

# Dong Sun

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

334  
papers

7,712  
citations

46  
h-index

73  
g-index

404  
ext. papers

9,645  
ext. citations

4.7  
avg, IF

6.42  
L-index

#	Paper	IF	Citations
334	Advanced tools and methods for single-cell surgery.. <i>Microsystems and Nanoengineering</i> , <b>2022</b> , 8, 47	7.7	2
333	Cell rotation <b>2022</b> , 213-241		
332	Cell patterning <b>2022</b> , 347-382		
331	Cell adhesion <b>2022</b> , 383-403		
330	Cell stretching and compression <b>2022</b> , 107-162		
329	Three-dimensional image reconstruction and intracellular surgery <b>2022</b> , 243-274		
328	Cell manipulation tools <b>2022</b> , 17-49		
327	Cell navigation and delivery in vivo <b>2022</b> , 433-465		
326	Robotic cell injection <b>2022</b> , 51-105		
325	Cell stimulation and migration control <b>2022</b> , 311-345		
324	Cell sorting and separation <b>2022</b> , 275-310		
323	Cell fusion <b>2022</b> , 405-431		
322	Cell transport with optical tweezers <b>2022</b> , 163-211		
321	Organelle biopsy and gene editing of single cells <b>2022</b> , 467-510		
320	3D Navigation Control of Untethered Magnetic Microrobot in Centimeter-Scale Workspace Based on Field-of-View Tracking Scheme. <i>IEEE Transactions on Robotics</i> , <b>2021</b> , 1-16	6.5	2
319	Automated 3-D Deformation of a Soft Object Using a Continuum Robot. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2021</b> , 18, 2076-2086	4.9	3
318	High-throughput deterministic pairing and coculturing of single cells in a microwell array using combined hydrodynamic and recirculation flow captures. <i>Biomicrofluidics</i> , <b>2021</b> , 15, 054103	3.2	1

317	Nanomanipulation in Biomedical Applications. <i>Current Robotics Reports</i> , <b>2021</b> , 2, 133-145	3.5	
316	A Bioinspired Composite Finger With Self-Locking Joints. <i>IEEE Robotics and Automation Letters</i> , <b>2021</b> , 6, 1391-1398	4.2	2
315	Control of a Flexible Continuum Manipulator for Laser Beam Steering. <i>IEEE Robotics and Automation Letters</i> , <b>2021</b> , 6, 1074-1081	4.2	9
314	Accurate instance segmentation of surgical instruments in robotic surgery: model refinement and cross-dataset evaluation. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2021</b> , 16, 1607-1614	3.9	2
313	Stable control framework for cell transportation using robot-aided optical tweezers <b>2021</b> , 23-37		
312	Acoustic valves in microfluidic channels for droplet manipulation. <i>Lab on A Chip</i> , <b>2021</b> , 21, 3165-3173	7.2	6
311	Automated in-vivo transportation control of biological cells using robot-aided optical tweezers <b>2021</b> , 93-113		
310	Laser-induced fusion of biological cells with cell positioning technique <b>2021</b> , 137-146		
309	Automated transportation of multiple types of cells with holographic optical tweezers <b>2021</b> , 61-74		
308	Preformation Characterization of a Torque-Driven Magnetic Microswimmer With Multi-Segment Structure. <i>IEEE Access</i> , <b>2021</b> , 9, 29279-29292	3.5	1
307	Cell biopsy using robot-aided optical manipulation of cell reorientation technique <b>2021</b> , 147-167		
306	Automated pairing manipulation of biological cells with a robot-tweezers manipulation system <b>2021</b> , 39-59		
305	Robotic optical tweezers for cell biophysics <b>2021</b> , 227-239		
304	Soft Gripper Design Based on the Integration of Flat Dry Adhesive, Soft Actuator, and Microspine. <i>IEEE Transactions on Robotics</i> , <b>2021</b> , 37, 1065-1080	6.5	6
303	Automated Optical Tweezers Manipulation to Transfer Mitochondria from Fetal to Adult MSCs to Improve Antiaging Gene Expressions. <i>Small</i> , <b>2021</b> , 17, e2103086	11	3
302	Automated Optical Tweezers Manipulation to Transfer Mitochondria from Fetal to Adult MSCs to Improve Antiaging Gene Expressions (Small 38/2021). <i>Small</i> , <b>2021</b> , 17, 2170199	11	
301	Robust Navigation Control of a Microrobot With Hysteresis Compensation. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2021</b> , 1-10	4.9	1
300	Development of Cell-Carrying Magnetic Microrobots with Bioactive Nanostructured Titanate Surface for Enhanced Cell Adhesion.. <i>Micromachines</i> , <b>2021</b> , 12,	3.3	2

