

Yongmin Zhong

List of Publications by Year in descending order

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150
papers

3,071
citations

186265

28
h-index

189892

50
g-index

153
all docs

153
docs citations

153
times ranked

1717
citing authors

#	ARTICLE	IF	CITATIONS
1	Three flexure hinges for compliant mechanism designs based on dimensionless graph analysis. <i>Precision Engineering</i> , 2010, 34, 92-100.	3.4	166
2	A derivative UKF for tightly coupled INS/GPS integrated navigation. <i>ISA Transactions</i> , 2015, 56, 135-144.	5.7	154
3	Multi-sensor optimal data fusion for INS/GPS/SAR integrated navigation system. <i>Aerospace Science and Technology</i> , 2009, 13, 232-237.	4.8	139
4	A new direct filtering approach to INS/GNSS integration. <i>Aerospace Science and Technology</i> , 2018, 77, 755-764.	4.8	127
5	Unscented kalman filter with process noise covariance estimation for vehicular ins/gps integration system. <i>Information Fusion</i> , 2020, 64, 194-204.	19.1	114
6	Maximum likelihood principle and moving horizon estimation based adaptive unscented Kalman filter. <i>Aerospace Science and Technology</i> , 2018, 73, 184-196.	4.8	100
7	Covariance matching based adaptive unscented Kalman filter for direct filtering in INS/GNSS integration. <i>Acta Astronautica</i> , 2016, 120, 171-181.	3.2	97
8	Windowing and random weighting based adaptive unscented Kalman filter. <i>International Journal of Adaptive Control and Signal Processing</i> , 2015, 29, 201-223.	4.1	85
9	Laser interferometry-based guidance methodology for high precision positioning of mechanisms and robots. <i>Robotics and Computer-Integrated Manufacturing</i> , 2010, 26, 74-82.	9.9	83
10	Random Weighting Method for Multisensor Data Fusion. <i>IEEE Sensors Journal</i> , 2011, 11, 1955-1961.	4.7	81
11	Deformable Models for Surgical Simulation: A Survey. <i>IEEE Reviews in Biomedical Engineering</i> , 2018, 11, 143-164.	18.0	79
12	Interacting multiple model estimation-based adaptive robust unscented Kalman filter. <i>International Journal of Control, Automation and Systems</i> , 2017, 15, 2013-2025.	2.7	69
13	Multi-sensor Optimal Data Fusion for INS/GNSS/CNS Integration Based on Unscented Kalman Filter. <i>International Journal of Control, Automation and Systems</i> , 2018, 16, 129-140.	2.7	66
14	Multi-Sensor Optimal Data Fusion Based on the Adaptive Fading Unscented Kalman Filter. <i>Sensors</i> , 2018, 18, 488.	3.8	65
15	Modified strong tracking unscented Kalman filter for nonlinear state estimation with process model uncertainty. <i>International Journal of Adaptive Control and Signal Processing</i> , 2015, 29, 1561-1577.	4.1	62
16	Robust adaptive filtering method for SINS/SAR integrated navigation system. <i>Aerospace Science and Technology</i> , 2011, 15, 425-430.	4.8	61
17	Model Predictive Based Unscented Kalman Filter for Hypersonic Vehicle Navigation With INS/GNSS Integration. <i>IEEE Access</i> , 2020, 8, 4814-4823.	4.2	58
18	Development and control of a two DOF linear angular precision positioning stage. <i>Mechatronics</i> , 2015, 32, 34-43.	3.3	56

