Ka-Wai Kwok

List of Publications by Year
in descending order

95 papers	2,246 citations	201674 27 h-index	276875 41 g-index
104 all docs	104 docs citations	104 times ranked	2113 citing authors

#	Article	IF	Citations
1	Positive Consensus of Fractional-Order Multiagent Systems Over Directed Graphs. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 9542-9548.	11.3	15
2	Stability and L_{1}-Gain Analysis of Periodic Piecewise Positive Systems With Constant Time Delay. IEEE Transactions on Automatic Control, 2022, 67, 2655-2662.	5.7	11
3	Energy-to-Peak Output Tracking Control of Actuator Saturated Periodic Piecewise Time-Varying Systems With Nonlinear Perturbations. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 2578-2590.	9.3	21
4	Further Improvements on Non-Negative Edge Consensus of Networked Systems. IEEE Transactions on Cybernetics, 2022, 52, 9111-9119.	9.5	7
5	Spatial deviations of the temporomandibular joint after oncological mandibular reconstruction. International Journal of Oral and Maxillofacial Surgery, 2022, 51, 44-53.	1.5	12
6	Proportionalâ€derivative controller design of continuousâ€time positive linear systems. International Journal of Robust and Nonlinear Control, 2022, 32, 9497-9511.	3.7	5
7	Nonnegative Consensus Tracking of Networked Systems With Convergence Rate Optimization. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 7534-7544.	11.3	6
8	Consensus of Positive Networked Systems on Directed Graphs. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 4575-4583.	11.3	6
9	Positive Consensus of Directed Multiagent Systems. IEEE Transactions on Automatic Control, 2022, 67, 3641-3646.	5.7	9
10	Plug and Clip. JACC: Cardiovascular Interventions, 2022, , .	2.9	0
11	Shape Tracking and Feedback Control of Cardiac Catheter Using MRI-Guided Robotic Platformâ€"Validation With Pulmonary Vein Isolation Simulator in MRI. IEEE Transactions on Robotics, 2022, 38, 2781-2798.	10.3	18
12	A polynomial blossoming approach to stabilization of periodic time-varying systems. Automatica, 2022, 141, 110305.	5.0	6
13	State of the Art and Future Opportunities in MRI-Guided Robot-Assisted Surgery and Interventions. Proceedings of the IEEE, 2022, 110, 968-992.	21.3	23
14	Soft Robot-Assisted Minimally Invasive Surgery and Interventions: Advances and Outlook. Proceedings of the IEEE, 2022, 110, 871-892.	21.3	15
15	A Bernstein Polynomial Approach to Estimating Reachable Set of Periodic Piecewise Polynomial Systems. IEEE Transactions on Automatic Control, 2021, 66, 4812-4819.	5.7	18
16	Three-Dimensionally Printed Patient-Specific Surgical Plates Increase Accuracy of Oncologic Head and Neck Reconstruction Versus Conventional Surgical Plates: A Comparative Study. Annals of Surgical Oncology, 2021, 28, 363-375.	1.5	44
17	Reachable Set Estimation and Synthesis for Periodic Positive Systems. IEEE Transactions on Cybernetics, 2021, 51, 501-511.	9.5	31
18	Development of an Openâ€Access and Explainable Machine Learning Prediction System to Assess the Mortality and Recurrence Risk Factors of Clostridioides Difficile Infection Patients. Advanced Intelligent Systems, 2021, 3, 2000188.	6.1	3

