

Jung Kim

List of Publications by Year in descending order

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Version: 2024-02-01

150
papers

2,736
citations

218381

26
h-index

223531

46
g-index

152
all docs

152
docs citations

152
times ranked

3410
citing authors

#	ARTICLE	IF	CITATIONS
1	Current hand exoskeleton technologies for rehabilitation and assistive engineering. International Journal of Precision Engineering and Manufacturing, 2012, 13, 807-824.	1.1	418
2	Pressure Insensitive Strain Sensor with Facile Solution-Based Process for Tactile Sensing Applications. ACS Nano, 2018, 12, 7546-7553.	7.3	162
3	Measurement and characterization of soft tissue behavior with surface deformation and force response under large deformations. Medical Image Analysis, 2010, 14, 138-148.	7.0	112
4	Soft Nanocomposite Based Multi-point, Multi-directional Strain Mapping Sensor Using Anisotropic Electrical Impedance Tomography. Scientific Reports, 2017, 7, 39837.	1.6	90
5	Highly Uniform and Low Hysteresis Piezoresistive Pressure Sensors Based on Chemical Grafting of Polypyrrole on Elastomer Template with Uniform Pore Size. Small, 2019, 15, e1901744.	5.2	82
6	Real-time pinch force estimation by surface electromyography using an artificial neural network. Medical Engineering and Physics, 2010, 32, 429-436.	0.8	72
7	Mechanical Property Characterization of Prostate Cancer Using a Minimally Motorized Indenter in an Ex Vivo Indentation Experiment. Urology, 2010, 76, 1007-1011.	0.5	70
8	Nanowire-integrated microfluidic devices for facile and reagent-free mechanical cell lysis. Lab on A Chip, 2012, 12, 2914.	3.1	70
9	In Vivo Mechanical Behavior of Intra-abdominal Organs. IEEE Transactions on Biomedical Engineering, 2006, 53, 2129-2138.	2.5	60
10	Development and Quantitative Performance Evaluation of a Noninvasive EMG Computer Interface. IEEE Transactions on Biomedical Engineering, 2009, 56, 188-191.	2.5	54
11	Direct synthesis and integration of functional nanostructures in microfluidic devices. Lab on A Chip, 2011, 11, 1946.	3.1	52
12	Recognition of walking environments and gait period by surface electromyography. Frontiers of Information Technology and Electronic Engineering, 2019, 20, 342-352.	1.5	48
13	Design and locomotion control of a hydraulic lower extremity exoskeleton for mobility augmentation. Mechatronics, 2017, 46, 32-45.	2.0	45
14	Robotic palpation and mechanical property characterization for abnormal tissue localization. Medical and Biological Engineering and Computing, 2012, 50, 961-971.	1.6	44
15	Characterization of Viscoelastic Soft Tissue Properties from In Vivo Animal Experiments and Inverse FE Parameter Estimation. Lecture Notes in Computer Science, 2005, 8, 599-606.	1.0	42
16	Estimation of elbow flexion force during isometric muscle contraction from mechanomyography and electromyography. Medical and Biological Engineering and Computing, 2010, 48, 1149-1157.	1.6	37
17	A Study on Estimation of Joint Force Through Isometric Index Finger Abduction With the Help of SEMG Peaks for Biomedical Applications. IEEE Transactions on Cybernetics, 2016, 46, 2-8.	6.2	37
18	Efficient soft tissue characterization under large deformations in medical simulations. International Journal of Precision Engineering and Manufacturing, 2009, 10, 115-121.	1.1	36

