Henry Kar Hang Chu

List of Publications by Year
in descending order

49	417	687363 13	888059 17
papers	citations	h-index	g-index

49	49	49	397
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Verticalized-Tip Trajectory Tracking of a 3D-Printable Soft Continuum Robot: Enabling Surgical Blood Suction Automation. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1545-1556.	5.8	13
2	Variable-Stiffness Control of a Dual-Segment Soft Robot Using Depth Vision. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1034-1045.	5.8	15
3	Optimization of a Single-Particle Micropatterning System With Robotic nDEP-Tweezers. IEEE Transactions on Automation Science and Engineering, 2022, 19, 818-832.	5.2	1
4	Shape Estimation and Control of a Soft Continuum Robot Under External Payloads. IEEE/ASME Transactions on Mechatronics, 2022, 27, 2511-2522.	5.8	15
5	Reconstructing External Force on the Circumferential Body of Continuum Robot With Embedded Proprioceptive Sensors. IEEE Transactions on Industrial Electronics, 2022, 69, 13111-13120.	7.9	2
6	Coupled Multiple Dynamic Movement Primitives Generalization for Deformable Object Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 5381-5388.	5.1	5
7	Constrained Motion Planning of a Cable-Driven Soft Robot With Compressible Curvature Modeling. IEEE Robotics and Automation Letters, 2022, 7, 4813-4820.	5.1	15
8	Dual-Segment Continuum Robot With Continuous Rotational Motion Along the Deformable Backbone. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4994-5004.	5.8	3
9	Automated Embryo Manipulation and Rotation via Robotic nDEP-Tweezers. IEEE Transactions on Biomedical Engineering, 2021, 68, 2152-2163.	4.2	6
10	Comparison of tribology performance, particle emissions and brake squeal noise between Cu-containing and Cu-free brake materials. Wear, 2021, 466-467, 203577.	3.1	11
11	A Learning Approach for Suture Thread Detection With Feature Enhancement and Segmentation for 3-D Shape Reconstruction. IEEE Transactions on Automation Science and Engineering, 2020, 17, 858-870.	5.2	15
12	Toward Vision-based Adaptive Configuring of A Bidirectional Two-Segment Soft Continuum Manipulator. , 2020, , .		11
13	Automated Single-microparticle Patterning System for Micro-analytics. , 2020, , .		1
14	Surgical Suture Thread Detection and 3-D Reconstruction Using a Model-Free Approach in a Calibrated Stereo Visual System. IEEE/ASME Transactions on Mechatronics, 2020, 25, 792-803.	5.8	14
15	A Learning-Driven Framework with Spatial Optimization For Surgical Suture Thread Reconstruction and Autonomous Grasping Under Multiple Topologies and Environmental Noises. , 2020, , .		10
16	Automated Folding of a Deformable Thin Object through Robot Manipulators. , 2020, , .		1
17	Vision-Based Surgical Suture Looping Through Trajectory Planning for Wound Suturing. IEEE Transactions on Automation Science and Engineering, 2019, 16, 542-556.	5.2	26
18	Three-dimensional Localization of Needle Tip Immersed in Medium. , 2019, , .		0

#	Article	IF	Citations
19	Automated Cell Patterning System with a Microchip using Dielectrophoresis. , 2019, , .		5
20	Microchip System for Patterning Cells on Different Substrates via Negative Dielectrophoresis. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1063-1074.	4.0	11
21	A Learning-based Inverse Kinematics Solver for a Multi-Segment Continuum Robot in Robot-Independent Mapping. , 2019, , .		11
22	Characterization of a Microchip Device for Cell Patterning via Negative Dielectrophoresis. , 2018, , .		7
23	Characterization of a Honeycomb-Like Scaffold With Dielectrophoresis-Based Patterning for Tissue Engineering. IEEE Transactions on Biomedical Engineering, 2017, 64, 755-764.	4.2	18
24	Engineered bone scaffolds with Dielectrophoresis-based patterning using 3D printing. Biomedical Microdevices, 2017, 19, 102.	2.8	18
25	Characterization of biomechanical properties of cells through dielectrophoresis-based cell stretching and actin cytoskeleton modeling. BioMedical Engineering OnLine, 2017, 16, 41.	2.7	25
26	Robotic knot tying through a spatial trajectory with a visual servoing system. , 2017, , .		5
27	Dynamic trajectory planning for robotic knot tying. , 2016, , .		4
28	Dielectrophoresis-induced cell patterning using a new PLA scaffold made by 3D printing. , 2016, , .		0
29	Design and characterization of a conductive nanostructured polypyrroleâ€polycaprolactone coated magnesium/<scp>PLGA</scp> composite for tissue engineering scaffolds. Journal of Biomedical Materials Research - Part A, 2015, 103, 2966-2973.	4.0	25
30	3D cell manipulation with honeycomb-patterned scaffold for regeneration of bone-like tissues. , 2015, , .		2
31	Rapid characterization of the biomechanical properties of drug-treated cells in a microfluidic device. Journal of Micromechanics and Microengineering, 2015, 25, 105004.	2.6	24
32	An electromagnetic system for magnetic microbead's manipulation. , 2015, , .		7
33	Automated dual-arm micromanipulation with path planning for micro-object handling. Robotics and Autonomous Systems, 2015, 74, 166-174.	5.1	9
34	Modeling and development of a magnetically actuated system for micro-particle manipulation. , 2014, , .		10
35	Conductive, multilayer scaffold with micro-porous structure for tissue engineering. , 2014, , .		0
36	Dielectrophoresis-based automatic 3D cell manipulation and patterning through a micro-electrode integrated multi-layer scaffold. , 2014, , .		5

#	Article	IF	Citations
37	Automated assembly of biological cells in a 3D scaffold via dielectrophoresis manipulation. , 2014, , .		1
38	Fabrication of a microcoil through parallel microassembly. , 2012, , .		7
39	Dual-arm micromanipulation and handling of objects through visual images. , 2012, , .		14
40	Automated parallel microassembly for MEMS application. Journal of Micromechanics and Microengineering, 2012, 22, 035017.	2.6	6
41	Image-based visual servoing through micropart reflection for the microassembly process. Journal of Micromechanics and Microengineering, 2011, 21, 065016.	2.6	8
42	Dynamic tracking of moving objects in microassembly through visual servoing. , 2010, , .		3
43	Automatic Micropart Re-Orientation Through Visual Tracking for Automated Micro-Assembly. , 2010, , .		0
44	Parallel microassembly with a robotic manipulation system. Journal of Micromechanics and Microengineering, 2010, 20, 125027.	2.6	13
45	Microgripper design for use in parallel microassembly processes. , 2009, , .		0
46	MEMS-based power disconnect for <inline-formula><math display="inline" overflow="scroll"><mrow><mn>42</mn><mtext>-</mtext><mi mathvariant="normal">V</mi></mrow></math></inline-formula> automotive power systems. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2008, 7, 013010.	0.9	1
47	MEMS Capacitive Force Sensor for Use in Microassembly. , 2008, , .		7
48	Stereolithography as a meso-structure for input force reduction to a capacitive force MEMS sensor. , 2007, , .		1
49	Design of a High Sensitivity Capacitive Force Sensor. , 2007, , .		6