress analysis of autofrettaged thick-walled spherical pressure vessel. <i>International Journal of Pressure Vessels and Piping</i> , 2010, 87, 396-401.	2.6	26

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37	Experimental and finite element prediction of bursting pressure in compound cylinders. International Journal of Pressure Vessels and Piping, 2004, 81, 889-896.	2.6	25
38	Residual stresses in autofrettaged vessel made of functionally graded material. Engineering Structures, 2009, 31, 2930-2935.	5.3	25
39	Stress analysis of thermal barrier coating system subjected to out-of-phase thermo-mechanical loadings considering roughness and porosity effect. Surface and Coatings Technology, 2015, 262, 77-86.	4.8	25
40	On the phase field modeling of crack growth and analytical treatment on the parameters. Continuum Mechanics and Thermodynamics, 2020, 32, 589-606.	2.2	25
41	Separation of delamination modes in composite beams with symmetric delaminations. Materials & Design, 2006, 27, 900-910.	5.1	24
42	Experimental accuracy assessment of various high-cycle fatigue criteria for a critical component with a complicated geometry and multi-input random non-proportional 3D stress components. Engineering Failure Analysis, 2018, 90, 534-553.	4.0	24
43	Effects of Vertical and Pinch Rolling on Residual Stress Distributions in Wire and Arc Additively Manufactured Components. Journal of Materials Engineering and Performance, 2020, 29, 2073-2084.	2.5	24
44	Damage prediction for un-coated and coated aluminum alloys under thermal and mechanical fatigue loadings based on a modified plastic strain energy approach. Materials & Design, 2015, 66, 587-595.	5.1	23
45	Improvement of high temperature fatigue lifetime in AZ91 magnesium alloy by heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 357-365.	5.6	22
46	Molecular dynamics simulation of nanoindentation of nanocrystalline Al/Ni multilayers. Computational Materials Science, 2016, 112, 175-184.	3.0	22
47	Experimental evaluation of the effect of residual stress field on crack growth behaviour in C(T) specimen. Engineering Fracture Mechanics, 2006, 73, 1772-1782.	4.3	21
48	Optimization of Air Plasma Sprayed Thermal Barrier Coating Parameters in Diesel Engine Applications. Journal of Materials Engineering and Performance, 2013, 22, 3530-3538.	2.5	20
49	A Plasticity Model for Metals With Dependency on All the Stress Invariants. Journal of Engineering Materials and Technology, Transactions of the ASME, 2013, 135, .	1.4	20
50	Friction behavior of nanocrystalline nickel near the Hall-Petch breakdown. Tribology International, 2017, 107, 18-24.	5.9	19
51	Phase field modeling of crack growth with double-well potential including surface effects. Continuum Mechanics and Thermodynamics, 2020, 32, 913-925.	2.2	19
52	Finite Element Simulation of Shot Peening Coverage with the Special Attention on Surface Nanocrystallization. Procedia Engineering, 2011, 10, 2464-2471.	1.2	18
53	Probabilistic assessment of creep-fatigue crack propagation in austenitic stainless steel cracked plates. Engineering Fracture Mechanics, 2018, 200, 50-63.	4.3	18
54	Experimental fatigue lifetime of coated and uncoated aluminum alloy under isothermal and thermo-mechanical loadings. Ceramics International, 2013, 39, 9099-9107.	4.8	17