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19	Quantum dot-based immunoassay enhanced by high-density vertical ZnO nanowire array. <i>Biosensors and Bioelectronics</i> , 2014, 55, 209-215.	5.3	36
20	A Haptic Interaction Method Using Visual Information and Physically Based Modeling. <i>IEEE/ASME Transactions on Mechatronics</i> , 2010, 15, 636-645.	3.7	35
21	Synergy matrices to estimate fluid wrist movements by surface electromyography. <i>Medical Engineering and Physics</i> , 2011, 33, 916-923.	0.8	32
22	Power-Assistive Finger Exoskeleton With a Palmar Opening at the Fingerpad. <i>IEEE Transactions on Biomedical Engineering</i> , 2014, 61, 2688-2697.	2.5	32
23	Backdrivable and Fully-Portable Pneumatic Back Support Exoskeleton for Lifting Assistance. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 2047-2053.	3.3	32
24	Deep Neural Network Based Electrical Impedance Tomographic Sensing Methodology for Large-Area Robotic Tactile Sensing. <i>IEEE Transactions on Robotics</i> , 2021, 37, 1570-1583.	7.3	30
25	Robotic Palpation-Based Mechanical Property Mapping for Diagnosis of Prostate Cancer. <i>Journal of Endourology</i> , 2011, 25, 851-857.	1.1	29
26	Feasibility of using an artificial neural network model to estimate the elbow flexion force from mechanomyography. <i>Journal of Neuroscience Methods</i> , 2011, 194, 386-393.	1.3	28
27	Design and characterization of a photo-sensor based force measurement unit (FMU). <i>Sensors and Actuators A: Physical</i> , 2012, 182, 49-56.	2.0	28
28	A Practical Strategy for sEMG-Based Knee Joint Moment Estimation During Gait and Its Validation in Individuals With Cerebral Palsy. <i>IEEE Transactions on Biomedical Engineering</i> , 2012, 59, 1480-1487.	2.5	25
29	Active muscle stiffness sensor based on piezoelectric resonance for muscle contraction estimation. <i>Sensors and Actuators A: Physical</i> , 2013, 194, 212-219.	2.0	25
30	Low-hysteresis and low-interference soft tactile sensor using a conductive coated porous elastomer and a structure for interference reduction. <i>Sensors and Actuators A: Physical</i> , 2019, 295, 541-550.	2.0	25
31	Virtual surgery simulation for medical training using multi-resolution organ models. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2007, 3, 149-158.	1.2	24
32	Graphic and haptic modelling of the oesophagus for VR-based medical simulation. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2009, 5, 257-266.	1.2	24
33	An efficient soft tissue characterization algorithm from <i>in vivo</i> indentation experiments for medical simulation. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2008, 4, 277-285.	1.2	23
34	Pneumatic AFO Powered by a Miniature Custom Compressor for Drop Foot Correction. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 1781-1789.	2.7	22
35	Surface Electromyography Characteristics for Motion Intention Recognition and Implementation Issues in Lower-limb Exoskeletons. <i>International Journal of Control, Automation and Systems</i> , 2022, 20, 1018-1028.	1.6	20
36	Estimation of flexible needle deflection in layered soft tissues with different elastic moduli. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 729-740.	1.6	19

