

Amitava De

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

94
papers

6,378
citations

32
h-index

79
g-index

103
ext. papers

8,000
ext. citations

4
avg. IF

6.31
L-index

#	Paper	IF	Citations
94	Additive manufacturing of metallic components [Process, structure and properties. <i>Progress in Materials Science</i> , 2018 , 92, 112-224	42.2	2682
93	Review: friction stir welding tools. <i>Science and Technology of Welding and Joining</i> , 2011 , 16, 325-342	3.7	484
92	Printability of alloys for additive manufacturing. <i>Scientific Reports</i> , 2016 , 6, 19717	4.9	210
91	Building blocks for a digital twin of additive manufacturing. <i>Acta Materialia</i> , 2017 , 135, 390-399	8.4	182
90	Heat transfer and material flow during laser assisted multi-layer additive manufacturing. <i>Journal of Applied Physics</i> , 2014 , 116, 124905	2.5	177
89	Toward optimum friction stir welding tool shoulder diameter. <i>Scripta Materialia</i> , 2011 , 64, 9-12	5.6	176
88	Spatial variation of melt pool geometry, peak temperature and solidification parameters during laser assisted additive manufacturing process. <i>Materials Science and Technology</i> , 2015 , 31, 924-930	1.5	154
87	Strains and strain rates during friction stir welding. <i>Scripta Materialia</i> , 2009 , 61, 863-866	5.6	143
86	Mitigation of thermal distortion during additive manufacturing. <i>Scripta Materialia</i> , 2017 , 127, 79-83	5.6	108
85	Heat and fluid flow in additive manufacturing [Part II: Powder bed fusion of stainless steel, and titanium, nickel and aluminum base alloys. <i>Computational Materials Science</i> , 2018 , 150, 369-380	3.2	106
84	Mechanistic models for additive manufacturing of metallic components. <i>Progress in Materials Science</i> , 2021 , 116, 100703	42.2	92
83	A smart model to estimate effective thermal conductivity and viscosity in the weld pool. <i>Journal of Applied Physics</i> , 2004 , 95, 5230-5240	2.5	89
82	Heat and fluid flow in additive manufacturing [Part I: Modeling of powder bed fusion. <i>Computational Materials Science</i> , 2018 , 150, 304-313	3.2	84
81	Load bearing capacity of tool pin during friction stir welding. <i>International Journal of Advanced Manufacturing Technology</i> , 2012 , 61, 911-920	3.2	76
80	Tool Geometry for Friction Stir Welding [Optimum Shoulder Diameter. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 2716-2722	2.3	73
79	Monitoring torque and traverse force in friction stir welding from input electrical signatures of driving motors. <i>Science and Technology of Welding and Joining</i> , 2013 , 18, 191-197	3.7	68
78	Finite element simulation of laser spot welding. <i>Science and Technology of Welding and Joining</i> , 2003 , 8, 377-384	3.7	68

