Aydin Nassehi

List of Publications by Year
in descending order

84 papers	3,029 citations	218677 26 h-index	168389 53 g-index
89 all docs	89 docs citations	89 times ranked	2022 citing authors

#	Article	IF	Citations
1	Characterising the Digital Twin: A systematic literature review. CIRP Journal of Manufacturing Science and Technology, 2020, 29, 36-52.	4.5	950
2	Energy efficient process planning for CNC machining. CIRP Journal of Manufacturing Science and Technology, 2012, 5, 127-136.	4.5	254
3	A review of hybrid manufacturing processes â€" state of the art and future perspectives. International Journal of Computer Integrated Manufacturing, 2013, 26, 596-615.	4.6	208
4	Strategic advantages of interoperability for global manufacturing using CNC technology. Robotics and Computer-Integrated Manufacturing, 2008, 24, 699-708.	9.9	146
5	Multi-sensor data fusion framework for CNC machining monitoring. Mechanical Systems and Signal Processing, 2016, 66-67, 505-520.	8.0	108
6	A Unified Manufacturing Resource Model for representing CNC machining systems. Robotics and Computer-Integrated Manufacturing, 2009, 25, 999-1007.	9.9	78
7	The application of multi-agent systems for STEP-NC computer aided process planning of prismatic components. International Journal of Machine Tools and Manufacture, 2006, 46, 559-574.	13.4	74
8	Process control in CNC manufacturing for discrete components: A STEP-NC compliant framework. Robotics and Computer-Integrated Manufacturing, 2007, 23, 667-676.	9.9	53
9	Virtual visual sensors and their application in structural health monitoring. Structural Health Monitoring, 2014, 13, 251-264.	7.5	51
10	Feature recognition from CNC part programs for milling operations. International Journal of Advanced Manufacturing Technology, 2014, 70, 397-412.	3.0	51
11	Investigation of part distortions as a result of hybrid manufacturing. Robotics and Computer-Integrated Manufacturing, 2016, 37, 23-32.	9.9	50
12	Application of a hybrid process for high precision manufacture of difficult to machine prismatic parts. International Journal of Advanced Manufacturing Technology, 2014, 74, 1115-1132.	3.0	47
13	Universal Manufacturing Platform for CNC Machining. CIRP Annals - Manufacturing Technology, 2007, 56, 459-462.	3.6	46
14	A roadmap for STEP-NC-enabled interoperable manufacturing. International Journal of Advanced Manufacturing Technology, 2013, 68, 1023-1037.	3.0	46
15	Machine tool capability profile for intelligent process planning. CIRP Annals - Manufacturing Technology, 2009, 58, 421-424.	3.6	44
16	Manufacturing at double the speed. Journal of Materials Processing Technology, 2016, 229, 729-757.	6.3	40
17	A new software platform to support feature-based process planning for interoperable STEP-NC manufacture. International Journal of Computer Integrated Manufacturing, 2007, 20, 669-683.	4.6	37
18	Systematic modeling and reusing of process knowledge for rapid process configuration. Robotics and Computer-Integrated Manufacturing, 2008, 24, 763-772.	9.9	35

