Yan Wang

List of Publications by Year
in descending order

166 papers	2,380 citations	218381 26 h-index	264894 42 g-index
167 all docs	167 docs citations	167 times ranked	1981 citing authors

#	Article	IF	Citations
1	Data-Driven Fault Diagnosis Method Based on Compressed Sensing and Improved Multiscale Network. IEEE Transactions on Industrial Electronics, 2020, 67, 3216-3225.	5.2	132
2	Real-time FDM machine condition monitoring and diagnosis based on acoustic emission and hidden semi-Markov model. International Journal of Advanced Manufacturing Technology, 2017, 90, 2027-2036.	1.5	104
3	Data-driven cost estimation for additive manufacturing in cybermanufacturing. Journal of Manufacturing Systems, 2018, 46, 115-126.	7.6	102
4	Periodic surface modeling for computer aided nano design. CAD Computer Aided Design, 2007, 39, 179-189.	1.4	95
5	Multi-Fidelity Physics-Constrained Neural Network and Its Application in Materials Modeling. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	88
6	An integrated multi-sensor fusion-based deep feature learning approach for rotating machinery diagnosis. Measurement Science and Technology, 2018, 29, 055103.	1.4	86
7	A sequential multi-fidelity metamodeling approach for data regression. Knowledge-Based Systems, 2017, 134, 199-212.	4.0	79
8	An improved fault diagnosis approach for FDM process with acoustic emission. Journal of Manufacturing Processes, 2018, 35, 570-579.	2.8	73
9	Design formalism for collaborative assembly design. CAD Computer Aided Design, 2004, 36, 849-871.	1.4	70
10	In situ monitoring of FDM machine condition via acoustic emission. International Journal of Advanced Manufacturing Technology, 2016, 84, 1483.	1.5	59
11	Experimental study of the process failure diagnosis in additive manufacturing based on acoustic emission. Measurement: Journal of the International Measurement Confederation, 2019, 136, 445-453.	2.5	56
12	A robust optimization approach based on multi-fidelity metamodel. Structural and Multidisciplinary Optimization, 2018, 57, 775-797.	1.7	51
13	pBO-2GP-3B: A batch parallel known/unknown constrained Bayesian optimization with feasibility classification and its applications in computational fluid dynamics. Computer Methods in Applied Mechanics and Engineering, 2019, 347, 827-852.	3.4	47
14	Low-carbon product design for product life cycle. Journal of Engineering Design, 2015, 26, 321-339.	1.1	46
15	An active learning radial basis function modeling method based on self-organization maps for simulation-based design problems. Knowledge-Based Systems, 2017, 131, 10-27.	4.0	41
16	Imprecise probabilities based on generalised intervals for system reliability assessment. International Journal of Reliability and Safety, 2010, 4, 319.	0.2	40
17	Ontology-based feature mapping and verification between CAD systems. Advanced Engineering Informatics, 2013, 27, 76-92.	4.0	40
18	Hidden Markov model-based autonomous manufacturing task orchestration in smart shop floors. Robotics and Computer-Integrated Manufacturing, 2020, 61, 101845.	6.1	38