#	ARTICLE	IF	CITATIONS
19	Cubature Kalman Filter With Both Adaptability and Robustness for Tightly-Coupled GNSS/INS Integration. <i>IEEE Sensors Journal</i> , 2021, 21, 14997-15011.	4.7	53
20	Design and analysis of a compact flexure-based precision pure rotation stage without actuator redundancy. <i>Mechanism and Machine Theory</i> , 2016, 105, 129-144.	4.5	50
21	Cubature rule-based distributed optimal fusion with identification and prediction of kinematic model error for integrated UAV navigation. <i>Aerospace Science and Technology</i> , 2021, 109, 106447.	4.8	50
22	An actuated force feedback-enabled laparoscopic instrument for robotic-assisted surgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2014, 10, 11-21.	2.3	42
23	Random weighting estimation for fusion of multi-dimensional position data. <i>Information Sciences</i> , 2010, 180, 4999-5007.	6.9	41
24	Robust Unscented Kalman Filtering With Measurement Error Detection for Tightly Coupled INS/GNSS Integration in Hypersonic Vehicle Navigation. <i>IEEE Access</i> , 2019, 7, 151409-151421.	4.2	41
25	Adaptive unscented Kalman filter based on maximum posterior and random weighting. <i>Aerospace Science and Technology</i> , 2017, 71, 12-24.	4.8	37
26	A hierarchically structured and constraint-based data model for intuitive and precise solid modeling in a virtual reality environment. <i>CAD Computer Aided Design</i> , 2004, 36, 903-928.	2.7	36
27	A Quaternion-Based Method for SINS/SAR Integrated Navigation System. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2012, 48, 514-524.	4.7	33
28	Design, analysis and experimental investigations of a high precision flexure-based microgripper for micro/nano manipulation. <i>Mechatronics</i> , 2020, 69, 102396.	3.3	33
29	Rapid alignment method based on local observability analysis for strapdown inertial navigation system. <i>Acta Astronautica</i> , 2014, 94, 790-798.	3.2	29
30	Maximum likelihood-based extended Kalman filter for COVID-19 prediction. <i>Chaos, Solitons and Fractals</i> , 2021, 146, 110922.	5.1	29
31	Random weighting estimation of kernel density. <i>Journal of Statistical Planning and Inference</i> , 2010, 140, 2403-2407.	0.6	28
32	Adaptive Square-Root Unscented Particle Filtering Algorithm for Dynamic Navigation. <i>Sensors</i> , 2018, 18, 2337.	3.8	28
33	Random Weighting Estimation Method for Dynamic Navigation Positioning. <i>Chinese Journal of Aeronautics</i> , 2011, 24, 318-323.	5.3	26
34	Modified federated Kalman filter for INS/GNSS/CNS integration. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2016, 230, 30-44.	1.3	26
35	A hybrid contact state analysis methodology for robotic-based adjustment of cylindrical pair. <i>International Journal of Advanced Manufacturing Technology</i> , 2011, 52, 329-342.	3.0	25
36	Neural network modelling of soft tissue deformation for surgical simulation. <i>Artificial Intelligence in Medicine</i> , 2019, 97, 61-70.	6.5	25

