

# Paolo Ferro

## List of Publications by Year in descending order

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115  
papers

2,099  
citations

201674

27  
h-index

276875

41  
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119  
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119  
docs citations

119  
times ranked

1549  
citing authors

#	ARTICLE	IF	CITATIONS
1	An investigation of fusion zone microstructures in electron beam welding of copper-stainless steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 424, 163-173.	5.6	164
2	Fatigue strength of blunt V-notched specimens produced by selective laser melting of Ti-6Al-4V. <i>Theoretical and Applied Fracture Mechanics</i> , 2018, 97, 376-384.	4.7	95
3	The influence of phase transformations on residual stresses induced by the welding process—3D and 2D numerical models. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2006, 14, 117-136.	2.0	88
4	Microstructural, compositional and residual stress evaluation of CO2 laser welded superaustenitic AISI 904L stainless steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 424, 117-127.	5.6	83
5	Investigation of electron-beam welding in wrought Inconel 706—experimental and numerical analysis. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 392, 94-105.	5.6	82
6	Induction heat treatment of a ISO C45 steel bar: Experimental and numerical analysis. <i>Computational Materials Science</i> , 2006, 35, 98-106.	3.0	74
7	Fatigue properties of ductile cast iron containing chunky graphite. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 554, 122-128.	5.6	66
8	A modified volumetric energy density—based approach for porosity assessment in additive manufacturing process design. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 110, 1911-1921.	3.0	60
9	Fatigue Assessment of Ti-6Al-4V Circular Notched Specimens Produced by Selective Laser Melting. <i>Metals</i> , 2017, 7, 291.	2.3	59
10	Materials selection in a critical raw materials perspective. <i>Materials and Design</i> , 2019, 177, 107848.	7.0	53
11	The local strain energy density approach applied to prestressed components subjected to cyclic load. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2014, 37, 1268-1280.	3.4	52
12	Asymptotic residual stresses in butt-welded joints under fatigue loading. <i>Theoretical and Applied Fracture Mechanics</i> , 2016, 83, 114-124.	4.7	52
13	Fatigue Behavior of Porous Ti-6Al-4V Made by Laser-Engineered Net Shaping. <i>Materials</i> , 2018, 11, 284.	2.9	51
14	Defects as a root cause of fatigue weakening of additively manufactured AlSi10Mg components. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 108, 102611.	4.7	50
15	The effect of Equal Channel Angular Pressing on the stress corrosion cracking susceptibility of AZ31 alloy in simulated body fluid. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 106, 103724.	3.1	43
16	Effect of inoculant containing rare earth metals and bismuth on microstructure and mechanical properties of heavy-section near-eutectic ductile iron castings. <i>Journal of Materials Processing Technology</i> , 2013, 213, 1601-1608.	6.3	42
17	Quantification of the Influence of Residual Stresses on Fatigue Strength of Al-Alloy Welded Joints by Means of the Local Strain Energy Density Approach. <i>Strength of Materials</i> , 2016, 48, 426-436.	0.5	38
18	Local strain energy density to predict size-dependent brittle fracture of cracked specimens under mixed mode loading. <i>Theoretical and Applied Fracture Mechanics</i> , 2016, 86, 217-224.	4.7	35

