

Pai Zheng

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

4,421
citations

109137

35
h-index

114278

63
g-index

104
all docs

104
docs citations

104
times ranked

2367
citing authors

#	ARTICLE	IF	CITATIONS
1	Smart manufacturing systems for Industry 4.0: Conceptual framework, scenarios, and future perspectives. <i>Frontiers of Mechanical Engineering</i> , 2018, 13, 137-150.	2.5	588
2	A state-of-the-art survey of Digital Twin: techniques, engineering product lifecycle management and business innovation perspectives. <i>Journal of Intelligent Manufacturing</i> , 2020, 31, 1313-1337.	4.4	346
3	A systematic design approach for service innovation of smart product-service systems. <i>Journal of Cleaner Production</i> , 2018, 201, 657-667.	4.6	287
4	A survey of smart product-service systems: Key aspects, challenges and future perspectives. <i>Advanced Engineering Informatics</i> , 2019, 42, 100973.	4.0	234
5	A novel data-driven graph-based requirement elicitation framework in the smart product-service system context. <i>Advanced Engineering Informatics</i> , 2019, 42, 100983.	4.0	101
6	Toward human-centric smart manufacturing: A human-cyber-physical systems (HCPS) perspective. <i>Journal of Manufacturing Systems</i> , 2022, 63, 471-490.	7.6	100
7	A generic tri-model-based approach for product-level digital twin development in a smart manufacturing environment. <i>Robotics and Computer-Integrated Manufacturing</i> , 2020, 64, 101958.	6.1	93
8	Towards Self-X cognitive manufacturing network: An industrial knowledge graph-based multi-agent reinforcement learning approach. <i>Journal of Manufacturing Systems</i> , 2021, 61, 16-26.	7.6	92
9	Analysis and prediction of printable bridge length in fused deposition modelling based on back propagation neural network. <i>Virtual and Physical Prototyping</i> , 2019, 14, 253-266.	5.3	91
10	Edge-cloud orchestration driven industrial smart product-service systems solution design based on CPS and IIoT. <i>Advanced Engineering Informatics</i> , 2019, 42, 100984.	4.0	89
11	Towards proactive human-robot collaboration: A foreseeable cognitive manufacturing paradigm. <i>Journal of Manufacturing Systems</i> , 2021, 60, 547-552.	7.6	87
12	Towards an automatic engineering change management in smart product-service systems – A DSM-based learning approach. <i>Advanced Engineering Informatics</i> , 2019, 39, 203-213.	4.0	86
13	A smart surface inspection system using faster R-CNN in cloud-edge computing environment. <i>Advanced Engineering Informatics</i> , 2020, 43, 101037.	4.0	84
14	Personalized product configuration framework in an adaptable open architecture product platform. <i>Journal of Manufacturing Systems</i> , 2017, 43, 422-435.	7.6	81
15	Smart, connected open architecture product: an IT-driven co-creation paradigm with lifecycle personalization concerns. <i>International Journal of Production Research</i> , 2019, 57, 2571-2584.	4.9	81
16	A digital twin-enhanced system for engineering product family design and optimization. <i>Journal of Manufacturing Systems</i> , 2020, 57, 82-93.	7.6	81
17	A data-driven cyber-physical approach for personalised smart, connected product co-development in a cloud-based environment. <i>Journal of Intelligent Manufacturing</i> , 2020, 31, 3-18.	4.4	78
18	A data-driven reversible framework for achieving Sustainable Smart product-service systems. <i>Journal of Cleaner Production</i> , 2021, 279, 123618.	4.6	77