299	Dynamic analysis of railway vehicle derailment mechanism in train-to-train collision accidents. <i>Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit</i> , <b>2020</b> , 095440972095987	1.4	1
298	Advanced Biological Imaging for Intracellular Micromanipulation: Methods and Applications. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 7308	2.6	3
297	Automated High-Productivity Microinjection System for Adherent Cells. <i>IEEE Robotics and Automation Letters</i> , <b>2020</b> , 5, 1167-1174	4.2	8
296	Precise Automated Intracellular Delivery Using a Robotic Cell Microscope System With Three-Dimensional Image Reconstruction Information. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 25, 2870-2881	5.5	11
295	Gravitational sedimentation-based approach for ultra-simple and flexible cell patterning coculture on microfluidic device. <i>Biofabrication</i> , <b>2020</b> , 12, 035005	10.5	7
294	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 1-1	5.5	5
293	Antibody-coated microstructures for selective isolation of immune cells in blood. <i>Lab on A Chip</i> , <b>2020</b> , 20, 1072-1082	7.2	5
292	Automated transportation of microparticles in vivo <b>2020</b> , 281-328		
291	Liquid metal droplet robot. <i>Applied Materials Today</i> , <b>2020</b> , 19, 100597	6.6	29
290	Magnetically Powered Biodegradable Microswimmers. <i>Micromachines</i> , <b>2020</b> , 11,	3.3	15
289	A microelectrode array chip for osteogenic differentiation of mesenchymal stem cells under electrical stimulation. <i>Lab on A Chip</i> , <b>2020</b> , 20, 373-383	7.2	4
288	Motion Planning and Robust Control for the Endovascular Navigation of a Microrobot. <i>IEEE Transactions on Industrial Informatics</i> , <b>2020</b> , 16, 4557-4566	11.9	8
287	Precise Drug Delivery by Using PLGA-Based Microspheres and Optical Manipulators. <i>IEEE Transactions on Nanobioscience</i> , <b>2020</b> , 19, 192-202	3.4	2
286	Automated In Vivo Navigation of Magnetic-Driven Microrobots Using OCT Imaging Feedback. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2020</b> , 67, 2349-2358	5	16
285	Electromagnetic Actuation of Microrobots in a Simulated Vascular Structure With a Position Estimator Based Motion Controller. <i>IEEE Robotics and Automation Letters</i> , <b>2020</b> , 5, 6255-6261	4.2	3
284	Neck injury mechanisms in train collisions: Dynamic analysis and data mining of the driver impact injury. <i>Accident Analysis and Prevention</i> , <b>2020</b> , 146, 105725	6.1	4
283	Development of Magnet-Driven and Image-Guided Degradable Microrobots for the Precise Delivery of Engineered Stem Cells for Cancer Therapy. <i>Small</i> , <b>2020</b> , 16, e1906908	11	42
282	Simultaneous Localization and Mapping-Based In Vivo Navigation Control of Microparticles. <i>IEEE Transactions on Industrial Informatics</i> , <b>2020</b> , 16, 2956-2964	11.9	10

