Zengxi Pan

List of Publications by Year in descending order

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		71061	54882
141	8,129	41	84
papers	citations	h-index	g-index
144	144	144	3768
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Wire-feed additive manufacturing of metal components: technologies, developments and future interests. International Journal of Advanced Manufacturing Technology, 2015, 81, 465-481.	1.5	1,007
2	A review of the wire arc additive manufacturing of metals: properties, defects and quality improvement. Journal of Manufacturing Processes, 2018, 35, 127-139.	2.8	818
3	Recent progress on programming methods for industrial robots. Robotics and Computer-Integrated Manufacturing, 2012, 28, 87-94.	6.1	350
4	A multi-bead overlapping model for robotic wire and arc additive manufacturing (WAAM). Robotics and Computer-Integrated Manufacturing, 2015, 31, 101-110.	6.1	345
5	Chatter analysis of robotic machining process. Journal of Materials Processing Technology, 2006, 173, 301-309.	3.1	264
6	A tool-path generation strategy for wire and arc additive manufacturing. International Journal of Advanced Manufacturing Technology, 2014, 73, 173-183.	1.5	227
7	A practical path planning methodology for wire and arc additive manufacturing of thin-walled structures. Robotics and Computer-Integrated Manufacturing, 2015, 34, 8-19.	6.1	223
8	Effects of heat accumulation on the arc characteristics and metal transfer behavior in Wire Arc Additive Manufacturing of Ti6Al4V. Journal of Materials Processing Technology, 2017, 250, 304-312.	3.1	217
9	A review on wire arc additive manufacturing: Monitoring, control and a framework of automated system. Journal of Manufacturing Systems, 2020, 57, 31-45.	7.6	206
10	Bead modelling and implementation of adaptive MAT path in wire and arc additive manufacturing. Robotics and Computer-Integrated Manufacturing, 2016, 39, 32-42.	6.1	174
11	The effects of forced interpass cooling on the material properties of wire arc additively manufactured Ti6Al4V alloy. Journal of Materials Processing Technology, 2018, 258, 97-105.	3.1	164
12	The anisotropic corrosion behaviour of wire arc additive manufactured Ti-6Al-4V alloy in 3.5% NaCl solution. Corrosion Science, 2018, 137, 176-183.	3.0	143
13	Towards an automated robotic arc-welding-based additive manufacturing system from CAD to finished part. CAD Computer Aided Design, 2016, 73, 66-75.	1.4	138
14	Fabricating Superior NiAl Bronze Components through Wire Arc Additive Manufacturing. Materials, 2016, 9, 652.	1.3	135
15	The effect of location on the microstructure and mechanical properties of titanium aluminides produced by additive layer manufacturing using in-situ alloying and gas tungsten arc welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 631, 230-240.	2.6	127
16	Automatic multi-direction slicing algorithms for wire based additive manufacturing. Robotics and Computer-Integrated Manufacturing, 2016, 37, 139-150.	6.1	127
17	Fabrication of Fe-FeAl Functionally Graded Material Using the Wire-Arc Additive Manufacturing Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 763-772.	1.0	116
18	Adaptive path planning for wire-feed additive manufacturing using medial axis transformation. Journal of Cleaner Production, 2016, 133, 942-952.	4.6	113

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19	Effects of heat accumulation on microstructure and mechanical properties of Ti6Al4V alloy deposited by wire arc additive manufacturing. Additive Manufacturing, 2018, 23, 151-160.	1.7	101
20	Characterization of wire arc additively manufactured titanium aluminide functionally graded material: Microstructure, mechanical properties and oxidation behaviour. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 734, 110-119.	2.6	97
21	Arc Welding Processes for Additive Manufacturing: A Review. Transactions on Intelligent Welding Manufacturing, 2018, , 3-24.	0.3	87
