

Matteo Benedetti

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1992176/publications.pdf>

Version: 2024-02-01

105
papers

3,271
citations

172457

29
h-index

168389

53
g-index

106
all docs

106
docs citations

106
times ranked

1968
citing authors

#	ARTICLE	IF	CITATIONS
1	Architected cellular materials: A review on their mechanical properties towards fatigue-tolerant design and fabrication. <i>Materials Science and Engineering Reports</i> , 2021, 144, 100606.	31.8	316
2	Low- and high-cycle fatigue resistance of Ti-6Al-4V ELI additively manufactured via selective laser melting: Mean stress and defect sensitivity. <i>International Journal of Fatigue</i> , 2018, 107, 96-109.	5.7	202
3	The effect of post-sintering treatments on the fatigue and biological behavior of Ti-6Al-4V ELI parts made by selective laser melting. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 71, 295-306.	3.1	165
4	Properties and applications of additively manufactured metallic cellular materials: A review. <i>Progress in Materials Science</i> , 2022, 125, 100918.	32.8	164
5	Reverse bending fatigue of shot peened 7075-T651 aluminium alloy: The role of residual stress relaxation. <i>International Journal of Fatigue</i> , 2009, 31, 1225-1236.	5.7	137
6	Fatigue and biological properties of Ti-6Al-4V ELI cellular structures with variously arranged cubic cells made by selective laser melting. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 78, 381-394.	3.1	128
7	Influence of shot peening on bending tooth fatigue limit of case hardened gears. <i>International Journal of Fatigue</i> , 2002, 24, 1127-1136.	5.7	126
8	On the effect of geometrical imperfections and defects on the fatigue strength of cellular lattice structures additively manufactured via Selective Laser Melting. <i>International Journal of Fatigue</i> , 2019, 124, 348-360.	5.7	119
9	Notch fatigue behaviour of shot peened high-strength aluminium alloys: Experiments and predictions using a critical distance method. <i>International Journal of Fatigue</i> , 2010, 32, 1600-1611.	5.7	91
10	High- and very high-cycle plain fatigue resistance of shot peened high-strength aluminum alloys: The role of surface morphology. <i>International Journal of Fatigue</i> , 2015, 70, 451-462.	5.7	84
11	Bending fatigue behaviour of differently shot peened Al 6082 T5 alloy. <i>International Journal of Fatigue</i> , 2004, 26, 889-897.	5.7	82
12	Notch fatigue and crack growth resistance of Ti-6Al-4V ELI additively manufactured via selective laser melting: A critical distance approach to defect sensitivity. <i>International Journal of Fatigue</i> , 2019, 121, 281-292.	5.7	62
13	The role of node fillet, unit-cell size and strut orientation on the fatigue strength of Ti-6Al-4V lattice materials additively manufactured via laser powder bed fusion. <i>International Journal of Fatigue</i> , 2021, 142, 105946.	5.7	53
14	Structural health monitoring of wind towers: remote damage detection using strain sensors. <i>Smart Materials and Structures</i> , 2011, 20, 055009.	3.5	51
15	Experimental determination and sensitivity analysis of the fatigue critical distance obtained with rounded V-notched specimens. <i>International Journal of Fatigue</i> , 2018, 113, 113-125.	5.7	51
16	The effect of bi-modal and lamellar microstructures of Ti-6Al-4V on the behaviour of fatigue cracks emanating from edge notches. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2004, 27, 1073-1089.	3.4	50
17	Elasto-plastic behavior of a Warrington-Seale rope: Experimental analysis and finite element modeling. <i>Engineering Structures</i> , 2015, 82, 113-120.	5.3	44
18	On the combination of the critical distance theory with a multiaxial fatigue criterion for predicting the fatigue strength of notched and plain shot-peened parts. <i>International Journal of Fatigue</i> , 2016, 93, 133-147.	5.7	41

