Guang-Zhong Yang

List of Publications by Year
in descending order

282 papers	10,365 citations	87401 40 h-index	53065 89 g-index
284 all docs	284 docs citations	284 times ranked	11884 citing authors

#	Article	IF	Citations
1	NFC-Powered Implantable Device for On-Body Parameters Monitoring With Secure Data Exchange Link to a Medical Blockchain Type of Network. IEEE Transactions on Cybernetics, 2023, 53, 31-43.	6.2	9
2	Eye-Tracking for Performance Evaluation and Workload Estimation in Space Telerobotic Training. IEEE Transactions on Human-Machine Systems, 2022, 52, 1-11.	2.5	17
3	Urinary Bladder Volume Monitoring Using Magnetic Induction Tomography: A Rotational Simulation Model for Anatomical Slices Within the Pelvic Region. IEEE Transactions on Biomedical Engineering, 2022, 69, 547-557.	2.5	1
4	A Reconfigurable Multirobot Cooperation Workcell for Personalized Manufacturing. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2581-2590.	3.4	1
5	Cross-Domain Self-Supervised Complete Geometric Representation Learning for Real-Scanned Point Cloud Based Pathological Gait Analysis. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 1034-1044.	3.9	3
6	Task-Based LSTM Kinematic Modeling for a Tendon-Driven Flexible Surgical Robot. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 339-342.	2.1	11
7	Anthropomorphic Dual-Arm Coordinated Control for a Single-Port Surgical Robot Based on Dual-Step Optimization. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 72-84.	2.1	16
8	A Two-Segment Continuum Robot With Piecewise Stiffness for Maxillary Sinus Surgery and Its Decoupling Method. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4440-4450.	3.7	18
9	Disparity-constrained stereo endoscopic image super-resolution. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 867-875.	1.7	4
10	Reprogrammable Soft Robot Actuation by Synergistic Magnetic and Light Fields. Advanced Functional Materials, 2022, 32, .	7.8	31
11	Robots at the Beijing 2022 Winter Olympics. Science Robotics, 2022, 7, eabq0785.	9.9	6
12	Medical Robotics: Opportunities in China. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 361-383.	7.5	7
13	Toward Robust Histology-Prior Embedding for Endomicroscopy Image Classification. IEEE Transactions on Medical Imaging, 2022, 41, 3242-3252.	5.4	0
14	Surgical Robotics and Computer-Integrated Interventional Medicine [Scanning the Issue]. Proceedings of the IEEE, 2022, 110, 823-834.	16.4	10
15	Visionâ€“Kinematics Interaction for Robotic-Assisted Bronchoscopy Navigation. IEEE Transactions on Medical Imaging, 2022, 41, 3600-3610.	5.4	5
16	PoseSDF: Simultaneous 3D Human Shape Reconstruction and Gait Pose Estimation Using Signed Distance Functions. , 2022, , .		5
17	Fixed and Sliding FBG Sensors-Based Triaxial Tip Force Sensing for Cable-Driven Continuum Robots. , 2022, , .		2
18	Human-Robot Shared Control for Surgical Robot Based on Context-Aware Sim-to-Real Adaptation. , 2022, , .		16

