

# Jianjun Shi

## List of Publications by Year in descending order

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86  
papers

3,428  
citations

172457

29  
h-index

155660

55  
g-index

86  
all docs

86  
docs citations

86  
times ranked

1627  
citing authors

#	ARTICLE	IF	CITATIONS
1	State Space Modeling of Sheet Metal Assembly for Dimensional Control. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 1999, 121, 756-762.	2.2	350
2	A Data-Level Fusion Model for Developing Composite Health Indices for Degradation Modeling and Prognostic Analysis. IEEE Transactions on Automation Science and Engineering, 2013, 10, 652-664.	5.2	229
3	State space modeling of dimensional variation propagation in multistage machining process using differential motion vectors. IEEE Transactions on Automation Science and Engineering, 2003, 19, 296-309.	2.3	225
4	Quality control and improvement for multistage systems: A survey. IIE Transactions, 2009, 41, 744-753.	2.1	219
5	Feature-Preserving Data Compression of Stamping Tonnage Information Using Wavelets. Technometrics, 1999, 41, 327-339.	1.9	159
6	Automatic feature extraction of waveform signals for in-process diagnostic performance improvement. Journal of Intelligent Manufacturing, 2001, 12, 257-268.	7.3	152
7	Stream of Variation Modeling and Analysis for Multistage Manufacturing Processes. , 0, , .		140
8	Diagnosability Study of Multistage Manufacturing Processes Based on Linear Mixed-Effects Models. Technometrics, 2003, 45, 312-325.	1.9	105
9	The GLRT for statistical process control of autocorrelated processes. IIE Transactions, 1999, 31, 1123-1134.	2.1	103
10	Image-Based Process Monitoring Using Low-Rank Tensor Decomposition. IEEE Transactions on Automation Science and Engineering, 2015, 12, 216-227.	5.2	96
11	Process-oriented tolerancing for multi-station assembly systems. IIE Transactions, 2005, 37, 493-508.	2.1	82
12	Knowledge discovery from observational data for process control using causal Bayesian networks. IIE Transactions, 2007, 39, 681-690.	2.1	81
13	Anomaly Detection in Images With Smooth Background via Smooth-Sparse Decomposition. Technometrics, 2017, 59, 102-114.	1.9	75
14	Statistical Estimation and Testing for Variation Root-Cause Identification of Multistage Manufacturing Processes. IEEE Transactions on Automation Science and Engineering, 2004, 1, 73-83.	5.2	73
15	An SPC monitoring system for cycle-based waveform signals using haar transform. IEEE Transactions on Automation Science and Engineering, 2006, 3, 60-72.	5.2	69
16	An Adaptive Sampling Strategy for Online High-Dimensional Process Monitoring. Technometrics, 2015, 57, 305-319.	1.9	68
17	State Space Modeling for 3-D Variation Propagation in Rigid-Body Multistage Assembly Processes. IEEE Transactions on Automation Science and Engineering, 2010, 7, 274-290.	5.2	63
18	Feature-Preserving Data Compression of Stamping Tonnage Information Using Wavelets. Technometrics, 1999, 41, 327.	1.9	55

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19	Detection and Identification of Cyber and Physical Attacks on Distribution Power Grids With PVs: An Online High-Dimensional Data-Driven Approach. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 1282-1291.	5.4	48
20	Residual Life Prediction of Multistage Manufacturing Processes With Interaction Between Tool Wear and Product Quality Degradation. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1211-1224.	5.2	46
21	Sequential measurement strategy for wafer geometric profile estimation. IIE Transactions, 2012, 44, 1-12.	2.1	41
22	A Deep Learning Based Data Fusion Method for Degradation Modeling and Prognostics. IEEE Transactions on Reliability, 2021, 70, 775-789.	4.6	40
23	Surrogate Model-Based Control Considering Uncertainties for Composite Fuselage Assembly. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	38
24	Quality-assured setup planning based on the stream-of-variation model for multi-stage machining processes. IIE Transactions, 2009, 41, 323-334.	2.1	37
25	Stream of Variation Modeling and Analysis for Compliant Composite Part Assembly” Part II: Multistation Processes. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	2.2	37
26	Feasibility analysis of composite fuselage shape control via finite element analysis. Journal of Manufacturing Systems, 2018, 46, 272-281.	13.9	37
27	Objective-oriented optimal sensor allocation strategy for process monitoring and diagnosis by multivariate analysis in a Bayesian network. IIE Transactions, 2013, 45, 630-643.	2.1	34
28	Stream of Variation Modeling and Analysis for Compliant Composite Part Assembly” Part I: Single-Station Processes. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	2.2	34
29	Predictive Control Considering Model Uncertainty for Variation Reduction in Multistage Assembly Processes. IEEE Transactions on Automation Science and Engineering, 2010, 7, 724-735.	5.2	33
30	Weakly correlated profile monitoring based on sparse multi-channel functional principal component analysis. IIE Transactions, 2018, 50, 878-891.	2.4	33
31	Multiple Tensor-on-Tensor Regression: An Approach for Modeling Processes With Heterogeneous Sources of Data. Technometrics, 2021, 63, 147-159.	1.9	32
32	Reconfigured piecewise linear regression tree for multistage manufacturing process control. IIE Transactions, 2012, 44, 249-261.	2.1	31
33	Active Learning for Gaussian Process Considering Uncertainties With Application to Shape Control of Composite Fuselage. IEEE Transactions on Automation Science and Engineering, 2021, 18, 36-46.	5.2	29
34	Online Multichannel Forging Tonnage Monitoring and Fault Pattern Discrimination Using Principal Curve. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2006, 128, 944-950.	2.2	28
35	Multiple profiles sensor-based monitoring and anomaly detection. Journal of Quality Technology, 2018, 50, 344-362.	2.5	27
36	Controlling the Residual Life Distribution of Parallel Unit Systems Through Workload Adjustment. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1042-1052.	5.2	24