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19	Performance-aware programming for intraoperative intensity-based image registration on graphics processing units. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 375-386.	2.8	1
20	Real-to-virtual domain transfer-based depth estimation for real-time 3D annotation in transnasal surgery: a study of annotation accuracy and stability. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 731-739.	2.8	3
21	A Robotic Platform to Navigate MRI-guided Focused Ultrasound System. IEEE Robotics and Automation Letters, 2021, 6, 5137-5144.	5.1	10
22	Largeâ€Scale Surface Shape Sensing with Learningâ€Based Computational Mechanics. Advanced Intelligent Systems, 2021, 3, 2100089.	6.1	6
23	Soft robotic manipulator for intraoperative MRI-guided transoral laser microsurgery. Science Robotics, 2021, 6, .	17.6	54
24	A Survey for Machine Learning-Based Control of Continuum Robots. Frontiers in Robotics and AI, 2021, 8, 730330.	3.2	40
25	Towards Safe In Situ Needle Manipulation for Robot Assisted Lumbar Injection in Interventional MRI. , 2021, 2021, 1835-1842.		2
26	An Unsupervised Machine Learning Clustering and Prediction of Differential Clinical Phenotypes of COVID-19 Patients Based on Blood Testsâ€”A Hong Kong Population Study. Frontiers in Medicine, 2021, 8, 764934.	2.6	5
27	Modeling and Control of Soft Robotic Tail Based Aerial Maneuvering (STAM) System: Towards Agile Self-Righting with a Soft Tail. , 2021, , .		2
28	Interfacing Soft and Hard: A Spring Reinforced Actuator. Soft Robotics, 2020, 7, 44-58.	8.0	51
29	Prospective Techniques for Magnetic Resonance Imagingâ€“Guided Robot-Assisted Stereotactic Neurosurgery. , 2020, , 585-598.		2
30	Eye-in-Hand Visual Servoing Enhanced With Sparse Strain Measurement for Soft Continuum Robots. IEEE Robotics and Automation Letters, 2020, 5, 2161-2168.	5.1	53
31	Design and Fabrication of Wireless Multilayer Tracking Marker for Intraoperative MRI-Guided Interventions. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1016-1025.	5.8	12
32	Design of a Percutaneous MRI-Guided Needle Robot With Soft Fluid-Driven Actuator. IEEE Robotics and Automation Letters, 2020, 5, 2100-2107.	5.1	22
33	A Novel Scheme of Nonfragile Controller Design for Periodic Piecewise LTV Systems. IEEE Transactions on Industrial Electronics, 2020, 67, 10766-10775.	7.9	37
34	Stability and â„“₁-gain analysis for positive 2-D Markov jump systems. International Journal of Systems Science, 2019, 50, 2077-2087.	5.5	13
35	Mitral Annular and Left Ventricular Dynamics in Atrial Functional Mitral Regurgitation: A Three-Dimensional and Speckle-Tracking Echocardiographic Study. Journal of the American Society of Echocardiography, 2019, 32, 503-513.	2.8	51
36	Vision-Based Online Learning Kinematic Control for Soft Robots Using Local Gaussian Process Regression. IEEE Robotics and Automation Letters, 2019, 4, 1194-1201.	5.1	80