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19	A two-term stress function approach to evaluate stress distributions in bonded joints of different geometries. <i>Journal of Strain Analysis for Engineering Design</i> , 2002, 37, 385-398.	1.8	33
20	Generalized stress intensity factors due to steady and transient thermal loads with applications to welded joints. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2006, 29, 440-453.	3.4	32
21	Annealing temperature effects on super duplex stainless steel UNS s32750 welded joints. I: microstructure and partitioning of elements. <i>Journal of Materials Science</i> , 2010, 45, 4369-4377.	3.7	32
22	Annealing temperature effects on superduplex stainless steel UNS S32750 welded joints. II: pitting corrosion resistance evaluation. <i>Journal of Materials Science</i> , 2010, 45, 4378-4389.	3.7	32
23	A Semiempirical Model for Sigma-Phase Precipitation in Duplex and Superduplex Stainless Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 1109-1116.	2.2	31
24	Asymptotic residual stress distribution induced by multipass welding processes. <i>International Journal of Fatigue</i> , 2017, 101, 421-429.	5.7	31
25	Asymptotic thermal and residual stress distributions due to transient thermal loads. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2009, 32, 936-948.	3.4	30
26	Laser welding of copper-nickel alloys: a numerical and experimental analysis. <i>Science and Technology of Welding and Joining</i> , 2005, 10, 299-310.	3.1	29
27	Influence of phase transformations on the asymptotic residual stress distribution arising near a sharp V-notch tip. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2012, 20, 085003.	2.0	28
28	Mechanical and Fatigue Properties of Heavy Section Solution Strengthened Ferritic Ductile Iron Castings. <i>Advanced Engineering Materials</i> , 2016, 18, 2070-2075.	3.5	28
29	A dissolution kinetics model and its application to duplex stainless steels. <i>Acta Materialia</i> , 2013, 61, 3141-3147.	7.9	26
30	Porosity Inducing Process Parameters in Selective Laser Melted AlSi10Mg Aluminium Alloy. <i>Physical Mesomechanics</i> , 2020, 23, 256-262.	1.9	26
31	Fracture behaviour of notched as-built EBM parts: Characterization and interplay between defects and notch strengthening behaviour. <i>Theoretical and Applied Fracture Mechanics</i> , 2018, 98, 178-185.	4.7	24
32	A Semianalytical Thermal Model for Friction Stir Welding. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010, 41, 440-449.	2.2	21
33	Fatigue strength improvement of heavy-section pearlitic ductile iron castings by in-mould inoculation treatment. <i>International Journal of Fatigue</i> , 2017, 102, 221-227.	5.7	21
34	Novel method for the fatigue strength assessment of heavy sections made by ductile cast iron in presence of solidification defects. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 1746-1757.	3.4	21
35	Mechanical and fatigue properties of pearlitic ductile iron castings characterized by long solidification times. <i>Engineering Failure Analysis</i> , 2017, 79, 902-912.	4.0	20
36	Effect of in-mould inoculant composition on microstructure and fatigue behaviour of heavy section ductile iron castings. <i>Procedia Structural Integrity</i> , 2016, 2, 3150-3157.	0.8	19

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37	Determination of Fatigue Limit by Static Thermographic Method and Classic Thermographic Method on Notched Specimens. <i>Procedia Structural Integrity</i> , 2020, 26, 166-174.	0.8	18
38	Porosity effect on tensile behavior of Ti-6Al-4V specimens produced by laser engineered net shaping technology. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2021, 235, 1930-1937.	2.1	18
39	Long solidification time effect on solution strengthened ferritic ductile iron fatigue properties. <i>International Journal of Fatigue</i> , 2021, 145, 106137.	5.7	16
40	Methodologies and experimental validations of welding process numerical simulation. <i>International Journal of Computational Materials Science and Surface Engineering</i> , 2010, 3, 114.	0.2	15
41	Using the Hybrid Metal Extrusion & Bonding (HYB) Process for Dissimilar Joining of AA6082-T6 and S355. <i>Procedia Structural Integrity</i> , 2018, 13, 249-254.	0.8	15
42	Understanding powder bed fusion additive manufacturing phenomena via numerical simulation. <i>Frattura Ed Integrita Strutturale</i> , 2020, 14, 252-284.	0.9	15
43	Cr Segregation and Impact Fracture in a Martensitic Stainless Steel. <i>Coatings</i> , 2020, 10, 843.	2.6	14
44	Metallurgical and mechanical characterization of electron beam welded DP600 steel joints. <i>Journal of Materials Science</i> , 2012, 47, 199-207.	3.7	13
45	A simplified model for TIG-dressing numerical simulation. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2017, 25, 035012.	2.0	12
46	Crack initiation and propagation from geometric microdefects: Experiment and transition fatigue behavior. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 2323-2336.	3.4	12
47	The peak stress method to calculate residual notch stress intensity factors in welded joints. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 727-738.	3.4	11
48	Design for Recycling in a Critical Raw Materials Perspective. <i>Recycling</i> , 2019, 4, 44.	5.0	11
49	Effect of Solidification Time on Microstructural, Mechanical and Fatigue Properties of Solution Strengthened Ferritic Ductile Iron. <i>Metals</i> , 2019, 9, 24.	2.3	11
50	A simplified non-linear numerical method for the assessment of welding induced deformations. <i>Marine Structures</i> , 2021, 78, 102982.	3.8	11
51	Influence of solidification defects on the fatigue behaviour of heavy-section silicon solution-strengthened ferritic ductile cast irons. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2018, 41, 2231-2238.	3.4	10
52	Calculation of 3D residual notch stress intensity factors by means of the peak stress method. <i>Theoretical and Applied Fracture Mechanics</i> , 2019, 100, 377-382.	4.7	10
53	Product design from an environmental and critical raw materials perspective. <i>International Journal of Sustainable Engineering</i> , 2021, 14, 1-11.	3.5	10
54	Residual Notch Stress Intensity Factors in Welded Joints Evaluated by 3D Numerical Simulations of Arc Welding Processes. <i>Materials</i> , 2021, 14, 812.	2.9	10

