Denis Benasciutti

List of Publications by Year
in descending order

73	1,796	304743 22	289244 40
papers	citations	h-index	g-index

78	78	78	926
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spectral methods for lifetime prediction under wide-band stationary random processes. International Journal of Fatigue, 2005, 27, 867-877.	5.7	272
2	Vibration energy scavenging via piezoelectric bimorphs of optimized shapes. Microsystem Technologies, 2010, 16, 657-668.	2.0	170
3	Comparison of spectral methods for fatigue analysis of broad-band Gaussian random processes. Probabilistic Engineering Mechanics, 2006, 21, 287-299.	2.7	146
4	Harvested power and sensitivity analysis of vibrating shoe-mounted piezoelectric cantilevers. Smart Materials and Structures, 2010, 19, 115011.	3.5	103
5	Cycle distribution and fatigue damage assessment in broad-band non-Gaussian random processes. Probabilistic Engineering Mechanics, 2005, 20, 115-127.	2.7	73
6	A stress invariant based spectral method to estimate fatigue life under multiaxial random loading. International Journal of Fatigue, 2011, 33, 887-899.	5.7	65
7	Recent developments in frequency domain multi-axial fatigue analysis. International Journal of Fatigue, 2016, 91, 397-413.	5.7	64
8	Fatigue life assessment in non-Gaussian random loadings. International Journal of Fatigue, 2006, 28, 733-746.	5.7	57
9	On fatigue damage assessment in bimodal random processesâ˜†. International Journal of Fatigue, 2007, 29, 232-244.	5.7	49
10	Some analytical expressions to measure the accuracy of the â€œequivalent von Mises stressâ€•in vibration multiaxial fatigue. Journal of Sound and Vibration, 2014, 333, 4326-4340.	3.9	49
11	A novel engineering method based on the critical plane concept to estimate the lifetime of weldments subjected to variable amplitude multiaxial fatigue loading. Fatigue and Fracture of Engineering Materials and Structures, 2009, 32, 441-459.	3.4	45
12	Finite elements prediction of thermal stresses in work roll of hot rolling mills. Procedia Engineering, 2010, 2, 707-716.	1.2	45
13	Frequencyâ€based analysis of random fatigue loads: Models, hypotheses, reality. Materialwissenschaft Und Werkstofftechnik, 2018, 49, 345-367.	0.9	44
14	Analogies between spectral methods and multiaxial criteria in fatigue damage evaluation. Probabilistic Engineering Mechanics, 2013, 31, 39-45.	2.7	42
15	On thermal stress and fatigue life evaluation in work rolls of hot rolling mill. Journal of Strain Analysis for Engineering Design, 2012, 47, 297-312.	1.8	32
16	Dirlik and Tovo-Benasciutti Spectral Methods in Vibration Fatigue: A Review with a Historical Perspective. Metals, 2021, 11, 1333.	2.3	31
17	Frequency-based fatigue analysis of non-stationary switching random loads. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 1016-1029.	3.4	29
18	Vibration analysis of a Sendzimir cold rolling mill and bearing fault detection. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2010, 224, 1645-1654.	2.1	28

