Telmo G Santos

List of Publications by Year
in descending order

83 papers	3,219 citations	186209 28 h-index	161767 54 g-index
85 all docs	85 docs citations	85 times ranked	2315 citing authors

#	Article	IF	Citations
1	Current Status and Perspectives on Wire and Arc Additive Manufacturing (WAAM). Materials, 2019, 12, 1121.	1.3	391
2	Revisiting fundamental welding concepts to improve additive manufacturing: From theory to practice. Progress in Materials Science, 2020, 107, 100590.	16.0	390
3	Mechanical and metallurgical characterization of friction stir welding joints of AA6061-T6 with AA6082-T6. Materials & Design, 2009, 30, 180-187.	5.1	183
4	Wire and arc additive manufacturing of HSLA steel: Effect of thermal cycles on microstructure and mechanical properties. Additive Manufacturing, 2019, 27, 440-450.	1.7	137
5	Non-destructive testing application of radiography and ultrasound for wire and arc additive manufacturing. Additive Manufacturing, 2018, 21, 298-306.	1.7	121
6	Steel-copper functionally graded material produced by twin-wire and arc additive manufacturing (T-WAAM). Materials and Design, 2022, 213, 110270.	3.3	120
7	Advanced technique for non-destructive testing of friction stir welding of metals. Measurement: Journal of the International Measurement Confederation, 2010, 43, 1021-1030.	2.5	94
8	Effect of milling parameters on HSLA steel parts produced by Wire and Arc Additive Manufacturing (WAAM). Journal of Manufacturing Processes, 2020, 59, 739-749.	2.8	94
9	Microstructural modification and ductility enhancement of surfaces modified by FSP in aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 506, 16-22.	2.6	83
10	Reinforcement strategies for producing functionally graded materials by friction stir processing in aluminium alloys. Journal of Materials Processing Technology, 2013, 213, 1609-1615.	3.1	82
11	Friction Stir Welding assisted by electrical Joule effect. Journal of Materials Processing Technology, 2014, 214, 2127-2133.	3.1	74
12	Ultracold-Wire and arc additive manufacturing (UC-WAAM). Journal of Materials Processing Technology, 2021, 296, 117196.	3.1	67
13	Production of Al/NiTi composites by friction stir welding assisted by electrical current. Materials and Design, 2017, 113, 311-318.	3.3	61
14	A differential planar eddy currents probe: Fundamentals, modeling and experimental evaluation. NDT and E International, 2012, 51, 85-93.	1.7	57
15	In-situ strengthening of a high strength low alloy steel during Wire and Arc Additive Manufacturing (WAAM). Additive Manufacturing, 2020, 34, 101200.	1.7	57
16	Phased Array Ultrasonic Inspection of Metal Additive Manufacturing Parts. Journal of Nondestructive Evaluation, 2019, 38, 1.	1.1	47
17	Effect of contaminations on the acoustic emissions during wire and arc additive manufacturing of 316L stainless steel. Additive Manufacturing, 2022, 51, 102585.	1.7	45
18	Contactless high-speed eddy current inspection of unidirectional carbon fiber reinforced polymer. Composites Part B: Engineering, 2019, 168, 226-235.	5.9	44