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37	Extended Kalman filter based on stochastic epidemiological model for COVID-19 modelling. Computers in Biology and Medicine, 2021, 137, 104810.	7.0	24
38	Mahalanobis distance-based fading cubature Kalman filter with augmented mechanism for hypersonic vehicle INS/CNS autonomous integration. Chinese Journal of Aeronautics, 2022, 35, 114-128.	5.3	24
39	A Cellular Neural Network Methodology for Deformable Object Simulation. IEEE Transactions on Information Technology in Biomedicine, 2006, 10, 749-762.	3.2	23
40	Kalman Filter Finite Element Method for Real-Time Soft Tissue Modeling. IEEE Access, 2020, 8, 53471-53483.	4.2	23
41	Matrix weighted multisensor data fusion for INS/GNSS/CNS integration. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2016, 230, 1011-1026.	1.3	22
42	A Robust Cubature Kalman Filter with Abnormal Observations Identification Using the Mahalanobis Distance Criterion for Vehicular INS/GNSS Integration. Sensors, 2019, 19, 5149.	3.8	21
43	Random weighting method for estimation of error characteristics in SINS/GPS/SAR integrated navigation system. Aerospace Science and Technology, 2015, 46, 22-29.	4.8	20
44	A new ChainMail approach for real-time soft tissue simulation. Bioengineered, 2016, 7, 246-252.	3.2	20
45	Soft tissue deformation with reaction-diffusion process for surgery simulation. Journal of Visual Languages and Computing, 2012, 23, 1-12.	1.8	19
46	An autowave based methodology for deformable object simulation. CAD Computer Aided Design, 2006, 38, 740-754.	2.7	18
47	Extended Kalman Filter Nonlinear Finite Element Method for Nonlinear Soft Tissue Deformation. Computer Methods and Programs in Biomedicine, 2021, 200, 105828.	4.7	17
48	Extended Kalman filter for online soft tissue characterization based on Hunt-Crossley contact model. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 123, 104667.	3.1	16
49	Distributed State Fusion Using Sparse-Grid Quadrature Filter With Application to INS/CNS/GNSS Integration. IEEE Sensors Journal, 2022, 22, 3430-3441.	4.7	16
50	Soft tissue modelling through autowaves for surgery simulation. Medical and Biological Engineering and Computing, 2006, 44, 805-821.	2.8	15
51	Sage windowing and random weighting adaptive filtering method for kinematic model error. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1488-1500.	4.7	15
52	Energy balance method for modelling of soft tissue deformation. CAD Computer Aided Design, 2017, 93, 15-25.	2.7	15
53	Neural dynamics-based Poisson propagation for deformable modelling. Neural Computing and Applications, 2019, 31, 1091-1101.	5.6	14
54	Random Weighting-Based Nonlinear Gaussian Filtering. IEEE Access, 2020, 8, 19590-19605.	4.2	14

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55	An electromechanical based deformable model for soft tissue simulation. Artificial Intelligence in Medicine, 2009, 47, 275-288.	6.5	13
56	Thermal-mechanical deformation modelling of soft tissues for thermal ablation. Bio-Medical Materials and Engineering, 2014, 24, 2299-2310.	0.6	13
57	Soft tissue modelling with conical springs. Bio-Medical Materials and Engineering, 2015, 26, S207-S214.	0.6	13
58	Ellipsoid bounding region-based ChainMail algorithm for soft tissue deformation in surgical simulation. International Journal on Interactive Design and Manufacturing, 2018, 12, 903-918.	2.2	13
59	Solid modelling in a virtual reality environment. Visual Computer, 2005, 21, 17-40.	3.5	12
60	Robust adaptive filter allowing systematic model errors for transfer alignment. Aerospace Science and Technology, 2016, 59, 32-40.	4.8	12
61	Reduced-Order Extended Kalman Filter for Deformable Tissue Simulation. Journal of the Mechanics and Physics of Solids, 2022, 158, 104696.	4.8	12
62	Weak convergence for random weighting estimation of smoothed quantile processes. Information Sciences, 2014, 263, 36-42.	6.9	11
63	An Advanced Cubature Information Filtering for Indoor Multiple Wideband Source Tracking With a Distributed Noise Statistics Estimator. IEEE Access, 2019, 7, 151851-151866.	4.2	11
64	Cellular neural network modelling of soft tissue dynamics for surgical simulation. Technology and Health Care, 2017, 25, 337-344.	1.2	10
65	A Strap-Down Inertial Navigation/Spectrum Red-Shift/Star Sensor (SINS/SRS/SS) Autonomous Integrated System for Spacecraft Navigation. Sensors, 2018, 18, 2039.	3.8	10
66	A methodology for solid modelling in a virtual reality environment. Robotics and Computer-Integrated Manufacturing, 2005, 21, 528-549.	9.9	9
67	Simulation of deformable models with the Poisson equation. Computer Methods in Biomechanics and Biomedical Engineering, 2006, 9, 289-304.	1.6	9
68	The bounds on tracking performance utilising a laser-based linear and angular sensing and measurement methodology for micro/nano manipulation. Measurement Science and Technology, 2014, 25, 125005.	2.6	9
69	Windowing-based random weighting fitting of systematic model errors for dynamic vehicle navigation. Information Sciences, 2014, 282, 350-362.	6.9	9
70	ChainMail based neural dynamics modeling of soft tissue deformation for surgical simulation. Technology and Health Care, 2017, 25, 231-239.	1.2	9
71	Double-Channel Sequential Probability Ratio Test for Failure Detection in Multisensor Integrated Systems. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-14.	4.7	9
72	Random weighting estimation for systematic error of observation model in dynamic vehicle navigation. International Journal of Control, Automation and Systems, 2016, 14, 514-523.	2.7	8

