Jay Lee

List of Publications by Year in descending order

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145 papers	17,523 citations	36303 51 h-index	15732 125 g-index
145 all docs	145 docs citations	145 times ranked	11907 citing authors

#	Article	IF	Citations
1	A Cyber-Physical Systems architecture for Industry 4.0-based manufacturing systems. Manufacturing Letters, 2015, 3, 18-23.	2.2	3,341
2	Service Innovation and Smart Analytics for Industry 4.0 and Big Data Environment. Procedia CIRP, 2014, 16, 3-8.	1.9	1,301
3	Prognostics and health management design for rotary machinery systemsâ€"Reviews, methodology and applications. Mechanical Systems and Signal Processing, 2014, 42, 314-334.	8.0	1,138
4	Wavelet filter-based weak signature detection method and its application on rolling element bearing prognostics. Journal of Sound and Vibration, 2006, 289, 1066-1090.	3.9	1,059
5	Recent advances and trends in predictive manufacturing systems in big data environment. Manufacturing Letters, 2013, 1, 38-41.	2.2	766
6	A review on prognostics and health monitoring of Li-ion battery. Journal of Power Sources, 2011, 196, 6007-6014.	7.8	600
7	Review and recent advances in battery health monitoring and prognostics technologies for electric vehicle (EV) safety and mobility. Journal of Power Sources, 2014, 256, 110-124.	7.8	496
8	Intelligent prognostics tools and e-maintenance. Computers in Industry, 2006, 57, 476-489.	9.9	475
9	Industrial Artificial Intelligence for industry 4.0-based manufacturing systems. Manufacturing Letters, 2018, 18, 20-23.	2.2	454
10	Residual life predictions for ball bearings based on self-organizing map and back propagation neural network methods. Mechanical Systems and Signal Processing, 2007, 21, 193-207.	8.0	436
11	Robust performance degradation assessment methods for enhanced rolling element bearing prognostics. Advanced Engineering Informatics, 2003, 17, 127-140.	8.0	365
12	Smart Agents in Industrial Cyberâ€"Physical Systems. Proceedings of the IEEE, 2016, 104, 1086-1101.	21.3	327
13	Industrial Big Data Analytics and Cyber-physical Systems for Future Maintenance & Service Innovation. Procedia CIRP, 2015, 38, 3-7.	1.9	296
14	A similarity-based prognostics approach for Remaining Useful Life estimation of engineered systems. , 2008, , .		275
15	Watchdog Agentâ€"an infotronics-based prognostics approach for product performance degradation assessment and prediction. Advanced Engineering Informatics, 2003, 17, 109-125.	8.0	240
16	Cyber-physical Systems Architecture for Self-Aware Machines in Industry 4.0 Environment. IFAC-PapersOnLine, 2015, 48, 1622-1627.	0.9	227
17	Reliability-centered predictive maintenance scheduling for a continuously monitored system subject to degradation. Reliability Engineering and System Safety, 2007, 92, 530-534.	8.9	222
18	Industrial Artificial Intelligence in Industry 4.0 - Systematic Review, Challenges and Outlook. IEEE Access, 2020, 8, 220121-220139.	4.2	208

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19	A prognostic algorithm for machine performance assessment and its application. Production Planning and Control, 2004, 15, 796-801.	8.8	190
20	A blockchain enabled Cyber-Physical System architecture for Industry 4.0 manufacturing systems. Manufacturing Letters, 2019, 20, 34-39.	2.2	184
21	Multisensor data fusion for gearbox fault diagnosis using 2-D convolutional neural network and motor current signature analysis. Mechanical Systems and Signal Processing, 2020, 144, 106861.	8.0	173
22	E-manufacturingâ€"fundamental, tools, and transformation. Robotics and Computer-Integrated Manufacturing, 2003, 19, 501-507.	9.9	153
23	Introduction to cyber manufacturing. Manufacturing Letters, 2016, 8, 11-15.	2.2	139
24	Degradation Assessment and Fault Modes Classification Using Logistic Regression. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2005, 127, 912-914.	2.2	135
25	Smart Factory Systems. Informatik-Spektrum, 2015, 38, 230-235.	1.3	133
26	Empirical analysis of support vector machine ensemble classifiers. Expert Systems With Applications, 2009, 36, 6466-6476.	7.6	123
27	Integration of digital twin and deep learning in cyberâ€physical systems: towards smart manufacturing. IET Collaborative Intelligent Manufacturing, 2020, 2, 34-36.	3.3	122
28	Gaussian Process Regression for numerical wind speed prediction enhancement. Renewable Energy, 2020, 146, 2112-2123.	8.9	112
29	Measurement of machine performance degradation using a neural network model. Computers in Industry, 1996, 30, 193-209.	9.9	110
30	Wind turbine performance assessment using multi-regime modeling approach. Renewable Energy, 2012, 45, 86-95.	8.9	102
31	Opportunistic preventive maintenance scheduling for a multi-unit series system based on dynamic programming. International Journal of Production Economics, 2009, 118, 361-366.	8.9	100
32	Wind turbine performance degradation assessment based on a novel similarity metric for machine performance curves. Renewable Energy, 2016, 99, 1191-1201.	8.9	99
33	Predictive Manufacturing System - Trends of Next-Generation Production Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 150-156.	0.4	92
34	Sparse filtering with the generalized lp / lq norm and its applications to the condition monitoring of rotating machinery. Mechanical Systems and Signal Processing, 2018, 102, 198-213.	8.0	90
35	Instantaneous speed jitter detection via encoder signal and its application for the diagnosis of planetary gearbox. Mechanical Systems and Signal Processing, 2018, 98, 16-31.	8.0	83
36	Quality analysis in metal additive manufacturing with deep learning. Journal of Intelligent Manufacturing, 2020, 31, 2003-2017.	7.3	81