#	Article	IF	Citations
19	A Comparison of Front-End Amplifiers for Tetrapolar Bioimpedance Measurements. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-14.	2.4	8
20	Cross-Subject and Cross-Modal Transfer for Generalized Abnormal Gait Pattern Recognition. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 546-560.	7.2	30
21	Towards Integration of Ultrasonic-Powered Implantable Devices for Physiological Monitoring, Stimulation, and Imaging in Soft Tissues Using a Handheld Scanning Probe. IEEE Sensors Journal, 2021, 21, 14099-14109.	2.4	7
22	From wearables to implantablesâ€"clinical drive and technical challenges. , 2021, , 29-84.		8
23	How could robotics help establish a new norm after COVID-19?. Science Robotics, 2021, 6, .	9.9	3
24	Towards a Snake-Like Flexible Robot for Endoscopic Submucosal Dissection. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 257-260.	2.1	16
25	Progress in robotics for combating infectious diseases. Science Robotics, 2021, 6, .	9.9	67
26	Microfluidics at Fiber Tip for Nanoliter Delivery and Sampling. Advanced Science, 2021, 8, 2004643.	5.6	12
27	Diversity-Aware Label Distribution Learning for Microscopy Auto Focusing. IEEE Robotics and Automation Letters, 2021, 6, 1942-1949.	3.3	2
28	Feasibility Study on Subcutaneously Implanted Devices in Male Rodents for Cardiovascular Assessment Through Nearâ€Field Communication Interface. Advanced Intelligent Systems, 2021, 3, 2100053.	3.3	1
29	An Interdigital Strain Sensor Through Laser Carbonization of PI and PDMS Transfer. , 2021, , .		3
30	Feasibility Study on Subcutaneously Implanted Devices in Male Rodents for Cardiovascular Assessment Through Nearâ€Field Communication Interface. Advanced Intelligent Systems, 2021, 3, 2170051.	3.3	1
31	X-ray to MR: the progress of flexible instruments for endovascular navigation. Progress in Biomedical Engineering, 2021, 3, 032004.	2.8	15
32	Alleviating Class-Wise Gradient Imbalance for Pulmonary Airway Segmentation. IEEE Transactions on Medical Imaging, 2021, 40, 2452-2462.	5.4	19
33	An MR-Safe Endovascular Robotic Platform: Design, Control, and Ex-Vivo Evaluation. IEEE Transactions on Biomedical Engineering, 2021, 68, 3110-3121.	2.5	30
34	MCDCD: Multi-Source Unsupervised Domain Adaptation for Abnormal Human Gait Detection. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 4017-4028.	3.9	19
35	Refined Local-imbalance-based Weight for Airway Segmentation in CT. Lecture Notes in Computer Science, 2021, , 410-419.	1.0	3
36	Power and data communication in wearable and implantable devices. , 2021, , 279-309.		2

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37	An MR Safe Rotary Encoder Based on Eccentric Sheave and FBG Sensors. , 2021, , .		2
38	Robotic Electrospinning Actuated by Non-Circular Joint Continuum Manipulator for Endoluminal Therapy. , 2021, , .		0
39	Discriminative Asymmetric Learning for Efficient Surgical Instrument Parsing. , 2021, , .		0
40	A decade retrospective of medical robotics research from 2010 to 2020. Science Robotics, 2021, 6, eabi8017.	9.9	158
41	Intention Detection of Gait Adaptation in Natural Settings. , 2021, , .		0
42	Five years of Science Robotics. Science Robotics, 2021, 6, eabn2720.	9.9	2
43	A microsurgical robot research platform for robot-assisted microsurgery research and training. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 15-25.	1.7	26
44	Three-Dimensional Pose Estimation of Optically Transparent Microrobots. IEEE Robotics and Automation Letters, 2020, 5, 72-79.	3.3	9
45	Design and Prototyping of a Bio-Inspired Kinematic Sensing Suit for the Shoulder Joint: Precursor to a Multi-DoF Shoulder Exosuit. IEEE Robotics and Automation Letters, 2020, 5, 540-547.	3.3	17
46	Electrochemical Monitoring of Subcutaneous Tissue pO₂ Fluctuations during Exercise Using a Semiâ€implantable Needle Electrode. Electroanalysis, 2020, 32, 2393-2403.	1.5	3
47	Bladder Volume Monitoring Using Electrical Impedance Tomography With Simultaneous Multi-Tone Tissue Stimulation and DFT-Based Impedance Calculation Inside an FPGA. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 775-786.	2.7	30
48	EMG-based Abnormal Gait Detection and Recognition. , 2020, , .		14
49	Miniaturized Piezo Force Sensor for a Medical Catheter and Implantable Device. ACS Applied Electronic Materials, 2020, 2, 2669-2677.	2.0	23
50	Application of artificial intelligence in surgery. Frontiers of Medicine, 2020, 14, 417-430.	1.5	74
51	Spiral FBG sensors-based contact detection for confocal laser endomicroscopy. Biosensors and Bioelectronics, 2020, 170, 112653.	5.3	18
52	Microtentacle Actuators: Microtentacle Actuators Based on Shape Memory Alloy Smart Soft Composite (Adv. Funct. Mater. 34/2020). Advanced Functional Materials, 2020, 30, 2070231.	7.8	3
53	Distributed Force Control for Microrobot Manipulation via Planar Multiâ€Spot Optical Tweezer. Advanced Optical Materials, 2020, 8, 2000543.	3.6	15
54	FBG-Based Triaxial Force Sensor Integrated with an Eccentrically Configured Imaging Probe for Endoluminal Optical Biopsy. , 2020, , .		9