22	Modelling and prediction of surface roughness in wire arc additive manufacturing using machine learning. Journal of Intelligent Manufacturing, 2022, 33, 1467-1482.	4.4	83
23	Fabrication of iron-rich Fe–Al intermetallics using the wire-arc additive manufacturing process. Additive Manufacturing, 2015, 7, 20-26.	1.7	82
24	Mode coupling chatter suppression for robotic machining using semi-active magnetorheological elastomers absorber. Mechanical Systems and Signal Processing, 2019, 117, 221-237.	4.4	82
25	Location dependence of microstructure, phase transformation temperature and mechanical properties on Ni-rich NiTi alloy fabricated by wire arc additive manufacturing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 749, 218-222.	2.6	75
26	A Review on Chatter in Robotic Machining Process Regarding Both Regenerative and Mode Coupling Mechanism. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2240-2251.	3.7	74
27	Machining with flexible manipulator: toward improving robotic machining performance., 0,,.		71
28	The effect of postproduction heat treatment on \hat{I}^3 -TiAl alloys produced by the GTAW-based additive manufacturing process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 657, 86-95.	2.6	71
29	Vision based defects detection for Keyhole TIG welding using deep learning with visual explanation. Journal of Manufacturing Processes, 2020, 56, 845-855.	2.8	71
30	Effect of interpass temperature on in-situ alloying and additive manufacturing of titanium aluminides using gas tungsten arc welding. Additive Manufacturing, 2015, 8, 71-77.	1.7	70
31	In-depth study of the mechanical properties for Fe3Al based iron aluminide fabricated using the wire-arc additive manufacturing process. Materials Science & Degineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 669, 118-126.	2.6	65
32	An overview on TiFe intermetallic for solid-state hydrogen storage: microstructure, hydrogenation and fabrication processes. Critical Reviews in Solid State and Materials Sciences, 2020, 45, 410-427.	6.8	64
33	Fabrication of Copper-Rich Cu-Al Alloy Using the Wire-Arc Additive Manufacturing Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 3143-3151.	1.0	61
34	Influences of deposition current and interpass temperature to the Fe3Al-based iron aluminide fabricated using wire-arc additive manufacturing process. International Journal of Advanced Manufacturing Technology, 2017, 88, 2009-2018.	1.5	60
35	Motion capture in robotics review. , 2009, , .		59
36	Robotic machining from programming to process control: a complete solution by force control. Industrial Robot, 2008, 35, 400-409.	1.2	54

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37	The influence of post-production heat treatment on the multi-directional properties of nickel-aluminum bronze alloy fabricated using wire-arc additive manufacturing process. Additive Manufacturing, 2018, 23, 411-421.	1.7	53
38	Enhanced interface strength in steel-nickel bimetallic component fabricated using wire arc additive manufacturing with interweaving deposition strategy. Journal of Materials Science and Technology, 2020, 52, 226-234.	5.6	51
39	Comparative study on crystallographic orientation, precipitation, phase transformation and mechanical response of Ni-rich NiTi alloy fabricated by WAAM at elevated substrate heating temperatures. Materials Science & Direction A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140307.	2.6	51
40	Model predictive control of layer width in wire arc additive manufacturing. Journal of Manufacturing Processes, 2020, 58, 179-186.	2.8	49
41	Effect of Magnetic Arc Oscillation on the geometry of single-pass multi-layer walls and the process stability in wire and arc additive manufacturing. Journal of Materials Processing Technology, 2020, 283, 116723.	3.1	48
42	Mitigation of thermal distortion in wire arc additively manufactured Ti6Al4V part using active interpass cooling. Science and Technology of Welding and Joining, 2019, 24, 484-494.	1.5	47
43	Characterization of In-Situ Alloyed and Additively Manufactured Titanium Aluminides. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2299-2303.	1.0	46