#	Article	IF	Citations
19	WearGP: A computationally efficient machine learning framework for local erosive wear predictions via nodal Gaussian processes. Wear, 2019, 422-423, 9-26.	1.5	34
20	Constrained mixed-integer Gaussian mixture Bayesian optimization and its applications in designing fractal and auxetic metamaterials. Structural and Multidisciplinary Optimization, 2019, 59, 2131-2154.	1.7	34
21	Intellectual Property Protection in Collaborative Design through Lean Information Modeling and Sharing. Journal of Computing and Information Science in Engineering, 2006, 6, 149.	1.7	33
22	Mesoscale multi-physics simulation of rapid solidification of Ti-6Al-4V alloy. Additive Manufacturing, 2019, 25, 551-562.	1.7	33
23	A Dual-Dimer method for training physics-constrained neural networks with minimax architecture. Neural Networks, 2021, 136, 112-125.	3.3	33
24	Low-carbon conceptual design based on product life cycle assessment. International Journal of Advanced Manufacturing Technology, 2015, 81, 863-874.	1.5	31
25	Monitoring temperature in additive manufacturing with physics-based compressive sensing. Journal of Manufacturing Systems, 2018, 48, 60-70.	7.6	31
26	A New Multi-Objective Bayesian Optimization Formulation With the Acquisition Function for Convergence and Diversity. Journal of Mechanical Design, Transactions of the ASME, 2020, 142, .	1.7	29
27	Geometry-based semantic ID for persistent and interoperable reference in feature-based parametric modeling. CAD Computer Aided Design, 2005, 37, 1081-1093.	1.4	27
28	Feasibility of periodic surface models to develop gas diffusion layers: A gas permeability study. International Journal of Hydrogen Energy, 2012, 37, 14427-14438.	3.8	27
29	Trust Quantification for Networked Cyber-Physical Systems. IEEE Internet of Things Journal, 2018, 5, 2055-2070.	5.5	26
30	Robust optimization for reducing welding-induced angular distortion in fiber laser keyhole welding under process parameter uncertainty. Applied Thermal Engineering, 2018, 129, 893-906.	3.0	25
31	Multi-physics simulation of dendritic growth in magnetic field assisted solidification. International Journal of Heat and Mass Transfer, 2019, 144, 118673.	2.5	25
32	Document-Driven Design for Distributed CAD Services in Service-Oriented Architecture. Journal of Computing and Information Science in Engineering, 2006, 6, 127-138.	1.7	23
33	Modeling of composite fibrous porous diffusion media. International Journal of Hydrogen Energy, 2014, 39, 9375-9386.	3.8	23
34	A Hybrid Generalized Hidden Markov Model-Based Condition Monitoring Approach for Rolling Bearings. Sensors, 2017, 17, 1143.	2.1	23
35	Computational Optimization Study of Transcatheter Aortic Valve Leaflet Design Using Porcine and Bovine Leaflets. Journal of Biomechanical Engineering, 2020, 142, .	0.6	21
36	Semantic Tolerance Modeling With Generalized Intervals. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	1.7	20

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37	Multiscale Heterogeneous Modeling with Surfacelets. Computer-Aided Design and Applications, 2010, 7, 759-776.	0.4	17
38	Reliable Molecular Dynamics: Uncertainty quantification using interval analysis in molecular dynamics simulation. Computational Materials Science, 2017, 127, 141-160.	1.4	17
39	An atomistic simulation study of nanoscale sintering: The role of grain boundary misorientation. Computational Materials Science, 2019, 165, 180-189.	1.4	16
40	Gaussian-Process-Driven Adaptive Sampling for Reduced-Order Modeling of Texture Effects in Polycrystalline Alpha-Ti. Jom, 2019, 71, 2646-2656.	0.9	15
41	Reliable simulation with input uncertainties using an interval-based approach. , 2008, , .		14
42	Multiscale Uncertainty Quantification Based on a Generalized Hidden Markov Model. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	14
43	An Efficient First-Principles Saddle Point Searching Method Based on Distributed Kriging Metamodels. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2018, 4, .	0.7	14
44	Quantifying uncertainty in the process-structure relationship for Alâ€“Cu solidification. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 064005.	0.8	14
45	SUSTAINABLE DESIGN OF MATERIAL HANDLING EQUIPMENT: A WIN-WIN APPROACH FOR MANUFACTURERS AND CUSTOMERS. Mechanika, 2012, 18, .	0.3	14
46	Feature-based crystal construction in computer-aided nano-design. CAD Computer Aided Design, 2009, 41, 792-800.	1.4	13
47	Modeling of gas diffusion layers with curved fibers using a genetic algorithm. International Journal of Hydrogen Energy, 2017, 42, 23130-23140.	3.8	13
48	Uncertainty propagation in reduced order models based on crystal plasticity. Computer Methods in Applied Mechanics and Engineering, 2020, 365, 113009.	3.4	13
49	A physics-constrained dictionary learning approach for compression of vibration signals. Mechanical Systems and Signal Processing, 2021, 153, 107434.	4.4	13
50	A method for reverse engineering of material microstructure for heterogeneous CAD. CAD Computer Aided Design, 2013, 45, 1068-1078.	1.4	12
51	An integrated condition-monitoring method for a milling process using reduced decomposition features. Measurement Science and Technology, 2017, 28, 085101.	1.4	12
52	An efficient transient temperature monitoring of fused filament fabrication process with physics-based compressive sensing. IISE Transactions, 2019, 51, 168-180.	1.6	12
53	Direct printing of performance tunable strain sensor via nanoparticle laser patterning process. Virtual and Physical Prototyping, 2020, 15, 265-277.	5.3	12
54	RECONCILED TOP-DOWN AND BOTTOM-UP HIERARCHICAL MULTISCALE CALIBRATION OF BCC FE CRYSTAL PLASTICITY. International Journal for Multiscale Computational Engineering, 2017, 15, 505-523.	0.8	12