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37	Exogenous Gene Integration for Microalgal Cell Transformation Using a Nanowire-Incorporated Microdevice. ACS Applied Materials & Interfaces, 2015, 7, 27554-27561.	4.0	19
38	Design of an optical soft sensor for measuring fingertip force and contact recognition. International Journal of Control, Automation and Systems, 2017, 15, 16-24.	1.6	19
39	Design of a Portable Pneumatic Power Source With High Output Pressure for Wearable Robotic Applications. IEEE Robotics and Automation Letters, 2018, 3, 4351-4358.	3.3	19
40	An ERT-based Robotic Skin with Sparsely Distributed Electrodes: Structure, Fabrication, and DNN-based Signal Processing. , 2020, , .		19
41	Compact Flat Fabric Pneumatic Artificial Muscle (ffPAM) for Soft Wearable Robotic Devices. IEEE Robotics and Automation Letters, 2021, 6, 2603-2610.	3.3	19
42	A Real-time EMG-based Assistive Computer Interface for the Upper Limb Disabled. , 2007, , .		18
43	Wireless Ground Reaction Force Sensing System Using a Mechanically Decoupled Two-Dimensional Force Sensor. IEEE/ASME Transactions on Mechatronics, 2020, 25, 66-75.	3.7	18
44	Printable skin adhesive stretch sensor for measuring multi-axis human joint angles. , 2016, , .		17
45	Characterization of cellular elastic modulus using structure based double layer model. Medical and Biological Engineering and Computing, 2011, 49, 453-462.	1.6	16
46	Dispenser printing of piezo-resistive nanocomposite on woven elastic fabric and hysteresis compensation for skin-mountable stretch sensing. Smart Materials and Structures, 2018, 27, 025017.	1.8	16
47	Internal Array Electrodes Improve the Spatial Resolution of Soft Tactile Sensors Based on Electrical Resistance Tomography. , 2019, , .		16
48	Deep Neural Network Approach in Electrical Impedance Tomography-based Real-time Soft Tactile Sensor. , 2019, , .		16
49	Design of an Inflatable Wrinkle Actuator With Fast Inflation/Deflation Responses for Wearable Suits. IEEE Robotics and Automation Letters, 2020, 5, 3799-3805.	3.3	16
50	Evaluation of Telerobotic Shared Control Strategy for Efficient Single-Cell Manipulation. IEEE Transactions on Automation Science and Engineering, 2012, 9, 402-406.	3.4	15
51	Kinematic-based locomotion mode recognition for power augmentation exoskeleton. International Journal of Advanced Robotic Systems, 2017, 14, 172988141773032.	1.3	15
52	Feedforward Motion Control With a Variable Stiffness Actuator Inspired by Muscle Cross-Bridge Kinematics. IEEE Transactions on Robotics, 2019, 35, 747-760.	7.3	15
53	A Finger Grip Force Sensor with an Open-Pad Structure for Glove-Type Assistive Devices. Sensors, 2020, 20, 4.	2.1	15
54	Real-time thumb-tip force predictions from noninvasive biosignals and biomechanical models. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1679-1688.	1.1	14

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55	Rapid, High-Throughput, and Direct Molecular Beacon Delivery to Human Cancer Cells Using a Nanowire-Incorporated and Pneumatic Pressure-Driven Microdevice. <i>Small</i> , 2015, 11, 6215-6224.	5.2	14
56	Local property characterization of prostate glands using inhomogeneous modeling based on tumor volume and location analysis. <i>Medical and Biological Engineering and Computing</i> , 2013, 51, 197-205.	1.6	13
57	Ranking hand movements for myoelectric pattern recognition considering forearm muscle structure. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 1507-1518.	1.6	13
58	Performance estimation of the lower limb exoskeleton for plantarflexion using surface electromyography (sEMG) signals. <i>Journal of Biomechanical Science and Engineering</i> , 2017, 12, 16-00595-16-00595.	0.1	13
59	An SEMG computer interface using three myoelectric sites for proportional two-dimensional cursor motion control and clicking for individuals with spinal cord injuries. <i>Medical Engineering and Physics</i> , 2013, 35, 777-783.	0.8	12
60	Robotic system with sweeping palpation and needle biopsy for prostate cancer diagnosis. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2014, 10, 356-367.	1.2	11
61	Adaptive Optimal Measurement Algorithm for ERT-Based Large-Area Tactile Sensors. <i>IEEE/ASME Transactions on Mechatronics</i> , 2022, 27, 304-314.	3.7	11
62	Noninvasive sEMG-based control for humanoid robot teleoperated navigation. <i>International Journal of Precision Engineering and Manufacturing</i> , 2011, 12, 1105-1110.	1.1	10
63	Comparative study on the differential mechanical properties of human liver cancer and normal cells. <i>Animal Cells and Systems</i> , 2013, 17, 170-178.	0.8	10
64	Piezoresistive textile layer and distributed electrode structure for soft whole-body tactile skin. <i>Smart Materials and Structures</i> , 2021, 30, 085036.	1.8	10
65	Human haptic perception is interrupted by explorative stops of milliseconds. <i>Frontiers in Psychology</i> , 2014, 5, 292.	1.1	9
66	Custom optoelectronic force sensor based ground reaction force (GRF) measurement system for providing absolute force. , 2016, , .		9
67	Development of a Bendable Outsole Biaxial Ground Reaction Force Measurement System. <i>Sensors</i> , 2019, 19, 2641.	2.1	9
68	Sim-To-Real Transfer Learning Approach for Tracking Multi-DOF Ankle Motions Using Soft Strain Sensors. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 3525-3532.	3.3	9
69	Comparative study of a muscle stiffness sensor and electromyography and mechanomyography under fatigue conditions. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 577-588.	1.6	8
70	Design of an MR-compatible biopsy needle manipulator using pull-pull cable transmission. <i>International Journal of Precision Engineering and Manufacturing</i> , 2016, 17, 1129-1137.	1.1	8
71	Development of an MR-compatible hand exoskeleton that is capable of providing interactive robotic rehabilitation during fMRI imaging. <i>Medical and Biological Engineering and Computing</i> , 2018, 56, 261-272.	1.6	8
72	Backlash Compensation for Accurate Control of Biopsy Needle Manipulators having Long Cable Transmission. <i>International Journal of Precision Engineering and Manufacturing</i> , 2018, 19, 675-684.	1.1	8