44	In-situ dual wire arc additive manufacturing of NiTi-coating on Ti6Al4V alloys: Microstructure characterization and mechanical properties. Surface and Coatings Technology, 2020, 386, 125439.	2.2	43
45	Microstructural evolution and mechanical properties of deep cryogenic treated Cu–Al–Si alloy fabricated by Cold Metal Transfer (CMT) process. Materials Characterization, 2020, 159, 110011.	1.9	42
46	Recognizing human motions through mixture modeling of inertial data. Pattern Recognition, 2015, 48, 2394-2406.	5.1	40
47	Investigation into the viability of K-TIG for joining armour grade quenched and tempered steel. Journal of Manufacturing Processes, 2018, 32, 482-493.	2.8	40
48	A review of slicing methods for directed energy deposition based additive manufacturing. Rapid Prototyping Journal, 2018, 24, 1012-1025.	1.6	40
49	Microstructural characterization and mechanical properties of K-TIG welded SAF2205/AISI316L dissimilar joint. Journal of Manufacturing Processes, 2019, 45, 340-355.	2.8	39
50	Investigation of humping phenomenon for the multi-directional robotic wire and arc additive manufacturing. Robotics and Computer-Integrated Manufacturing, 2020, 63, 101916.	6.1	39
51	Human motion capture sensors and analysis in robotics. Industrial Robot, 2011, 38, 163-171.	1.2	38
52	Application of Multidirectional Robotic Wire Arc Additive Manufacturing Process for the Fabrication of Complex Metallic Parts. IEEE Transactions on Industrial Informatics, 2020, 16, 454-464.	7.2	38
53	Evolution of crystallographic orientation, precipitation, phase transformation and mechanical properties realized by enhancing deposition current for dual-wire arc additive manufactured Ni-rich NiTi alloy. Additive Manufacturing, 2020, 34, 101240.	1.7	38
54	Effects of wire feed conditions on in situ alloying and additive layer manufacturing of titanium aluminides using gas tungsten arc welding. Journal of Materials Research, 2014, 29, 2066-2071.	1.2	37

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55	Phase constituent control and correlated properties of titanium aluminide intermetallic alloys through dual-wire arc additive manufacturing. Materials Letters, 2019, 242, 111-114.	1.3	36
56	Microstructure and mechanical properties of ultra-high strength Al-Zn-Mg-Cu-Sc aluminum alloy fabricated by wire + arc additive manufacturing. Journal of Manufacturing Processes, 2022, 79, 576-586.	2.8	35
57	On the development of pseudo-eutectic AlCoCrFeNi2.1 high entropy alloy using Powder-bed Arc Additive Manufacturing (PAAM) process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140639.	2.6	34
58	Wire arc additive manufacturing of Ti6AL4V using active interpass cooling. Materials and Manufacturing Processes, 2020, 35, 845-851.	2.7	31
59	Fabrication of metallic parts with overhanging structures using the robotic wire arc additive manufacturing. Journal of Manufacturing Processes, 2021, 63, 24-34.	2.8	31
60	Introduction of ternary alloying element in wire arc additive manufacturing of titanium aluminide intermetallic. Additive Manufacturing, 2019, 27, 236-245.	1.7	29
61	Process planning for robotic wire and arc additive manufacturing. , 2015, , .		28
62	Learning Trajectories for Robot Programing by Demonstration Using a Coordinated Mixture of Factor Analyzers. IEEE Transactions on Cybernetics, 2016, 46, 706-717.	6.2	28
63	Model-free adaptive iterative learning control of melt pool width in wire arc additive manufacturing. International Journal of Advanced Manufacturing Technology, 2020, 110, 2131-2142.	1.5	28
64	Vision-based melt pool monitoring for wire-arc additive manufacturing using deep learning method. International Journal of Advanced Manufacturing Technology, 2022, 120, 551-562.	1,5	26
65	Recent progress on sampling based dynamic motion planning algorithms. , 2016, , .		25
66	Thermal induced phase evolution of Fe–Fe3Ni functionally graded material fabricated using the wire-arc additive manufacturing process: An in-situ neutron diffraction study. Journal of Alloys and Compounds, 2020, 826, 154097.	2.8	25