#	ARTICLE	IF	CITATIONS
19	A novel Strain-Energy-Density based fatigue criterion accounting for mean stress and plasticity effects on the medium-to-high-cycle uniaxial fatigue strength of plain and notched components. <i>International Journal of Fatigue</i> , 2020, 133, 105397.	5.7	40
20	A new challenge in the DEM/FEM simulation of the shot peening process: The residual stress field at a sharp edge. <i>International Journal of Mechanical Sciences</i> , 2020, 169, 105327.	6.7	40
21	Additively manufactured Ti-6Al-4V thin struts via laser powder bed fusion: Effect of building orientation on geometrical accuracy and mechanical properties. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 119, 104495.	3.1	40
22	Numerical Simulation of Residual Stress Relaxation in Shot Peened High-Strength Aluminum Alloys Under Reverse Bending Fatigue. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2010, 132, .	1.4	39
23	Determination of the fatigue critical distance according to the Line and the Point Methods with rounded V-notched specimen. <i>International Journal of Fatigue</i> , 2018, 106, 208-218.	5.7	39
24	Study of the Compression Behaviour of Ti6Al4V Trabecular Structures Produced by Additive Laser Manufacturing. <i>Materials</i> , 2019, 12, 1471.	2.9	38
25	Multiaxial fatigue resistance of shot peened high-strength aluminum alloys. <i>International Journal of Fatigue</i> , 2014, 61, 271-282.	5.7	36
26	Effect of the geometrical defectiveness on the mechanical properties of SLM biomedical Ti6Al4V lattices. <i>Procedia Structural Integrity</i> , 2018, 13, 161-167.	0.8	36
27	Geometric assessment of lattice materials built via Selective Laser Melting. <i>Materials Today: Proceedings</i> , 2019, 7, 353-361.	1.8	35
28	Effects of building direction and defect sensitivity on the fatigue behavior of additively manufactured H13 tool steel. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 108, 102634.	4.7	32
29	Influence of sharp microstructural gradients on the fatigue crack growth resistance of alpha+beta and near-alpha titanium alloys. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2005, 28, 909-922.	3.4	31
30	Effect of graphite morphology on the fatigue and fracture resistance of ferritic ductile cast iron. <i>Engineering Fracture Mechanics</i> , 2019, 206, 427-441.	4.3	31
31	Tribological behavior of the bronze-steel pair for worm gearing. <i>Wear</i> , 2013, 302, 1520-1527.	3.1	29
32	Fire behavior of steel wire ropes: Experimental investigation and numerical analysis. <i>Engineering Structures</i> , 2015, 84, 340-349.	5.3	29
33	Damage evolution in sinter-hardening powder-metallurgy steels during tensile and fatigue loading. <i>Materials & Design</i> , 2014, 61, 101-108.	5.1	27
34	Inverse determination of the fatigue Strain Energy Density control radius for conventionally and additively manufactured rounded V-notches. <i>International Journal of Fatigue</i> , 2019, 126, 306-318.	5.7	26
35	Surface layer modifications of micro-shot-peened Al-7075-T651: Experiments and stochastic numerical simulations. <i>Surface and Coatings Technology</i> , 2017, 321, 265-278.	4.8	25
36	Mean stress and plasticity effect prediction on notch fatigue and crack growth threshold, combining the theory of critical distances and multiaxial fatigue criteria. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2019, 42, 1228-1246.	3.4	25