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19	AR-assisted digital twin-enabled robot collaborative manufacturing system with human-in-the-loop. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022, 76, 102321.	6.1	76
20	A Knowledge Graph-Aided Conceptâ€“Knowledge Approach for Evolutionary Smart Productâ€“Service System Development. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2020, 142, .	1.7	72
21	Vision-based holistic scene understanding towards proactive humanâ€“robot collaboration. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022, 75, 102304.	6.1	69
22	Exploiting knowledge graphs in industrial products and services: A survey of key aspects, challenges, and future perspectives. <i>Computers in Industry</i> , 2021, 129, 103449.	5.7	67
23	A weighted interval rough number based method to determine relative importance ratings of customer requirements in QFD product planning. <i>Journal of Intelligent Manufacturing</i> , 2019, 30, 3-16.	4.4	60
24	An AR-Assisted Deep Learning-Based Approach for Automatic Inspection of Aviation Connectors. <i>IEEE Transactions on Industrial Informatics</i> , 2021, 17, 1721-1731.	7.2	55
25	A user-centric design approach for smart product-service systems using virtual reality: A case study. <i>Journal of Cleaner Production</i> , 2021, 280, 124413.	4.6	53
26	A graph-based context-aware requirement elicitation approach in smart product-service systems. <i>International Journal of Production Research</i> , 2021, 59, 635-651.	4.9	50
27	Toward cognitive predictive maintenance: A survey of graph-based approaches. <i>Journal of Manufacturing Systems</i> , 2022, 64, 107-120.	7.6	49
28	A context-aware diversity-oriented knowledge recommendation approach for smart engineering solution design. <i>Knowledge-Based Systems</i> , 2021, 215, 106739.	4.0	46
29	Design concept evaluation of smart product-service systems considering sustainability: An integrated method. <i>Computers and Industrial Engineering</i> , 2021, 159, 107485.	3.4	45
30	Smart additive manufacturing: Current artificial intelligence-enabled methods and future perspectives. <i>Science China Technological Sciences</i> , 2020, 63, 1600-1611.	2.0	45
31	Production planning for cloud-based additive manufacturingâ€“A computer vision-based approach. <i>Robotics and Computer-Integrated Manufacturing</i> , 2019, 58, 145-157.	6.1	43
32	Toward Proactive Humanâ€“Robot Collaborative Assembly: A Multimodal Transfer-Learning-Enabled Action Prediction Approach. <i>IEEE Transactions on Industrial Electronics</i> , 2022, 69, 8579-8588.	5.2	42
33	Adaptive reconstruction of digital twins for machining systems: A transfer learning approach. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022, 78, 102390.	6.1	40
34	A Knowledge Management System to Support Design for Additive Manufacturing Using Bayesian Networks. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2018, 140, .	1.7	38
35	A holistic relook at engineering design methodologies for smart product-service systems development. <i>Journal of Cleaner Production</i> , 2020, 272, 122737.	4.6	38
36	User-experience Based Product Development for Mass Personalization: A Case Study. <i>Procedia CIRP</i> , 2017, 63, 2-7.	1.0	36

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37	Digitalisation and servitisation of machine tools in the era of Industry 4.0: a review. <i>International Journal of Production Research</i> , 2023, 61, 4069-4101.	4.9	36
38	Design entropy theory: A new design methodology for smart PSS development. <i>Advanced Engineering Informatics</i> , 2020, 45, 101124.	4.0	35
39	A visual reasoning-based approach for mutual-cognitive human-robot collaboration. <i>CIRP Annals - Manufacturing Technology</i> , 2022, 71, 377-380.	1.7	35
40	A system framework for OKP product planning in a cloud-based design environment. <i>Robotics and Computer-Integrated Manufacturing</i> , 2017, 45, 73-85.	6.1	33
41	A context-aware concept evaluation approach based on user experiences for smart product-service systems design iteration. <i>Advanced Engineering Informatics</i> , 2021, 50, 101394.	4.0	33
42	A weighted rough set based fuzzy axiomatic design approach for the selection of AM processes. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 91, 1977-1990.	1.5	32
43	Development of an edge computing-based cyber-physical machine tool. <i>Robotics and Computer-Integrated Manufacturing</i> , 2021, 67, 102042.	6.1	32
44	Ontology-based information modeling method for digital twin creation of as-fabricated machining parts. <i>Robotics and Computer-Integrated Manufacturing</i> , 2021, 72, 102173.	6.1	31
45	An integrated framework for active discovery and optimal allocation of smart manufacturing services. <i>Journal of Cleaner Production</i> , 2020, 273, 123144.	4.6	30
46	Smart Product-Service Systems Solution Design via Hybrid Crowd Sensing Approach. <i>IEEE Access</i> , 2019, 7, 128463-128473.	2.6	29
47	A hypergraph-based approach for context-aware smart product-service system configuration. <i>Computers and Industrial Engineering</i> , 2022, 163, 107816.	3.4	26
48	Promoting employee health in smart office: A survey. <i>Advanced Engineering Informatics</i> , 2022, 51, 101518.	4.0	26
49	A digital twin-based multidisciplinary collaborative design approach for complex engineering product development. <i>Advanced Engineering Informatics</i> , 2022, 52, 101635.	4.0	26
50	Industrial smart product-service systems solution design via hybrid concerns. <i>Procedia CIRP</i> , 2019, 83, 187-192.	1.0	25
51	Establishing a reliable mechanism model of the digital twin machining system: An adaptive evaluation network approach. <i>Journal of Manufacturing Systems</i> , 2022, 62, 390-401.	7.6	25
52	A machine learning-based iterative design approach to automate user satisfaction degree prediction in smart product-service system. <i>Computers and Industrial Engineering</i> , 2022, 165, 107939.	3.4	24
53	A novel hypergraph convolution network-based approach for predicting the material removal rate in chemical mechanical planarization. <i>Journal of Intelligent Manufacturing</i> , 2022, 33, 2295-2306.	4.4	21
54	Achieving Cognitive Mass Personalization via the Self-X Cognitive Manufacturing Network: An Industrial Knowledge Graph- and Graph Embedding-Enabled Pathway. <i>Engineering</i> , 2023, 22, 14-19.	3.2	20