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37	Bayesian Belief Network-based approach for diagnostics and prognostics of semiconductor manufacturing systems. Robotics and Computer-Integrated Manufacturing, 2012, 28, 66-74.	9.9	78
38	Machine performance monitoring and proactive maintenance in computer-integrated manufacturing: review and perspective. International Journal of Computer Integrated Manufacturing, 1995, 8, 370-380.	4.6	77
39	Similarity based method for manufacturing process performance prediction and diagnosis. Computers in Industry, 2007, 58, 558-566.	9.9	76
40	Dynamic maintenance decision-making for seriesâ€“parallel manufacturing system based on MAMâ€“MTW methodology. European Journal of Operational Research, 2012, 221, 231-240.	5.7	76
41	Assessment of Data Suitability for Machine Prognosis Using Maximum Mean Discrepancy. IEEE Transactions on Industrial Electronics, 2018, 65, 5872-5881.	7.9	76
42	Field-synchronized Digital Twin framework for production scheduling with uncertainty. Journal of Intelligent Manufacturing, 2021, 32, 1207-1228.	7.3	75
43	A novel method for machine performance degradation assessment based on fixed cycle features test. Journal of Sound and Vibration, 2009, 326, 894-908.	3.9	72
44	Cyber physical systems for predictive production systems. Production Engineering, 2017, 11, 155-165.	2.3	70
45	Prognosability study of ball screw degradation using systematic methodology. Mechanical Systems and Signal Processing, 2018, 109, 45-57.	8.0	69
46	Adaptive virtual metrology for semiconductor chemical mechanical planarization process using GMDH-type polynomial neural networks. Journal of Process Control, 2018, 62, 44-54.	3.3	66
47	Agents enabling cyber-physical production systems. Automatisierungstechnik, 2015, 63, 777-789.	0.8	64
48	A hybrid feature selection scheme for unsupervised learning and its application in bearing fault diagnosis. Expert Systems With Applications, 2011, 38, 11311-11320.	7.6	62
49	A modified support vector data description based novelty detection approach for machinery components. Applied Soft Computing Journal, 2013, 13, 1193-1205.	7.2	60
50	Intelligent ball screw fault diagnosis using a deep domain adaptation methodology. Mechanism and Machine Theory, 2020, 151, 103932.	4.5	60
51	Investigation on the kurtosis filter and the derivation of convolutional sparse filter for impulsive signature enhancement. Journal of Sound and Vibration, 2017, 386, 433-448.	3.9	54
52	Condition-based maintenance for intelligent monitored series system with independent machine failure modes. International Journal of Production Research, 2013, 51, 4585-4596.	7.5	53
53	Preventive maintenance modeling for multi-component systems with considering stochastic failures and disassembly sequence. Reliability Engineering and System Safety, 2015, 142, 231-237.	8.9	53
54	Deep learning-based cross-domain adaptation for gearbox fault diagnosis under variable speed conditions. Measurement Science and Technology, 2020, 31, 055601.	2.6	53