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55	Collaborative Robot-Assisted Endovascular Catheterization with Generative Adversarial Imitation Learning. , 2020, , .		43
56	Design and Compensation Control of a Flexible Instrument for Endoscopic Surgery. , 2020, , .		18
57	Automatic Microsurgical Skill Assessment Based on Cross-Domain Transfer Learning. IEEE Robotics and Automation Letters, 2020, 5, 4148-4155.	3.3	30
58	Hybrid Robot-Assisted Frameworks for Endomicroscopy Scanning in Retinal Surgeries. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 176-187.	2.1	15
59	Liquid seal for compact micropiston actuation at the capillary tip. Science Advances, 2020, 6, eaba5660.	4.7	15
60	Combating COVID-19â€"The role of robotics in managing public health and infectious diseases. Science Robotics, 2020, 5, .	9.9	393
61	An Ergonomic Shared Workspace Analysis Framework for the Optimal Placement of a Compact Master Control Console. IEEE Robotics and Automation Letters, 2020, 5, 2995-3002.	3.3	13
62	Microtentacle Actuators Based on Shape Memory Alloy Smart Soft Composite. Advanced Functional Materials, 2020, 30, 2002510.	7.8	27
63	Nonlinearity Compensation in A Multi-DoF Shoulder Sensing Exosuit For Real-Time Teleoperation. , 2020, , .		3
64	Fiberâ€Optic SERS Probes Fabricated Using Twoâ€Photon Polymerization For Rapid Detection of Bacteria. Advanced Optical Materials, 2020, 8, 1901934.	3.6	49
65	Laser-Profiled Continuum Robot with Integrated Tension Sensing for Simultaneous Shape and Tip Force Estimation. Soft Robotics, 2020, 7, 421-443.	4.6	52
66	Hamlyn CRM: a compact master manipulator for surgical robot remote control. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 503-514.	1.7	16
67	Forging global cooperation and collaboration. Science Robotics, 2020, 5, .	9.9	2
68	Portable Impedance Analyzer as a Rapid Screening Tool for Malaria: An Experimental Study With Culture and Blood Infected Samples by Early Forms of Plasmodium Falciparum. IEEE Transactions on Biomedical Engineering, 2020, 67, 3531-3541.	2.5	7
69	Coupled Real-Synthetic Domain Adaptation for Real-World Deep Depth Enhancement. IEEE Transactions on Image Processing, 2020, , 1-1.	6.0	13
70	Micro Motion Amplificationâ€"A Review. IEEE Access, 2020, 8, 64037-64055.	2.6	27
71	Induced neural stem cell differentiation on a drawn fiber scaffoldâ€"toward peripheral nerve regeneration. Biomedical Materials (Bristol), 2020, 15, 055011.	1.7	15
72	Ultrasound Powered Implants: Design, Performance Considerations and Simulation Results. Scientific Reports, 2020, 10, 6537.	1.6	12