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55	Multi-modal transportation planning for multi-commodity rebalancing under uncertainty in humanitarian logistics. <i>Advanced Engineering Informatics</i> , 2021, 47, 101223.	4.0	19
56	Transfer Learning-enabled Action Recognition for Human-robot Collaborative Assembly. <i>Procedia CIRP</i> , 2021, 104, 1795-1800.	1.0	19
57	A graph-based reinforcement learning-enabled approach for adaptive human-robot collaborative assembly operations. <i>Journal of Manufacturing Systems</i> , 2022, 63, 491-503.	7.6	19
58	3D Printing in the Context of Cloud Manufacturing. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022, 74, 102256.	6.1	18
59	From Open CNC Systems to Cyber-Physical Machine Tools: A Case Study. <i>Procedia CIRP</i> , 2018, 72, 1270-1276.	1.0	17
60	Cloud-based approach for smart product personalization. <i>Procedia CIRP</i> , 2018, 72, 922-927.	1.0	15
61	Microstructure Evolution Modeling and Simulation for Dynamic Recrystallization of Cr12MoV Die Steel During Hot Compression Based on Real Metallographic Image. <i>Metals and Materials International</i> , 2019, 25, 966-981.	1.8	15
62	VR-based Product Personalization Process for Smart Products. <i>Procedia Manufacturing</i> , 2017, 11, 1568-1576.	1.9	14
63	Performance Evaluation of a Foot Interface to Operate a Robot Arm. <i>IEEE Robotics and Automation Letters</i> , 2019, 4, 3302-3309.	3.3	14
64	Unstable approach in aviation: Mental model disconnects between pilots and air traffic controllers and interaction conflicts. <i>Reliability Engineering and System Safety</i> , 2019, 185, 383-391.	5.1	13
65	An explorative context-aware machine learning approach to reducing human fatigue risk of traffic control operators. <i>Safety Science</i> , 2020, 125, 104655.	2.6	12
66	Industrial smart product-service system development for lifecycle sustainability concerns. <i>IET Collaborative Intelligent Manufacturing</i> , 2020, 2, 197-201.	1.9	9
67	Dynamic Scene Graph for Mutual-Cognition Generation in Proactive Human-Robot Collaboration. <i>Procedia CIRP</i> , 2022, 107, 943-948.	1.0	9
68	Investigating the evolving context of an unstable approach in aviation from mental model disconnects with an agent-based model. <i>Reliability Engineering and System Safety</i> , 2020, 193, 106657.	5.1	8
69	Product family design and optimization: a digital twin-enhanced approach. <i>Procedia CIRP</i> , 2020, 93, 246-250.	1.0	8
70	Augmented Lagrangian coordination for energy-optimal allocation of smart manufacturing services. <i>Robotics and Computer-Integrated Manufacturing</i> , 2021, 71, 102161.	6.1	8
71	Perspectives of Genetic Damage and Epigenetic Alterations by Hexavalent Chromium: Time Evolution Based on a Bibliometric Analysis. <i>Chemical Research in Toxicology</i> , 2021, 34, 684-694.	1.7	7
72	Smart Product-Service Systems: A Novel Transdisciplinary Sociotechnical Paradigm. <i>Advances in Transdisciplinary Engineering</i> , 2019, , .	0.1	7