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55	Mechanical and Metallurgical Properties of CO2 Laser Beam INCONEL 625 Welded Joints. Applied Sciences (Switzerland), 2021, 11, 7002.	2.5	10
56	Review of recent advances in local approaches applied to pre-stressed components under fatigue loading. Procedia Structural Integrity, 2016, 2, 3467-3474.	0.8	9
57	Simulating the dependence of the filler wire feeding on the wire size in the hybrid metal extrusion & bonding (HYB) process. Procedia Structural Integrity, 2020, 26, 321-329.	0.8	9
58	A Semi-Analytical Model for the Heat Generation during Hybrid Metal Extrusion and Bonding (HYB). Materials, 2021, 14, 170.	2.9	9
59	Microstructural and mechanical characterization of a stainless-steel wire mesh reinforced Al-matrix composite: Bimetallic components for lightweight design. Frattura Ed Integrita Strutturale, 2021, 15, 289-301.	0.9	8
60	Quantitative analyses on geometric shape effect of microdefect on fatigue accumulation in 316L stainless steel. Engineering Fracture Mechanics, 2022, 269, 108517.	4.3	8
61	Fatigue strength of sharp V-notched specimens made of ductile cast iron. Engineering Failure Analysis, 2017, 82, 308-314.	4.0	7
62	On the use of the Peak Stress Method for the calculation of Residual Notch Stress Intensity Factors: a preliminary investigation. Procedia Structural Integrity, 2017, 3, 191-200.	0.8	7
63	Strain Evolution in Cold-Warm Forged Steel Components Studied by Means of EBSD Technique. Materials, 2017, 10, 1441.	2.9	7
64	The influence of metallurgical data on residual stresses in Computational Welding. Procedia Structural Integrity, 2018, 9, 55-63.	0.8	7
65	Non-isothermal Dissolution Modelling of Sigma Phase in Duplex Stainless Steels. Acta Metallurgica Sinica (English Letters), 2016, 29, 859-868.	2.9	6
66	Effect of Heat Treatment on Commercial AlSi12Cu1(Fe) and AlSi12(b) Aluminum Alloy Die Castings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1631-1640.	2.2	6
67	A First Approach on Modelling the Thermal and Microstructure Fields During Aluminium Butt Welding Using the HYB PinPoint Extruder. Procedia Structural Integrity, 2020, 28, 2253-2260.	0.8	6
68	Effect of Heat Input on Distortions and Residual Stresses Induced by Gas Tungsten Arc Welding in SS 316L to INCONEL625 Multipass Dissimilar Welded Joints. Advances in Materials Science and Engineering, 2021, 2021, 1-9.	1.8	6
69	A Numerical and Experimental Analysis of Inconel 625 Electron-Beam Welding Thermal Aspects. Procedia Structural Integrity, 2019, 18, 63-74.	0.8	5
70	Adhesively bonded joint brittle fracture assessment via average strain energy density criterion. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 2907-2914.	3.4	5
71	Estimation of multi-pass welds deformations with Virtual Weld Bead method. Procedia Structural Integrity, 2020, 25, 149-158.	0.8	5
72	Does metallurgy affect the residual notch stress intensity factor value induced by welding operations? A comprehensive study via a 3D numerical model. International Journal of Fatigue, 2021, 149, 106261.	5.7	5