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73	Optical spectroscopy for in vivo medical diagnosisâ€"a review of the state of the art and future perspectives. Progress in Biomedical Engineering, 2020, 2, 042001.	2.8	32
74	A Novel Endoscope Design Using Spiral Technique for Robotic-Assisted Endoscopy Insertion. , 2020, , .		7
75	Z-Net: an Anisotropic 3D DCNN for Medical CT Volume Segmentation. , 2020, , .		4
76	Supervised Semi-Autonomous Control for Surgical Robot Based on Banoian Optimization. , 2020, , .		18
77	Association of Residents' Neural Signatures With Stress Resilience During Surgery. JAMA Surgery, 2019, 154, e192552.	2.2	19
78	WSRender: A Workspace Analysis and Visualization Toolbox for Robotic Manipulator Design and Verification. IEEE Robotics and Automation Letters, 2019, 4, 3836-3843.	3.3	13
79	3-D Canonical Pose Estimation and Abnormal Gait Recognition With a Single RGB-D Camera. IEEE Robotics and Automation Letters, 2019, 4, 3617-3624.	3.3	54
80	Adaptive Riemannian BCI for Enhanced Motor Imagery Training Protocols. , 2019, , .		2
81	Real-Time 3-D Shape Instantiation for Partially Deployed Stent Segments From a Single 2-D Fluoroscopic Image in Fenestrated Endovascular Aortic Repair. IEEE Robotics and Automation Letters, 2019, 4, 3703-3710.	3.3	5
82	A Rolling-Tip Flexible Instrument for Minimally Invasive Surgery. , 2019, , .		17
83	A Flexible Wearable Device for Measurement of Cardiac, Electrodermal, and Motion Parameters in Mental Healthcare Applications. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2276-2285.	3.9	20
84	Quantitative Evaluation of Lobar Pulmonary Function of Emphysema Patients with Endobronchial Coils. Respiration, 2019, 98, 70-81.	1.2	9
85	Active Contraints for Tool-Shaft Collision Avoidance in Minimally Invasive Surgery. , 2019, , .		8
86	From Emotions to Mood Disorders: A Survey on Gait Analysis Methodology. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2302-2316.	3.9	38
87	Floating magnetic microrobots for fiber functionalization. Science Robotics, 2019, 4, .	9.9	48
88	Transfer Learning for Surgical Task Segmentation. , 2019, , .		11
89	Design and Fabrication of a 3-D Printed Metallic Flexible Joint for Snake-Like Surgical Robot. IEEE Robotics and Automation Letters, 2019, 4, 1557-1563.	3.3	69
90	Robot learningâ€"Beyond imitation. Science Robotics, 2019, 4, .	9.9	10

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91	Designing, Prototyping, and Testing a Flexible Suturing Robot for Transanal Endoscopic Microsurgery. IEEE Robotics and Automation Letters, 2019, 4, 1669-1675.	3.3	21
92	Design optimization of a contact-aided continuum robot for endobronchial interventions based on anatomical constraints. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1137-1146.	1.7	20
93	Role of Quantitative Computed Tomographic Scan Analysis in Lung Volume Reduction for Emphysema. Respiration, 2019, 98, 86-94.	1.2	9
94	A Smart Wireless Ear-Worn Device for Cardiovascular and Sweat Parameter Monitoring During Physical Exercise: Design and Performance Results. Sensors, 2019, 19, 1616.	2.1	41
95	Design, Fabrication, and Testing a Semiautomatic Sewing Device for Personalized Stent Graft Manufacturing. IEEE/ASME Transactions on Mechatronics, 2019, 24, 517-526.	3.7	5
96	Frontiers of Medical Robotics: From Concept to Systems to Clinical Translation. Annual Review of Biomedical Engineering, 2019, 21, 193-218.	5.7	99
97	Normalization in Training U-Net for 2-D Biomedical Semantic Segmentation. IEEE Robotics and Automation Letters, 2019, 4, 1792-1799.	3.3	54
98	Unsupervised Task Segmentation Approach for Bimanual Surgical Tasks using Spatiotemporal and Variance Properties. , 2019, , .		5
99	A Handheld Master Controller for Robot-Assisted Microsurgery. , 2019, , .		13
100	Toward a Versatile Robotic Platform for Fluoroscopy and MRI-Guided Endovascular Interventions: A Pre-Clinical Study. , 2019, , .		26
101	Design and Verification of A Portable Master Manipulator Based on an Effective Workspace Analysis Framework. , 2019, , .		8
102	A Novel Semi-Autonomous Control Framework for Retina Confocal Endomicroscopy Scanning*. , 2019, 2019, 7083-7090.		2
103	Vision-based Automatic Control of a 5-Fingered Assistive Robotic Manipulator for Activities of Daily Living. , 2019, , .		4
104	Endoscopic Bi-Manual Robotic Instrument Design Using a Genetic Algorithm. , 2019, , .		8
105	XAIâ€"Explainable artificial intelligence. Science Robotics, 2019, 4, .	9.9	829
106	Towards a Flexible/Stretchable Multiparametric Sensing Device for Surgical and Wearable Applications. , 2019, , .		11
107	Use of Near-infrared Spectroscopy and Implantable Doppler for Postoperative Monitoring of Free Tissue Transfer for Breast Reconstruction: A Systematic Review and Meta-analysis. Plastic and Reconstructive Surgery - Global Open, 2019, 7, e2437.	0.3	15
108	Context-Aware Modeling for Augmented Reality Display Behaviour. IEEE Robotics and Automation Letters, 2019, 4, 562-569.	3.3	4