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73	A node2vec-based graph embedding approach for unified assembly process information modeling and workstep execution time prediction. Computers and Industrial Engineering, 2022, 163, 107864.	3.4	6
74	An Explainable Laser Welding Defect Recognition Method Based on Multi-Scale Class Activation Mapping. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-12.	2.4	6
75	Transfer Learning for Smart Manufacturing: A Stepwise Survey. IFAC-PapersOnLine, 2020, 53, 37-42.	0.5	5
76	An Adaptive Parallel Feature Learning and Hybrid Feature Fusion-Based Deep Learning Approach for Machining Condition Monitoring. IEEE Transactions on Cybernetics, 2023, 53, 7584-7595.	6.2	5
77	A weighted preference graph approach to analyze incomplete customer preference information in QFD product planning. , 2016, , .		4
78	Towards better information transparency in the air traffic landing system: A novel agent-based model with implicit interactions. Reliability Engineering and System Safety, 2019, 191, 106569.	5.1	4
79	A modularized generic product model in support of product family modeling in One-of-a-Kind Production. , 2014, , .		3
80	A Personalized Attribute Determination Process in a Cloud-Based Adaptable Product Configurator. , 2017, , .		3
81	A Closed-Loop Context-Aware Framework for Sustainable Smart PSS Development. , 2020, , .		3
82	Editorial Notes: Design innovation of Smart PSS. Advanced Engineering Informatics, 2020, 44, 101069.	4.0	3
83	A High-Resolution Network-Based Approach for 6D Pose Estimation of Industrial Parts. , 2021, , .		3
84	A Survey of Requirements Management in Smart Product-Service Systems. Advances in Transdisciplinary Engineering, 2019, , .	0.1	3
85	Integration of Conceptual Design and MOKA into CATIA v5: A Knowledge-Based Application for an Aircraft Y-Bolt Component. Applied Mechanics and Materials, 2012, 271-272, 974-980.	0.2	2
86	A rough set based fuzzy axiomatic design approach in evaluating customer-centric design alternatives. , 2015, , .		2
87	Integrate Product Planning Process of OKP Companies in the Cloud Manufacturing Environment. IFIP Advances in Information and Communication Technology, 2015, , 420-426.	0.5	2
88	Product-Service Family Enabled Product Configuration System for Cloud Manufacturing. , 2017, , .		2
89	A novel AHP-TOPSIS integrated method for case-based retrieval in mechanical product design. International Journal of Product Development, 2017, 22, 212.	0.2	2
90	Fundamentals of smart product-service system. , 2021, , 21-51.		1

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91	Design Entropy Theory: A Novel Transdisciplinary Design Methodology for Smart PSS Development. Advances in Transdisciplinary Engineering, 2020, , .	0.1	1
92	Digital twin-enhanced product family design and optimization service. , 2022, , 89-118.		1
93	Graph-based context-aware product-service family configuration. , 2021, , 117-149.		0
94	Design entropy theory. , 2021, , 53-84.		0
95	New IT-driven value co-creation mechanism. , 2021, , 85-115.		0
96	Toward sustainable smart product-service systems. , 2021, , 203-227.		0
97	Digital twin-enhanced product family design and optimization. , 2021, , 151-179.		0
98	Evolution of IT-driven product-service systems. , 2021, , 9-20.		0
99	Engineering lifecycle implementations of smart product-service system. , 2021, , 181-201.		0
100	Design of Data Collection and Analysis Method for a Pleasant and Safe User Experience of Personal Mobility Device. Advances in Transdisciplinary Engineering, 2019, , .	0.1	0