

Alessandro Fortunato

List of Publications by Year in descending order

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103
papers

2,569
citations

236925

25
h-index

214800

47
g-index

104
all docs

104
docs citations

104
times ranked

2145
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental investigation on the effect of spot diameter on continuous-wave laser welding of copper and aluminum thin sheets for battery manufacturing. Optics and Laser Technology, 2022, 145, 107495.	4.6	35
2	Laser dissimilar welding of highly reflective materials for E-Mobility applications. , 2022, , 579-645.		3
3	Fabrication of Thin Walls with and without Close Loop Control as a Function of Scan Strategy Via Direct Energy Deposition. Lasers in Manufacturing and Materials Processing, 2022, 9, 81-101.	2.2	11
4	Weldability and mechanical properties of dissimilar laser welded aluminum alloys thin sheets produced by conventional rolling and Additive Manufacturing. Journal of Materials Processing Technology, 2022, 302, 117512.	6.3	11
5	Prediction of Micro-scale Forces in Dry Grinding Process Through a FEM-ML Hybrid Approach. International Journal of Precision Engineering and Manufacturing, 2022, 23, 15-29.	2.2	8
6	Relationship between microstructure, mechanical and magnetic properties of pure iron produced by laser powder bed fusion (L-PBF) in the as-built and stress relieved conditions. Progress in Additive Manufacturing, 2022, 7, 1195-1212.	4.8	7
7	The effect of femto-second laser shock peening on the microstructures and surface roughness of AlSi10Mg samples produced with selective laser melting (SLM).. Procedia CIRP, 2022, 108, 77-81.	1.9	4
8	Hardness Penetration Depth Prediction in the Grind-Hardening Process through a Combined FEM model. Procedia CIRP, 2022, 108, 194-198.	1.9	2
9	Surface integrity evaluation within dry grinding process on automotive gears. Cleaner Engineering and Technology, 2022, 9, 100522.	4.0	3
10	The effects of the confining medium and protective layer during femtosecond laser shock peening. Manufacturing Letters, 2021, 27, 26-30.	2.2	24
11	Applying optical coherence tomography for weld depth monitoring in remote laser welding of automotive battery tab connectors. Journal of Laser Applications, 2021, 33, .	1.7	22
12	Laser dissimilar welding of copper and steel thin sheets for battery production. Journal of Laser Applications, 2021, 33, .	1.7	13
13	Mechanical and in vitro biological properties of uniform and graded Cobalt-Chrome lattice structures in orthopedic implants. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 2091-2103.	3.4	18
14	Additive manufacturing of AISI 420 stainless steel: process validation, defect analysis and mechanical characterization in different process and post-process conditions. International Journal of Advanced Manufacturing Technology, 2021, 117, 809-821.	3.0	11
15	Stiffness prediction and deformation analysis of Cobalt-Chromium lattice structures: From periodic to functionally graded structures produced by additive manufacturing. Journal of Manufacturing Processes, 2021, 68, 104-114.	5.9	10
16	Mechanical interaction between additive-manufactured metal lattice structures and bone in compression: implications for stress shielding of orthopaedic implants. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 121, 104608.	3.1	62
17	Dissimilar laser welding of copper and aluminum alloys in multilayer configuration for battery applications. Journal of Laser Applications, 2021, 33, .	1.7	7
18	The influence of geometric defects and microstructure in the simulation of the mechanical behaviour of laser powder-bed fusion components: Application to endoprosthesis. Journal of Manufacturing Processes, 2021, 71, 541-549.	5.9	4