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55	Novel method for rolling element bearing health assessmentâ€"A tachometer-less synchronously averaged envelope feature extraction technique. Mechanical Systems and Signal Processing, 2012, 29, 362-376.	8.0	52
56	Discriminant diffusion maps analysis: A robust manifold learner for dimensionality reduction and its applications in machine condition monitoring and fault diagnosis. Mechanical Systems and Signal Processing, 2013, 34, 277-297.	8.0	52
57	A comparative study on vibrationâ€based condition monitoring algorithms for wind turbine drive trains. Wind Energy, 2014, 17, 695-714.	4.2	51
58	Motor current signature analysis for gearbox condition monitoring under transient speeds using wavelet analysis and dual-level time synchronous averaging. Mechanical Systems and Signal Processing, 2017, 94, 73-84.	8.0	51
59	A geometrical investigation on the generalized l p /l q norm for blind deconvolution. Signal Processing, 2017, 134, 63-69.	3.7	50
60	A systematic review of machine learning algorithms for prognostics and health management of rolling element bearings: fundamentals, concepts and applications. Measurement Science and Technology, 2020, 32, 012001.	2.6	48
61	Ensemble Empirical Mode Decomposition-Based Teager Energy Spectrum for Bearing Fault Diagnosis. Journal of Vibration and Acoustics, Transactions of the ASME, 2013, 135, .	1.6	47
62	Deep Learning-Based Domain Adaptation Method for Fault Diagnosis in Semiconductor Manufacturing. IEEE Transactions on Semiconductor Manufacturing, 2020, 33, 445-453.	1.7	47
63	A Novel Transfer Learning Approach in Remaining Useful Life Prediction for Incomplete Dataset. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	4.7	46
64	A Cyber Physical Interface for Automation Systemsâ€"Methodology and Examples. Machines, 2015, 3, 93-106.	2.2	45
65	Deep Learning-Based Intelligent Process Monitoring of Directed Energy Deposition in Additive Manufacturing with Thermal Images. Procedia Manufacturing, 2020, 48, 643-649.	1.9	44
66	Intelligent Maintenance Systems and Predictive Manufacturing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	44
67	An online adaptive condition-based maintenance method for mechanical systems. Mechanical Systems and Signal Processing, 2010, 24, 2985-2995.	8.0	39
68	Smart products and service systems for e-business transformation. International Journal of Technology Management, 2003, 26, 45.	0.5	38
69	Innovative Product Advanced Service Systems (I-PASS): methodology, tools, and applications for dominant service design. International Journal of Advanced Manufacturing Technology, 2011, 52, 1161-1173.	3.0	38
70	A Unified Framework and Platform for Designing of Cloud-Based Machine Health Monitoring and Manufacturing Systems. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2015, 137, .	2.2	38
71	A deviation based assessment methodology for multiple machine health patterns classification and fault detection. Mechanical Systems and Signal Processing, 2018, 99, 244-261.	8.0	37
72	Convolutional Neural Network Based Rolling-Element Bearing Fault Diagnosis for Naturally Occurring and Progressing Defects Using Time-Frequency Domain Features. , 2019, , .		35

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73	A combined filtering strategy for short term and long term wind speed prediction with improved accuracy. Renewable Energy, 2019, 136, 1082-1090.	8.9	35
74	A similarity based methodology for machine prognostics by using kernel two sample test. ISA Transactions, 2020, 103, 112-121.	5.7	35
75	Maintenance Priority Assignment Utilizing On-line Production Information. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 435-446.	2.2	33
76	Feature signature prediction of a boring process using neural network modeling with confidence bounds. International Journal of Advanced Manufacturing Technology, 2006, 30, 614-621.	3.0	32
77	Multi-phase preventive maintenance policy for leased equipment. International Journal of Production Research, 2015, 53, 4528-4537.	7.5	32
78	Introduction to Data-Driven Methodologies for Prognostics and Health Management. , 2017, , 9-32.		31
79	A Markov model for short term wind speed prediction by integrating the wind acceleration information. Renewable Energy, 2021, 164, 242-253.	8.9	30
80	Design of a reconfigurable prognostics platform for machine tools. Expert Systems With Applications, 2010, 37, 240-252.	7.6	29
81	A virtual metrology method with prediction uncertainty based on Gaussian process for chemical mechanical planarization. Computers in Industry, 2020, 119, 103228.	9.9	29
82	Data quality evaluation and improvement for prognostic modeling using visual assessment based data partitioning method. Computers in Industry, 2013, 64, 214-225.	9.9	28
83	A unified digital twin framework for shop floor design in industry 4.0 manufacturing systems. Manufacturing Letters, 2021, 27, 87-91.	2.2	28
84	Remote machine maintenance system through Internet and mobile communication. International Journal of Advanced Manufacturing Technology, 2006, 31, 783-789.	3.0	27
85	Intelligent Diagnostics for Ball Screw Fault Through Indirect Sensing Using Deep Domain Adaptation. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	4.7	27
86	A real-time intelligent multiple fault diagnostic system. International Journal of Advanced Manufacturing Technology, 2006, 29, 590-597.	3.0	25
87	A Hybrid Method for On-line Performance Assessment and Life Prediction in Drilling Operations. , 2007, , .		25
88	An auto-associative residual based approach for railway point system fault detection and diagnosis. Measurement: Journal of the International Measurement Confederation, 2018, 119, 246-258.	5.0	25
89	Multisensor process performance assessment through use of autoregressive modeling and feature maps. Journal of Manufacturing Systems, 2003, 22, 64-72.	13.9	24
90	A dynamic opportunistic maintenance policy for continuously monitored systems. Journal of Quality in Maintenance Engineering, 2006, 12, 294-305.	1.7	23

