Kyung-Soo Kim

List of Publications by Year
in descending order

137 papers	2,133 citations	236612 25 h-index	264894 42 g-index
137 all docs	137 docs citations	137 times ranked	1820 citing authors

#	Article	IF	Citations
1	Disturbance Observer for Estimating Higher Order Disturbances in Time Series Expansion. IEEE Transactions on Automatic Control, 2010, 55, 1905-1911.	3.6	270
2	Sliding Mode Control Using Novel Sliding Surfaces. Lecture Notes in Control and Information Sciences, 2009, , .	0.6	141
3	Designing robust sliding hyperplanes for parametric uncertain systems: a Riccati approach. Automatica, 2000, 36, 1041-1048.	3.0	138
4	Reduced order disturbance observer for discrete-time linear systems. Automatica, 2013, 49, 968-975.	3.0	110
5	A Robot Finger Design Using a Dual-Mode Twisting Mechanism to Achieve High-Speed Motion and Large Grasping Force. IEEE Transactions on Robotics, 2012, 28, 1398-1405.	7.3	76
6	Designing Anthropomorphic Robot Hand With Active Dual-Mode Twisted String Actuation Mechanism and Tiny Tension Sensors. IEEE Robotics and Automation Letters, 2017, 2, 1571-1578.	3.3	76
7	Morphology-based guidance line extraction for an autonomous weeding robot in paddy fields. Computers and Electronics in Agriculture, 2015, 113, 266-274.	3.7	73
8	A Closed-Form Solution to Asymmetric Motion Profile Allowing Acceleration Manipulation. IEEE Transactions on Industrial Electronics, 2010, 57, 2499-2506.	5.2	53
9	Controller Design of an Electric Power Steering System. IEEE Transactions on Control Systems Technology, 2018, 26, 748-755.	3.2	45
10	Degradation of optical properties of a film-type single-wall carbon nanotubes saturable absorber (SWNT-SA) with an Er-doped all-fiber laser. Optics Express, 2012, 20, 12966.	1.7	42
11	Estimating Clothing Thermal Insulation Using an Infrared Camera. Sensors, 2016, 16, 341.	2.1	40
12	Compound Explosives Detection and Component Analysis via Terahertz Time-Domain Spectroscopy. Journal of the Optical Society of Korea, 2013, 17, 454-460.	0.6	36
13	Effective image enhancement techniques for fog–affected indoor and outdoor images. IET Image Processing, 2018, 12, 465-471.	1.4	35
14	A novel smooth impact drive mechanism actuation method with dual-slider for a compact zoom lens system. Review of Scientific Instruments, 2011, 82, 085105.	0.6	34
15	Design and test of an adaptive vibration absorber based on magnetorheological elastomers and a hybrid electromagnet. Journal of Intelligent Material Systems and Structures, 2013, 24, 803-812.	1.4	33
16	A Robust State of Charge Estimation Approach Based on Nonlinear Battery Cell Model for Lithium-Ion Batteries in Electric Vehicles. IEEE Transactions on Vehicular Technology, 2021, 70, 5638-5647.	3.9	32
17	Ultrashort stretched-pulse L-band laser using carbon-nanotube saturable absorber. Optics Express, 2015, 23, 7779.	1.7	31
18	A practically efficient method for motion control based on asymmetric velocity profile. International Journal of Machine Tools and Manufacture, 2009, 49, 678-682.	6.2	30

