

Wei Tech Ang

List of Publications by Year in descending order

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68
papers

1,840
citations

304602

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docs citations

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times ranked

1308
citing authors

#	ARTICLE	IF	CITATIONS
1	Feedforward Controller With Inverse Rate-Dependent Model for Piezoelectric Actuators in Trajectory-Tracking Applications. IEEE/ASME Transactions on Mechatronics, 2007, 12, 134-142.	3.7	285
2	Toward active tremor canceling in handheld microsurgical instruments. IEEE Transactions on Automation Science and Engineering, 2003, 19, 793-800.	2.4	197
3	Estimation of Physiological Tremor from Accelerometers for Real-Time Applications. Sensors, 2011, 11, 3020-3036.	2.1	88
4	Nonlinear Regression Model of a Low-Cost MEMS Accelerometer. IEEE Sensors Journal, 2007, 7, 81-88.	2.4	80
5	Feedforward Controller of Ill-Conditioned Hysteresis Using Singularity-Free Prandtl-Ishlinskii Model. IEEE/ASME Transactions on Mechatronics, 2009, 14, 598-605.	3.7	80
6	Neural oscillator based control for pathological tremor suppression via functional electrical stimulation. Control Engineering Practice, 2011, 19, 74-88.	3.2	70
7	Tracking control of hysteretic piezoelectric actuator using adaptive rate-dependent controller. Sensors and Actuators A: Physical, 2009, 150, 116-123.	2.0	61
8	Estimating Displacement of Periodic Motion With Inertial Sensors. IEEE Sensors Journal, 2008, 8, 1385-1388.	2.4	57
9	Multistep Prediction of Physiological Tremor Based on Machine Learning for Robotics Assisted Microsurgery. IEEE Transactions on Cybernetics, 2015, 45, 328-339.	6.2	56
10	Automatic Identification of Systolic Time Intervals in Seismocardiogram. Scientific Reports, 2016, 6, 37524.	1.6	54
11	Autofocusing and Polar Body Detection in Automated Cell Manipulation. IEEE Transactions on Biomedical Engineering, 2017, 64, 1099-1105.	2.5	48
12	Drift-Free Position Estimation of Periodic or Quasi-Periodic Motion Using Inertial Sensors. Sensors, 2011, 11, 5931-5951.	2.1	47
13	Automatic Hysteresis Modeling of Piezoelectric Micromanipulator in Vision-Guided Micromanipulation Systems. IEEE/ASME Transactions on Mechatronics, 2012, 17, 547-553.	3.7	47
14	Multistep Prediction of Physiological Tremor for Surgical Robotics Applications. IEEE Transactions on Biomedical Engineering, 2013, 60, 3074-3082.	2.5	42
15	Visual Servoed Three-Dimensional Cell Rotation System. IEEE Transactions on Biomedical Engineering, 2015, 62, 2498-2507.	2.5	38
16	Three-Dimensional Cell Rotation With Fluidic Flow-Controlled Cell Manipulating Device. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1995-2003.	3.7	38
17	A Quaternion Weighted Fourier Linear Combiner for Modeling Physiological Tremor. IEEE Transactions on Biomedical Engineering, 2016, 63, 2336-2346.	2.5	38
18	Exploring Peripheral Mechanism of Tremor on Neuromusculoskeletal Model: A General Simulation Study. IEEE Transactions on Biomedical Engineering, 2009, 56, 2359-2369.	2.5	37

#	ARTICLE	IF	CITATIONS
19	Compact Sensing Design of a Handheld Active Tremor Compensation Instrument. IEEE Sensors Journal, 2009, 9, 1864-1871.	2.4	35
20	A Low-Cost Flexure-Based Handheld Mechanism for Micromanipulation. IEEE/ASME Transactions on Mechatronics, 2011, 16, 773-778.	3.7	33
21	Physiological Tremor Estimation With Autoregressive (AR) Model and Kalman Filter for Robotics Applications. IEEE Sensors Journal, 2013, 13, 4977-4985.	2.4	32
22	Modeling rate-dependent hysteresis in piezoelectric actuators. , 0, , .		31
23	Tremor Suppression of Elbow Joint via Functional Electrical Stimulation: A Simulation Study. , 2006, , .		26
24	Reciprocal EMG Controlled FES for Pathological Tremor Suppression of Forearm. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4810-3.	0.5	24
25	An Active Hand-Held Instrument for Enhanced Microsurgical Accuracy. Lecture Notes in Computer Science, 2000, , 878-886.	1.0	23
26	Multidimensional Modeling of Physiological Tremor for Active Compensation in Handheld Surgical Robotics. IEEE Transactions on Industrial Electronics, 2017, 64, 1645-1655.	5.2	22
27	Design of all-accelerometer inertial measurement unit for tremor sensing in hand-held microsurgical instrument. , 0, , .		20
28	Placement of accelerometers for high sensing resolution in micromanipulation. Sensors and Actuators A: Physical, 2011, 167, 304-316.	2.0	19
29	Kalman filtering for real-time orientation tracking of handheld microsurgical instrument. , 0, , .		17
30	Mobile EEG-based situation awareness recognition for air traffic controllers. , 2017, , .		17
31	Micromanipulation accuracy in pointing and tracing investigated with a contact-free measurement system. , 2009, 2009, 3960-3.		14
32	Design and implementation of active error canceling in hand-held microsurgical instrument. , 0, , .		13
33	SENSING OF PATHOLOGICAL TREMOR USING SURFACE ELECTROMYOGRAPHY AND ACCELEROMETER FOR REAL-TIME ATTENUATION. Journal of Mechanics in Medicine and Biology, 2011, 11, 1347-1371.	0.3	13
34	Regenerative rehabilitation: exploring the synergistic effects of rehabilitation and implantation of a bio-functional scaffold in enhancing nerve regeneration. Biomaterials Science, 2019, 7, 5150-5160.	2.6	11
35	A Digitized Representation of the Modified Prandtl–Ishlinskii Hysteresis Model for Modeling and Compensating Piezoelectric Actuator Hysteresis. Micromachines, 2021, 12, 942.	1.4	10
36	An Extended Kalman filtering of accelerometer and surface electromyography data for attenuation of pathological tremor. , 2008, , .		9