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73	Energy propagation modeling of nonlinear soft tissue deformation for surgical simulation. <i>Simulation</i> , 2018, 94, 3-10.	1.8	8
74	Constrained Unscented Particle Filter for SINS/GNSS/ADS Integrated Airship Navigation in the Presence of Wind Field Disturbance. <i>Sensors</i> , 2019, 19, 471.	3.8	8
75	Incorporating constraints into a Virtual Reality environment for intuitive and precise solid modelling. , 0, , .		7
76	A New Methodology for Deformable Object Simulation. , 0, , .		7
77	A NEW PARAMETER ESTIMATION METHOD FOR ONLINE SOFT TISSUE CHARACTERIZATION. <i>Journal of Mechanics in Medicine and Biology</i> , 2016, 16, 1640019.	0.7	7
78	Prediction of tissue thermal damage. <i>Technology and Health Care</i> , 2016, 24, S625-S629.	1.2	7
79	Local deformation for soft tissue simulation. <i>Bioengineered</i> , 2016, 7, 291-297.	3.2	7
80	Non-Fourier based thermal-mechanical tissue damage prediction for thermal ablation. <i>Bioengineered</i> , 2017, 8, 71-77.	3.2	7
81	Adaptively Random Weighted Cubature Kalman Filter for Nonlinear Systems. <i>Mathematical Problems in Engineering</i> , 2019, 2019, 1-13.	1.1	7
82	Constrained finite element method for runtime modeling of soft tissue deformation. <i>Applied Mathematical Modelling</i> , 2022, 109, 599-612.	4.2	7
83	A new neural network for robot path planning. , 2008, , .		6
84	Error-Resistant Adaptive Filtering for INS/SAR Integrated Navigation System. , 2009, , .		6
85	Random Weighting Estimation of Confidence Intervals for Quantiles. <i>Australian and New Zealand Journal of Statistics</i> , 2013, 55, 43-53.	0.9	6
86	Random weighting estimation of kinematic model error for dynamic navigation. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2015, 51, 2248-2259.	4.7	6
87	Asymptotic Properties of Random Weighted Empirical Distribution Function. <i>Communications in Statistics - Theory and Methods</i> , 2015, 44, 3812-3824.	1.0	6
88	Random weighting estimation of sampling distributions via importance resampling. <i>Communications in Statistics Part B: Simulation and Computation</i> , 2017, 46, 640-654.	1.2	6
89	A Novel Fitting H-Infinity Kalman Filter for Nonlinear Uncertain Discrete-Time Systems Based on Fitting Transformation. <i>IEEE Access</i> , 2020, 8, 10554-10568.	4.2	6
90	Set-Membership Based Hybrid Kalman Filter for Nonlinear State Estimation under Systematic Uncertainty. <i>Sensors</i> , 2020, 20, 627.	3.8	6