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19	Robust Zero Placement for Motion Control of Lightly Damped Systems. IEEE Transactions on Industrial Electronics, 2013, 60, 3857-3864.	5.2	30
20	Design of a cat-inspired robotic leg for fast running. Advanced Robotics, 2014, 28, 1587-1598.	1.1	30
21	An impulse-time perturbation approach for enhancing the robustness of extra-insensitive input shapers. Automatica, 2013, 49, 3425-3431.	3.0	28
22	Note: A compact three-axis optical force/torque sensor using photo-interrupters. Review of Scientific Instruments, 2013, 84, 126109.	0.6	27
23	A 2-Speed Small Transmission Mechanism Based on Twisted String Actuation and a Dog Clutch. IEEE Robotics and Automation Letters, 2018, 3, 1338-1345.	3.3	27
24	Sliding Mode Design via Quadratic Performance Optimization with Pole-Clustering Constraint. SIAM Journal on Control and Optimization, 2004, 43, 670-684.	1.1	25
25	Distributed-Actuation Mechanism for a Finger-Type Manipulator: Theory and Experiments. IEEE Transactions on Robotics, 2010, 26, 569-575.	7.3	25
26	Note: Real time control of a tunable vibration absorber based on magnetorheological elastomer for suppressing tonal vibrations. Review of Scientific Instruments, 2012, 83, 046108.	0.6	25
27	Development of anthropomorphic robot hand with dual-mode twisting actuation and electromagnetic joint locking mechanism. , 2013, , .		24
28	Conceptual and basic designs of the Mobile Harbor crane based on topology and shape optimization. Structural and Multidisciplinary Optimization, 2014, 50, 505-515.	1.7	23
29	A Novel Passive Quasi-Zero Stiffness Isolator for Ultra-Precision Measurement Systems. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1573-1580.	1.1	23
30	A Portable and Remote 6-DOF Pose Sensor System With a Long Measurement Range Based on 1-D Laser Sensors. IEEE Transactions on Industrial Electronics, 2015, 62, 5722-5729.	5.2	22
31	Developing Accurate Long Distance 6-DOF Motion Detection with 1-D Laser Sensors: Three-Beam Detection System. IEEE Transactions on Industrial Electronics, 2012, , 1-1.	5.2	21
32	Using the Stator Current Ripple Model for Real-Time Estimation of Full Parameters of a Permanent Magnet Synchronous Motor. IEEE Access, 2019, 7, 33369-33379.	2.6	20
33	Modified Nonnegative Matrix Factorization Using the Hadamard Product to Estimate Real-Time Continuous Finger-Motion Intentions. IEEE Transactions on Human-Machine Systems, 2017, 47, 1089-1099.	2.5	16
34	Note: Vibration suppression using tunable vibration absorber based on stiffness variable magneto-rheological gel. Review of Scientific Instruments, 2015, 86, 106106.	0.6	15
35	Design of a miniature force sensor based on photointerrupter for robotic hand. Sensors and Actuators A: Physical, 2018, 269, 444-453.	2.0	15
36	Nondestructive evaluation of multilayered paint films in ambient atmosphere using terahertz reflection spectroscopy. NDT and E International, 2016, 80, 71-76.	1.7	14

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37	Wearable sensor system including optical 3-axis GRF sensor for joint torque estimation in real-time gait analysis. , 2014, , .		13
38	Two-channel electrotactile stimulation for sensory feedback of fingers of prosthesis. , 2016, , .		13
39	Design and Analysis of the Active Dual-Mode Twisting Actuation Mechanism. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2790-2801.	3.7	13
40	Nondestructive Material Characterization in the Terahertz Band by Selective Extraction of Sample-Induced Echo Signals. Journal of Nondestructive Evaluation, 2015, 34, 1.	1.1	12
41	A Nonlinear-Model-Based Observer for a State-of-Charge Estimation of a Lithium-Ion Battery in Electric Vehicles. Energies, 2019, 12, 3383.	1.6	12
42	Using scales in the multiobjective approach. IEEE Transactions on Automatic Control, 2000, 45, 973-977.	3.6	11
43	Vibration isolation strategies using magneto-rheological elastomer for a miniature cryogenic cooler in space application. , 2010, , .		11
44	Structural Optimization of a Novel 6-DOF Pose Sensor System for Enhancing Noise Robustness at a Long Distance. IEEE Transactions on Industrial Electronics, 2014, 61, 5622-5631.	5.2	11
45	Using lateral vibration for thermosonic flip-chip interconnection with anisotropic conductive film. Journal of Micromechanics and Microengineering, 2010, 20, 105015.	1.5	10
46	A Robust Current Controller for Uncertain Permanent Magnet Synchronous Motors with a Performance Recovery Property for Electric Power Steering Applications. Energies, 2018, 11, 1224.	1.6	10
47	Bias Compensation for Fast Servo Track Writer Seek Control. IEEE Transactions on Magnetics, 2011, 47, 1937-1943.	1.2	9
48	Formulating a Laplace domain approach for tuning motion profiles. , 2011, , .		9
49	Design of modular gripper for explosive ordinance disposal robot manipulator based on modified dual-mode twisting actuation. International Journal of Control, Automation and Systems, 2016, 14, 1322-1330.	1.6	9
50	A Survey of Control Issues in Optical Data Storage Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 854-868.	0.4	8
51	Advanced sensing system of crane spreader motion(for Mobile Harbor). , 2012, , .		8
52	Design and control of robot manipulator with a distributed actuation mechanism. Mechatronics, 2014, 24, 1223-1230.	2.0	8
53	The Role of Relative Spinal Motion during Feline Galloping for Speed Performance. Journal of Bionic Engineering, 2014, 11, 517-528.	2.7	8
54	Development of a robotic finger with an active dual-mode twisting actuation and a miniature tendon tension sensor. , 2016, , .		8