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55	Generalized periodic surface model and its application in designing fibrous porous media. Engineering Computations, 2015, 32, 7-36.	0.7	11
56	Resilience Quantification for Probabilistic Design of Cyber-Physical System Networks. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2018, 4, .	0.7	11
57	A multi-fidelity Bayesian optimization approach based on the expected further improvement. Structural and Multidisciplinary Optimization, 2021, 63, 1709-1719.	1.7	11
58	Physics-Based Compressive Sensing to Enable Digital Twins of Additive Manufacturing Processes. Journal of Computing and Information Science in Engineering, 2021, 21, .	1.7	11
59	Loci Periodic Surface Reconstruction from Crystals. Computer-Aided Design and Applications, 2007, 4, 437-447.	0.4	10
60	Degree Elevation and Reduction of Periodic Surfaces. Computer-Aided Design and Applications, 2008, 5, 841-854.	0.4	10
61	Closed-Loop Analysis in Semantic Tolerance Modeling. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, .	1.7	10
62	Generalized Fokkerâ€“Planck equation with generalized interval probability. Mechanical Systems and Signal Processing, 2013, 37, 92-104.	4.4	10
63	A generalized interval probability-based optimization method for training generalized hidden Markov model. Signal Processing, 2014, 94, 319-329.	2.1	10
64	Generalized Galileo Galilei problem in interval setting for functionally related loads. Archive of Applied Mechanics, 2016, 86, 1203-1217.	1.2	10
65	Coarse-Grained Force Field Calibration Based on Multiobjective Bayesian Optimization to Simulate Water Diffusion in Poly-Îµ-caprolactone. Journal of Physical Chemistry A, 2020, 124, 5042-5052.	1.1	10
66	Interpretable Interval Constraint Solvers in Semantic Tolerance Analysis. Computer-Aided Design and Applications, 2008, 5, 654-666.	0.4	9
67	Searching Feasible Design Space by Solving Quantified Constraint Satisfaction Problems. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	1.7	9
68	Cost-Effective Product Realization: Service-Oriented Architecture for Integrated Product Life-cycle Management. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 1-12.	0.4	8
69	Solving Interval Constraints by Linearization in Computer-Aided Design. Reliable Computing, 2007, 13, 211-244.	0.8	8
70	A Review of Recent Phase Transition Simulation Methods: Saddle Point Search. , 2008, , .		8
71	System Resilience Quantification for Probabilistic Design of Internet-of-Things Architecture. , 2016, , .		8
72	Semantic Tolerancing with Generalized Intervals. Computer-Aided Design and Applications, 2007, 4, 257-266.	0.4	7