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91	Optimal CBPM policy considering maintenance effects and environmental condition. International Journal of Advanced Manufacturing Technology, 2011, 56, 1181-1193.	3.0	23
92	Fault prediction of power electronics modules and systems under complex working conditions. Computers in Industry, 2018, 97, 1-9.	9.9	23
93	Industrial AI. , 2020, , .		23
94	A novel scalable method for machine degradation assessment using deep convolutional neural network. Measurement: Journal of the International Measurement Confederation, 2020, 151, 107106.	5.0	22
95	Deep learning-based cross-sensor domain adaptation for fault diagnosis of electro-mechanical actuators. International Journal of Dynamics and Control, 2020, 8, 1054-1062.	2.5	21
96	Integrated E-maintenance and Intelligent Maintenance Systems. , 2009, , 499-544.		19
97	A comprehensive framework of factory-to-factory dynamic fleet-level prognostics and operation management for geographically distributed assets. , 2015, , .		19
98	An Online Virtual Metrology Model With Sample Selection for the Tracking of Dynamic Manufacturing Processes With Slow Drift. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 574-582.	1.7	19
99	Evaluating Feature Selection and Anomaly Detection Methods of Hard Drive Failure Prediction. IEEE Transactions on Reliability, 2021, 70, 749-760.	4.6	19
100	Cyber-Physical Systems in Future Maintenance. Lecture Notes in Mechanical Engineering, 2015, , 299-305.	0.4	17
101	Intracranial Pressure Monitoring Signals After Traumatic Brain Injury: A Narrative Overview and Conceptual Data Science Framework. Frontiers in Neurology, 2020, 11, 959.	2.4	16
102	New Technologies for Maintenance. , 2008, , 49-78.		16
103	A comparative study of maintenance data classification based on neural networks, logistic regression and support vector machines. Journal of Quality in Maintenance Engineering, 2010, 16, 303-318.	1.7	15
104	Fault Diagnosis of Ball Screw in Industrial Robots Using Non-Stationary Motor Current Signals. Procedia Manufacturing, 2020, 48, 1102-1108.	1.9	15
105	A real-time intelligent multiple fault diagnostic system. International Journal of Advanced Manufacturing Technology, 2006, 29, 590-597.	3.0	14
106	Industrial AI Enabled Prognostics for High-speed Railway Systems. , 2018, , .		14
107	A unified data security framework for federated prognostics and health management in smart manufacturing. Manufacturing Letters, 2020, 24, 136-139.	2.2	14
108	Methodology for Important Sensor Screening for Fault Detection and Classification in Semiconductor Manufacturing. IEEE Transactions on Semiconductor Manufacturing, 2021, 34, 65-73.	1.7	14