281	Gradient-Enhanced Electromagnetic Actuation System With a New Core Shape Design for Microrobot Manipulation. <i>IEEE Transactions on Industrial Electronics</i> , <b>2020</b> , 67, 4700-4710	8.9	21
280	Combined Single-Cell Manipulation and Chemomechanical Modeling to Probe Cell Migration Mechanism During Cell-to-Cell Interaction. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2020</b> , 67, 1474-1482	5.482	0
279	Lgr5-overexpressing mesenchymal stem cells augment fracture healing through regulation of Wnt/ERK signaling pathways and mitochondrial dynamics. <i>FASEB Journal</i> , <b>2019</b> , 33, 8565-8577	0.9	18
278	. <i>Journal of Microelectromechanical Systems</i> , <b>2019</b> , 28, 298-310	2.5	7
277	Microfluidic Single-Cell Manipulation and Analysis: Methods and Applications. <i>Micromachines</i> , <b>2019</b> , 10,	3.3	73
276	Magnetically Driven Undulatory Microswimmers Integrating Multiple Rigid Segments. <i>Small</i> , <b>2019</b> , 15, e1901197	11	18
275	Robust orientation control of multi-DOF cell based on uncertainty and disturbance estimation. <i>International Journal of Robust and Nonlinear Control</i> , <b>2019</b> , 29, 4859-4871	3.6	15
274	Automated Indirect Transportation of Biological Cells with Optical Tweezers and a 3D Printed Microtool. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 2883	2.6	5
273	Translational and rotational manipulation of filamentous cells using optically driven microrobots. <i>Optics Express</i> , <b>2019</b> , 27, 16475-16482	3.3	10
272	Inchworm-inspired soft climbing robot using microspine arrays <b>2019</b> ,		3
271	A Robotic Surgery Approach to Mitochondrial Transfer Amongst Single Cells <b>2019</b> ,		2
270	3-D Image Reconstruction of Biological Organelles With a Robot-Aided Microscopy System for Intracellular Surgery. <i>IEEE Robotics and Automation Letters</i> , <b>2019</b> , 4, 231-238	4.2	12
269	Calcium Spike Patterns Reveal Linkage of Electrical Stimulus and MSC Osteogenic Differentiation. <i>IEEE Transactions on Nanobioscience</i> , <b>2019</b> , 18, 3-9	3.4	3
268	Achieving Automated Organelle Biopsy on Small Single Cells Using a Cell Surgery Robotic System. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2019</b> , 66, 2210-2222	5	25
267	Modeling and Control of Single-Cell Migration Induced by a Chemoattractant-Loaded Microbead. <i>IEEE Transactions on Cybernetics</i> , <b>2019</b> , 49, 427-439	10.2	4
266	Out-of-Plane Rotation Control of Biological Cells With a Robot-Tweezers Manipulation System for Orientation-Based Cell Surgery. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2019</b> , 66, 199-207	5	46
265	Development of a collision-avoidance vector based control algorithm for automated in-vivo transportation of biological cells. <i>Automatica</i> , <b>2018</b> , 90, 147-156	5.7	8
264	A dual caudal-fin miniature robotic fish with an integrated oscillation and jet propulsive mechanism. <i>Bioinspiration and Biomimetics</i> , <b>2018</b> , 13, 036007	2.6	12