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19	Electrical conductivity field analysis for evaluation of FSW joints in AA6013 and AA7075 alloys. Journal of Materials Processing Technology, 2011, 211, 174-180.	3.1	43
20	Geometric optimization of a differential planar eddy currents probe for non-destructive testing. Sensors and Actuators A: Physical, 2013, 197, 96-105.	2.0	43
21	Non-destructive microstructural analysis by electrical conductivity: Comparison with hardness measurements in different materials. Journal of Materials Science and Technology, 2019, 35, 360-368.	5.6	42
22	Effect of heat treatments on 316 stainless steel parts fabricated by wire and arc additive manufacturing : Microstructure and synchrotron X-ray diffraction analysis. Additive Manufacturing, 2021, 48, 102428.	1.7	42
23	Hot forging wire and arc additive manufacturing (HF-WAAM). Additive Manufacturing, 2020, 35, 101193.	1.7	40
24	In Situ Monitoring of Additive Manufacturing Using Digital Image Correlation: A Review. Materials, 2021, 14, 1511.	1.3	40
25	Advances in NDT and Materials Characterization by Eddy Currents. Procedia CIRP, 2013, 7, 359-364.	1.0	33
26	Novel eddy current probes for pipes: Application in austenitic round-in-square profiles of ITER. NDT and E International, 2017, 87, 111-118.	1.7	33
27	Surface reinforcement of AA5083-H111 by friction stir processing assisted by electrical current. Journal of Materials Processing Technology, 2015, 216, 375-380.	3.1	31
28	Modification of electrical conductivity by friction stir processing of aluminum alloys. International Journal of Advanced Manufacturing Technology, 2011, 57, 511-519.	1.5	29
29	Comparison of deposited surface area of airborne ultrafine particles generated from two welding processes. Inhalation Toxicology, 2012, 24, 774-781.	0.8	29
30	Microstructural mapping of friction stir welded AA 7075-T6 and AlMgSc alloys using electrical conductivity. Science and Technology of Welding and Joining, 2011, 16, 630-635.	1.5	28
31	Influence of thermal debinding on the final properties of Feâ€“Si soft magnetic alloys for metal injection molding (MIM). Journal of Magnetism and Magnetic Materials, 2016, 416, 342-347.	1.0	28
32	FSW of aluminum AA5754 to steel DX54 with innovative overlap joint. Welding in the World, Le Soudage Dans Le Monde, 2017, 61, 257-268.	1.3	28
33	A new dual driver planar eddy current probe with dynamically controlled induction pattern. NDT and E International, 2015, 70, 29-37.	1.7	27
34	High-speed inspection of delamination defects in unidirectional CFRP by non-contact eddy current testing. Composites Part B: Engineering, 2021, 224, 109167.	5.9	27
35	Wire and Arc Additive Manufacturing of Highâ€Strength Lowâ€Alloy Steel: Microstructure and Mechanical Properties. Advanced Engineering Materials, 2021, 23, 2001036.	1.6	25
36	Magnetic pulse welding on the cutting edge of industrial applications. Soldagem E Inspecao, 2014, 19, 69-81.	0.6	25

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37	Benchmarking of Nondestructive Testing for Additive Manufacturing. 3D Printing and Additive Manufacturing, 2021, 8, 263-270.	1.4	24
38	Effect of processing temperatures on the properties of a high-strength steel welded by FSW. Welding in the World, Le Soudage Dans Le Monde, 2018, 62, 1173-1185.	1.3	23
39	Simulation and validation of thermography inspection for components produced by additive manufacturing. Applied Thermal Engineering, 2019, 159, 113872.	3.0	23
40	Influence of processing parameters on the density of 316L stainless steel parts manufactured through laser powder bed fusion. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2020, 234, 1246-1257.	1.5	23
41	Analysis of copper sheets welded by fiber laser with beam oscillation. Optics and Laser Technology, 2021, 133, 106563.	2.2	23
42	Characterization of airborne particles generated from metal active gas welding process. Inhalation Toxicology, 2014, 26, 345-352.	0.8	21
43	A new NDT technique based on bacterial cells to detect micro surface defects. NDT and E International, 2014, 63, 43-49.	1.7	21
44	Evaluation of Different Non-destructive Testing Methods to Detect Imperfections in Unidirectional Carbon Fiber Composite Ropes. Journal of Nondestructive Evaluation, 2019, 38, 1.	1.1	20
45	Continuous wave terahertz imaging for NDT: Fundamentals and experimental validation. Measurement: Journal of the International Measurement Confederation, 2021, 172, 108904.	2.5	20
46	Magnetic pulse welding: machine optimisation for aluminium tubular joints production. Science and Technology of Welding and Joining, 2018, 23, 172-179.	1.5	19
47	Fabrication of a biodegradable and cytocompatible magnesium/nanohydroxyapatite/fluorapatite composite by upward friction stir processing for biomedical applications. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 129, 105137.	1.5	18
48	Embedded Fiber Sensors to Monitor Temperature and Strain of Polymeric Parts Fabricated by Additive Manufacturing and Reinforced with NiTi Wires. Sensors, 2020, 20, 1122.	2.1	16
49	Non-destructive testing for wire + arc additive manufacturing of aluminium parts. Additive Manufacturing, 2019, 29, 100782.	1.7	15
50	New directions for inline inspection of automobile laser welds using non-destructive testing. International Journal of Advanced Manufacturing Technology, 2022, 118, 1183-1195.	1.5	15
51	Mechanical characterization and fatigue assessment of wire and arc additively manufactured HSLA steel parts. International Journal of Fatigue, 2022, 164, 107146.	2.8	14
52	Shaping Eddy Currents for Non-Destructive Testing Using Additive Manufactured Magnetic Substrates. Journal of Nondestructive Evaluation, 2022, 41, .	1.1	13
53	A reconfigurable digital signal processing system for eddy currents non-destructive testing. , 2010, , .		12
54	Analyzing mechanical properties and nondestructive characteristics of brazed joints of NiTi shape memory alloys to carbon steel rods. International Journal of Advanced Manufacturing Technology, 2013, 66, 787-793.	1.5	12