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73	Is 2D numerical modelling of welding process able to capture the residual notch stress intensity factor values?. Theoretical and Applied Fracture Mechanics, 2021, 114, 103006.	4.7	5
74	Numerical modelling of residual stress redistribution induced by TIG-dressing. Frattura Ed Integrita Strutturale, 2019, 13, 221-230.	0.9	5
75	Quantifying lamellar microstructural effect on the fatigue performance of bimodal Ti-6Al-4V with microdefect. International Journal of Fatigue, 2022, 163, 107045.	5.7	5
76	Modelling of the carburizing and quenching process applied to caterpillar track bushings. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 025019.	2.0	4
77	Alloy Substitution in a Critical Raw Materials Perspective. Frattura Ed Integrita Strutturale, 2020, 14, 81-91.	0.9	4
78	Thermal and Residual Stress Distributions in Inconel 625 Butt-Welded Plates: Simulation and Experimental Validation. Advances in Materials Science and Engineering, 2021, 2021, 1-12.	1.8	4
79	Molten Pool in Welding Processes: Phenomenological vs Fluid-Dynamic Numerical Simulation Approach. Materials Science Forum, 0, 884, 26-40.	0.3	3
80	Post welding heat treatment improving mechanical properties on Ti-6Al-4V. Procedia Structural Integrity, 2020, 26, 11-19.	0.8	3
81	How to apply mitigating actions against critical raw materials issues in mechanical design. Procedia Structural Integrity, 2020, 26, 28-34.	0.8	3
82	The strain energy density approach applied to bonded joints. Procedia Structural Integrity, 2020, 28, 19-25.	0.8	3
83	Rapid Calculation of Residual Stresses in Dissimilar S355â€“AA6082 Butt Welds. Materials, 2021, 14, 6644.	2.9	3
84	Influence of aluminum casting alloys chemical composition on the interaction with a 304L stainless steel insert. Procedia Structural Integrity, 2021, 33, 189-197.	0.8	3
85	Thermal load-induced notch stress intensity factors derived from averaged strain energy density. Procedia Structural Integrity, 2016, 2, 2367-2374.	0.8	2
86	A Solidification Time-Based Method for Rapid Evaluation of the Mechanical Properties of Grey Iron Castings. International Journal of Metalcasting, 2019, 13, 845-852.	1.9	2
87	Effect of Seismic Load on Welded Structures Deformation. Procedia Structural Integrity, 2020, 28, 162-170.	0.8	2
88	A Novel Method for Welding Residual Deformations Prediction. Procedia Structural Integrity, 2020, 28, 171-179.	0.8	2
89	A RAPID APPROACH TO ESTIMATE THE MECHANICAL PROPERTIES OF GREY CAST IRON CASTINGS. Acta Metallurgica Slovaca, 2018, 24, 213-222.	0.7	2
90	A metallurgical and thermal analysis of Inconel 625 electron-beam welded joints. Frattura Ed Integrita Strutturale, 2019, 13, 251-263.	0.9	2