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37	Fast wavenumber measurement for accurate and automatic location and quantification of defect in composite. <i>Structural Health Monitoring</i> , 2016, 15, 223-234.	7.5	23
38	Virtual assembly and residual stress analysis for the composite fuselage assembly process. <i>Journal of Manufacturing Systems</i> , 2019, 52, 55-62.	13.9	21
39	A Bayesian Approach for Interpreting Mean Shifts in Multivariate Quality Control. <i>Technometrics</i> , 2012, 54, 294-307.	1.9	20
40	Design of DOE-Based Automatic Process Controller With Consideration of Model and Observation Uncertainties. <i>IEEE Transactions on Automation Science and Engineering</i> , 2010, 7, 266-273.	5.2	19
41	An Automatic Process Monitoring Method Using Recurrence Plot in Progressive Stamping Processes. <i>IEEE Transactions on Automation Science and Engineering</i> , 2016, 13, 1102-1111.	5.2	19
42	A Wavelet-Based Penalized Mixed-Effects Decomposition for Multichannel Profile Detection of In-Line Raman Spectroscopy. <i>IEEE Transactions on Automation Science and Engineering</i> , 2018, 15, 1258-1271.	5.2	19
43	Modeling and analysis of disease and risk factors through learning Bayesian networks from observational data. <i>Quality and Reliability Engineering International</i> , 2008, 24, 291-302.	2.3	17
44	Surrogate model-based optimal feed-forward control for dimensional-variation reduction in composite parts' assembly processes. <i>Journal of Quality Technology</i> , 2018, 50, 279-289.	2.5	17
45	Dynamic Multivariate Functional Data Modeling via Sparse Subspace Learning. <i>Technometrics</i> , 2021, 63, 370-383.	1.9	17
46	Optimal Placement of Actuators Via Sparse Learning for Composite Fuselage Shape Control. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2019, 141, .	2.2	17
47	Generalized Wavelet Shrinkage of Inline Raman Spectroscopy for Quality Monitoring of Continuous Manufacturing of Carbon Nanotube Buckypaper. <i>IEEE Transactions on Automation Science and Engineering</i> , 2017, 14, 196-207.	5.2	15
48	In-process quality improvement: Concepts, methodologies, and applications. <i>IIE Transactions</i> , 2023, 55, 2-21.	2.4	15
49	Press Tonnage Signal Decomposition and Validation Analysis for Transfer or Progressive Die Processes. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2005, 127, 231-235.	2.2	13
50	Simultaneous signal separation and prognostics of multi-component systems: the case of identical components. <i>IIE Transactions</i> , 2015, 47, 487-504.	2.1	13
51	Tensor Mixed Effects Model With Application to Nanomanufacturing Inspection. <i>Technometrics</i> , 2020, 62, 116-129.	1.9	13
52	Correlation-based dynamic sampling for online high dimensional process monitoring. <i>Journal of Quality Technology</i> , 2021, 53, 289-308.	2.5	13
53	Hybrid Nonlinear Variation Modeling of Compliant Metal Plate Assemblies Considering Welding Shrinkage and Angular Distortion. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2020, 142, .	2.2	13
54	Integrated design of run-to-run PID controller and SPC monitoring for process disturbance rejection. <i>IIE Transactions</i> , 1999, 31, 517-527.	2.1	12