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37	Electrocoiling-guided printing of multiscale architectures at single-wavelength resolution. Lab on A Chip, 2019, 19, 1953-1960.	6.0	8
38	Device Sizing Guided by Echocardiography-Based Three-Dimensional Printing Is Associated with Superior Outcome after Percutaneous Left Atrial Appendage Occlusion. Journal of the American Society of Echocardiography, 2019, 32, 708-719.e1.	2.8	49
39	High-Performance Continuous Hydraulic Motor for MR Safe Robotic Teleoperation. IEEE Robotics and Automation Letters, 2019, 4, 1964-1971.	5.1	30
40	Stability and L_2 Synthesis of a Class of Periodic Piecewise Time-Varying Systems. IEEE Transactions on Automatic Control, 2019, 64, 3378-3384.	5.7	50
41	On positive realness, negative imaginariness, and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml3" display="inline" overflow="scroll" altimg="si1.gif"><mml:msub><mml:mrow><mml:mi>H</mml:mi></mml:mrow><mml:mrow><mml:mi>âˆž</mml:mi></mml:mrow></mml:msub></mml:math> control of state-space symmetric systems. Automatica, 2019, 101, 190-196.	5.0	22
42	Real-Time Surface Shape Sensing for Soft and Flexible Structures Using Fiber Bragg Gratings. IEEE Robotics and Automation Letters, 2019, 4, 1454-1461.	5.1	48
43	Experimental validation of robot-assisted cardiovascular catheterization: model-based versus model-free control. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 797-804.	2.8	10
44	Stability and stabilization of periodic piecewise linear systems: A matrix polynomial approach. Automatica, 2018, 94, 1-8.	5.0	76
45	MR Safe Robotic Manipulator for MRI-Guided Intracardiac Catheterization. IEEE/ASME Transactions on Mechatronics, 2018, 23, 586-595.	5.8	58
46	Compact Design of a Hydraulic Driving Robot for Intraoperative MRI-Guided Bilateral Stereotactic Neurosurgery. IEEE Robotics and Automation Letters, 2018, 3, 2515-2522.	5.1	43
47	Dynamic Modeling and Characterization of the Core- XyCartesian Motion System. , 2018, , .		2
48	Localized online learning-based control of a soft redundant manipulator under variable loading. Advanced Robotics, 2018, 32, 1168-1183.	1.8	20
49	Techniques for Stereotactic Neurosurgery: Beyond the Frame, Toward the Intraoperative Magnetic Resonance Imagingâ€“Guided and Robot-Assisted Approaches. World Neurosurgery, 2018, 116, 77-87.	1.3	40
50	Switched systems approach to state bounding for time delay systems. Information Sciences, 2018, 465, 191-201.	6.9	10
51	Modular force approximating soft robotic pneumatic actuator. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1819-1827.	2.8	5
52	Intermediate Range Wireless Power Transfer With Segmented Coil Transmitters for Implantable Heart Pumps. IEEE Transactions on Power Electronics, 2017, 32, 3844-3857.	7.9	86
53	Objective Assessment of Endovascular Navigation Skills with Force Sensing. Annals of Biomedical Engineering, 2017, 45, 1315-1327.	2.5	50
54	Using Multimaterial 3-Dimensional PrintingÂfor Personalized Planning of Complex Structural Heart Disease Intervention. JACC: Cardiovascular Interventions, 2017, 10, e97-e98.	2.9	9

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55	Nonparametric Online Learning Control for Soft Continuum Robot: An Enabling Technique for Effective Endoscopic Navigation. Soft Robotics, 2017, 4, 324-337.	8.0	89
56	An efficient cardiac mapping strategy for radiofrequency catheter ablation with active learning. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1199-1207.	2.8	10
57	FEM-based soft robotic control framework for intracavitary navigation. , 2017, , .		14
58	FPGA-Based High-Performance Collision Detection: An Enabling Technique for Image-Guided Robotic Surgery. Frontiers in Robotics and AI, 2016, 3, .	3.2	6
59	Bidirectional Soft Silicone Curvature Sensor Based on Off-Centered Embedded Fiber Bragg Grating. IEEE Photonics Technology Letters, 2016, 28, 2237-2240.	2.5	71
60	Design and Fabrication of MR-Tracked Metallic Stylet for Gynecologic Brachytherapy. IEEE/ASME Transactions on Mechatronics, 2016, 21, 956-962.	5.8	30
61	Three-Dimensional Printing for Planning Occlusion Procedure for a Double-Lobed Left Atrial Appendage. Circulation: Cardiovascular Interventions, 2016, 9, e003561.	3.9	24
62	The impact of expert visual guidance on trainee visual search strategy, visual attention and motor skills. Frontiers in Human Neuroscience, 2015, 9, 526.	2.0	29
63	GPU-based proximity query processing on unstructured triangular mesh model. , 2015, , .		3
64	Wearable Virtual White Cane: Assistive Technology for Navigating the Visually Impaired1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	4
65	MRI-conditional catheter sensor for contact force and temperature monitoring during cardiac electrophysiological procedures. Journal of Cardiovascular Magnetic Resonance, 2014, 16, P150.	3.3	10
66	FPGA-based acceleration of MRI registration: an enabling technique for improving MRI-guided cardiac therapy. Journal of Cardiovascular Magnetic Resonance, 2014, 16, W11.	3.3	5
67	MRI-based visual and haptic catheter feedback: simulating a novel system's contribution to efficient and safe MRI-guided cardiac electrophysiology procedures. Journal of Cardiovascular Magnetic Resonance, 2014, 16, O50.	3.3	14
68	An MR-Conditional High-Torque Pneumatic Stepper Motor for MRI-Guided and Robot-Assisted Intervention. Annals of Biomedical Engineering, 2014, 42, 1823-1833.	2.5	47
69	Implicit active constraints for a compliant surgical manipulator. , 2014, , .		13
70	Augmented Reality for Improving Catheterization in Magnetic Resonance Imaging-Guided Cardiac Electrophysiology Therapy1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	4
71	Motion-adapted catheter navigation with real-time instantiation and improved visualisation. Journal of Robotic Surgery, 2013, 7, 251-260.	1.8	4
72	Acceleration of real-time Proximity Query for dynamic active constraints. , 2013, , .		2