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91	Finite-element kalman filter with state constraint for dynamic soft tissue modelling. Computers in Biology and Medicine, 2021, 135, 104594.	7.0	6
92	Maximum Likelihood-Based Measurement Noise Covariance Estimation Using Sequential Quadratic Programming for Cubature Kalman Filter Applied in INS/BDS Integration. Mathematical Problems in Engineering, 2021, 2021, 1-13.	1.1	6
93	Thermal-Mechanical-Based Soft Tissue Deformation for Surgery Simulation. Advanced Robotics, 2010, 24, 1719-1739.	1.8	5
94	Random Weighting Estimation for Quantile Processes and Negatively Associated Samples. Communications in Statistics - Theory and Methods, 2014, 43, 656-662.	1.0	5
95	GPU-ACCELERATED FINITE ELEMENT MODELING OF BIO-HEAT CONDUCTION FOR SIMULATION OF THERMAL ABLATION. Journal of Mechanics in Medicine and Biology, 2018, 18, 1840012.	0.7	5
96	TEMPERATURE-DEPENDENT THERMOMECHANICAL MODELING OF SOFT TISSUE DEFORMATION. Journal of Mechanics in Medicine and Biology, 2018, 18, 1840021.	0.7	5
97	Modeling of soft tissue thermal damage based on GPU acceleration. Computer Assisted Surgery, 2019, 24, 5-12.	1.3	5
98	A Quaternion-Based Robust Adaptive Spherical Simplex Unscented Particle Filter for MINS/VNS/GNS Integrated Navigation System. Mathematical Problems in Engineering, 2019, 2019, 1-13.	1.1	5
99	Randomly Weighted CKF for Multisensor Integrated Systems. Journal of Sensors, 2019, 2019, 1-19.	1.1	5
100	Moving-Window-Based Adaptive Fitting H-Infinity Filter for the Nonlinear System Disturbance. IEEE Access, 2020, 8, 76143-76157.	4.2	5
101	Sensing and Modelling Mechanical Response in Large Deformation Indentation of Adherent Cell Using Atomic Force Microscopy. Sensors, 2020, 20, 1764.	3.8	5
102	A model representation for solid modelling in a virtual reality environment. , 0, , .		4
103	A reaction-diffusion methodology for soft object simulation. , 2006, , .		4
104	A vision-based approach for surface roughness assessment at micro and nano scales. , 2008, , .		4
105	Master-slave robotic system for needle indentation and insertion. Computer Assisted Surgery, 2017, 22, 100-105.	1.3	4
106	Unbinding of Kinesin from Microtubule in the Strongly Bound States Enhances under Assisting Forces. Molecular Informatics, 2018, 37, e1700092.	2.5	4
107	Soft tissue deformation modelling through neural dynamics-based reaction-diffusion mechanics. Medical and Biological Engineering and Computing, 2018, 56, 2163-2176.	2.8	4
108	Random Weighting, Strong Tracking, and Unscented Kalman Filter for Soft Tissue Characterization. Sensors, 2018, 18, 1650.	3.8	4

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109	Random Weighting Estimation of One-sided Confidence Intervals in Discrete Distributions. International Journal of Intelligent Mechatronics and Robotics, 2011, 1, 18-26.	0.4	4
110	Robust Adaptive Unscented Particle Filter. International Journal of Intelligent Mechatronics and Robotics, 2013, 3, 55-66.	0.4	4
111	Modelling a precision loadcell using neural networks for vision-based force measurement in cell micromanipulation. , 2013, , .		3
112	Soft tissue deformation estimation by spatio-temporal Kalman filter finite element method. Technology and Health Care, 2018, 26, 317-325.	1.2	3
113	Real-Time Nonlinear Characterization of Soft Tissue Mechanical Properties. Journal of Sensors, 2020, 2020, 1-15.	1.1	3
114	A hierarchically structured constraint-based data model for solid modelling in a virtual reality environment. , 0, , .		2
115	Assembly Modelling Through Constraint-based Manipulations in A Virtual Reality Environment. , 2005, , .		2
116	Random weighting estimation of stable exponent. Metrika, 2014, 77, 451-468.	0.8	2
117	Modelling the indentation force response of non-uniform soft tissue using a recurrent neural network. , 2016, , .		2
118	HEATING ANALYSIS OF SOFT TISSUE AT FINITE DEFORMATION DURING THERMAL ABLATION. Journal of Mechanics in Medicine and Biology, 2017, 17, 1740041.	0.7	2
119	Heat conduction-based methodology for nonlinear soft tissue deformation. International Journal on Interactive Design and Manufacturing, 2019, 13, 147-161.	2.2	2
120	<title>Integrated virtual factory and logistics for electronics industry</title>. , 2003, , .		1
121	Intuitive and Precise Solid Modeling in a Virtual Reality Environment. , 2005, , 185-202.		1
122	HAPTIC DEFORMATION SIMULATION WITH POISSON EQUATION. International Journal of Image and Graphics, 2006, 06, 445-473.	1.5	1
123	REACTION-DIFFUSION BASED DEFORMABLE OBJECT SIMULATION. International Journal of Image and Graphics, 2008, 08, 265-280.	1.5	1
124	An Improved Approach to Estimate Soft Tissue Parameters Using Genetic Algorithm for Minimally Invasive Measurement. , 2009, , .		1
125	Pose estimation with capacitive sensors experiencing non-linear response to tilt. , 2014, , .		1
126	Cellular neural network-based thermal modelling for real-time robotic path planning. International Journal of Agile Systems and Management, 2014, 7, 261.	0.3	1