77	Three-dimensional heat transfer analysis of LENSTM process using finite element method. <i>International Journal of Advanced Manufacturing Technology</i> , 2009 , 45, 935-943	3.2	66
76	Dimensionless numbers in additive manufacturing. <i>Journal of Applied Physics</i> , 2017 , 121, 064904	2.5	65
75	Development of a finite element based heat transfer model for conduction mode laser spot welding process using an adaptive volumetric heat source. <i>International Journal of Thermal Sciences</i> , 2009 , 48, 1923-1931	4.1	64
74	Estimation of Melt Pool Dimensions, Thermal Cycle, and Hardness Distribution in the Laser-Engineered Net Shaping Process of Austenitic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 4080-4087	2.3	61
73	Probing unknown welding parameters from convective heat transfer calculation and multivariable optimization. <i>Journal Physics D: Applied Physics</i> , 2004 , 37, 140-150	3	51
72	Prediction of cooling rate and microstructure in laser spot welds. <i>Science and Technology of Welding and Joining</i> , 2003 , 8, 391-399	3.7	48
71	Numerical and experimental investigation on friction stir lap welding of aluminium to steel. <i>Science and Technology of Welding and Joining</i> , 2014 , 19, 69-75	3.7	42
70	Finite element modelling of resistance spot welding of aluminium with spherical tip electrodes. <i>Science and Technology of Welding and Joining</i> , 2002 , 7, 119-124	3.7	41
69	Cooling rates and peak temperatures during friction stir welding of a high-carbon steel. <i>Scripta Materialia</i> , 2015 , 94, 36-39	5.6	40
68	Influence of process variables on weld bead quality in two wire tandem submerged arc welding of HSLA steel. <i>Journal of Materials Processing Technology</i> , 2012 , 212, 2041-2050	5.3	39
67	Improving reliability of heat and fluid flow calculation during conduction mode laser spot welding by multivariable optimisation. <i>Science and Technology of Welding and Joining</i> , 2006 , 11, 143-153	3.7	37
66	An Improved Numerical Modeling for Resistance Spot Welding Process and Its Experimental Verification. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 1998 , 120, 246-251	3.3	36
65	Probing torque, traverse force and tool durability in friction stir welding of aluminum alloys. <i>Journal of Materials Processing Technology</i> , 2017 , 241, 86-92	5.3	35
64	Neural network models of peak temperature, torque, traverse force, bending stress and maximum shear stress during friction stir welding. <i>Science and Technology of Welding and Joining</i> , 2012 , 17, 460-466	2.7	34
63	Friction stir welding of mild steel: tool durability and steel microstructure. <i>Materials Science and Technology</i> , 2014 , 30, 1050-1056	1.5	31
62	Development of a Three-Dimensional Heat-Transfer Model for the Gas Tungsten Arc Welding Process Using the Finite Element Method Coupled with a Genetic Algorithm-Based Identification of Uncertain Input Parameters. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 2698-2710	2.3	30
61	Material adhesion and stresses on friction stir welding tool pins. <i>Science and Technology of Welding and Joining</i> , 2014 , 19, 534-540	3.7	29
60	Tool durability maps for friction stir welding of an aluminium alloy. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 3552-3570	2.4	29

59	Numerical Modelling of Resistance Spot Welding of Aluminium Alloy.. <i>ISIJ International</i> , 2003 , 43, 238-244	7	27
58	Numerical modeling of friction stir welding using the tools with polygonal pins. <i>Defence Technology</i> , 2015 , 11, 229-236	3	26
57	A Genetic Algorithm-Assisted Inverse Convective Heat Transfer Model for Tailoring Weld Geometry. <i>Materials and Manufacturing Processes</i> , 2009 , 24, 384-397	4.1	26
56	Probing influence of welding current on weld quality in two wire tandem submerged arc welding of HSLA steel. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 111-116	3.7	24
55	Three-dimensional transient heat conduction and thermomechanical analysis for laser spot welding using adaptive heat source. <i>Science and Technology of Welding and Joining</i> , 2007 , 12, 24-31	3.7	23
54	Finite element analysis of resistance spot welding in aluminium. <i>Science and Technology of Welding and Joining</i> , 2002 , 7, 111-118	3.7	21
53	Three-dimensional Heat Transfer Analysis of Two Wire Tandem Submerged Arc Welding. <i>ISIJ International</i> , 2011 , 51, 793-798	1.7	19
52	Analysis and optimisation of electrode life for conventional and compound tip electrodes during resistance spot welding of electrogalvanised steels. <i>Science and Technology of Welding and Joining</i> , 2000 , 5, 49-57	3.7	19
51	Joining of aluminium alloy and galvanized steel using a controlled gas metal arc process. <i>Journal of Manufacturing Processes</i> , 2017 , 27, 179-187	5	17
50	Residual stresses in wire-arc additive manufacturing □Hierarchy of influential variables. <i>Additive Manufacturing</i> , 2020 , 35, 101355	6.1	17
49	Numerical modelling of gas metal arc joining of aluminium alloy and galvanised steels in lap joint configuration. <i>Science and Technology of Welding and Joining</i> , 2016 , 21, 303-309	3.7	17
48	Friction Stir Welding of a Thick Al-Zn-Mg Alloy Plate. <i>Journal of Materials Engineering and Performance</i> , 2016 , 25, 1163-1171	1.6	16
47	Minimising electrode wear in resistance spot welding of aluminium alloys. <i>Science and Technology of Welding and Joining</i> , 2011 , 16, 509-513	3.7	15
46	Real time seam tracking system for automated fusion arc welding. <i>Science and Technology of Welding and Joining</i> , 2003 , 8, 340-346	3.7	15
45	Modelling of selective laser melting process with adaptive remeshing. <i>Science and Technology of Welding and Joining</i> , 2019 , 24, 391-400	3.7	14
44	Joining of galvanized steel and aluminium alloy using controlled short circuiting gas metal arc welding process. <i>Science and Technology of Welding and Joining</i> , 2015 , 20, 402-408	3.7	14
43	Use of a multivariate optimization algorithm to develop a self-consistent numerical heat transfer model for laser spot welding. <i>International Journal of Advanced Manufacturing Technology</i> , 2008 , 38, 575-585	3.2	14
42	Probing a novel heat source model and adaptive remeshing technique to simulate laser powder bed fusion with experimental validation. <i>Computational Materials Science</i> , 2020 , 181, 109752	3.2	13