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19	Design and fabrication of personalized knee prostheses by laser-based powder bed fusion: Influence of manufacturing process on geometric accuracy. Journal of Laser Applications, 2021, 33, 042045.	1.7	1
20	Effects of powders and process parameters on density and hardness of A357 aluminum alloy fabricated by selective laser melting. International Journal of Advanced Manufacturing Technology, 2020, 106, 371-383.	3.0	38
21	Laser Directed Energy Deposition of Bulk 316L Stainless Steel. Lasers in Manufacturing and Materials Processing, 2020, 7, 426-448.	2.2	8
22	CoCr alloy processed by Selective Laser Melting (SLM): effect of Laser Energy Density on microstructure, surface morphology, and hardness. Journal of Manufacturing Processes, 2020, 52, 106-119.	5.9	108
23	The effects of hot isostatic pressing (HIP) and solubilization heat treatment on the density, mechanical properties, and microstructure of austenitic stainless steel parts produced by selective laser melting (SLM). International Journal of Advanced Manufacturing Technology, 2020, 107, 109-122.	3.0	44
24	Short pulse laser welding of aluminum and copper alloys in dissimilar configuration. Journal of Laser Applications, 2020, 32, .	1.7	8
25	The effect of radial infeed on surface integrity in dry generating gear grinding for industrial production of automotive transmission gears. Journal of Manufacturing Processes, 2019, 45, 234-241.	5.9	26
26	The influence of laser pulse shape and separation distance on dissimilar welding of Al and Cu films. Journal of Manufacturing Processes, 2019, 45, 331-339.	5.9	36
27	Additive Manufacturing of WC-Co Cutting Tools for Gear Production. Lasers in Manufacturing and Materials Processing, 2019, 6, 247-262.	2.2	26
28	CoCr porous scaffolds manufactured via selective laser melting in orthopedics: Topographical, mechanical, and biological characterization. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2343-2353.	3.4	35
29	Continuous laser welding with spatial beam oscillation of dissimilar thin sheet materials (Al-Cu and Tj ETQq1 1 0.784314 rgBT /Overlo 158-165.	5.9	88
30	Laser Welding of Thin Copper and Aluminum Sheets: Feasibility and Challenges in Continuous-Wave Welding of Dissimilar Metals. Lasers in Manufacturing and Materials Processing, 2019, 6, 136-157.	2.2	26
31	Dry Generating Gear Grinding: Hierarchical Two-Step Finite Element Model for Process Optimization. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	2.2	12
32	New comprehensive procedure for custom-made total ankle replacements: Medical imaging, joint modeling, prosthesis design, and 3D printing. Journal of Orthopaedic Research, 2019, 37, 760-768.	2.3	29
33	Laser Direct Energy Deposition Welding of AISI 316 Stainless Steel Sheets. , 2019, , .		0
34	Dry grinding of gears for sustainable automotive transmission production. Journal of Cleaner Production, 2018, 176, 76-88.	9.3	44
35	Abrasive Grains Micro Geometry: A Comparison between Two Acquisition Methods. Procedia CIRP, 2018, 67, 302-306.	1.9	3
36	Milling of maraging steel components produced by selective laser melting. International Journal of Advanced Manufacturing Technology, 2018, 94, 1895-1902.	3.0	62

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37	High throughput hybrid laser assisted machining of sintered reaction bonded silicon nitride. Journal of Materials Processing Technology, 2018, 252, 628-635.	6.3	33
38	Long-pulse quasi-CW laser cutting of metals. International Journal of Advanced Manufacturing Technology, 2018, 94, 155-162.	3.0	11
39	An improved model for cold metal transfer welding of aluminium alloys. Journal of Thermal Analysis and Calorimetry, 2018, 131, 3003-3009.	3.6	11
40	Fabrication of Knee Prostheses by Means of SLM: Process and Functional Characterization. , 2018, , .		2
41	Hybrid laser assisted machining: a new manufacturing technology for ceramic components. Procedia CIRP, 2018, 74, 761-764.	1.9	5
42	Forming Behaviour at Elevated Temperature of a Laser Heat-Treated AZ31 Magnesium Alloy Sheet. Materials Science Forum, 2018, 941, 1270-1275.	0.3	0
43	Long Pulse Laser Micro Welding of Commercially Pure Titanium Thin Sheets. Procedia Engineering, 2017, 184, 274-283.	1.2	13
44	High speed pulsed laser cutting of LiCoO ₂ /Li-ion battery electrodes. Optics and Laser Technology, 2017, 94, 90-96.	4.6	23
45	Effect of selective laser melting (SLM) process parameters on microstructure and mechanical properties of 316L austenitic stainless steel. Journal of Materials Processing Technology, 2017, 249, 255-263.	6.3	672
46	A Modeling Approach for Plastic-Metal Laser Direct Joining. Lasers in Manufacturing and Materials Processing, 2017, 4, 136-151.	2.2	5
47	Corrosion Resistance and Mechanical Characterization of Ankle Prostheses Fabricated via Selective Laser Melting. Procedia CIRP, 2017, 65, 25-31.	1.9	11
48	Characterization of Lattice Structures for Additive Manufacturing of Lightweight Mechanical Components. , 2017, , .		4
49	Pulsed Laser Profiling of Grinding Wheels at Normal and Quasi-Tangential Incidence. Lasers in Manufacturing and Materials Processing, 2016, 3, 158-173.	2.2	8
50	Quality and Productivity Considerations for Laser Cutting of LiFePO ₄ and LiNiMnCoO ₂ Battery Electrodes. Procedia CIRP, 2016, 42, 433-438.	1.9	10
51	Long Pulse Laser Wire Deposition of Hard Steels. Physics Procedia, 2016, 83, 723-732.	1.2	3
52	Micro-machinability of A-286 Steel with and without Laser Assist. Procedia CIRP, 2016, 46, 432-435.	1.9	7
53	Surface modification of mild steel using a combination of laser and electrochemical processes. Surface and Coatings Technology, 2016, 307, 849-860.	4.8	20
54	A complete residual stress model for laser surface hardening of complex medium carbon steel components. Surface and Coatings Technology, 2016, 302, 100-106.	4.8	44