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73	Thumb-tip force estimation from sEMG and a musculoskeletal model for real-time finger prosthesis. , 2009, , .		7
74	Indenter Study: Associations Between Prostate Elasticity and Lower Urinary Tract Symptoms. Urology, 2014, 83, 544-549.	0.5	7
75	SMAFO: Stiffness modulated Ankle Foot Orthosis for a patient with foot drop. , 2015, , .		7
76	Force estimation in fatigue condition using a muscle-twitch model during isometric finger contraction. Medical Engineering and Physics, 2017, 50, 103-108.	0.8	7
77	Echinoderm Inspired Variable Stiffness Soft Actuator with Connected Ossicle Structure. , 2019, , .		7
78	Characterization of Spastic Ankle Flexors Based on Viscoelastic Modeling for Accurate Diagnosis. International Journal of Control, Automation and Systems, 2020, 18, 102-113.	1.6	7
79	UVtac: Switchable UV Marker-Based Tactile Sensing Finger for Effective Force Estimation and Object Localization. IEEE Robotics and Automation Letters, 2022, 7, 6036-6043.	3.3	7
80	Development of a Surgical Simulator for Laparoscopic Esophageal Procedures. , 2006, 2006, 819-22.		6
81	Robotic system for hybrid diagnosis of prostate cancer: Design and experimentation. , 2011, , .		6
82	Digital rectal examination in a simulated environment using sweeping palpation and mechanical localization. International Journal of Precision Engineering and Manufacturing, 2014, 15, 169-175.	1.1	6
83	Friction coefficient for the quantification of needle grasp in the lifting-thrusting method. International Journal of Precision Engineering and Manufacturing, 2014, 15, 1429-1434.	1.1	6
84	2.5D Laser-Cutting-Based Customized Fabrication of Long-Term Wearable Textile sEMG Sensor: From Design to Intention Recognition. IEEE Robotics and Automation Letters, 2022, 7, 10367-10374.	3.3	6
85	Development and Performance Evaluation of a Neural Signal-based Assistive Computer Interface. , 2007, , .		5
86	Evaluation of telerobotic shared control for efficient manipulation of single-cells in microinjection. , 2011, , .		5
87	Development of Self-Stabilizing Manipulator Inspired by the Musculoskeletal System Using the Lyapunov Method. IEEE Transactions on Robotics, 2017, 33, 1425-1437.	7.3	5
88	Dye Sensitized Solar Cell with P(VDF-CO-HFP) Gel Electrolyte. Molecular Crystals and Liquid Crystals, 2004, 424, 241-244.	0.4	4
89	An Efficient Soft Tissue Characterization Method for Haptic Rendering of Soft Tissue Deformation in Medical Simulation. , 2007, , .		4
90	Understanding of hands and task characteristics for development of biomimetic robot hands. , 2008, , .		4