263	A fluorescent microbead-based microfluidic immunoassay chip for immune cell cytokine secretion quantification. <i>Lab on A Chip</i> , <b>2018</b> , 18, 522-531	7.2	30
262	A switching controller for high speed cell transportation by using a robot-aided optical tweezers system. <i>Automatica</i> , <b>2018</b> , 89, 308-315	5.7	13
261	Revealing elasticity of largely deformed cells flowing along confining microchannels.. <i>RSC Advances</i> , <b>2018</b> , 8, 1030-1038	3.7	18
260	Mechanically stable ternary heterogeneous electrodes for energy storage and conversion. <i>Nanoscale</i> , <b>2018</b> , 10, 2613-2622	7.7	22
259	A simplified sheathless cell separation approach using combined gravitational-sedimentation-based prefocusing and dielectrophoretic separation. <i>Lab on A Chip</i> , <b>2018</b> , 18, 1521-1532	7.2	29
258	Microfluidic platform for probing cancer cells migration property under periodic mechanical confinement. <i>Biomicrofluidics</i> , <b>2018</b> , 12, 024118	3.2	11
257	Electrotaxis of tumor-initiating cells of H1975 lung adenocarcinoma cells is associated with both activation of stretch-activated cation channels (SACCs) and internal calcium release. <i>Bioelectrochemistry</i> , <b>2018</b> , 124, 80-92	5.6	10
256	An approach to quantized consensus of continuous-time linear multi-agent systems. <i>Automatica</i> , <b>2018</b> , 91, 98-104	5.7	30
255	Saturated PID Control for the Optical Manipulation of Biological Cells. <i>IEEE Transactions on Control Systems Technology</i> , <b>2018</b> , 26, 1909-1916	4.8	19
254	High-Entropy Alloy (HEA)-Coated Nanolattice Structures and Their Mechanical Properties. <i>Advanced Engineering Materials</i> , <b>2018</b> , 20, 1700625	3.5	40
253	Graphene-Bridged Multifunctional Flexible Fiber Supercapacitor with High Energy Density. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 28597-28607	9.5	59
252	Force Modeling, Identification, and Feedback Control of Robot-Assisted Needle Insertion: A Survey of the Literature. <i>Sensors</i> , <b>2018</b> , 18,	3.8	39
251	Design of an Interactive Control System for a Multisection Continuum Robot. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2018</b> , 23, 2379-2389	5.5	16
250	High-Throughput Single Cell Trapping and Patterning Using a Sandwiched Microfluidic Chip <b>2018</b> ,		2
249	Robust Model-Predictive Deformation Control of a Soft Object by Using a Flexible Continuum Robot <b>2018</b> ,		4
248	Magnetic Force-driven in Situ Selective Intracellular Delivery. <i>Scientific Reports</i> , <b>2018</b> , 8, 14205	4.9	4
247	A Fish-Like Magnetically Propelled Microswimmer Fabricated by 3D Laser Lithography <b>2018</b> ,		3
246	Microfluidic implementation of functional cytometric microbeads for improved multiplexed cytokine quantification. <i>Biomicrofluidics</i> , <b>2018</b> , 12, 044112	3.2	2