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19	Homogenized limit analysis of masonry structures with random input properties: polynomial Response Surface approximation and Monte Carlo simulations. Structural Engineering and Mechanics, 2010, 34, 417-447.	1.0	28
20	On fatigue cycle distribution in non-stationary switching loadings with Markov chain structure. Probabilistic Engineering Mechanics, 2010, 25, 406-418.	2.7	25
21	Fatigue damage assessment in wide-band uniaxial random loadings by PSD decomposition: outcomes from recent research. International Journal of Fatigue, 2016, 91, 248-250.	5.7	25
22	Thermo-Mechanical Finite Element Simulation and Fatigue Life Assessment of a Copper Mould for Continuous Casting of Steel. Procedia Engineering, 2015, 133, 688-697.	1.2	24
23	Fatigue damage assessment of a car body-in-white using a frequency-domain approach. International Journal of Materials and Product Technology, 2007, 30, 172.	0.2	20
24	A frequencyâ€domain formulation of MCE method for multiâ€axial random loadings. Fatigue and Fracture of Engineering Materials and Structures, 2008, 31, 937-948.	3.4	20
25	Experimental characterisation of a CuAg alloy for thermoâ€mechanical applications. Part 1: Identifying parameters of nonâ€linear plasticity models. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 1364-1377.	3.4	17
26	Estimation of Material Parameters in Nonlinear Hardening Plasticity Models and Strain Life Curves for CuAg Alloy. IOP Conference Series: Materials Science and Engineering, 2016, 119, 012020.	0.6	15
27	Simplified numerical approach for the thermo-mechanical analysis of steelmaking components under cyclic loading: an anode for electric arc furnace. Ironmaking and Steelmaking, 2019, 46, 56-65.	2.1	15
28	Cyclic Plasticity and Low Cycle Fatigue of an AISI 316L Stainless Steel: Experimental Evaluation of Material Parameters for Durability Design. Materials, 2021, 14, 3588.	2.9	15
29	A harmonic one-dimensional element for non-linear thermo-mechanical analysis of axisymmetric structures under asymmetric loads: The case of hot strip rolling. Journal of Strain Analysis for Engineering Design, 2016, 51, 518-531.	1.8	14
30	Analytical characterization and experimental validation of performances of piezoelectric vibration energy scavengers. , 2009, , .		13
31	An algorithm for fast critical plane search in computerâ€aided engineering durability analysis under multiaxial random loadings: Application to the Carpinteriâ€“Spagnoliâ€“Vantadori spectral method. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 1978-1993.	3.4	13
32	Basic Principles of Spectral Multi-axial Fatigue Analysis. Procedia Engineering, 2015, 101, 34-42.	1.2	12
33	Variability of the fatigue damage due to the randomness of a stationary vibration load. International Journal of Fatigue, 2020, 141, 105891.	5.7	12
34	Thermal stress analysis of PCM containers for temperature smoothing of waste gas. Applied Thermal Engineering, 2016, 106, 1010-1022.	6.0	11
35	â€œProjection-by-Projectionâ€•Approach: A Spectral Method for Multiaxial Random Fatigue. , 0, , .		10
36	Microstructural and mechanical characterisation of laser-welded lap joints with linear and circular beads in thin low carbon steel sheets. Materials & Design, 2014, 62, 205-216.	5.1	10

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37	Vibration fatigue tests by tri-axis shaker: design of an innovative system for uncoupled bending/torsion loading. Procedia Structural Integrity, 2018, 8, 92-101.	0.8	10
38	Copper Mold for Continuous Casting of Steel: Modelling Strategies to Assess Thermal Distortion and Durability. Key Engineering Materials, 0, 754, 287-290.	0.4	9
39	Friction stir welds in aluminium: Design Sâ€N curves from statistical analysis of literature data. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 2212-2230.	3.4	9
40	On the optimal bending deflection of piezoelectric scavengers. Journal of Intelligent Material Systems and Structures, 2013, 24, 627-639.	2.5	8
41	Experimental characterisation of a <scp>CuAg</scp> alloy for thermoâ€mechanical applications. Part 2: Design strainâ€life curves estimated via statistical analysis. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 1378-1388.	3.4	8
42	The â€œProjection-by-Projectionâ€•(PbP) criterion for multiaxial random fatigue loadings. Frattura Ed Integrita Strutturale, 2019, 13, 348-366.	0.9	8
43	A numerical approach for the analysis of deformable journal bearings. Frattura Ed Integrita Strutturale, 2012, 6, 37-45.	0.9	7
44	Variance of fatigue damage in stationary random loadings: comparison between time- and frequency-domain results. Procedia Structural Integrity, 2019, 24, 398-407.	0.8	7
45	On the damage mechanisms in a continuous casting mold: After-service material characterization and finite element simulation. Engineering Failure Analysis, 2018, 94, 480-492.	4.0	6
46	More on variance of fatigue damage in non-Gaussian random loadings â€“ effect of skewness and kurtosis. Procedia Structural Integrity, 2020, 25, 101-111.	0.8	6
47	Variance of the fatigue damage in non-Gaussian stochastic processes with narrow-band power spectrum. Structural Safety, 2021, 93, 102131.	5.3	6
48	Acceleration techniques for the numerical simulation of the cyclic plasticity behaviour of mechanical components under thermal loads. MATEC Web of Conferences, 2018, 165, 19010.	0.2	5
49	An Isotropic Model for Cyclic Plasticity Calibrated on the Whole Shape of Hardening/Softening Evolution Curve. Metals, 2019, 9, 950.	2.3	5
50	Fatigue Analysis of Nonstationary Random Loadings Measured in an Industrial Vehicle Wheel: Uncertainty of Fatigue Damage. Metals, 2022, 12, 616.	2.3	5
51	An innovative system for uncoupled bending/torsion tests by tri-axis shaker: numerical simulations and experimental results. MATEC Web of Conferences, 2018, 165, 16006.	0.2	4
52	Benchmarks for Accelerated Cyclic Plasticity Models with Finite Elements. Metals, 2020, 10, 781.	2.3	4
53	An Overview of Fatigue Testing Systems for Metals under Uniaxial and Multiaxial Random Loadings. Metals, 2021, 11, 447.	2.3	4
54	Accelerated cyclic plasticity models for FEM analysis of steelmaking components under thermal loads. Procedia Structural Integrity, 2018, 8, 174-183.	0.8	3