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91	Inclusion detection with haptic-palpaton system for medical telediagnosis. , 2009, 2009, 4595-8.		4
92	Real-time estimation of thumb-tip forces using surface electromyogram for a novel human-machine interface. , 2010, , .		4
93	Design of a novel tremor suppression device using a linear delta manipulator for micromanipulation. , 2013, , .		4
94	Investigation of a tolerable time delay in SEMG-based elbow assistive device. , 2014, , .		4
95	MR-compatible hand exoskeleton for monitoring brain activity during active assistance. , 2015, 2015, 5752-5.		4
96	A Mechatronic Mirror-Image Motion Device for Symmetric Upper-Limb Rehabilitation. International Journal of Precision Engineering and Manufacturing, 2020, 21, 947-956.	1.1	4
97	Development of a wearable health monitoring device with motion artifact reduced algorithm (ICCAS) Tj ETQq1 1 0.784314 rgBT /Ove		3
98	A physically-based haptic rendering for telemanipulation with visual information: Macro and micro applications. , 2008, , .		3
99	Development of a myoelectric joystick: A preliminary study. , 2010, , .		3
100	Robotic palpation system for prostate cancer detection. , 2010, , .		3
101	New approach for abnormal tissue localization with robotic palpation and mechanical property characterization. , 2011, , .		3
102	Development of real-time muscle stiffness sensor based on resonance frequency for physical Human Robot Interactions. , 2012, 2012, 2367-70.		3
103	Electromagnetic tracking of needle intervention for sacral nerve stimulation using the image-guided surgery toolkit (IGSTK). International Journal of Precision Engineering and Manufacturing, 2013, 14, 2015-2020.	1.1	3
104	Powered finger exoskeleton having partially open fingerpad for flexion force assistance. , 2013, , .		3
105	Foot pronation monitoring using wireless biaxial force sensing system. , 2015, , .		3
106	Harmonic analysis of pulse morphology variability for pulse smoothness assessment. Biomedical Signal Processing and Control, 2018, 44, 1-11.	3.5	3
107	Implementation issues of EMG-based motion intention detection for exoskeletal robots. , 2018, , .		3
108	Development of an interactive game-based mirror image hand rehabilitation system. Intelligent Service Robotics, 2019, 12, 149-157.	1.6	3

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109	Proof-of-concept of a Pneumatic Ankle Foot Orthosis Powered by a Custom Compressor for Drop Foot Correction. , 2020, , .		3
110	Qualitative Stability Analysis of Soft Hand Exoskeleton Based on Tendon-driven Mechanism. International Journal of Precision Engineering and Manufacturing, 2020, 21, 2095-2104.	1.1	3
111	Motion duplication control for distributed dynamic systems by natural damping. , 0, , .		2
112	Influence of motion artifacts on photoplethysmographic signals for measuring pulse rates. , 2008, , .		2
113	Finger flexion force sensor based on volar displacement of flexor tendon. , 2012, , .		2
114	Development of mirror image motion system with sEMG for shoulder rehabilitation of post-stroke hemiplegic patients. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1473-1479.	1.1	2
115	Variation of Dynamic Muscle Model during Fatigue-Inducing Voluntary Contraction. , 2013, , .		2
116	Estimating grip forces with a tactiley transparent finger exoskeleton for pinch grip force assistance. , 2014, , .		2
117	Feasibility of proportional EMG control for a hand exoskeleton: A Fittsâ€™ Law approach. IFAC-PapersOnLine, 2018, 51, 214-219.	0.5	2
118	Development and Validation of Pneumatic Muscle based Back Assistance Exoskeleton*. , 2019, , .		2
119	A Large-Scale Fabric-Based Tactile Sensor Using Electrical Resistance Tomography. Lecture Notes in Electrical Engineering, 2019, , 107-109.	0.3	2
120	Power Transmission Design of Fast and Energy-Efficient Stiffness Modulation for Human Power Assistance. , 2021, , .		2
121	Real-time haptic rendering of slowly deformable bodies based on two dimensional visual information for telemanipulation. , 2007, , .		1
122	A preliminary research into joint angle prediction of the upper limb using surface electromyogram for a cooperative machine. , 2008, , .		1
123	Estimation of isometric joint torque from muscle activation and length in intrinsic hand muscle. , 2008, , .		1
124	Development of a low cost force sensor for wearable robotic systems. , 2011, , .		1
125	Optical muscle activation sensors for estimating upper limb force level. , 2011, , .		1
126	Evaluation of elbow power assistive system using sEMG signals for individuals with muscle weakness: Influence of assistive gain for variation of payload. , 2012, , .		1