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55	Laser Profiling of Aluminum Oxide Grinding Wheels. , 2015, , .		1
56	Laser Interaction with Carbon Fibre Reinforced Polymers. Procedia CIRP, 2015, 33, 423-427.	1.9	26
57	Laser cutting of lithium iron phosphate battery electrodes: Characterization of process efficiency and quality. Optics and Laser Technology, 2015, 65, 164-174.	4.6	38
58	Lithium iron phosphate battery electrode integrity following high speed pulsed laser cutting. Applied Physics A: Materials Science and Processing, 2015, 119, 431-435.	2.3	6
59	A laser assisted hybrid process chain for high removal rate machining of sintered silicon nitride. CIRP Annals - Manufacturing Technology, 2015, 64, 189-192.	3.6	20
60	Laser Assisted Cold Bending of High Strength Steels. , 2014, , .		1
61	Chemical and microstructural transformations in lithium iron phosphate battery electrodes following pulsed laser exposure. Applied Surface Science, 2014, 322, 85-94.	6.1	15
62	A Multi-Axis Deep Drawing Servo Press With Non-Overconstrained Architecture. , 2014, , .		1
63	Non-conventional laser surface hardening for axisymmetric components. Proceedings of SPIE, 2014, , .	0.8	0
64	Nanosecond pulsed laser welding of high carbon steels. Optics and Laser Technology, 2014, 56, 25-34.	4.6	17
65	Laser surface hardening of large cylindrical components utilizing ring spot geometry. CIRP Annals - Manufacturing Technology, 2014, 63, 233-236.	3.6	21
66	Pulsed Laser Ablation of Lithium Ion Battery Electrodes. , 2014, , .		2
67	The virtual design of machining centers for HSM: Towards new integrated tools. Mechatronics, 2013, 23, 264-278.	3.3	18
68	Laser foaming for joining aluminum foam cores inside a hollow profile. Optics and Laser Technology, 2013, 48, 331-336.	4.6	16
69	5 Axes computer aided laser milling. Optics and Lasers in Engineering, 2013, 51, 749-760.	3.8	26
70	A Comprehensive Model for Laser Hardening of Carbon Steels. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	2.2	15
71	Laser shock peening and warm laser shock peening: process modeling and pulse shape influence. Proceedings of SPIE, 2013, , .	0.8	2
72	An exhaustive model for the laser hardening of hypo eutectoid steel. Proceedings of SPIE, 2013, , .	0.8	0