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55	Numerical simulations of cyclic behaviors in light alloys under isothermal and thermo-mechanical fatigue loadings. <i>Materials & Design</i> , 2014, 56, 245-253.	5.1	17
56	A study of fretting wear with particular reference to measurement of residual stresses by X-ray diffraction. <i>Wear</i> , 1991, 148, 249-260.	3.1	16
57	Stress-strain time-dependent behavior of A356.0 aluminum alloy subjected to cyclic thermal and mechanical loadings. <i>Mechanics of Time-Dependent Materials</i> , 2014, 18, 475-491.	4.4	16
58	Experimental results and finite-element predictions of the effect of nut geometry, washer and Teflon tape on the fatigue life of bolts. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2005, 28, 557-564.	3.4	15
59	Effects of stress invariants and reverse loading on ductile fracture initiation. <i>International Journal of Solids and Structures</i> , 2012, 49, 1541-1556.	2.7	15
60	Obtaining multiaxial residual stress distributions from limited measurements. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 303, 281-291.	5.6	13
61	Size-dependent energy release rate formulation of notched beams based on a modified couple stress theory. <i>Engineering Fracture Mechanics</i> , 2014, 116, 80-91.	4.3	13
62	The effect of plugging of tubes on failure of shell and tube heat exchanger. <i>Engineering Failure Analysis</i> , 2019, 104, 545-559.	4.0	13
63	Multiaxial stress-strain modeling and effect of additional hardening due to nonproportional loading. <i>Journal of Mechanical Science and Technology</i> , 2007, 21, 1153-1161.	1.5	12
64	Application of homotopy-Padé technique in limit analysis of circular plates under arbitrary rotational symmetric loading using von-Mises yield criterion. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2010, 15, 1080-1091.	3.3	12
65	Failure Analysis of a Gas Turbine Compressor in a Thermal Power Plant. <i>Journal of Failure Analysis and Prevention</i> , 2013, 13, 313-319.	0.9	12
66	Application of Artificial Neural Network to Predict the Effects of Severe Shot Peening on Properties of Low Carbon Steel. <i>Advanced Structured Materials</i> , 2016, , 45-60.	0.5	12
67	Considering cyclic plasticity to predict residual stresses in laser cladding of Inconel 718 multi bead samples. <i>Journal of Manufacturing Processes</i> , 2019, 42, 149-158.	5.9	12
68	Investigation of microstructure effect on fretting fatigue crack initiation using crystal plasticity. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2019, 42, 640-650.	3.4	12
69	Residual stress analyses of re-autofrettaged thick-walled tubes. <i>International Journal of Pressure Vessels and Piping</i> , 2012, 98, 57-64.	2.6	11
70	Predicting fracture of solder joints with different constraint factors. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2019, 42, 425-438.	3.4	11
71	A comparative study on the fatigue life of the vehicle body spot welds using different numerical techniques: Inertia relief and Modal dynamic analyses. <i>Frattura Ed Integrità Strutturale</i> , 2020, 14, 67-81.	0.9	11
72	On the Material Modeling of the Autofrettaged Pressure Vessel Steels. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2009, 131, .	0.6	10

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73	Optimal experiment design for plasma thermal spray parameters at bending loads. International Journal of Surface Science and Engineering, 2012, 6, 3.	0.4	10
74	Failure analysis of bolt connections in fired heater of a petrochemical unit. Engineering Failure Analysis, 2018, 92, 327-342.	4.0	10
75	Effect of microstructure on crack behavior in nanocrystalline nickel using molecular dynamics simulation. Theoretical and Applied Fracture Mechanics, 2019, 104, 102390.	4.7	9
76	Acoustic simulation of ultrasonic testing and neural network used for diameter prediction of three-sheet spot welded joints. Journal of Manufacturing Processes, 2021, 64, 1507-1516.	5.9	9
77	Performance Analysis of Functionally Graded Coatings in Contact with Cylindrical Rollers. Advances in Mechanical Engineering, 2015, 7, 456848.	1.6	8
78	Effect of severe shot peening on the fatigue life of the laser-cladded Inconel 718 specimens. International Journal of Advanced Manufacturing Technology, 2019, 104, 2619-2631.	3.0	8
79	Fretting fatigue behavior of 316L stainless steel under combined loading conditions. International Journal of Fatigue, 2019, 128, 105206.	5.7	8
80	AN EXPERIMENTAL STUDY OF FRETTING BY MEANS OF X-RAY DIFFRACTION. Fatigue and Fracture of Engineering Materials and Structures, 1992, 15, 91-102.	3.4	7
81	General Variable Material Property Formulation for the Solution of Autofrettaged Thick-Walled Tubes With Constant Axial Strains. Journal of Pressure Vessel Technology, Transactions of the ASME, 2008, 130, .	0.6	7
82	Residual Stress Analysis of the Autofrettaged Thick-Walled Tube Using Nonlinear Kinematic Hardening. Journal of Pressure Vessel Technology, Transactions of the ASME, 2013, 135, .	0.6	7
83	Reliability assessment of cracked pipes subjected to creep-fatigue loading. Theoretical and Applied Fracture Mechanics, 2019, 104, 102333.	4.7	7
84	An Analytical Framework for the Solution of Autofrettaged Tubes Under Constant Axial Strain Condition. Journal of Pressure Vessel Technology, Transactions of the ASME, 2009, 131, .	0.6	6
85	Thermo-mechanical behaviours of light alloys in comparison to high temperature isothermal behaviours. Materials at High Temperatures, 2014, 31, 12-17.	1.0	6
86	Comparison Between Isothermal and Non-Isothermal Fatigue Behavior in a Cast Aluminum-Silicon-Magnesium Alloy. Strength of Materials, 2015, 47, 840-848.	0.5	6
87	Strain-rate dependent influence of adherend stiffness on fracture load prediction of BGA solder joints. Engineering Fracture Mechanics, 2017, 186, 119-133.	4.3	6
88	Predicting Crack Initiation of Solder Joints with Varying Sizes Under Bending. Journal of Electronic Materials, 2019, 48, 2840-2852.	2.2	5
89	Phase field theory for fracture at large strains including surface stresses. International Journal of Engineering Science, 2022, 178, 103732.	5.0	5
90	Constitutive modeling of elastic-visco-plastic behaviors in aluminum alloys subjected to cyclic loadings at various strain rates. Journal of Strain Analysis for Engineering Design, 2015, 50, 103-124.	1.8	4