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73	A Review of Recent Phase Transition Simulation Methods: Transition Path Search. , 2008, , .		7
74	An Interval-Based Metamodeling Approach to Simulate Material Handling in Semiconductor Wafer Fabs. IEEE Transactions on Semiconductor Manufacturing, 2010, 23, 527-537.	1.4	7
75	Reliable kinetic Monte Carlo simulation based on random set sampling. Soft Computing, 2013, 17, 1439-1451.	2.1	7
76	A generalized hidden Markov model and its applications in recognition of cutting states. International Journal of Precision Engineering and Manufacturing, 2016, 17, 1471-1482.	1.1	7
77	Mesoscale Multi-Physics Simulation of Solidification in Selective Laser Melting Process Using a Phase Field and Thermal Lattice Boltzmann Model. , 2017, , .		7
78	Controlled kinetic Monte Carlo simulation of laser improved nano particle deposition process. Powder Technology, 2018, 325, 651-658.	2.1	7
79	Uncertainty quantification in materials modeling. , 2020, , 1-40.		7
80	Transport Phenomena in Carbon Paper Gas Diffusion Layers. ECS Transactions, 2011, 41, 499-512.	0.3	6
81	A generalized Markov chain model based on generalized interval probability. Science China Technological Sciences, 2013, 56, 2132-2136.	2.0	6
82	Material feature representation and identification with composite surfacelets. Journal of Computational Design and Engineering, 2016, 3, 370-384.	1.5	6
83	Multiphysics Simulation of Nucleation and Grain Growth in Selective Laser Melting of Alloys. Journal of Computing and Information Science in Engineering, 2020, 20, .	1.7	6
84	A semi-automatic mold cost estimation framework based upon geometry similarity. International Journal of Advanced Manufacturing Technology, 2013, 68, 1387-1399.	1.5	5
85	Stochastic dynamics simulation with generalized interval probability. International Journal of Computer Mathematics, 2015, 92, 623-642.	1.0	5
86	Machine Fault Diagnosis of Fused Filament Fabrication Process with Physics-Constrained Dictionary Learning. Procedia Manufacturing, 2021, 53, 726-734.	1.9	5
87	Semantic Tolerance Modeling. , 2006, , 261.		4
88	Computing Minkowski Sum of Periodic Surface Models. Computer-Aided Design and Applications, 2009, 6, 825-837.	0.4	4
89	Inverse Surfacelet Transform for Image Reconstruction With Constrained-Conjugate Gradient Methods. Journal of Computing and Information Science in Engineering, 2014, 14, .	1.7	4
90	Sensitivity Analysis in Quantified Interval Constraint Satisfaction Problems. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	4

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91	A Multiscale Materials Modeling Method With Seamless Zooming Capability Based on Surfacelets1. Journal of Computing and Information Science in Engineering, 2017, 17, .	1.7	4
92	Special Issue on Uncertainty Quantification in Multiscale System Design and Simulation. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2018, 4, .	0.7	4
93	Hierarchical top-down bottom-up calibration with consideration for uncertainty and inter-scale discrepancy of Peierls stress of bcc Fe. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 064004.	0.8	4
94	Physics-Based Compressive Sensing Approach to Monitor Turbulent Flow. AIAA Journal, 2020, 58, 3299-3307.	1.5	4
95	Hierarchical multiscale model calibration and validation for materials applications. , 2020, , 449-471.		4
96	Design of Trustworthy Cyberâ€“Physicalâ€“Social Systems With Discrete Bayesian Optimization. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	1.7	4
97	Probabilistic Modeling of Information Dynamics in Networked Cyberâ€“Physicalâ€“Social Systems. IEEE Internet of Things Journal, 2021, 8, 14934-14947.	5.5	4
98	Geometric Modeling of Nano Structures with Periodic Surfaces. Lecture Notes in Computer Science, 2006, , 343-356.	1.0	4
99	Structural optimization of metamaterials based on periodic surface modeling. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 115057.	3.4	4
100	Feature Mapping Automation for CAD Data Exchange. , 2008, , .		3
101	3D Fractals From Periodic Surfaces. , 2010, , .		3
102	An Uncertainty Quantification Method Based on Generalized Interval. , 2013, , .		3
103	Simulating Stochastic Diffusions by Quantum Walks. , 2013, , .		3
104	Model-Form Calibration in Drift-Diffusion Simulation Using Fractional Derivatives. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2016, 2, .	0.7	3
105	A specific structuring element-based opening method for rapid geometry measurement of weld pool. International Journal of Advanced Manufacturing Technology, 2017, 90, 1465-1477.	1.5	3
106	An interval-based approach to model input uncertainty in M/M/1 simulation. International Journal of Approximate Reasoning, 2018, 95, 46-61.	1.9	3
107	Quantifying Trust Perception to Enable Design for Connectivity in Cyber-Physical-Social Systems. , 2020, , 85-113.		3
108	A Concurrent Search Algorithm for Multiple Phase Transition Pathways. , 2013, , .		3