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109	A systematic approach for predictive maintenance service design: methodology and applications. International Journal of Internet Manufacturing and Services, 2009, 2, 76.	0.1	13
110	Cross-domain gearbox diagnostics under variable working conditions with deep convolutional transfer learning. JVC/Journal of Vibration and Control, 2021, 27, 854-864.	2.6	13
111	Production line simulation using STPN for maintenance scheduling. Journal of Intelligent Manufacturing, 2010, 21, 213-221.	7.3	12
112	CPS-enabled worry-free industrial applications. , 2017, , .		11
113	Detection and diagnosis of bottle capping failures based on motor current signature analysis. Procedia Manufacturing, 2019, 34, 840-846.	1.9	11
114	Enhancing Intelligent Cross-Domain Fault Diagnosis Performance on Rotating Machines with Noisy Health Labels. Procedia Manufacturing, 2020, 48, 940-946.	1.9	11
115	Adaptive virtual metrology method based on Just-in-time reference and particle filter for semiconductor manufacturing. Measurement: Journal of the International Measurement Confederation, 2021, 168, 108338.	5.0	11
116	Web-enabled platform for distributed and dynamic decision-making systems. International Journal of Advanced Manufacturing Technology, 2008, 38, 1260-1270.	3.0	10
117	Optimized maintenance design for manufacturing performance improvement using simulation. , 2008, , .		10
118	A unified Bayesian filtering framework for multi-horizon wind speed prediction with improved accuracy. Renewable Energy, 2021, 178, 709-719.	8.9	10
119	Intelligent Robust Cross-Domain Fault Diagnostic Method for Rotating Machines Using Noisy Condition Labels. Mathematics, 2022, 10, 455.	2.2	10
120	Knowledge transfer using Bayesian learning for predicting the process-property relationship of Inconel alloys obtained by laser powder bed fusion. Virtual and Physical Prototyping, 2022, 17, 787-805.	10.4	10
121	Opportunistic preventive maintenance optimization for multi-unit series systems with combing multi-preventive maintenance techniques. Journal of Shanghai Jiaotong University (Science), 2010, 15, 513-518.	0.9	9
122	Predictive Big Data Analytics and Cyber Physical Systems for TES Systems. Decision Engineering, 2017, , 97-112.	2.0	9
123	Introduction to resilient manufacturing systems. Manufacturing Letters, 2022, 32, 24-27.	2.2	9
124	New Thinking Paradigm for Maintenance Innovation Design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7104-7109.	0.4	8
125	A Novel Method for Deposit Accumulation Assessment in Dry Etching Chamber. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 183-189.	1.7	8
126	Deep Learning-Based Intelligent Defect Detection of Cutting Wheels with Industrial Images in Manufacturing. Procedia Manufacturing, 2020, 48, 902-907.	1.9	8

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127	INTRODUCTION OF WATCHDOG PROGNOSTICS AGENT AND ITS APPLICATION TO ELEVATOR HOISTWAY PERFORMANCE ASSESSMENT. Journal of the Chinese Institute of Industrial Engineers, 2005, 22, 56-63.	0.5	7
128	Motor current signature analysis for gearbox fault diagnosis in transient speed regimes. , 2015, , .		7
129	An intelligent system for offshore wind farm maintenance scheduling optimization considering turbine production loss. Journal of Intelligent and Fuzzy Systems, 2019, 37, 6911-6923.	1.4	7
130	Dominant Innovation Design for Smart Products-Service Systems (PSS): Strategies and Case Studies. , 2014, , .		6
131	Design of Self-Maintenance and Engineering Immune Systems for Smarter Machines and Manufacturing Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1-11.	0.4	4
132	EFFICIENT MATERIAL ALLOCATIONS IN HIGH-MIX LOW-VOLUME MANUFACTURING. Journal of Advanced Manufacturing Systems, 2010, 09, 101-116.	1.0	4
133	Reference-based Virtual Metrology method with uncertainty evaluation for Material Removal Rate prediction based on Gaussian Process Regression. International Journal of Advanced Manufacturing Technology, 2021, 116, 1199-1211.	3.0	4
134	Performance Assessment for a Fleet of Machines Using a Combined Method of Ant-Based Clustering and CMAC. Advances in Mechanical Engineering, 2013, 5, 603071.	1.6	4
135	A Stochastic Asset Life Prediction Method for Large Fleet Datasets in Big Data Environment. , 2015, , .		3
136	A Novel Methodology for Lens Matching in Compact Lens Module Assembly. IEEE Transactions on Automation Science and Engineering, 2023, 20, 741-750.	5.2	3
137	Internet Server Controller Based Intelligent Maintenance System for Products. , 2006, , 785-794.		2
138	Probe on network-based collaborative maintenance mode for after-sales equipment. Yugoslav Journal of Operations Research, 2009, 19, 299-313.	0.8	2
139	Orthonormal Basis Function Based Transient Modeling for Boring Tool Degradation Monitoring. Proceedings of the American Control Conference, 2007, , .	0.0	1
140	Combining Feature Extraction-Based and Full Trace Analysis Capabilities in Fault Detection: Methods and Comparative Analysis. , 2021, , .		1
141	Sequential optimization of the injection molding gate locations using parallel efficient global optimization. International Journal of Advanced Manufacturing Technology, 2022, 120, 3805-3819.	3.0	1
142	Outlier mining based abnormal machine detection in intelligent maintenance. Journal of Shanghai Jiaotong University (Science), 2009, 14, 695-700.	0.9	0
143	Prognostics and Health Monitoring of Li-ion Vattery for Hybrid Electric Vehicle. , 0, , .		0
144	Prognostics and Maintenance for Mechanical Systems in Harsh Environment. Advances in Mechanical Engineering, 2013, 5, 121340.	1.6	0

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145	A Methodology for the Early Diagnosis of Vehicle Torque Converter Clutch Degradation. , 2019, , .		0