41	Prediction of weld quality in pulsed current GMAW process using artificial neural network. <i>Science and Technology of Welding and Joining</i> , 2004 , 9, 253-259	3.7	13
40	Probing Reliability of Transport Phenomena Based Heat Transfer and Fluid Flow Analysis in Autogeneous Fusion Welding Process. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010 , 41, 2337-2347	2.3	12
39	An Experimental Study of Resistance Spot Welding in 1 mm Thick Sheet of Low Carbon Steel. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 1996 , 210, 341-347	2.4	11
38	Gas metal arc brazing of galvanized steel sheets. <i>Science and Technology of Welding and Joining</i> , 2016 , 21, 600-606	3.7	11
37	An investigation on friction hydro-pillar processing. <i>Science and Technology of Welding and Joining</i> , 2017 , 22, 555-561	3.7	10
36	Efficient Estimation Of Volumetric Heat Source In Fusion Welding Process Simulation. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2012 , 56, 88-97	1.9	10
35	Probing residual stresses in stationary shoulder friction stir welding process. <i>International Journal of Advanced Manufacturing Technology</i> , 2020 , 106, 1573-1586	3.2	10
34	Magnetic pulse welding of copper to steel tubes Experimental investigation and process modelling. <i>Journal of Manufacturing Processes</i> , 2020 , 58, 249-258	5	10
33	Error analysis of forward and reverse heat conduction and convection calculations considering uncertainties in welding. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 662-668	3.7	9
32	Pulsed current gas metal arc welding of P91 steels using metal cored wires. <i>Journal of Materials Processing Technology</i> , 2016 , 229, 826-833	5.3	8
31	Development of Process Maps in Two-Wire Tandem Submerged Arc Welding Process of HSLA Steel. <i>Journal of Materials Engineering and Performance</i> , 2013 , 22, 988-994	1.6	8
30	Investigation on laser engineered net shaping of multilayered structures in H13 tool steel. <i>Journal of Laser Applications</i> , 2015 , 27, 032010	2.1	8
29	Modeling of Gas Metal Arc Welding Process Using an Analytically Determined Volumetric Heat Source. <i>ISIJ International</i> , 2013 , 53, 698-703	1.7	8
28	Integrating Finite Element Based Heat Transfer Analysis with Multivariate Optimization for Efficient Weld Pool Modeling. <i>ISIJ International</i> , 2006 , 46, 267-275	1.7	8
27	Probing Pulsed Current Gas Metal Arc Welding for Modified 9Cr-1Mo Steel. <i>Journal of Materials Engineering and Performance</i> , 2015 , 24, 1462-1470	1.6	7
26	Development of efficient numerical heat transfer model coupled with genetic algorithm based optimisation for prediction of process variables in GTA spot welding. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 333-345	3.7	7
25	Material flow during friction hydro-pillar processing. <i>Science and Technology of Welding and Joining</i> , 2020 , 25, 228-234	3.7	7
24	Wetting length in gas metal arc brazing of galvanised steel. <i>Science and Technology of Welding and Joining</i> , 2017 , 22, 166-169	3.7	6