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55	Optimal fixture locator adjustment strategies for multi-station assembly processes. IIE Transactions, 2009, 41, 843-852.	2.1	12
56	Quantitative characterization and modeling strategy of nanoparticle dispersion in polymer composites. IIE Transactions, 2012, 44, 523-533.	2.1	12
57	Holistic modeling and analysis of multistage manufacturing processes with sparse effective inputs and mixed profile outputs. IIE Transactions, 2021, 53, 582-596.	2.4	11
58	Adaptive Cautious Regularized Run-to-Run Controller for Lithography Process. IEEE Transactions on Semiconductor Manufacturing, 2021, 34, 387-397.	1.7	11
59	Gaussian process modeling for engineered surfaces with applications to Si wafer production. Stat, 2013, 2, 159-170.	0.4	10
60	Process Modeling and Prediction With Large Number of High-Dimensional Variables Using Functional Regression. IEEE Transactions on Automation Science and Engineering, 2020, 17, 684-696.	5.2	10
61	SGL-PCA: Health Index Construction With Sensor Sparsity and Temporal Monotonicity for Mixed High-Dimensional Signals. IEEE Transactions on Automation Science and Engineering, 2023, 20, 372-384.	5.2	10
62	Physician performance assessment using a composite quality index. Statistics in Medicine, 2013, 32, 2661-2680.	1.6	9
63	Additive Tensor Decomposition Considering Structural Data Information. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2904-2917.	5.2	9
64	An Augmented Regression Model for Tensors With Missing Values. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2968-2984.	5.2	8
65	Supervisory adaptive control for the structural vibration of a coordinate-measuring machine. International Journal of Advanced Manufacturing Technology, 1996, 11, 240-248.	3.0	7
66	An order downdating algorithm for tracking system order and parameters in recursive least squares identification. IEEE Transactions on Signal Processing, 1999, 47, 3134-3137.	5.3	5
67	A single interval based classifier. Annals of Operations Research, 2014, 216, 307-325.	4.1	5
68	A Condition Change Detection Method for Solar Conversion Efficiency in Solar Cell Manufacturing Processes. IEEE Transactions on Semiconductor Manufacturing, 2019, 32, 82-92.	1.7	5
69	AKM <sup>2</sup> D: An adaptive framework for online sensing and anomaly quantification. IIE Transactions, 2020, 52, 1032-1046.	2.4	5
70	Finite Element Analysis Model-Based Cautious Automatic Optimal Shape Control for Fuselage Assembly. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2022, 144, .	2.2	5
71	The GLRT for statistical process control of autocorrelated processes. IIE Transactions, 1999, 31, 1123-1134.	2.1	3
72	Design of regression model-based automatic process control with reduced adjustment frequency. Quality and Reliability Engineering International, 2009, 25, 997-1013.	2.3	3

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73	Structural tensor-on-tensor regression with interaction effects and its application to a hot rolling process. Journal of Quality Technology, 2022, 54, 547-560.	2.5	3
74	A Product-Oriented Synchronization and Effective Information Extraction of Continuous Streaming Data for Relationship Mining in a Hot Rolling Process. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2022, 144, .	2.2	3
75	Multiple event identification and characterization by retrospective analysis of structured data streams. IISE Transactions, 2022, 54, 908-921.	2.4	3
76	A New Sparse-Learning Model for Maximum Gap Reduction of Composite Fuselage Assembly. Technometrics, 2022, 64, 409-418.	1.9	2
77	Process modeling with multi-level categorical inputs via variable selection and level aggregation. IISE Transactions, 2023, 55, 363-376.	2.4	2
78	Automatic feature extraction of waveform signals for in-process diagnostic performance improvement. , 0, , .		1
79	Reliability modeling and analysis of multi-station manufacturing processes considering the quality and reliability interaction. , 0, , .		1
80	A Physics-Specific Change Point Detection Method Using Torque Signals in Pipe Tightening Processes. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1289-1300.	5.2	1
81	Treatment Effect Modeling for FTIR Signals Subject to Multiple Sources of Uncertainties. IEEE Transactions on Automation Science and Engineering, 2022, 19, 895-906.	5.2	1
82	On-Line Seam Detection in Rolling Processes Using Snake Projection and Discrete Wavelet Transform. , 2006, , .		1
83	Invited Paper: Synthetic Defect Generation for Display Front-Panel Screen Quality Inspection: A Survey. Digest of Technical Papers SID International Symposium, 2022, 53, 975-978.	0.3	1
84	Real-time Data-driven Quality Assessment for Continuous Manufacturing of Carbon Nanotube Buckypaper. IEEE Nanotechnology Magazine, 2020, , 1-1.	2.0	0
85	A Systematic Approach for Business Data Analytics With a Real Case Study. , 2018, , 933-954.		0
86	Robust change detection for large-scale data streams. Sequential Analysis, 2022, 41, 1-19.	0.5	0