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109	Context-Aware Depth and Pose Estimation for Bronchoscopic Navigation. IEEE Robotics and Automation Letters, 2019, 4, 732-739.	3.3	35
110	Ten robotics technologies of the year. Science Robotics, 2019, 4, .	9.9	19
111	A Self-Adaptive Motion Scaling Framework for Surgical Robot Remote Control. IEEE Robotics and Automation Letters, 2019, 4, 359-366.	3.3	29
112	AirwayNet: A Voxel-Connectivity Aware Approach for Accurate Airway Segmentation Using Convolutional Neural Networks. Lecture Notes in Computer Science, 2019, , 212-220.	1.0	32
113	Line scanning, fiber bundle fluorescence HiLo endomicroscopy with confocal slit detection. Journal of Biomedical Optics, 2019, 24, 1.	1.4	10
114	En-face optical coherence tomography/fluorescence endomicroscopy for minimally invasive imaging using a robotic scanner. Journal of Biomedical Optics, 2019, 24, 1.	1.4	6
115	Towards development of fibre-optic surface enhanced Raman spectroscopy probes using 2-photon polymerisation for rapid detection of bacteria. , 2019, , .		2
116	A Multirobot Cooperation Framework for Sewing Personalized Stent Grafts. IEEE Transactions on Industrial Informatics, 2018, 14, 1776-1785.	7.2	23
117	A Monolithic Forceâ€Sensitive 3D Microgripper Fabricated on the Tip of an Optical Fiber Using 2â€Photon Polymerization. Small, 2018, 14, e1703964.	5.2	84
118	Looking aheadâ€” Science Robotics in its second year. Science Robotics, 2018, 3, .	9.9	5
119	The grand challenges of Science Robotics. Science Robotics, 2018, 3, .	9.9	787
120	A real-time and registration-free framework for dynamic shape instantiation. Medical Image Analysis, 2018, 44, 86-97.	7.0	10
121	Retinal surgery with flexible robots: Biomechanical advantages. , 2018, , .		2
122	Learning-based endovascular navigation through the use of non-rigid registration for collaborative robotic catheterization. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 855-864.	1.7	44
123	Real-Time 3-D Shape Instantiation From Single Fluoroscopy Projection for Fenestrated Stent Graft Deployment. IEEE Robotics and Automation Letters, 2018, 3, 1314-1321.	3.3	16
124	Electrical and Physical Sensors for Biomedical Implants. , 2018, , 99-195.		7
125	Probabilistic guidance for catheter tip motion in cardiac ablation procedures. Medical Image Analysis, 2018, 47, 1-14.	7.0	4
126	Inverse Kinematics Control Methods for Redundant Snakelike Robot Teleoperation During Minimally Invasive Surgery. IEEE Robotics and Automation Letters, 2018, 3, 2501-2508.	3.3	41