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37	Ensemble framework based real-time respiratory motion prediction for adaptive radiotherapy applications. Medical Engineering and Physics, 2016, 38, 749-757.	0.8	9
38	A micro motion sensing system for micromanipulation tasks. Sensors and Actuators A: Physical, 2012, 173, 254-266.	2.0	8
39	A Developmental Rehabilitation Robotic System for a Rat With Complete Thoracic Spinal Cord Injury in Quadruped Posture. IEEE Robotics and Automation Letters, 2018, 3, 2109-2115.	3.3	8
40	Plant Cell Injection Based on Autofocusing Algorithm. , 2008, , .		7
41	A compact 3-DOF compliant serial mechanism for trajectory tracking with flexures made by rapid prototyping. , 2012, , .		6
42	A fully automated robotic system for three-dimensional cell rotation. , 2016, , .		6
43	Multi-Step Prediction of Physiological Tremor With Random Quaternion Neurons for Surgical Robotics Applications. IEEE Access, 2018, 6, 42216-42226.	2.6	6
44	Unsupervised Phase Learning and Extraction from Repetitive Movements. , 2018, 2018, 227-230.		5
45	Neural network methods for error canceling in human-machine manipulation. , 0, , .		4
46	An intelligent hand-held microsurgical instrument for improved accuracy. , 0, , .		4
47	FES artifact suppression for real-time tremor compensation. , 2009, , .		4
48	Autofocusing algorithm comparison in bright field microscopy for automatic vision aided cell micromanipulation. , 2010, , .		4
49	Vision based cell strain modeling and control system. , 2010, , .		4
50	EEG controlled neuromuscular electrical stimulation of the upper limb for stroke patients. Frontiers of Mechanical Engineering in China, 2011, 6, 71.	0.4	4
51	Development of a Compact 1-D Micromanipulator with Flexure Manufactured Using Rapid Prototyping. International Journal of Intelligent Mechatronics and Robotics, 2012, 2, 47-57.	0.4	4
52	An Enhanced Intelligent Handheld Instrument with Visual Servo Control for 2-DOF Hand Motion Error Compensation. International Journal of Advanced Robotic Systems, 2013, 10, 355.	1.3	4
53	Calibration of piezoelectric actuator-based vision guided cell microinjection system. , 2008, , .		3
54	Design and development of a low-cost flexure-based hand-held mechanism for micromanipulation. , 2009, , .		3

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55	Transfer Function Compensation in Gyroscope-Free Inertial Measurement Units for Accurate Angular Motion Sensing. IEEE Sensors Journal, 2012, 12, 1207-1208.	2.4	3
56	Beneficial micropipette oscillation in vision-guided piezo-assisted ICSI. , 2013, , .		3
57	Musculoskeletal Models of Tremor. , 2013, , 79-107.		2
58	Automatic Inference of Ratâ€™s Hindlimb Trajectory to Synchronize with Forelimb Gait Through Phase. , 2019, 2019, 4615-4618.		2
59	Real-time stressing and force sensing on biological cells. , 2010, , .		1
60	Application of lateral oscillating piezo-driven micropipette in embryo biopsy for pre-implantation genetic diagnosis. , 2014, , .		1
61	Dynamics of the mobile robotic balance trainer: Study of the pentagonal closed chain properties in relation with balance tasks. , 2015, , .		1
62	Phase Learning to Extract Phase from Forelimb(s) and Hindlimb(s) Movement in Real Time. , 2021, , .		1
63	Fusion of Inertial Measurements and Vision Feedback for Microsurgery. Advances in Intelligent Systems and Computing, 2013, , 27-35.	0.5	1
64	Real-time modeling and control of the circular cell membranes strain. , 2011, , .		0
65	Three-dimensional modeling of physiological tremor for hand-held surgical robotic instruments. , 2016, 2016, 3708-3711.		0
66	Rehabilitation Robotic System with Forelimb-Hindlimb Phase synchronization in Rats with Spinal Cord Injury. , 2021, , .		0
67	Fusion of Inertial Measurements and Vision Feedback for Microsurgery. Studies in Computational Intelligence, 2013, , 341-349.	0.7	0
68	Robotic Micromanipulation of Biological Cells with Friction Force-Based Rotation Control. , 2020, , .		0