#	ARTICLE	IF	CITATIONS
37	Dynamic Measurements of Impulses Generated by the Separation of Adhered Bodies under Near-Zero Gravity Conditions. <i>Experimental Mechanics</i> , 2008, 48, 777-787.	2.0	24
38	Plain fatigue resistance of shot peened high strength aluminium alloys: Effect of loading ratio. <i>Procedia Engineering</i> , 2010, 2, 397-406.	1.2	24
39	Investigation of the lubricated wear behavior of ductile cast iron and quenched and tempered alloy steel for possible use in worm gearing. <i>Wear</i> , 2016, 350-351, 68-73.	3.1	24
40	A 3D-Printed Ultra-Low Young's Modulus β -Ti Alloy for Biomedical Applications. <i>Materials</i> , 2020, 13, 2792.	2.9	24
41	A simplified and fast method to predict plain and notch fatigue of shot peened high-strength aluminium alloys under reverse bending. <i>Surface and Coatings Technology</i> , 2014, 243, 2-9.	4.8	23
42	High Spatial Resolution Evaluation of Residual Stresses in Shot Peened Specimens Containing Sharp and Blunt Notches by Micro-hole Drilling, Micro-slot Cutting and Micro-X-ray Diffraction Methods. <i>Experimental Mechanics</i> , 2016, 56, 1449-1463.	2.0	22
43	Residual stresses reconstruction in shot peened specimens containing sharp and blunt notches by experimental measurements and finite element analysis. <i>International Journal of Fatigue</i> , 2016, 87, 102-111.	5.7	22
44	Building the Kitagawa-Takahashi diagram of flawed materials and components using an optimized V-notched cylindrical specimen. <i>Engineering Fracture Mechanics</i> , 2020, 224, 106810.	4.3	22
45	Effect of heat treatment temperature and turning residual stresses on the plain and notch fatigue strength of Ti-6Al-4V additively manufactured via laser powder bed fusion. <i>International Journal of Fatigue</i> , 2022, 162, 107009.	5.7	22
46	Fatigue properties of Ti6Al4V cellular specimens fabricated via SLM: CAD vs real geometry. <i>Procedia Structural Integrity</i> , 2017, 7, 116-123.	0.8	21
47	A New Perspective in Adhesion Science and Technology: Testing Dynamic Failure of Adhesive Junctions for Space Applications. <i>Experimental Mechanics</i> , 2010, 50, 1213-1223.	2.0	20
48	Single-point incremental forming of sheet metals: Experimental study and numerical simulation. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2017, 231, 301-312.	2.4	20
49	Multiaxial plain and notch fatigue strength of thick-walled ductile cast iron EN-GJS-600-3: Combining multiaxial fatigue criteria, theory of critical distances, and defect sensitivity. <i>International Journal of Fatigue</i> , 2022, 156, 106703.	5.7	20
50	Orthotropic elastic constants of 2D cellular structures with variously arranged square cells: The effect of filleted wall junctions. <i>International Journal of Mechanical Sciences</i> , 2017, 122, 63-78.	6.7	19
51	The role of lubricating fluid pressurization and entrapment on the path of inclined edge cracks originated under rolling-sliding contact fatigue: Numerical analyses vs. experimental evidences. <i>International Journal of Fatigue</i> , 2016, 92, 517-530.	5.7	17
52	Fatigue and Fracture Resistance of Heavy-Section Ferritic Ductile Cast Iron. <i>Metals</i> , 2017, 7, 88.	2.3	17
53	Rapid evaluation of notch stress intensity factors using the peak stress method with 3D tetrahedral finite element models: Comparison of commercial codes. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2022, 45, 1005-1034.	3.4	16
54	Fatigue Behavior of Shot Peened Notched Specimens: Effect of the Residual Stress Field Ahead of the Notch Root. <i>Procedia Engineering</i> , 2015, 109, 80-88.	1.2	15