245	Characterization of a Honeycomb-Like Scaffold With Dielectrophoresis-Based Patterning for Tissue Engineering. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2017</b> , 64, 755-764	5	15
244	Increasing the physical size and nucleation status of human pluripotent stem cell-derived ventricular cardiomyocytes by cell fusion. <i>Stem Cell Research</i> , <b>2017</b> , 19, 76-81	1.6	7
243	Effects of direct current electric fields on lung cancer cell electrotaxis in a PMMA-based microfluidic device. <i>Analytical and Bioanalytical Chemistry</i> , <b>2017</b> , 409, 2163-2178	4.4	20
242	Flexible Fiber-Shaped Supercapacitor Based on Nickel-Cobalt Double Hydroxide and Pen Ink Electrodes on Metallized Carbon Fiber. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 5409-5418	9.5	120
241	Robust Control to Manipulate a Microparticle with Electromagnetic Coil System. <i>IEEE Transactions on Industrial Electronics</i> , <b>2017</b> , 64, 8566-8577	8.9	25
240	<b>2017</b> ,		7
239	A novel MEMS force sensor based on Laterally Movable Gate Array Field Effect Transistor(LMGAFET) <b>2017</b> ,		3
238	Microfluidic single-cell array platform enabling week-scale clonal expansion under chemical/electrical stimuli. <i>Biomicrofluidics</i> , <b>2017</b> , 11, 054103	3.2	8
237	Rationally designed nickel oxide ravin@iron cobalt-hydroxides with largely enhanced capacitive performance for asymmetric supercapacitors. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 16944-16952	13	26
236	Automated Transportation of Biological Cells for Multiple Processing Steps in Cell Surgery. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2017</b> , 14, 1712-1721	4.9	8
235	Engineered bone scaffolds with Dielectrophoresis-based patterning using 3D printing. <i>Biomedical Microdevices</i> , <b>2017</b> , 19, 102	3.7	10
234	Development of an Enhanced Electromagnetic Actuation System With Enlarged Workspace. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2017</b> , 22, 2265-2276	5.5	35
233	In Vivo Manipulation of Single Biological Cells With an Optical Tweezers-Based Manipulator and a Disturbance Compensation Controller. <i>IEEE Transactions on Robotics</i> , <b>2017</b> , 33, 1200-1212	6.5	32
232	Characterization of biomechanical properties of cells through dielectrophoresis-based cell stretching and actin cytoskeleton modeling. <i>BioMedical Engineering OnLine</i> , <b>2017</b> , 16, 41	4.1	19
231	Control of Single-Cell Migration Using a Robot-Aided Stimulus-Induced Manipulation System. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2017</b> , 22, 815-825	5.5	7
230	Automated Transportation of Multiple Cell Types Using a Robot-Aided Cell Manipulation System With Holographic Optical Tweezers. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2017</b> , 22, 804-814	5.5	18
229	Cell migration microfluidics for electrotaxis-based heterogeneity study of lung cancer cells. <i>Biosensors and Bioelectronics</i> , <b>2017</b> , 89, 837-845	11.8	31
228	Design of an automated controller with collision-avoidance capability for in-vivo transportation of biological cells <b>2017</b> ,		2

227	Microstructure, Mechanical and Corrosion Behaviors of CoCrFeNiAl <sub>0.3</sub> High Entropy Alloy (HEA) Films. <i>Coatings</i> , <b>2017</b> , 7, 156	2.9	34
226	Transportation of Multiple Biological Cells Through Saturation-Controlled Optical Tweezers In Crowded Microenvironments. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 888-899	5.5	27
225	Characterization of Drug Effect on Leukemia Cells Through Single Cell Assay With Optical Tweezers and Dielectrophoresis. <i>IEEE Transactions on Nanobioscience</i> , <b>2016</b> , 15, 820-827	3.4	4
224	Cell out-of-plane rotation control using a cell surgery robotic system equipped with optical tweezers manipulators <b>2016</b> ,		3
223	Single Cell Transfection through Precise Microinjection with Quantitatively Controlled Injection Volumes. <i>Scientific Reports</i> , <b>2016</b> , 6, 24127	4.9	56
222	Fusion with stem cell makes the hepatocellular carcinoma cells similar to liver tumor-initiating cells. <i>BMC Cancer</i> , <b>2016</b> , 16, 56	4.8	25
221	A High-Throughput Automated Microinjection System for Human Cells With Small Size. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 838-850	5.5	42
220	. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2016</b> , 13, 543-551	4.9	35
219	Design of a Novel Compliant Safe Robot Joint With Multiple Working States. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2016</b> , 21, 1193-1198	5.5	14
218	Active disturbance rejection control of single cell migration induced by chemoattractant-loaded microbead <b>2016</b> ,		1
217	Monitoring the intracellular calcium response to a dynamic hypertonic environment. <i>Scientific Reports</i> , <b>2016</b> , 6, 23591	4.9	10
216	Design of a three-segment continuum robot for minimally invasive surgery. <i>Robotics and Biomimetics</i> , <b>2016</b> , 3, 2		8
215	Self-assembly of hierarchical 3D starfish-like Co <sub>3</sub> O <sub>4</sub> nanowire bundles on nickel foam for high-performance supercapacitor. <i>Journal of Nanoparticle Research</i> , <b>2016</b> , 18, 1	2.3	21
214	Development of biocompatible magnetic microrobot transporter using 3D laser lithography <b>2016</b> ,		2
213	Design and shape control of a three-section continuum robot <b>2016</b> ,		4
212	A dynamic model of chemoattractant-induced cell migration. <i>Biophysical Journal</i> , <b>2015</b> , 108, 1645-1651	2.9	27
211	Enclosing a target by nonholonomic mobile robots with bearing-only measurements. <i>Automatica</i> , <b>2015</b> , 53, 400-407	5.7	108
210	Design of a robust unified controller for cell manipulation with a robot-aided optical tweezers system. <i>Automatica</i> , <b>2015</b> , 55, 279-286	5.7	34



