Tuhin Mukherjee

List of Publications by Year
in descending order

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28 papers	8,180 citations	257450 24 h-index	477307 29 g-index
31 all docs	31 docs citations	31 times ranked	5144 citing authors

#	Article	IF	Citations
1	Additive manufacturing of metallic components â€“ Process, structure and properties. Progress in Materials Science, 2018, 92, 112-224.	32.8	4,751
2	An improved prediction of residual stresses and distortion in additive manufacturing. Computational Materials Science, 2017, 126, 360-372.	3.0	543
3	Scientific, technological and economic issues in metal printing and their solutions. Nature Materials, 2019, 18, 1026-1032.	27.5	336
4	Printability of alloys for additive manufacturing. Scientific Reports, 2016, 6, 19717.	3.3	319
5	Building blocks for a digital twin of additive manufacturing. Acta Materialia, 2017, 135, 390-399.	7.9	258
6	Mechanistic models for additive manufacturing of metallic components. Progress in Materials Science, 2021, 116, 100703.	32.8	246
7	Metallurgy, mechanistic models and machine learning in metal printing. Nature Reviews Materials, 2021, 6, 48-68.	48.7	220
8	A digital twin for rapid qualification of 3D printed metallic components. Applied Materials Today, 2019, 14, 59-65.	4.3	190
9	Heat and fluid flow in additive manufacturing â€“ Part II: Powder bed fusion of stainless steel, and titanium, nickel and aluminum base alloys. Computational Materials Science, 2018, 150, 369-380.	3.0	169
10	Mitigation of thermal distortion during additive manufacturing. Scripta Materialia, 2017, 127, 79-83.	5.2	151
11	Mitigation of lack of fusion defects in powder bed fusion additive manufacturing. Journal of Manufacturing Processes, 2018, 36, 442-449.	5.9	141
12	Fusion zone geometries, cooling rates and solidification parameters during wire arc additive manufacturing. International Journal of Heat and Mass Transfer, 2018, 127, 1084-1094.	4.8	130
13	Heat and fluid flow in additive manufacturingâ€”Part I: Modeling of powder bed fusion. Computational Materials Science, 2018, 150, 304-313.	3.0	127
14	Dimensionless numbers in additive manufacturing. Journal of Applied Physics, 2017, 121, .	2.5	115
15	Residual stresses and distortion in additively manufactured compositionally graded and dissimilar joints. Computational Materials Science, 2018, 143, 325-337.	3.0	91
16	Three-dimensional grain growth during multi-layer printing of a nickel-based alloy Inconel 718. Additive Manufacturing, 2019, 25, 448-459.	3.0	64
17	Conditions for void formation in friction stir welding from machine learning. Npj Computational Materials, 2019, 5, .	8.7	49
18	Residual stresses and distortion in the patterned printing of titanium and nickel alloys. Additive Manufacturing, 2019, 29, 100808.	3.0	40

#	Article	IF	Citations
19	Residual stresses in wire-arc additive manufacturing â€“ Hierarchy of influential variables. Additive Manufacturing, 2020, 35, 101355.	3.0	40
20	Machine learning based hierarchy of causative variables for tool failure in friction stir welding. Acta Materialia, 2020, 192, 67-77.	7.9	37
21	Physics-informed machine learning and mechanistic modeling of additive manufacturing to reduce defects. Applied Materials Today, 2021, 24, 101123.	4.3	34
22	An improved heat transfer and fluid flow model of wire-arc additive manufacturing. International Journal of Heat and Mass Transfer, 2021, 167, 120835.	4.8	29
23	Printability of 316 stainless steel. Science and Technology of Welding and Joining, 2019, 24, 412-419.	3.1	28
24	Spatial and temporal variation of hardness of a printed steel part. Acta Materialia, 2021, 209, 116775.	7.9	25
25	Crack free metal printing using physics informed machine learning. Acta Materialia, 2022, 226, 117612.	7.9	22
26	Grain Growth Modeling for Additive Manufacturing of Nickel Based Superalloys. , 2016, , 265-269.		9
27	High-throughput screening of surface roughness during additive manufacturing. Journal of Manufacturing Processes, 2022, 81, 65-77.	5.9	6
28	Control of asymmetric track geometry in printed parts of stainless steels, nickel, titanium and aluminum alloys. Computational Materials Science, 2020, 182, 109791.	3.0	5