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127	Nonlinear Deformations of Soft Tissues for Surgery Simulation. , 2016, , 281-296.		1
128	Design of a 3-DOF parallel mechanism for the enhancement of endonasal surgery. , 2017, , .		1
129	A hyperelastic model for mechanical responses of adherent cells in microinjection. , 2017, , .		1
130	Investigating the Mechanical Properties of Biological Brain Cells With Atomic Force Microscopy. Journal of Medical Devices, Transactions of the ASME, 2018, 12, .	0.7	1
131	On the Development of an Ants-Inspired Navigational Network for Autonomous Robots. International Journal of Intelligent Mechatronics and Robotics, 2012, 2, 57-71.	0.4	1
132	Limited Memory Measurement Noise Adaptive Random Weighted Filtering Algorithm. , 2020, , .		1
133	System identification of biological cells by atomic force microscopy. International Journal on Interactive Design and Manufacturing, 0, , 1.	2.2	1
134	Analysis, conversion and visualization of discrete simulation results. , 0, , .		0
135	Deformable object simulation with Poisson equation. , 0, , .		0
136	Closed-form equations for the vibrations of a flexure-based Scott-Russell mechanism. , 2008, , .		0
137	Learning of biologically inspired behaviors for autonomous robots by a navigational network. , 2008, , .		0
138	A Constraint-Based Methodology For Product Design With Virtual Reality. Intelligent Automation and Soft Computing, 2009, 15, 151-165.	2.1	0
139	A Virtual Environment for Visualization of Electronics Assembly Processes. , 2009, , .		0
140	An optimal parameter estimation method for soft tissue characterization. , 2010, , .		0
141	Processing of 3D Unstructured Measurement Data for Reverse Engineering. International Journal of Intelligent Mechatronics and Robotics, 2011, 1, 42-51.	0.4	0
142	ADAPTIVE UNSCENTED KALMAN FILTER FOR ONLINE SOFT TISSUES CHARACTERIZATION. Journal of Mechanics in Medicine and Biology, 2017, 17, 1740014.	0.7	0
143	Path planning in the presence of soft tissue deformation. International Journal on Interactive Design and Manufacturing, 2019, 13, 1603-1616.	2.2	0
144	Random weighting-based quantile estimation via importance resampling. Communications in Statistics - Theory and Methods, 2019, 48, 4820-4833.	1.0	0

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145	Characterizing the Disruption of HEK-293 Cell Membrane in AFM-based Indentation Using Energy Limiter Method. , 2019, , .		0
146	<title>Constraint manager for intuitive and precise solid modelling in a virtual reality environment</title>. , 2003, , .		0
147	Robust Adaptive Central Difference Particle Filter. International Journal of Robotics Applications and Technologies, 2014, 2, 19-34.	0.4	0
148	Optimal Robot Path Planning with Cellular Neural Network. , 0, , 19-38.		0
149	Random Weighting Estimation of One-Sided Confidence Intervals in Discrete Distributions. , 0, , 92-102.		0
150	Processing of 3D Unstructured Measurement Data for Reverse Engineering. , 0, , 118-127.		0