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55	Design and control of antagonistic robot joint with Twisted String Actuators. , 2016, , .		8
56	A Novel Pneumatic Generator with Pressure-Feedback Mechanism for Self-Injection of Hydrogen Peroxide. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1992-2002.	3.7	8
57	Practical Approach for Controlling Optical Image Stabilization System. International Journal of Control, Automation and Systems, 2020, 18, 824-833.	1.6	8
58	Real-Time Optimal Torque Control of Interior Permanent Magnet Synchronous Motors Based on a Numerical Optimization Technique. IEEE Transactions on Control Systems Technology, 2021, 29, 1815-1822.	3.2	8
59	Developing a robust sensing system for remote relative 6-DOF motion using 1-D laser sensors. , 2012, , .		7
60	Weighted virtual tangential vector algorithm for local path planning of mobile robots. Electronics Letters, 2013, 49, 255-256.	0.5	7
61	Design of Prosthetic Robot Hand with High Performances Based on Novel Actuation Principles. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 313-318.	0.4	7
62	Design improvement of the three-beam detector towards a precise long-range 6-degree of freedom motion sensor system. Review of Scientific Instruments, 2014, 85, 015004.	0.6	7
63	Developing a real time controlled adaptive MRE-based tunable vibration absorber system for a linear cryogenic cooler. , 2011, , .		6
64	Vision based guidance line extraction for autonomous weed control robot in paddy field. , 2015, , .		6
65	A novel disturbance observer based robust current-control for a PMSM drive system. , 2015, , .		6
66	Design of a Compact Pneumatic Power Generator With a Self-Regulating Mechanism for Mobile Application. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1983-1991.	3.7	6
67	An Impulse-time Perturbation Approach for a Symmetric Extra-insensitive Input Shaper. International Journal of Control, Automation and Systems, 2018, 16, 1239-1246.	1.6	6
68	Design of Robot Hand With Pneumatic Dual-Mode Actuation Mechanism Powered by Chemical Gas Generation Method. IEEE Robotics and Automation Letters, 2018, 3, 4193-4200.	3.3	6
69	Estimating Simultaneous and Proportional Finger Force Intention Based on sEMG Using a Constrained Autoencoder. IEEE Access, 2020, 8, 138264-138276.	2.6	6
70	Eccentricity Compensation in Optical Storage Systems: Analysis and Experiments. Japanese Journal of Applied Physics, 2002, 41, 6302-6303.	0.8	5
71	Elastic region of an ACF joint for thermosonic flip-chip bonding. Journal of Micromechanics and Microengineering, 2011, 21, 095015.	1.5	5
72	SoftGait: compliant walking assistance via pneumatically actuated robot legs. Electronics Letters, 2013, 49, 1208-1209.	0.5	5