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55	A bandwidth correction to the Allegri-Zhang solution for accelerated random vibration testing. MATEC Web of Conferences, 2018, 165, 07006.	0.2	3
56	Confidence interval of the â€˜single-momentâ€™ fatigue damage calculated from an estimated power spectral density. International Journal of Fatigue, 2021, 145, 106131.	5.7	3
57	Variance of fatigue damage in narrowband Gaussian random loadings: Exact solution and approximations. International Journal of Fatigue, 2021, 151, 106366.	5.7	3
58	Sulla stima della vita a fatica di giunti saldati soggetti a carichi multiassiali ad ampiezza variabile. Frattura Ed Integrita Strutturale, 2009, 3, 125-134.	0.9	2
59	A Semi-Analytical Finite Element Approach in Machine Design of Axisymmetric Structures. , 0, , .		2
60	Experimental characterization of a CuAg alloy for thermo-mechanical applications: non-linear plasticity models and low-cycle fatigue curves. Procedia Engineering, 2018, 213, 743-753.	1.2	2
61	Techniques to accelerate thermo-mechanical simulations in large-scale FE models with nonlinear plasticity and cyclic input. IOP Conference Series: Materials Science and Engineering, 2019, 629, 012008.	0.6	2
62	FEM strategies for Large Scale Thermo-Mechanical Simulations with Material Non-linearity. IOP Conference Series: Materials Science and Engineering, 2019, 649, 012022.	0.6	2
63	Metal Plasticity and Fatigue at High Temperature. Metals, 2020, 10, 326.	2.3	2
64	Comment on paper: A unified frequency domain fatigue damage modeling approach for random-on-random spectrum [Z. Li and A. Ince. Int J Fatigue, 2019;124:123â€“137]. International Journal of Fatigue, 2020, 136, 105595.	5.7	2
65	A frequency-domain model assessing random loading damage by the strain energy density parameter. International Journal of Fatigue, 2021, 146, 106152.	5.7	2
66	Material Modelling in Multi-Physics FEM Simulation. Key Engineering Materials, 2018, 783, 41-45.	0.4	1
67	An efficient procedure to speed up critical plane search in multiaxial fatigue: Application to the Carpinteri-Spagnoli spectral criterion. MATEC Web of Conferences, 2019, 300, 16003.	0.2	1
68	Fatigue strength of S355JC steel under harmonic and random bending-torsion loading by a tri-axis shaker: Preliminary experimental results. MATEC Web of Conferences, 2019, 300, 17006.	0.2	1
69	Numerical simulation of cyclic plasticity in mechanical components under low cycle fatigue loading: accelerated material models. Procedia Structural Integrity, 2019, 19, 548-555.	0.8	1
70	An Industry-Oriented Approach for the Numerical Analysis of Steelmaking Components under Thermal Loads. , 2017, , .		0
71	How Material Properties Affect the Thermal Distortion of a Mold for Continuous Casting of Steel. Key Engineering Materials, 0, 774, 429-434.	0.4	0
72	Computerâ€aided durability analysis of complex structures under multiaxial random loadings through the Projectionâ€byâ€Projection spectral method. Material Design and Processing Communications, 2019, 1, e48.	0.9	0

#	Article	IF	Citations
73	Fracture, Fatigue, and Structural Integrity of Metallic Materials and Components Undergoing Random or Variable Amplitude Loadings. Metals, 2022, 12, 919.	2.3	0