67	Thermal cycling of Fe3Al based iron aluminide during the wire-arc additive manufacturing process: An in-situ neutron diffraction study. Intermetallics, 2018, 92, 101-107.	1.8	23
68	In-situ neutron diffraction study on the high temperature thermal phase evolution of wire-arc additively manufactured Ni53Ti47 binary alloy. Journal of Alloys and Compounds, 2020, 843, 156020.	2.8	23
69	The first step towards intelligent wire arc additive manufacturing: An automatic bead modelling system using machine learning through industrial information integration. Journal of Industrial Information Integration, 2021, 23, 100218.	4.3	23
70	Advanced Design for Additive Manufacturing: 3D Slicing and 2D Path Planning. , 0, , .		22
71	Neutron diffraction residual stress determinations in Fe3Al based iron aluminide components fabricated using wire-arc additive manufacturing (WAAM). Additive Manufacturing, 2019, 29, 100774.	1.7	22
72	Influences of postproduction heat treatment on Fe3Al-based iron aluminide fabricated using the wire-arc additive manufacturing process. International Journal of Advanced Manufacturing Technology, 2018, 97, 335-344.	1.5	20

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73	In-situ neutron diffraction characterization on the phase evolution of \hat{I}^3 -TiAl alloy during the wire-arc additive manufacturing process. Journal of Alloys and Compounds, 2019, 778, 280-287.	2.8	20
74	Precipitation Strengthening in Ni–Cu Alloys Fabricated Using Wire Arc Additive Manufacturing Technology. Metals, 2019, 9, 105.	1.0	19
75	Fabrication of FeNi intermetallic using the wire-arc additive manufacturing process: A feasibility and neutron diffraction phase characterization study. Journal of Manufacturing Processes, 2020, 57, 691-699.	2.8	19
76	Improving the weld microstructure and material properties of K-TIG welded armour steel joint using filler material. International Journal of Advanced Manufacturing Technology, 2019, 100, 1931-1944.	1.5	18
77	WAAM process for metal block structure parts based on mixed heat input. International Journal of Advanced Manufacturing Technology, 2021, 113, 503-521.	1.5	18
78	Neutron diffraction residual stress determinations in titanium aluminide component fabricated using the twin wire-arc additive manufacturing. Journal of Manufacturing Processes, 2022, 74, 141-150.	2.8	18
79	Control of autonomous airship. , 2009, , .		17
80	Offline Programming for a Complex Welding System Using DELMIA Automation. Lecture Notes in Electrical Engineering, $2011, 341-349$.	0.3	16
81	The well-distributed volumetric heat source model for numerical simulation of wire arc additive manufacturing process. Materials Today Communications, 2021, 27, 102430.	0.9	16
82	Automated Offline Programming for Robotic Welding System with High Degree of Freedoms. Lecture Notes in Electrical Engineering, 2011, , 685-692.	0.3	16
83	Miniature pipe robots. Industrial Robot, 2003, 30, 575-583.	1.2	15
84	Mode coupling chatter prediction and avoidance in robotic machining process. International Journal of Advanced Manufacturing Technology, 2019, 104, 2103-2116.	1.5	15
85	Comparative effect of Mn/Ti solute atoms and TiC/Ni3(Al,Ti) nano-particles on work hardening behaviour in Ni Cu alloys fabricated by wire arc additive manufacturing. Materials Science & December 1988. Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 753, 262-275.	2.6	15
86	Thermal Behavior in Wire Arc Additive Manufacturing: Characteristics, Effects and Control. Transactions on Intelligent Welding Manufacturing, 2019, , 3-18.	0.3	15
87	A shape control strategy for wire arc additive manufacturing of thin-walled aluminium structures with sharp corners. Journal of Manufacturing Processes, 2021, 64, 253-264.	2.8	15
88	Process Planning Strategy for Wire and Arc Additive Manufacturing. Advances in Intelligent Systems and Computing, 2015, , 437-450.	0.5	15