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73	Controllable pneumatic generator based on the catalytic decomposition of hydrogen peroxide. Review of Scientific Instruments, 2014, 85, 075109.	0.6	5
74	Using common spatial pattern algorithm for unsupervised real-time estimation of fingertip forces from sEMG signals. , 2015, , .		5
75	Dual-mode twisting actuation mechanism with an active clutch for active mode-change and simple relaxation process. , 2015, , .		5
76	Bioinspired Image Stabilization Control Using the Adaptive Gain Adjustment Scheme of Vestibulo-Ocular Reflex. IEEE/ASME Transactions on Mechatronics, 2016, 21, 922-930.	3.7	5
77	The MSC Prosthetic Hand: Rapid, Powerful, and Intuitive. IEEE Robotics and Automation Letters, 2022, 7, 3170-3177.	3.3	5
78	Development of quadruped robot for inspection of underground pipelines in nuclear power plants. Electronics Letters, 2022, 58, 234-236.	0.5	5
79	Auto-positioning of sliding planes based on virtual force. International Journal of Control, Automation and Systems, 2013, 11, 798-804.	1.6	4
80	Tuning the S-curve motion profile in short distance case. , 2013, , .		4
81	An advanced cargo handling system operating at sea. International Journal of Control, Automation and Systems, 2014, 12, 852-860.	1.6	4
82	Investigation of fiber Bragg grating as a spectral notch shaper for single-pulse coherent anti-Stokes Raman spectroscopy. Optics Communications, 2017, 383, 107-112.	1.0	4
83	Generalized Control Framework for Exoskeleton Robots by Interaction Force Feedback Control. International Journal of Control, Automation and Systems, 2021, 19, 3419-3427.	1.6	4
84	Application of sliding actuation mechanism to robot finger. , 2009, , .		3
85	BLDC motor driven robot finger design using the sliding actuation principle. , 2010, , .		3
86	Ground following locomotion of a robot inspired by pill bugs. , 2011, , .		3
87	Generalized design of disturbance observer for non-minimum phase system using an H-infinity approach. , 2013, , .		3
88	Sliding Mechanism of Lateral Thermosonic Process With Anisotropic Conductive Film for High Productivity and High Reliability. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 205-212.	1.4	3
89	Reinterpretation of disturbance observer as an add-on controller. , 2014, , .		3
90	Note: Reliable and non-contact 6D motion tracking system based on 2D laser scanners for cargo transportation. Review of Scientific Instruments, 2014, 85, 106102.	0.6	3

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91	A novel actuation for a robotic fish using a flexible joint. International Journal of Control, Automation and Systems, 2014, 12, 878-885.	1.6	3
92	Applications: Twisted String Actuation-based Compact Automatic Transmission. , 2021, , .		3
93	Highly Damage-Resistant Thin Film Saturable Absorber Based on Mechanically Functionalized SWCNTs. Nanoscale Research Letters, 2022, 17, 11.	3.1	3
94	Bipedal Walking and Impact Reduction Algorithm for a Robot with Pneumatically Driven Knees. International Journal of Control, Automation and Systems, 2021, 19, 3937-3946.	1.6	3
95	Disturbance attenuation via strictly positive real compensators. Journal of the Franklin Institute, 2003, 340, 515-521.	1.9	2
96	A Lyapunov Approach for Discrete-time Sliding Hyperplane Design and Robust Sliding Mode Control using MROF. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 1129-1134.	0.4	2
97	Structure optimization of 1-D laser sensors assembly for robust 6-DOF measurement. , 2012, , .		2
98	A tri-axial force sensor based on light intensity modulation for detecting ground reaction force. , 2013, , .		2
99	Portable serial robot manipulator with distributed actuation mechanism. , 2014, , .		2
100	Precedence walking assistance mechanism for exoskeletons with improved detection of step initiation based on gait analysis. Journal of Mechanical Science and Technology, 2014, 28, 4353-4359.	0.7	2
101	Remote position detection of steel coils using 2D laser scanners: Two-line-tracker. , 2014, , .		2
102	Design of biped robot inspired by cats for fast running. Electronics Letters, 2014, 50, 730-731.	0.5	2
103	Using Intaglio-Shaped Bumps for Increasing the Conductive Particle Density in Lateral Thermosonic Process With Anisotropic Conductive Film. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 371-376.	1.4	2
104	Verification of the peak time approach for detection of step initiation using the UTRCEXO. International Journal of Control, Automation and Systems, 2014, 12, 1070-1076.	1.6	2
105	The analysis of new 3 DOF parallel delta type leg for a quadruped robot to maximize actuation torque reduction. , 2015, , .		2
106	A feasibility study of designing a tunable vibration absorber using stiffness variable magnetorheological gel. , 2015, , .		2
107	A DOB based robust current control of Permanent Magnet Synchronous Motor. , 2015, , .		2
108	Supercontinuum notch shaping via fiber Bragg grating for the excitation source in coherent anti-Stokes Raman spectroscopy. , 2015, , .		2