#	ARTICLE	IF	CITATIONS
19	A visual reasoning-based approach for mutual-cognitive human-robot collaboration. CIRP Annals - Manufacturing Technology, 2022, 71, 377-380.	3.6	35
20	A STEP-compliant process planning system for CNC turning operations. Robotics and Computer-Integrated Manufacturing, 2011, 27, 349-356.	9.9	34
21	Process comprehension for shopfloor manufacturing knowledge reuse. International Journal of Production Research, 2013, 51, 7405-7419.	7.5	34
22	STEP-NC compliant process planning as an enabler for adaptive global manufacturing. Robotics and Computer-Integrated Manufacturing, 2006, 22, 456-467.	9.9	33
23	Anarchic manufacturing. International Journal of Production Research, 2019, 57, 2514-2530.	7.5	31
24	Assessment of interoperability in cloud manufacturing. Robotics and Computer-Integrated Manufacturing, 2020, 61, 101832.	9.9	31
25	A mechanistic model of energy consumption in milling. International Journal of Production Research, 2018, 56, 642-659.	7.5	30
26	Self-repair of smart manufacturing systems by deep reinforcement learning. CIRP Annals - Manufacturing Technology, 2020, 69, 421-424.	3.6	29
27	Toward interoperable CNC manufacturing. International Journal of Computer Integrated Manufacturing, 2008, 21, 222-230.	4.6	27
28	A novel methodology for cross-technology interoperability in CNC machining. Robotics and Computer-Integrated Manufacturing, 2013, 29, 79-87.	9.9	26
29	A STEP compliant knowledge based schema to support shop-floor adaptive automation in dynamic manufacturing environments. CIRP Annals - Manufacturing Technology, 2010, 59, 441-444.	3.6	24
30	A unified manufacturing resource model for representation of computerized numerically controlled machine tools. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2009, 223, 463-483.	2.4	22
31	Evolutionary algorithms for generation and optimization of tool paths. CIRP Annals - Manufacturing Technology, 2015, 64, 455-458.	3.6	22
32	Interoperability as a Key Enabler for Manufacturing in the Cloud. Procedia CIRP, 2016, 52, 30-34.	1.9	21
33	Development of a feature-based open soft-CNC system. International Journal of Advanced Manufacturing Technology, 2017, 89, 1013-1024.	3.0	21
34	Application of mobile agents in interoperable STEP-NC compliant manufacturing. International Journal of Production Research, 2006, 44, 4159-4174.	7.5	19
35	Using formal methods to model hybrid manufacturing processes. , 2012, , 52-56.		19
36	An agile production network enabled by reconfigurable manufacturing systems. CIRP Annals - Manufacturing Technology, 2021, 70, 403-406.	3.6	17

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37	Non-invasive damage detection in beams using marker extraction and wavelets. Mechanical Systems and Signal Processing, 2014, 49, 13-23.	8.0	16
38	Machine tool capability profiles for representing machine tool health. Robotics and Computer-Integrated Manufacturing, 2015, 34, 70-78.	9.9	14
39	Degradation-aware decision making in reconfigurable manufacturing systems. CIRP Annals - Manufacturing Technology, 2019, 68, 431-434.	3.6	14
40	A multi-method simulation approach for evaluating the effect of the interaction of customer behaviour and enterprise strategy on economic viability of remanufacturing. CIRP Annals - Manufacturing Technology, 2018, 67, 33-36.	3.6	12
41	Anarchic manufacturing: Distributed control for product transition. Journal of Manufacturing Systems, 2020, 56, 1-10.	13.9	11
42	The creation of a neural networkÂbased capability profile to enable generative design and the manufacture of functional FDM parts. International Journal of Advanced Manufacturing Technology, 2021, 113, 2951-2968.	3.0	10
43	Review of machine learning technologies and artificial intelligence in modern manufacturing systems. , 2022, , 317-348.		9
44	Determination of Machinability Considering Degradation of Accuracy Over Machine Tool Life Cycle. Procedia CIRP, 2014, 17, 760-765.	1.9	8
45	A STEP-NC Compliant Methodology for Modelling Manufacturing Resources. Springer Series in Advanced Manufacturing, 2009, , 261-281.	0.5	8
46	Process comprehension for interoperable CNC manufacturing. , 2011, , .		7
47	Unified representation of fixtures: clamping, locating and supporting elements in CNC manufacture. International Journal of Production Research, 2011, 49, 5017-5032.	7.5	7
48	Democratising the design of 3D printed functional components through a hybrid virtual-physical design methodology. Procedia CIRP, 2018, 78, 394-399.	1.9	7
49	Embracing complicatedness and complexity with Anarchic Manufacturing. Procedia Manufacturing, 2019, 28, 51-56.	1.9	7
50	Anarchic manufacturing: implementing fully distributed control and planning in assembly. Production and Manufacturing Research, 2021, 9, 56-80.	1.5	7
51	Towards integrated version control of virtual and physical artefacts in new product development: inspirations from software engineering and the digital twin paradigm. Procedia CIRP, 2021, 100, 283-288.	1.9	7
52	An Information Model for Process Control on Machine Tools. Advances in Intelligent and Soft Computing, 2010, , 1565-1582.	0.2	7
53	Daydreaming factories. CIRP Annals - Manufacturing Technology, 2022, 71, 671-692.	3.6	7
54	A meta-model of computer numerical controlled part programming languages. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2015, 229, 1243-1257.	2.4	6