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127	Temporal Stress in the Operating Room. Annals of Surgery, 2018, 267, 683-691.	2.1	39
128	A fusion framework to estimate plantar ground force distributions and ankle dynamics. Information Fusion, 2018, 41, 255-263.	11.7	11
129	Gaze gesture based human robot interaction for laparoscopic surgery. Medical Image Analysis, 2018, 44, 196-214.	7.0	59
130	Multi-parametric rigid and flexible, low-cost, disposable sensing platforms for biomedical applications. Biosensors and Bioelectronics, 2018, 102, 668-675.	5.3	40
131	Rolling-Joint Design Optimization for Tendon Driven Snake-Like Surgical Robots. , 2018, , .		17
132	Trajectory Optimization of Robot-Assisted Endovascular Catheterization with Reinforcement Learning. , 2018, , .		21
133	Cross-Scene Suture Thread Parsing for Robot Assisted Anastomosis based on Joint Feature Learning. , 2018, , .		6
134	Depth Estimation of Optically Transparent Microrobots Using Convolutional and Recurrent Neural Networks. , 2018, , .		5
135	Robotic Sewing and Knot Tying for Personalized Stent Graft Manufacturing. , 2018, , .		9
136	A Comparison of Assistive Methods for Suturing in MIRS. , 2018, , .		8
137	Design and kinematics characterization of a laser-profiled continuum manipulator for the guidance of bronchoscopic instruments. , 2018, , .		14
138	A Framework for Sensorless Tissue Motion Tracking in Robotic Endomicroscopy Scanning. , 2018, , .		4
139	Multi-Stage Suture Detection for Robot Assisted Anastomosis Based on Deep Learning. , 2018, , .		9
140	Robotic Surgery Improves Technical Performance and Enhances Prefrontal Activation During High Temporal Demand. Annals of Biomedical Engineering, 2018, 46, 1621-1636.	1.3	34
141	Fiber bundle shifting endomicroscopy for high-resolution imaging. Biomedical Optics Express, 2018, 9, 4649.	1.5	31
142	Gaze-Assisted Adaptive Motion Scaling Optimization Using Graded and Preference Based Bayesian Approaches. , 2018, , .		2
143	New materials for next-generation robots. Science Robotics, 2018, 3, .	9.9	14
144	Context aware decision support in neurosurgical oncology based on an efficient classification of endomicroscopic data. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1187-1199.	1.7	17

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145	Micro-scale fiber-optic force sensor fabricated using direct laser writing and calibrated using machine learning. Optics Express, 2018, 26, 14186.	1.7	29
146	The i2Snake Robotic Platform for Endoscopic Surgery. Annals of Biomedical Engineering, 2018, 46, 1663-1675.	1.3	81
147	Social roboticsâ€"Trust, learning, and social interaction. Science Robotics, 2018, 3, .	9.9	9
148	A Single-Port Robotic System for Transanal Microsurgeryâ€"Design and Validation. IEEE Robotics and Automation Letters, 2017, 2, 1510-1517.	3.3	55
149	Efficient Proximity Queries for Continuum Robots on Parallel Computing Hardware. IEEE Robotics and Automation Letters, 2017, 2, 1548-1555.	3.3	3
150	Effective Manipulation in Confined Spaces of Highly Articulated Robotic Instruments for Single Access Surgery. IEEE Robotics and Automation Letters, 2017, 2, 1704-1711.	3.3	32
151	Objective Assessment of Endovascular Navigation Skills with Force Sensing. Annals of Biomedical Engineering, 2017, 45, 1315-1327.	1.3	50
152	Real-time surgical tool tracking and pose estimation using a hybrid cylindrical marker. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 921-930.	1.7	52
153	Flexible Robotic Scanning Device for Intraoperative Endomicroscopy in MIS. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1728-1735.	3.7	13
154	Methylene-blue aided rapid confocal laser endomicroscopy of breast cancer. Journal of Biomedical Optics, 2017, 22, 020501.	1.4	6
155	Digital architecture and robotic construction. Science Robotics, 2017, 2, .	9.9	2
156	Concentric Tube Robots: Rapid, Stable Path-Planning and Guidance for Surgical Use. IEEE Robotics and Automation Magazine, 2017, 24, 42-53.	2.2	42
157	To integrate and to empower: Robots for rehabilitation and assistance. Science Robotics, 2017, 2, .	9.9	8
158	Optimization of EMG movement recognition for use in an upper limb wearable robot. , 2017, , .		8
159	Robust guidewire tracking under large deformations combining segment-like features (SEGlets). Medical Image Analysis, 2017, 38, 150-164.	7.0	29
160	Medical roboticsâ€"Regulatory, ethical, and legal considerations for increasing levels of autonomy. Science Robotics, 2017, 2, .	9.9	349
161	The role of technology in minimally invasive surgery: state of the art, recent developments and future directions. Postgraduate Medical Journal, 2017, 93, 159-167.	0.9	58
162	Deep Learning for Health Informatics. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 4-21.	3.9	1,290