89	A defect detection system for wire arc additive manufacturing using incremental learning. Journal of Industrial Information Integration, 2022, 27, 100291.	4.3	15
90	Layer-by-layer model-based adaptive control for wire arc additive manufacturing of thin-wall structures. Journal of Intelligent Manufacturing, 2022, 33, 1165-1180.	4.4	15

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91	Flexible fullâ€body tactile sensor of low cost and minimal output connections for service robot. Industrial Robot, 2005, 32, 485-491.	1.2	14
92	Effect of Heat Input on Weld Formation and Tensile Properties in Keyhole Mode TIG Welding Process. Metals, 2019, 9, 1327.	1.0	14
93	Towards intelligent monitoring system in wire arc additive manufacturing: a surface anomaly detector on a small dataset. International Journal of Advanced Manufacturing Technology, 2022, 120, 5225-5242.	1.5	14
94	Automatic program generation for welding robots from CAD., 2016,,.		13
95	Effect of post-weld heat treatment on microstructure and mechanical properties of deep penetration autogenous TIG-welded dissimilar joint between creep strength enhanced ferritic steel and austenitic stainless steel. International Journal of Advanced Manufacturing Technology, 2020, 108, 3207-3229.	1.5	13
96	Effect of the post-production heat treatment on phase evolution in the Fe3Ni–FeNi functionally graded material: An in-situ neutron diffraction study. Intermetallics, 2021, 129, 107032.	1.8	13
97	A practical fabrication strategy for wire arc additive manufacturing of metallic parts with wire structures. International Journal of Advanced Manufacturing Technology, 2021, 115, 3197-3212.	1.5	13
98	A strut-based process planning method for wire arc additive manufacturing of lattice structures. Journal of Manufacturing Processes, 2021, 65, 283-298.	2.8	12
99	Automated Programming for Robotic Welding. Transactions on Intelligent Welding Manufacturing, 2018, , 48-59.	0.3	12
100	Robotic machining: material removal rate control with a flexible manipulator., 2008,,.		11
101	Effect of chemical composition on microstructure, strength and wear resistance of wire deposited Ni-Cu alloys. Additive Manufacturing, 2018, 24, 30-36.	1.7	11
102	Dynamic Modeling of Weld Bead Geometry Features in Thick Plate GMAW Based on Machine Vision and Learning. Sensors, 2020, 20, 7104.	2.1	11
103	Feasibility Study of Low Force Robotic Friction Stir Process and its Effect On Cavitation Erosion and Electrochemical Corrosion for Ni Al Bronze Alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2291-2298.	1.0	10
104	Modification and characterization of the Al concentration induced precipitate in the Fe3Al-based iron aluminide fabricated using the wire-arc additive manufacturing process. Materials Characterization, 2021, 178, 111270.	1.9	10
105	Robotic machining from programming to process control. , 2008, , .		9
106	Inertial sensing for human motor control symmetry in injury rehabilitation. , 2013, , .		9
107	Adaptive Partial Shortcuts: Path Optimization for Industrial Robotics. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 86, 35-47.	2.0	9
108	On the Effect of Heat Input and Interpass Temperature on the Performance of Inconel 625 Alloy Deposited Using Wire Arc Additive Manufacturing–Cold Metal Transfer Process. Metals, 2022, 12, 46.	1.0	9

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109	Adaptive Force Control for Robotic Machining Process. Proceedings of the American Control Conference, 2007, , .	0.0	8
110	Tandem Gas Metal Arc Welding for Low Distortion Butt Welds. Advanced Materials Research, 0, 337, 511-516.	0.3	8
111	Automatic Rebar Counting using Image Processing and Machine Learning. , 2019, , .		8
112	A Combination of Keyhole GTAW with a Trapezoidal Interlayer: A New Insight into Armour Steel Welding. Materials, 2019, 12, 3571.	1.3	8
113	Microstructural characterisation and hardness assessment of wire arc cladded Hastelloy C276 on creep resistant steel P91. Journal of Materials Research and Technology, 2022, 19, 3818-3827.	2.6	8