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73	A Comprehensive Model for Laser Hardening of Carbon Steels. , 2013, , .		0
74	Numerical evaluation of the reflectivity coefficient in laser surface hardening simulation. Surface and Coatings Technology, 2012, 206, 3179-3185.	4.8	11
75	The influence of process parameters on porosity formation in hybrid LASER-GMA welding of AA6082 aluminum alloy. Optics and Laser Technology, 2012, 44, 1485-1490.	4.6	66
76	Numerical simulation of nanosecond pulsed laser welding of eutectoid steel components. Optics and Laser Technology, 2012, 44, 1999-2003.	4.6	8
77	Warm Laser Shock Peening: New developments and process optimization. CIRP Annals - Manufacturing Technology, 2011, 60, 219-222.	3.6	36
78	A New Computationally Efficient Model for Tempering in Multitrack Laser Hardening in Medium Carbon Steels. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2011, 133, .	2.2	7
79	An automated procedure for material removal rate prediction in laser surface micromanufacturing. International Journal of Advanced Manufacturing Technology, 2010, 46, 163-171.	3.0	11
80	Hybrid metal-plastic joining by means of laser. International Journal of Material Forming, 2010, 3, 1131-1134.	2.0	47
81	An efficient model for laser surface hardening of hypo-eutectoid steels. Applied Surface Science, 2010, 256, 1913-1919.	6.1	56
82	Laser surface hardening of martensitic stainless steel hollow parts. CIRP Annals - Manufacturing Technology, 2010, 59, 207-210.	3.6	30
83	Investigation on Porosity Formation in AA6082 Hybrid Laser-GMAW Welding. , 2010, , .		0
84	A New Computationally Efficient Model for Tempering in Multi-Tracks Laser Hardening. , 2009, , .		5
85	Laser ablation simulation for copper. International Journal of Nanomanufacturing, 2009, 3, 279.	0.3	3
86	Hybrid laser-MIG welding of aluminum alloys: The influence of shielding gases. Applied Surface Science, 2009, 255, 5588-5590.	6.1	41
87	Prediction of hypo eutectoid steel softening due to tempering phenomena in laser surface hardening. CIRP Annals - Manufacturing Technology, 2008, 57, 209-212.	3.6	48
88	A New Computationally Efficient Method in Laser Hardening Modeling. , 2008, , .		2
89	Laser Ablation of Metals: A 3D Process Simulation for Industrial Applications. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2008, 130, .	2.2	22
90	Optimization Strategies of Laser Hardening of Hypo-eutectoid Steel. , 2008, , 355-360.		4

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91	3-D Transient Simulation Model for Laser Micromilling Processes. , 2007, , 319.		1
92	Dynamic Hybrid Modeling of the Vertical Z Axis in a High-Speed Machining Center: Towards Virtual Machining. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 780-788.	2.2	8
93	The influence of shielding gas in hybrid LASERâ€“MIG welding. Applied Surface Science, 2007, 253, 8050-8053.	6.1	65
94	A study on shielding gas contamination in laser welding of non-ferrous alloys. Applied Surface Science, 2007, 254, 904-907.	6.1	18
95	The influence of arc transfer mode in hybrid laser-mig welding. Journal of Materials Processing Technology, 2007, 191, 111-113.	6.3	89
96	Evaluation of molten pool geometry with induced plasma plume absorption in laser-material interaction zone. International Journal of Machine Tools and Manufacture, 2007, 47, 971-977.	13.4	6
97	From Traditional to Virtual Design of Machine-Tools: A Long Way to Go ... Part 1 â€” Problem Identification and Model Validation. , 2006, , 297.		3
98	3-D Modelling of Laser Ablation of Metals in Mould Manufacturing. , 2006, , 21.		4
99	From Traditional to Virtual Design of Machine-Tools: A Long Way to Go ... Part 2 â€” The Talk Between Two Worlds. , 2006, , .		2
100	Quality factors assessed by analytical modelling in laser cutting. Thin Solid Films, 2004, 453-454, 486-491.	1.8	17
101	3D Printing of Non-Metallic Materials. , 0, , .		0
102	Continuous generating grinding method for beveloid gears and analysis of grinding characteristics. Advances in Manufacturing, 0, , 1.	6.1	2
103	Prediction of the grinding wheel specification influence on thermal defects in dry grinding through a hierarchical FEM model. International Journal of Advanced Manufacturing Technology, 0, , .	3.0	0