23	Spot Welding. <i>Science and Technology of Welding and Joining</i> , 2008 , 13, 213-214	3.7	6
22	Magnetic pulse welding of metallic tubes [Experimental investigation and numerical modelling. <i>Science and Technology of Welding and Joining</i> , 2020 , 25, 273-281	3.7	6
21	Probing Magnetic Pulse Welding of Thin-Walled Tubes. <i>Journal of Manufacturing and Materials Processing</i> , 2020 , 4, 118	2.2	6
20	Fast responsive control of current and voltage waveforms for gas metal arc brazing of thin zinc-coated steel sheets. <i>Journal of Materials Processing Technology</i> , 2018 , 254, 171-178	5.3	6
19	Probing current, voltage and metal transfer characteristics in pulsed arc and in conventional and a novel low energy input short arc GMAW. <i>Yosetsu Gakkai Ronbunshu/Quarterly Journal of the Japan Welding Society</i> , 2013 , 31, 26s-30s	0.7	5
18	Friction Hydro-Pillar Processing of a High Carbon Steel: Joint Structure and Properties. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018 , 49, 699-708	2.5	4
17	Real-time heat input monitoring towards robust GMA brazing. <i>Science and Technology of Welding and Joining</i> , 2019 , 24, 16-26	3.7	4
16	Computational Modelling of Conduction Mode Laser Welding Process 2010 ,		4
15	Probing the role of instantaneous current waveform in numerical modelling of resistance spot welding process. <i>Science and Technology of Welding and Joining</i> , 2005 , 10, 325-334	3.7	4
14	Heat and Fluid Flow Modeling to Examine 3D-Printability of Alloys 2016 , 471-478		4
13	Probing Tool Durability in Stationary Shoulder Friction Stir Welding. <i>Minerals, Metals and Materials Series</i> , 2019 , 91-98	0.3	4
12	An investigation on girth friction welding of duplex stainless steel pipes. <i>Journal of Manufacturing Processes</i> , 2020 , 51, 73-82	5	3
11	Multipass pulsed current gas metal arc welding of P91 steel. <i>Science and Technology of Welding and Joining</i> , 2016 , 21, 171-177	3.7	3
10	Probing joint strength and distortion in gas metal arc lap joining of aluminum and steel sheets. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019 , 63, 229-236	1.9	3
9	Analytical estimation of fusion zone dimensions and cooling rates in part scale laser powder bed fusion. <i>Additive Manufacturing</i> , 2021 , 46, 102222	6.1	3
8	Influence of Machine Specific Instantaneous Current Wave Form on Resistance Spot Welding Process. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2006 , 128, 668-676 ^{3.3}		2
7	Probing magnetic pulse welding of aluminium and steel sheets. <i>Journal of Manufacturing Processes</i> , 2021 , 72, 309-319	5	2
6	Three-Dimensional Heat Transfer Analysis of Laser-Arc Hybrid Welding Process. <i>Indian Welding Journal</i> , 47, 57	1	2

5	Degradation of nickel-bonded tungsten carbide tools in friction stir welding of high carbon steel. <i>International Journal of Advanced Manufacturing Technology</i> , 2021 , 115, 1049	3.2	2
4	Gas Metal Arc Lap Joining of Aluminium Alloys and Steel Sheets. <i>Journal of Welding and Joining</i> , 2018 , 36, 19-26	1.1	1
3	Real-time monitoring of temperature field, metal transfer and cooling rate during gas metal arc-directed energy deposition. <i>Science and Technology of Welding and Joining</i> , 1-10	3.7	1
2	Analytical Estimation of Electromagnetic Pressure, Flyer Impact Velocity, and Welded Joint Length in Magnetic Pulse Welding. <i>Metals</i> , 2022 , 12, 276	2.3	0
1	Heat and Fluid Flow Modeling to Examine 3Dprintability of Alloys 2016 , 469-478		