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55	Multisensor Inspection of Laser-Brazed Joints in the Automotive Industry. Sensors, 2021, 21, 7335.	2.1	12
56	Reliability and NDT Methods. Advanced Structured Materials, 2020, , 265-295.	0.3	11
57	Friction Stir Welding Assisted by Electrical Joule Effect to Overcome Lack of Penetration in Aluminium Alloys. Key Engineering Materials, 0, 611-612, 763-772.	0.4	10
58	Double active transient thermography. NDT and E International, 2022, 125, 102566.	1.7	10
59	Micro wire and arc additive manufacturing (Âµ-WAAM). Additive Manufacturing Letters, 2022, 2, 100032.	0.9	10
60	Data fusion in non destructive testing using fuzzy logic to evaluate friction stir welding. Welding International, 2008, 22, 826-833.	0.3	9
61	Application Of Eddy Current Techniques To Inspect Friction Spot Welds In Aluminium Alloy Aa2024 And A Composite Material. Welding in the World, Le Soudage Dans Le Monde, 2011, 55, 12-18.	1.3	9
62	Computational Tools for Modelling FSW and an Improved Tool for NDT. Welding in the World, Le Soudage Dans Le Monde, 2009, 53, R99-R108.	1.3	8
63	Functionalized material production via multi-stack Upward Friction Stir Processing (UFSP). Materials and Manufacturing Processes, 2022, 37, 11-24.	2.7	7
64	Emission of Nanoparticles During Friction Stir Welding (FSW) of Aluminium Alloys. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2014, 77, 924-930.	1.1	6
65	Production and characterization of functionally graded NiTi shape memory alloys by Joule effect. Journal of Materials Processing Technology, 2020, 285, 116803.	3.1	6
66	Effects of voltage on the components of surface integrity of Al₂O₃ ceramic coatings on AA2024 by plasma electrolytic oxidation. Journal of Adhesion Science and Technology, 2020, 34, 1971-1981.	1.4	6
67	Orthogonal cutting of Wire and Arc Additive Manufactured parts. International Journal of Advanced Manufacturing Technology, 2022, 119, 4439-4459.	1.5	5
68	Nova TÃ©cnica de END Baseada em CÃ©lulas Bacterianas para DetecÃ§Ã£o de Micro e Nano Defeitos Superficiais. Soldagem E Inspecao, 2015, 20, 253-259.	0.6	4
69	Developments in micro- and nano-defects detection using bacterial cells. NDT and E International, 2016, 78, 20-28.	1.7	4
70	Using Biotechnology to Solve Engineering Problems: Non-Destructive Testing of Microfabrication Components. Materials, 2017, 10, 788.	1.3	4
71	In Situ Structural Characterization of Functionally Graded Niâ€“Ti Shape Memory Alloy During Tensile Loading. Shape Memory and Superelasticity, 2019, 5, 457-467.	1.1	4
72	INNOVATIVE EDDY CURRENT PROBE FOR MICRO DEFECTS. AIP Conference Proceedings, 2010, , .	0.3	3

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73	Surface discontinuity detection using bacterial suspensions. Welding in the World, Le Soudage Dans Le Monde, 2015, 59, 723-730.	1.3	3
74	A Non-Conventional Technique for Evaluating Welded Joints Based on the Electrical Conductivity. Key Engineering Materials, 2014, 611-612, 671-676.	0.4	2
75	Innovative concept and application of EC probe for inspection of friction stir welds. International Journal of Microstructure and Materials Properties, 2014, 9, 314.	0.1	2
76	Local magnetic flux density measurements for temperature control of transient and non-homogeneous processing of steels. Scientific Reports, 2019, 9, 17900.	1.6	2
77	In situ monitoring of wire and arc additive manufacturing by digital image correlation: a case study. Procedia Structural Integrity, 2022, 37, 33-40.	0.3	2
78	In-situ hot forging directed energy deposition-arc of CuAl8 alloy. Additive Manufacturing, 2022, 55, 102847.	1.7	2
79	Characterization of FSP by electrical conductivity. , 2014, , 153-176.		1
80	Application of Eddy Currents in Processed Materials Structural Evaluation. Materials Science Forum, 2012, 730-732, 715-720.	0.3	0
81	New method employing the electrical impedance for monitoring mechanical damage evolution in glass-reinforced: Applications to riveted joints. Materials & Design, 2012, 42, 25-31.	5.1	0
82	Nondestructive testing in microfabrication using bacteria. CiÃªncia & Tecnologia Dos Materiais, 2017, 29, e262-e264.	0.5	0
83	Process Developments in FSW. Advances in Intelligent Systems and Computing, 2014, , 1015-1021.	0.5	0