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91	Size dependent energy release rate of notched FGM beams based on a modified couple stress theory. <i>Materials Today: Proceedings</i> , 2016, 3, 2662-2671.	1.8	4
92	Experimental and numerical evaluations of stress relaxation in A356 aluminium alloy subjected to out-of-phase thermomechanical cyclic loadings. <i>Materials at High Temperatures</i> , 2014, 31, 204-210.	1.0	3
93	Experimental Analysis on the Material Properties of A356.0 Aluminum Alloy Surface Nanostructured by Severe Shot Peening. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 143-154.	2.5	3
94	FEM Prediction of Welding Residual Stresses and Temperature Fields in Butt and T-Welded Joints. <i>Advanced Materials Research</i> , 0, 418-420, 1486-1493.	0.3	2
95	Effects of Temperature on Wear Behavior of a Plasma Sprayed Diesel Engine Cylinder. , 0, , .		2
96	SIDE EFFECTS OF SHOT PEENING ON FATIGUE CRACK INITIATION LIFE. <i>International Journal of Engineering, Transactions B: Applications</i> , 2011, , .	0.7	2
97	Fatigue Life of Repaired Welded Tubular Joints. <i>International Journal of Engineering, Transactions B: Applications</i> , 2013, 26, .	0.7	2
98	Main and interaction effects of manufacturing variables on microstructure and fracture of solder-copper connections. <i>Engineering Failure Analysis</i> , 2022, 139, 106449.	4.0	2
99	Fatigue life analysis in the residual stress field due to resistance spot welding process considering different sheet thicknesses and dissimilar electrode geometries. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2023, 237, 33-51.	1.1	2
100	Bauschinger Effect Investigation of an Aluminum Alloy, and Its Application in Autofrettaged and Compound Tubes. , 2007, , 629.		1
101	Determination of Residual Stresses in Autofrettaged Compound Tubes for Different Geometries. , 2007, , 53.		1
102	Material Removal Simulation of Aluminum Compound Tubes With Incorporating Real Unloading Behavior. , 2007, , 195.		1
103	An Analytical Framework for the Solution of Autofrettaged Tubes Under Constant Axial Strain Condition. , 2008, , .		1
104	On the Material Modeling of the Autofrettaged Pressure Vessel Steels. , 2008, , .		1
105	Prediction by Genetic Algorithm and Measurement by Center Hole Drilling of Residual Stresses of MAG Weldment. <i>Advanced Materials Research</i> , 0, 83-86, 738-745.	0.3	1
106	Rate-dependent dynamic ALE analysis of finite deformation of elasto-viscoplastic solids. <i>Materials & Design</i> , 2009, 30, 2995-3004.	5.1	1
107	A new technique of the "first and second limits" for wagon maintenance in railway tracks consisting of sharp curves based on the empirical study of wheel wear. <i>Scientia Iranica</i> , 2017, 24, 1171-1180.	0.4	1
108	Experimental and Finite Element Studies on Free Vibration of Automotive Steering Knuckle. <i>International Journal of Engineering Transactions B: Applications</i> , 2017, 30, .	0.5	1

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109	A Study on the Contact Ellipse and the Contact Pressure During the Wheel Wear through Passing the Tracks including Several Sharp Curves. International Journal of Engineering Transactions B: Applications, 2018, 31, .	0.5	1
110	Effect of Residual Stress on Failure of Tube-to-tubesheet Weld in Heat Exchangers. International Journal of Engineering, Transactions A: Basics, 2019, 32, .	0.4	1
111	Effect of residual stress on stress intensity factors of fretting fatigue cracks. International Journal of Microstructure and Materials Properties, 2007, 2, 164.	0.1	0