#	ARTICLE	IF	CITATIONS
55	Statistical properties of threshold and notch derived estimations of the critical distance according to the line method of the theory of critical distances. <i>International Journal of Fatigue</i> , 2020, 137, 105656.	5.7	15
56	Plain and notch fatigue strength of thick-walled ductile cast iron EN-GJS-600-3: A double-notch critical distance approach to defect sensitivity. <i>International Journal of Fatigue</i> , 2021, 152, 106414.	5.7	15
57	Numerical analysis of the rolling process of shaped wires for locked steel ropes. <i>Journal of Materials Processing Technology</i> , 2005, 170, 97-107.	6.3	14
58	Rotary draw bending of rectangular tubes using a novel parallelepiped elastic mandrel. <i>International Journal of Advanced Manufacturing Technology</i> , 2016, 85, 1089-1103.	3.0	14
59	Fatigue cracks emanating from sharp notches in high-strength aluminium alloys: The effect of loading direction, kinking, notch geometry and microstructure. <i>International Journal of Fatigue</i> , 2009, 31, 1996-2005.	5.7	13
60	Forming rectangular tubes into complicated 3D shapes by combining three-roll push bending, twisting and rotary draw bending: the role of the fabrication loading history on the mechanical response. <i>International Journal of Material Forming</i> , 2019, 12, 907-926.	2.0	13
61	Quasi-static compression and compression fatigue behavior of regular and irregular cellular biomaterials. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 1178-1194.	3.4	13
62	DEM/FEM simulation of the shot peening process on sharp notches. <i>International Journal of Mechanical Sciences</i> , 2021, 204, 106547.	6.7	13
63	The effect of notch plasticity on the behaviour of fatigue cracks emanating from edge-notches in high-strength β -titanium alloys. <i>Engineering Fracture Mechanics</i> , 2008, 75, 169-187.	4.3	12
64	On the variability in static and cyclic mechanical properties of extruded 7075-T6 aluminum alloy. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 2975-2989.	3.4	12
65	Manufacturability of lattice structures fabricated by laser powder bed fusion: A novel biomedical application of the beta Ti-21S alloy. <i>Additive Manufacturing</i> , 2022, 50, 102556.	3.0	12
66	Structural health monitoring of wind towers: residual fatigue life estimation. <i>Smart Materials and Structures</i> , 2013, 22, 045017.	3.5	11
67	Statistical significance of notch fatigue prognoses based on the strain-energy density method: Application to conventionally and additively manufactured materials. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 109, 102720.	4.7	11
68	Incorporating residual stresses into a Strain-Energy-Density based fatigue criterion and its application to the assessment of the medium-to-very-high-cycle fatigue strength of shot-peened parts. <i>International Journal of Fatigue</i> , 2020, 139, 105728.	5.7	11
69	Low and high cycle fatigue properties of an ultrahigh strength TRIP bainitic steel. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2017, 40, 1459-1471.	3.4	10
70	Uniaxial static mechanical properties of regular, irregular and random additively manufactured cellular materials: Nominal vs. real geometry. <i>Forces in Mechanics</i> , 2021, 2, 100007.	2.8	10
71	Mode III critical distance determination with optimized V-notched specimen under torsional fatigue and size effects on the inverse search probability distribution. <i>International Journal of Fatigue</i> , 2021, 151, 106351.	5.7	9
72	A general weight function for inclined kinked edge cracks in a semi-plane. <i>Engineering Fracture Mechanics</i> , 2010, 77, 1631-1643.	4.3	8

#	ARTICLE	IF	CITATIONS
73	A fully parametric weight function for inclined edge cracks with a kink. <i>Engineering Fracture Mechanics</i> , 2015, 136, 195-212.	4.3	8
74	Tension-compression asymmetric mechanical behaviour of lattice cellular structures produced by selective laser melting. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2020, 234, 3241-3256.	2.1	8
75	Torsional-loaded notched specimen fatigue strength prediction based on mode I and mode III critical distances and fracture surface investigations with a 3D optical profilometer. <i>International Journal of Fatigue</i> , 2022, 161, 106913.	5.7	8
76	The role of the second body on the pressurization and entrapment of oil in cracks produced under lubricated rolling-sliding contact fatigue. <i>Theoretical and Applied Fracture Mechanics</i> , 2017, 91, 3-16.	4.7	7
77	Shape optimization of a metallic flywheel using an evolutive system method: Design of an asymmetrical shape for mechanical interface. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2018, 232, 217-230.	2.1	7
78	Tooth Root Bending Fatigue Strength of High-Density Sintered Small-Module Spur Gears: The Effect of Porosity and Microstructure. <i>Metals</i> , 2019, 9, 599.	2.3	7
79	Effect of Process Parameters on the Surface Microgeometry of a Ti6Al4V Alloy Manufactured by Laser Powder Bed Fusion: 3D vs. 2D Characterization. <i>Metals</i> , 2022, 12, 106.	2.3	7
80	Tooth root bending fatigue strength of small-module sinter-hardened spur gears. <i>Powder Metallurgy</i> , 2017, 60, 149-156.	1.7	6
81	Fluid Pressurization and Entrapment Effects on the SIFs of Cracks produced under lubricated Rolling-Sliding Contact Fatigue. <i>Procedia Structural Integrity</i> , 2016, 2, 3098-3108.	0.8	5
82	Numerical/experimental strategies to infer enhanced liquid thermal conductivity and roughness in laser powder-bed fusion processes. <i>Additive Manufacturing</i> , 2019, 27, 552-564.	3.0	5
83	Fatigue Corrosion Behavior of Friction Welded Dissimilar Joints in Different Testing Conditions. <i>Metals</i> , 2020, 10, 1018.	2.3	5
84	Comparative Analysis of Shot-Peened Residual Stresses Using Micro-Hole Drilling, Micro-Slot Cutting, X-ray Diffraction Methods and Finite-Element Modelling. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 215-223.	0.5	5
85	Experimental investigation on the propagation of fatigue cracks emanating from sharp notches. <i>Meccanica</i> , 2008, 43, 201-210.	2.0	4
86	Mechanical Properties of Porous Structures Produced by Selective Laser Melting of a Ti6Al4V Alloy Powder. <i>Funtai Oyobi Fummatu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy</i> , 2018, 65, 481-485.	0.2	4
87	Effect of strut cross section and strut defect on tensile properties of cubic cellular structure. <i>Material Design and Processing Communications</i> , 2020, 2, e118.	0.9	4
88	On the effect of the node and building orientation on the fatigue behavior of Lâ€PBF Ti6Al4V lattice structure subâ€unital elements. <i>Material Design and Processing Communications</i> , 2021, 3, e258.	0.9	4
89	Non-linear Mechanical Behaviour of Metallic Micro-wires under Dynamic Axial Loads. <i>Experimental Mechanics</i> , 2012, 52, 215-228.	2.0	3
90	Statistical evaluation of the critical distance in the finite life fatigue regime. <i>Procedia Structural Integrity</i> , 2020, 28, 702-709.	0.8	3