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91	The Use of Matlab in Advanced Design of Bonded and Welded Joints. , 0, , .		1
92	Prediction of Defects in Multistage Cold Forging by Using Finite Element Method. Key Engineering Materials, 0, 622-623, 659-663.	0.4	1
93	Experimental Damage Criterion for Static and Fatigue Life Assessment of Commercial Aluminum Alloy Die Castings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2574-2583.	2.2	1
94	The effect of residual stress on fatigue behavior of V-notched components: a review. Procedia Structural Integrity, 2017, 3, 119-125.	0.8	1
95	Experimental and numerical analysis of TIG-dressing applied to a steel weldment. Procedia Structural Integrity, 2018, 9, 64-70.	0.8	1
96	Fatigue strength assessment of heavy section ductile irons through the average strain density energy criterion. Material Design and Processing Communications, 2021, 3, e197.	0.9	1
97	The fatigue behavior of V-notches in presence of residual stresses: recent developments and future outcomes. Frattura Ed Integrita Strutturale, 2017, 11, 189-195.	0.9	1
98	Residual Notch Stress Intensity Factor assessment via 3D welding numerical simulation: influence of power input. Procedia Structural Integrity, 2022, 39, 120-127.	0.8	1
99	The influence of welding heat input on Residual Notch Stress Intensity Factor. International Journal of Fatigue, 2022, 163, 107042.	5.7	1
100	Effects of different production technologies on mechanical and metallurgical properties of precious metal denture alloys. Open Engineering, 2017, 7, 394-402.	1.6	0
101	Mechanical Qualification of the Hybrid Metal Extrusion & Bonding (HYB) Process for Butt Welding of 4 mm Plates of AA6082-T6. Procedia Structural Integrity, 2018, 9, 165-171.	0.8	0
102	Fatigue assessment of semi-circular notched specimens produced by Laser Engineered Net Shaping method. MATEC Web of Conferences, 2018, 188, 03016.	0.2	0
103	Rapid Calculation of Residual Notch Stress Intensity Factors (R- NSIFs) by Means of the Peak Stress Method. , 2018, , .		0
104	An efficient model for the TIGâ€dressing process numerical simulation. Material Design and Processing Communications, 2019, 1, e35.	0.9	0
105	CHARACTERIZATION OF CHROMIUM NITRIDE PRECIPITATION IN THE HEAT AFFECTED ZONE OF THE SUPERDUPLEX STAINLESS STEEL UNS S32750: AN EXPERIMENTAL AND NUMERICAL ANALYSIS. Acta Metallurgica Slovaca, 2021, 27, 57-62.	0.7	0
106	CORROSION RESISTANCE OF UNS S31803 STAINLESS STEEL WELDED JOINTS. Acta Metallurgica Slovaca, 2018, 24, 147-155.	0.7	0
107	A novel algorithm for crack path identification based on infrared images. Frattura Ed Integrita Strutturale, 2019, 13, 116-124.	0.9	0
108	Raw materials criticalities in material selection & design. , 2020, 3, 017-019.		0

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109	Setup of a numerical model for Post Welding Heat Treatment simulation of steel joints. Procedia Structural Integrity, 2021, 33, 198-206.	0.8	0
110	Preliminary Finite Element assessment of residual stresses in dissimilar AA6082-S355 butt welded joints produced with the Hybrid Metal Extrusion and Bonding (HYB) technique. Procedia Structural Integrity, 2021, 33, 704-713.	0.8	0
111	Crack Arresters Design for Fatigue Strength Improvement of Additively Manufactured Components. , 2020, , .		0
112	Metallurgical Characterization of Co-Cr-Mo Parts Processed by a Hybrid Manufacturing Technology. Physical Mesomechanics, 2022, 25, 155-167.	1.9	0
113	Casting and Solidification Processing. Metals, 2022, 12, 559.	2.3	0
114	Assessment of Metallurgical and Mechanical Properties of Welded Joints via Numerical Simulation and Experiments. Materials, 2022, 15, 3694.	2.9	0
115	Influence of short-term post welding heat treatments on corrosion resistance of UNS N06625 nickel-chromium-molybdenum alloy. Procedia Structural Integrity, 2022, 41, 430-438.	0.8	0