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163	A decade of imaging surgeons' brain function (part II): A systematic review of applications for technical and nontechnical skills assessment. Surgery, 2017, 162, 1130-1139.	1.0	14
164	New materials for next-generation robots. Science Robotics, 2017, 2, .	9.9	17
165	A decade of imaging surgeons' brain function (part I): Terminology, techniques, and clinical translation. Surgery, 2017, 162, 1121-1130.	1.0	21
166	Laserâ€Printing and 3D Opticalâ€Control of Untethered Microrobots. Advanced Optical Materials, 2017, 5, 1700031.	3.6	37
167	Three-dimensional robotic-assisted endomicroscopy with a force adaptive robotic arm. , 2017, , .		11
168	A machine learning approach for real-time modelling of tissue deformation in image-guided neurosurgery. Artificial Intelligence in Medicine, 2017, 80, 39-47.	3.8	56
169	The potential role of optical biopsy in the study and diagnosis of environmental enteric dysfunction. Nature Reviews Gastroenterology and Hepatology, 2017, 14, 727-738.	8.2	20
170	An image retrieval framework for real-time endoscopic image retargeting. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1281-1292.	1.7	11
171	Master manipulator designed for highly articulated robotic instruments in single access surgery. , 2017, , .		12
172	Gaze contingent control for optical micromanipulation. , 2017, , .		5
173	Modelling and characterization of a compliant tethered microgripper for microsurgical applications. , 2017, , .		1
174	Microrobots: Laserâ€Printing and 3D Opticalâ€Control of Untethered Microrobots (Advanced Optical) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.6	0
175	A CMOS programmable phase shifter for compensating synchronous detection bioimpedance systems. , 2017, , .		7
176	Depth estimation of optically transparent laser-driven microrobots. , 2017, , .		3
177	A vision-guided multi-robot cooperation framework for learning-by-demonstration and task reproduction. , 2017, , .		17
178	3D printing of improved needle grasping instrument for flexible robotic surgery. , 2017, , .		3
179	Imperial College near infrared spectroscopy neuroimaging analysis framework. Neurophotonics, 2017, 5, 1.	1.7	10
180	Line-scanning fiber bundle endomicroscopy with a virtual detector slit. Biomedical Optics Express, 2016, 7, 2257.	1.5	34

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181	Design and analysis of a wire-driven flexible manipulator for bronchoscopic interventions. , 2016, , .		1
182	Multi-view Multi-modal Feature Embedding for Endomicroscopy Mosaic Classification. , 2016, , .		9
183	A vision-guided dual arm sewing system for stent graft manufacturing. , 2016, , .		12
184	Implicit active constraints for safe and effective guidance of unstable concentric tube robots. , 2016, , .		10
185	Intention recognition for gaze controlled robotic minimally invasive laser ablation. , 2016, , .		8
186	Hands-on reconfigurable robotic surgical instrument holder arm. , 2016, , .		9
187	Design of a smart 3D-printed wristed robotic surgical instrument with embedded force sensing and modularity. , 2016, , .		9
188	Development of a microhand using direct laser writing for indirect optical manipulation. , 2016, , .		3
189	Science for robotics and robotics for science. Science Robotics, 2016, 1, .	9.9	27
190	Persistent Prefrontal Engagement Despite Improvements in Laparoscopic Technical Skill. JAMA Surgery, 2016, 151, 682.	2.2	23
191	A pilot study to determine whether using a lightweight, wearable micro-camera improves dietary assessment accuracy and offers information on macronutrients and eating rate. British Journal of Nutrition, 2016, 115, 160-167.	1.2	49
192	Optomechanical force estimation using passive micromanipulator end-effectors. , 2016, , .		1
193	Active implantable sensor powered by ultrasounds with application in the monitoring of physiological parameters for soft tissues. , 2016, , .		9
194	Toward Pervasive Gait Analysis With Wearable Sensors: A Systematic Review. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 1521-1537.	3.9	297
195	Looking towards objective quality evaluation in colonoscopy: Analysis of visual gaze patterns. Journal of Gastroenterology and Hepatology (Australia), 2016, 31, 604-609.	1.4	11
196	Vision-based deformation recovery for intraoperative force estimation of toolâ€“tissue interaction for neurosurgery. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 929-936.	1.7	28
197	Robotics takes off. Science, 2016, 352, 1255-1255.	6.0	2
198	Online tracking and retargeting with applications to optical biopsy in gastrointestinal endoscopic examinations. Medical Image Analysis, 2016, 30, 144-157.	7.0	39

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