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73	Dimensionality Reduction in Controlling Articulated Snake Robot for Endoscopy Under Dynamic Active Constraints. IEEE Transactions on Robotics, 2013, 29, 15-31.	10.3	67
74	Enhanced frontoparietal network architectures following â€œgaze-contingentâ€•versus â€œfree-handâ€• motor learning. NeuroImage, 2013, 64, 267-276.	4.2	17
75	Gaze contingent cartesian control of a robotic arm for laparoscopic surgery. , 2013, 2013, 3582-3589.		28
76	An ungrounded hand-held surgical device incorporating active constraints with force-feedback. , 2013, 2013, 2559-2565.		18
77	Implicit Active Constraints for robot-assisted arthroscopy. , 2013, 2013, 5390-5395.		9
78	Design of a multitasking robotic platform with flexible arms and articulated head for Minimally Invasive Surgery. , 2012, 2012, 1988-1993.		58
79	Collaborative Gaze Channelling for Improved Cooperation During Robotic Assisted Surgery. Annals of Biomedical Engineering, 2012, 40, 2156-2167.	2.5	19
80	A hand-held instrument for in vivo probe-based confocal laser endomicroscopy during Minimally Invasive Surgery. , 2012, 2012, 1982-1987.		6
81	Collaborative eye tracking: a potential training tool in laparoscopic surgery. Surgical Endoscopy and Other Interventional Techniques, 2012, 26, 2003-2009.	2.4	76
82	Gaze-Contingent Motor Channelling, haptic constraints and associated cognitive demand for robotic MIS. Medical Image Analysis, 2012, 16, 612-631.	11.6	37
83	DOF Minimization for Optimized Shape Control under Active Constraints for a Hyper-redundant Flexible Robot. Lecture Notes in Computer Science, 2011, , 67-78.	1.3	1
84	From medical images to minimally invasive intervention: Computer assistance for robotic surgery. Computerized Medical Imaging and Graphics, 2010, 34, 33-45.	5.8	59
85	Plugfest 2009: Global interoperability in Telerobotics and telemedicine. , 2010, 2010, 1733-1738.		26
86	Control of Articulated Snake Robot under Dynamic Active Constraints. Lecture Notes in Computer Science, 2010, 13, 229-236.	1.3	11
87	Cognitive Burden Estimation for Visuomotor Learning with fNIRS. Lecture Notes in Computer Science, 2010, 13, 319-326.	1.3	17
88	Perceptually docked control environment for multiple microbots: application to the gastric wall biopsy. , 2009, 2009, 2783-2788.		0
89	Dynamic Active Constraints for Hyper-Redundant Flexible Robots. Lecture Notes in Computer Science, 2009, 12, 410-417.	1.3	21
90	Perceptual Docking for Robotic Control. Lecture Notes in Computer Science, 2008, , 21-30.	1.3	19

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91	Gaze-Contingent Motor Channelling and Haptic Constraints for Minimally Invasive Robotic Surgery. Lecture Notes in Computer Science, 2008, 11, 676-683.	1.3	24
92	Brush Footprint Acquisition and Preliminary Analysis for Chinese Calligraphy using a Robot Drawing Platform. , 2006, , .		20
93	GA-based Homography Transformation for Vision Rectification in Robot Drawing System. , 0, , .		4
94	Vision System and Projective Rectification For A Robot Drawing Platform. , 0, , .		7
95	Genetic Algorithm-Based Brush Stroke Generation for Replication of Chinese Calligraphic Character. , 0, , .		6