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109	Note: Position/torque control of antagonistic robot joint with high-compliant twisted string actuators (TSAs). Review of Scientific Instruments, 2016, 87, 126107.	0.6	2
110	Optimization and reliability evaluation of COG bonding process. Journal of Mechanical Science and Technology, 2016, 30, 1305-1313.	0.7	2
111	Control of and experimentation on an active dual-mode twisted string actuation mechanism. , 2017, , .		2
112	Development of a vehicle body velocity sensor using Modulated Motion Blur. , 2017, , .		2
113	Novel Descattering Approach for Stereo Vision in Dense Suspended Scatterer Environments. Sensors, 2017, 17, 1425.	2.1	2
114	Precise Control Law Design of Robot Finger Embedding Distributed Actuation Mechanism. Journal of Institute of Control, Robotics and Systems, 2010, 16, 846-851.	0.1	2
115	Analysis on a robotic fish propulsion by using flexible structure. , 2012, , .		1
116	Finger module design based on dual-mode twisting actuation for explosive ordnance disposal gripper. , 2013, , .		1
117	Double-looped Mach-Zehnder interferometer for achieving multiple ring-down interferograms. Optics Express, 2014, 22, 28353.	1.7	1
118	Design, analysis and simulation of biped running robot. , 2014, , .		1
119	General design of disturbance observer for stable linear time-invariant single-input/single-output systems via an H_∞ approach. , 2017, , .		1
120	Analysis of Pneumatic Balloon Actuator. , 2011, , .		0
121	Analysis of rod vibration on a dual-slider smooth impact drive mechanism for a compact zoom lens system. , 2012, , .		0
122	Data processing of Terahertz signals for in situ explosives detection and component analysis via Terahertz time-domain spectroscopy. , 2012, , .		0
123	Faster detection of step initiation for the unmanned technology research center exoskeleton (UTRCEXO) with insole-type force sensing resistor (FSR). , 2013, , .		0
124	Application of chemical reaction based pneumatic power generator to robot finger. , 2013, , .		0
125	Input shaper design using impulse-time perturbation method. , 2014, , .		0
126	Dynamic analysis of the spinal-pelvic motion match during feline galloping for speed increase into quadruped robotic system. , 2014, , .		0

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127	Add-on controller design based on disturbance observer in H-infinity framework. , 2015, , .		0
128	Multilayered film monitoring using terahertz reflective time-domain spectroscopy. , 2015, , .		0
129	Design of robot hand for bipedal/quadrupedal transformable locomotive robot. , 2016, , .		0
130	Modified nonlinear pressure estimator of pneumatic actuator for force controller design. , 2017, , .		0
131	Note: Hybrid active/passive force feedback actuator using hydrostatic transmission. Review of Scientific Instruments, 2017, 88, 126103.	0.6	0
132	A disturbance observer based approach to current control of PMSM drives for torque ripple reduction. IFAC-PapersOnLine, 2019, 52, 206-209.	0.5	0
133	Development of wearable dry sEMG sensor and selection of optimal location through anatomical consideration for the prosthetic hand. , 2019, , .		0
134	Modulated Motion Blur-Based Vehicle Body Velocity and Pose Estimation Using an Optical Image Modulator. IEEE Transactions on Vehicular Technology, 2021, 70, 8744-8754.	3.9	0
135	Selective extraction of refractive index in the ambient atmosphere using terahertz time-domain spectroscopy. , 2019, , .		0
136	A Nonlinear Open Circuit Voltage Representation Enabling State of Charge Estimation at the Voltage Plateau Region of LiFePO$_4$ Battery. , 2020, , .		0
137	Simultaneous and Proportional Wrist Force Intent Estimation Method using Constrained Autoencoder. , 2021, , .		0