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127	Wireless Multi-Axial Force Sensing Shoe for Gait Abnormalities Monitoring. , 2015, , .		1
128	Human elbow motor learning skills of varying loads: Proof of internal model generation using joint stiffness estimation. Journal of Biomechanical Science and Engineering, 2021, 16, 21-00088-21-00088.	0.1	1
129	Needle Insertion Force of Biological Soft Tissue for Haptic based Intravenous Injection Simulator. Journal of the Korean Society for Precision Engineering, 2012, 29, 222-228.	0.1	1
130	ESTIMATION OF SOFT TISSUE'S MECHANICAL PROPERTIES WITH IDENTATION EXPERIMENT AND OPTIMIZATION AHLGOLITHM(3A2 Cellular & Tissue Engineering & Biomaterials II). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2007, 2007.3, S174.	0.0	1
131	A Soft Somesthetic Robotic Finger Based on Conductive Working Liquid and an Origami Structure. , 2021, , .		1
132	Neural-Gas Network-Based Optimal Design Method for ERT-Based Whole-Body Robotic Skin. IEEE Transactions on Robotics, 2022, 38, 3463-3478.	7.3	1
133	A Passively Adaptable Toroidal Continuously Variable Transmission Combined with Twisted String Actuator. , 2022, , .		1
134	Real-time isometric pinch force prediction from sEMG. , 2008, , .		0
135	Preliminary results of EMG amplitude estimation with a muscle twitch model. , 2009, , .		0
136	New experimental method based biological soft tissue modeling. , 2010, , .		0
137	In-situ nanowire array synthesis in the microchannel for microfluidic devices. , 2010, , .		0
138	Localization of abnormality using finite element modeling of prostate glands with robotic system: A preliminary study. , 2012, , .		0
139	Force estimation using an approximately physiological mechanism. , 2013, , .		0
140	Movements stability analysis of SEMG-based elbow power assistance by Maximum finite time Lyapunov exponent. , 2013, , .		0
141	Quantum dot labeled immunoassay using zinc oxide nanowires. , 2013, , .		0
142	Characteristics of elbow movements to different amounts of surface electromyography-based assistive torque. , 2013, , .		0
143	Molecular Delivery: Rapid, High-Throughput, and Direct Molecular Beacon Delivery to Human Cancer Cells Using a Nanowire-Incorporated and Pneumatic Pressure-Driven Microdevice (Small 46/2015). Small, 2015, 11, 6214-6214.	5.2	0
144	Wearable lower limb biomechanics measurement system for gait analysis during walking and ascending stair. , 2015, , .		0

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145	How Can You Touch and Feel via Telerobots?. , 2019, , .		0
146	An Instrumentation for Force and Motion Measurement in Transgastric NOTES. The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM, 2010, 2010.5, 731-736.	0.0	0
147	Investigation of the Effect of Weighting between sEMG and Interaction Force in Intention Extraction for the Control of an Upper-Limb Assistive Device. Journal of Medical Robotics Research, 2017, 02, 1740005.	1.0	0
148	A Theoretical Model for an Inflatable Wrinkle Bending Actuator. Journal of the Korean Society for Precision Engineering, 2020, 37, 503-508.	0.1	0
149	Development of Wearable Sensing Suit for Monitoring Wrist Joint Motions and Deep Neural Network-based Calibration Method. Journal of the Korean Society for Precision Engineering, 2020, 37, 765-771.	0.1	0
150	Development of a Surgical Simulator for Laparoscopic Esophageal Procedures. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0