114	Location dependence of microstructure and mechanical properties of Cuâ€"Al alloy fabricated by dual wire CMT. Materials Research Express, 2019, 6, 126567.	0.8	7
115	High-temperature oxidation performance of wire-arc additively manufactured Inconel 718 superalloys. Materials Science and Technology, 2021, 37, 413-423.	0.8	7
116	Integration of a multi-directional wire arc additive manufacturing system with an automated process planning algorithm. Journal of Industrial Information Integration, 2022, 26, 100265.	4.3	7
117	Analysis and suppression of chatter in robotic machining process. , 2007, , .		6
118	Mixture Model Segmentation for Gait Recognition. , 2008, , .		6
119	Path Planning with a Lazy Significant Edge Algorithm (LSEA). International Journal of Advanced Robotic Systems, 2013, 10, 198.	1.3	6
120	In-Situ Fabrication of Titanium Iron Intermetallic Compound by the Wire Arc Additive Manufacturing Process. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 552-557.	1.1	6
121	3D mapping using a ToF camera for self programming an industrial robot., 2013,,.		5
122	Semi-Active Chatter Reduction for Robotic Machining Using Magnetorheological Elastomers (MREs)., 2017,,.		5
123	Development of safe optimized welding procedures for high strength Q&T steel welded with austenitic consumables. Soldagem E Inspecao, 2013, 18, 169-175.	0.6	4
124	OICP: An Online Fast Registration Algorithm Based on Rigid Translation Applied to Wire Arc Additive Manufacturing of Mold Repair. Materials, 2021, 14, 1563.	1.3	4
125	Strut formation control and processing time optimization for wire arc additive manufacturing of lattice structures. Journal of Manufacturing Processes, 2022, 79, 962-974.	2.8	4
126	Task Space Motion Planning Decomposition. , 2018, , .		3

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127	The Strategy for Fabricating Wire-Structure Parts Using Robotic Skeleton Arc Additive Manufacturing. , 2019, , .		3
128	Robotic skeleton arc additive manufacturing of aluminium alloy. International Journal of Advanced Manufacturing Technology, 2021, 114, 2945-2959.	1.5	3
129	Microstructural characterization and oxidation performance of solution-annealed and precipitation hardened wire-arc additively manufactured Inconel 718 superalloys. Additive Manufacturing, 2022, 51, 102602.	1.7	3
130	Path planning for industrial robots; Lazy Significant Edge Algorithm (LSEA)., 2013,,.		2
131	Neutron diffraction residual stress measurements of welds made with pulsed tandem gas metal arc welding (PT-GMAW). Powder Diffraction, 2014, 29, S24-S27.	0.4	2
132	Bounding sphere CAD model simplification for efficient collision detection in offline programming, , 2015, , .		2
133	Automatic Weld Path Generation for Mesh Objects. , 2017, , .		2
134	MIMO Model Predictive Control of Bead Geometry in Wire Arc Additive Manufacturing., 2021,,.		2
135	Effects of synchronized magnetic arc oscillation on microstructure, texture, grain boundary and mechanical properties of wire arc additively manufactured Ti6Al4V alloy. Additive Manufacturing, 2022, 54, 102723.	1.7	2
136	A Nonautoregressive Dynamic Model Based Welding Parameter Planning Method for Varying Geometry Beads in WAAM. IEEE Transactions on Industrial Electronics, 2023, 70, 2770-2779.	5.2	2
137	Automated Assembly of Ship Panels Using an Integrated Robotic Tool. Advanced Materials Research, 0, 338, 639-644.	0.3	1
138	Bringing Path Planning and Lean Automation Together. Advanced Materials Research, 2012, 591-593, 1371-1375.	0.3	1
139	Mask R-CNN-Based Welding Image Object Detection and Dynamic Modelling for WAAM. Transactions on Intelligent Welding Manufacturing, 2020, , 57-73.	0.3	1
140	Effects of Deposition Current on the Microstructure and Pseudoelasticity of Wire-Arc Additively Manufactured Ni-rich NiTi Alloys. Advances in Intelligent Systems and Computing, 2020, , 78-85.	0.5	0
141	Sphere sets from point clouds for efficient collision detection in robot motion planning. , 2021, , .		O