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109	e-Design Systems. Industrial Innovation Series, 2005, , 28-1-28-26.	0.2	3
110	A Stochastic Reduced-Order Model for Statistical Microstructure Descriptors Evolution. Journal of Computing and Information Science in Engineering, 2022, 22, .	1.7	3
111	Independence in Generalized Interval Probability. , 2011, , .		2
112	Geometry guided crystal phase transition pathway search. CAD Computer Aided Design, 2013, 45, 53-64.	1.4	2
113	A Comparison of Surfacelet-Based Methods for Recognizing Linear Geometric Features in Material Microstructure. , 2013, , .		2
114	Controlled Kinetic Monte Carlo Simulation for Computer-Aided Nanomanufacturing. Journal of Micro and Nano-Manufacturing, 2016, 4, .	0.8	2
115	A Bayesian Discrete Optimization Algorithm for Permutation Based Combinatorial Problems. , 2019, , .		2
116	Analyzing and Implementing a Feature Mapping Approach to CAD System Interoperability. , 2009, , .		2
117	Ontology-Based Representation and Verification to Enable Feature Interoperability Between CAD Systems. , 2011, , .		2
118	Rail Steel Health Analysis Based on a Novel Genetic Density-based Clustering Technique and Manifold Representation of Acoustic Emission Signals. Applied Artificial Intelligence, 2022, 36, .	2.0	2
119	Distributed Data Access Control for Lean Product Information Sharing in Collaborative Design. , 2004, , 961.		1
120	Feature-Based Crystal Construction in Computer-Aided Nano-Design. , 2008, , .		1
121	Metamorphosis of Periodic Surface Models. , 2009, , .		1
122	e-Design systems. Industrial Innovation Series, 2013, , 399-428.	0.2	1
123	Training Generalized Hidden Markov Model with Interval Probability Parameters. , 2014, , .		1
124	Geometric Descriptor-Based Local Contour Point Set Matching for Cross-Section Profile Measurement of Automotive Sealing Strips. , 2015, , .		1
125	Quantifying Model-Form Uncertainty in Molecular Dynamics Simulation. , 0, , 283-292.		1
126	Molecular Dynamics Simulation With Interval-Valued Interatomic Potentials. , 2016, , .		1

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127	On Social Value of Risk Information in Risk Communication. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2017, 3, .	0.7	1
128	A remote health condition monitoring system based on compressed sensing. , 2017, , .		1
129	Trust Based Cyber-Physical Systems Network Design. , 2018, , .		1
130	A Multiscale Adhesion Model for Deposition Prediction in Laser Enhanced Nanoparticle Deposition Process. Acta Materialia, 2021, 208, 116740.	3.8	1
131	Topology-informed information dynamics modeling in cyberâ€“physicalâ€“social system networks. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2021, 35, 316-331.	0.7	1
132	A Curve Swarm Algorithm for Global Search of State Transition Paths. , 2015, , 139-146.		1
133	Quantifying Model-Form Uncertainty in Molecular Dynamics Simulation. , 2016, , 283-292.		1
134	Loci Surface Guided Crystal Phase Transition Pathway Search. , 2011, , .		1
135	An Efficient Saddle Point Search Method Using Kriging Metamodels. , 2015, , .		1
136	Degree Operations on Periodic Surfaces. , 2007, , .		1
137	Reliable Kinetic Monte Carlo Simulation Based on Random Set Sampling. , 2011, , .		1
138	Reduced-order kinetic Monte Carlo model to simulate water diffusion in biodegradable polymers. Computational Materials Science, 2022, 203, 111141.	1.4	1
139	Algebraic interval constraint driven exploration in human-agent collaborative problem solving. , 2007, , .		0
140	GPU-Based Parallel Simulation of Silicon Anisotropic Etching. , 2012, , .		0
141	Simulating Drift-Diffusion Processes With Generalized Interval Probability. , 2012, , .		0
142	Sensitivity Analysis in Quantified Interval Constraint Satisfaction Problems. , 2013, , .		0
143	Clustered Cell Parallelization for GPU Computing of Silicon Anisotropic Etching Simulation. , 2013, , .		0
144	Solving Interval Master Equation in Simulation of Jump Processes Under Uncertainties. , 2013, , .		0