#	ARTICLE	IF	CITATIONS
91	A novel experimental procedure to reproduce the load history at the crack tip produced by lubricated rolling sliding contact fatigue. <i>Engineering Fracture Mechanics</i> , 2018, 192, 129-147.	4.3	2
92	Sensibility analysis of the fatigue critical distance values assessed by combining plain and notched cylindrical specimens. <i>Procedia Structural Integrity</i> , 2018, 8, 67-74.	0.8	2
93	Modelling the Residual Stress Field Ahead of the Notch Root in Shot Peened V-Notched Samples. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 249-261.	0.5	2
94	Inverse determination and probability distribution of the mode III strain energy density control radius with an optimized V-notched specimen under torsional fatigue loading. <i>International Journal of Fatigue</i> , 2022, 159, 106787.	5.7	2
95	Fatigue fracture surface investigations with a 3D optical profiler. <i>Procedia Structural Integrity</i> , 2022, 39, 450-459.	0.8	2
96	Yield and fracture loci for a ductile cast iron ENâ€GJSâ€600â€3 under biaxial stresses. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2022, 45, 783-800.	3.4	2
97	Optimal notched specimen parameters for accurate fatigue critical distance determination. <i>Procedia Structural Integrity</i> , 2017, 5, 817-824.	0.8	1
98	Fatigue and fracture resistance of ferritic ductile cast iron: the effect of Sb and solidification time. <i>MATEC Web of Conferences</i> , 2018, 165, 13011.	0.2	1
99	Effect of Porosity and Cell Topology on Elastic-Plastic Behavior of Cellular Structures. <i>Procedia Structural Integrity</i> , 2019, 18, 93-100.	0.8	1
100	Stress concentration factors for planar square cell lattices with filleted junctions. <i>Material Design and Processing Communications</i> , 2020, 2, e98.	0.9	1
101	Fatigue Design and Defects in Metals and Alloys. <i>Metals</i> , 2020, 10, 865.	2.3	1
102	Dimensional metrology of additively manufactured lattice structures by combined tactile probe and Xâ€ray tomography. <i>Material Design and Processing Communications</i> , 0, , .	0.9	1
103	Comparative Metrological Characterization of Ti-6Al-4V Lattice Structures Produced by Laser-Powder Bed Fusion. , 2022, , 235-250.		1
104	Correlation between asâ€designed and asâ€built Young's modulus of cubic regular, cubic irregular, and trabecular cellular materials. <i>Material Design and Processing Communications</i> , 0, , e257.	0.9	0
105	Plain and notch fatigue strength of ductile cast iron GJS600: The role of defect sensitivity. <i>Procedia Structural Integrity</i> , 2022, 39, 65-70.	0.8	0