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55	Innovative Framework for Immersive Metrology. Procedia CIRP, 2017, 60, 110-115.	1.9	6
56	Development of a data model and a prototype information sharing platform for DEMAT machine tools. International Journal of Computer Integrated Manufacturing, 2015, 28, 364-378.	4.6	5
57	Generating Milling Tool Paths for Prismatic Parts Using Genetic Programming. Procedia CIRP, 2015, 33, 490-495.	1.9	5
58	STEP-based Conceptual Framework for Measurement Planning Integration. Procedia CIRP, 2016, 43, 315-320.	1.9	5
59	A STEP-compliant Method for Manufacturing Knowledge Capture. Procedia CIRP, 2014, 20, 103-108.	1.9	4
60	Special issue on â€˜Cyber-physical product creation for Industry 4.0â€™. International Journal of Computer Integrated Manufacturing, 2018, 31, 611-611.	4.6	4
61	Non-invasive damage detection in composite beams using marker extraction and wavelets. , 2011, , .		3
62	Modeling of machine tools using smart interlocking software blocks. CIRP Annals - Manufacturing Technology, 2012, 61, 435-438.	3.6	3
63	Balancing Global Customer Needs and Profitability Using a Novel Business Model for New Model Programmes in the Automotive Industry. Procedia CIRP, 2016, 52, 56-61.	1.9	3
64	Through Life Machine Tool Capability Modelling. Procedia Manufacturing, 2018, 16, 171-178.	1.9	3
65	Balancing multiple objectives with anarchic manufacturing. Procedia Manufacturing, 2019, 38, 1453-1460.	1.9	3
66	A Monte Carlo Analysis of the Effects of Geometric Deviations on the Performance of Magnetic Gears. IEEE Transactions on Industry Applications, 2020, 56, 4857-4869.	4.9	3
67	Simulation of Manufacturing Systems. , 2019, , 1570-1573.		3
68	Formal Modelling of Process Planning in Combined Additive and Subtractive Manufacturing. , 2014, , 171-176.		2
69	Additive Manufacturing Simulation Using Signed Distance Fields. Smart Innovation, Systems and Technologies, 2016, , 435-444.	0.6	2
70	Towards the democratisation of design: the implementation of metaheuristic search strategies to enable the auto-assignment of manufacturing parameters for FDM. Procedia Manufacturing, 2019, 38, 383-390.	1.9	2
71	Towards the democratisation of design: a generalised capability model for FDM. International Journal of Agile Systems and Management, 2020, 13, 79.	0.3	2
72	Computer-Aided Process Planning. , 2019, , 339-345.		2

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73	Assessing the Effect of Geometric Error on the Performance of Magnetic Gears. , 2019, , .		1
74	An analysis of premium payments as a mechanism for securing preferential service in cloud manufacturing. Procedia CIRP, 2019, 81, 168-173.	1.9	1
75	Web Based Multi Agent Platform for Collaborative Manufacturing. , 2007, , 325-332.		1
76	Design and implementation of machine tool static error feedback model. , 2009, , .		0
77	Special Issue on Digital Enterprise Technology. International Journal of Computer Integrated Manufacturing, 2009, 22, 999-999.	4.6	0
78	A Novel Information Modelling Approach for Representing Parallel Kinematic Machine Tools. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1796-1801.	0.4	0
79	Algorithm. , 2019, , 1-6.		0
80	Algorithm. , 2019, , 61-65.		0
81	Towards the democratisation of design: a generalised capability model for FDM. International Journal of Agile Systems and Management, 2020, 13, 79.	0.3	0
82	A heuristic for internal disruption management in assembly systems. Procedia CIRP, 2022, 106, 64-69.	1.9	0
83	Feature-Based process planning for interoperable STEP-NC manufacture. , 2006, , 781-786.		0
84	A new software platform for step-nc manufacturing application development. , 2006, , 787-792.		0