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145	A Multi-Scale Materials Modeling Method With Seamless Zooming Capability Based on Surfacelets. , 2014, , .		0
146	A Kalman Filtering Mechanism Based on Generalized Interval Probability and its Application in Process Variation Estimation. , 2014, , .		0
147	An Extended Kalman Filtering Mechanism Based on Generalized Interval Probability. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2015, 1, .	0.7	0
148	Quantification of Model-Form Uncertainty in Drift-Diffusion Simulation Using Fractional Derivatives. , 2015, , .		0
149	Manufacturing Energy Consumption Estimation Using Machine Learning Approach. , 2017, , .		0
150	Shape Descriptor-Based Local Contour Profile Registration and Measurement for Flexible Automotive Sealing Strips. Journal of Computing and Information Science in Engineering, 2018, 18, .	1.7	0
151	Model-Form and Parameter Uncertainty Quantification in Structural Vibration Simulation Using Fractional Derivatives. Journal of Computational and Nonlinear Dynamics, 2019, 14, .	0.7	0
152	Sensitivity analysis in kinetic Monte Carlo simulation based on random set sampling. , 2020, , 273-299.		0
153	Data-driven acceleration of first-principles saddle point and local minimum search based on scalable Gaussian processes. , 2020, , 119-168.		0
154	Reliable molecular dynamics simulations for intrusive uncertainty quantification using generalized interval analysis. , 2020, , 229-271.		0
155	Physics based compressive sensing to monitor temperature and melt flow in laser powder bed fusion. Additive Manufacturing, 2021, 47, 102304.	1.7	0
156	Document-Driven Design for Distributed CAD Services. , 2007, , 371-397.		0
157	Minkowski Sums of Periodic Surface Models. , 2009, , .		0
158	Multiscale Variability and Uncertainty Quantification Based on a Generalized Multiscale Markov Model. , 2010, , .		0
159	A Hierarchical, Heterogeneous CAD Modeling Approach. , 2011, , .		0
160	Cross-Scale, Cross-Domain Model Validation Based on Generalized Hidden Markov Model and Generalized Interval Bayesâ€™ Rule. , 2013, , 149-154.		0
161	Cross-Scale, Cross-Domain Model Validation Based on Generalized Hidden Markov Model and Generalized Interval Bayes' Rule. , 0, , 149-154.		0
162	Inverse Surfacelet Transform for Image Reconstruction With Prior Knowledge. , 2013, , .		0

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163	Risk-Informed Decision Framework for Built Environment: The Incorporation of Epistemic Uncertainty. , 2016, , 279-296.		0
164	A Robust Control Scheme for Time Delay Switch Attacks. , 2021, , .		0
165	A Multiscale Adhesion Model for Deposition Prediction in Laser Enhanced Nanoparticle Deposition Process. SSRN Electronic Journal, 0, , .	0.4	0
166	Development of Aluminum Scandium Nitride Molecular Dynamics Force Fields with Scalable Multi-Objective Bayesian Optimization. Jom, 0, , .	0.9	0