209	Rapid characterization of the biomechanical properties of drug-treated cells in a microfluidic device. <i>Journal of Micromechanics and Microengineering</i> , <b>2015</b> , 25, 105004	2	21
208	Automated Pairing Manipulation of Biological Cells With a Robot-Tweezers Manipulation System. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2015</b> , 20, 2242-2251	5.5	22
207	An electromagnetic system for magnetic microbead manipulation <b>2015</b> ,		5
206	Superhydrophobic-like tunable droplet bouncing on slippery liquid interfaces. <i>Nature Communications</i> , <b>2015</b> , 6, 7986	17.4	164
205	<b>2015</b> ,		11
204	Three-dimensional cell manipulation and patterning using dielectrophoresis via a multi-layer scaffold structure. <i>Lab on A Chip</i> , <b>2015</b> , 15, 920-30	7.2	34
203	Design and characterization of a conductive nanostructured polypyrrole-polycaprolactone coated magnesium/PLGA composite for tissue engineering scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2015</b> , 103, 2966-73	5.4	21
202	Swarm-inspired transportation of biological cells using saturation-controlled optical tweezers <b>2015</b> ,		3
201	Modeling and closed-loop control of electromagnetic manipulation of a microparticle <b>2015</b> ,		3
200	Cell adhesion manipulation through single cell assembly for characterization of initial cell-to-cell interaction. <i>BioMedical Engineering OnLine</i> , <b>2015</b> , 14, 114	4.1	8
199	Multilevel-Based Topology Design and Cell Patterning With Robotically Controlled Optical Tweezers. <i>IEEE Transactions on Control Systems Technology</i> , <b>2015</b> , 23, 176-185	4.8	28
198	Global exponential stability and periodic solutions of high-order bidirectional associative memory (BAM) neural networks with time delays and impulses. <i>Neurocomputing</i> , <b>2015</b> , 155, 261-276	5.4	15
197	Distributed control for uniform circumnavigation of ring-coupled unicycles. <i>Automatica</i> , <b>2015</b> , 53, 23-29	5.7	44
196	Activation of multiple signaling pathways during the differentiation of mesenchymal stem cells cultured in a silicon nanowire microenvironment. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2014</b> , 10, 1153-63	6	39
195	Multirobot rendezvous with bearing-only or range-only measurements. <i>Robotics and Biomimetics</i> , <b>2014</b> , 1,		6
194	Preparation and Experimental Study on Dielectrophoresis-Based Microfluidic Chip for Cell Patterning. <i>Chinese Journal of Analytical Chemistry</i> , <b>2014</b> , 42, 1568-1573	1.6	0
193	Observer-Based Optical Manipulation of Biological Cells With Robotic Tweezers. <i>IEEE Transactions on Robotics</i> , <b>2014</b> , 30, 68-80	6.5	43
192	Dynamic Path Planning for Inserting a Steerable Needle Into a Soft Tissue. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2014</b> , 19, 549-558	5.5	18

191	Rapidly Exploring Random Tree Algorithm-Based Path Planning for Robot-Aided Optical Manipulation of Biological Cells. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2014</b> , 11, 649-657	4.9	41
190	Minimizing Energy Consumption of Wheeled Mobile Robots via Optimal Motion Planning. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2014</b> , 19, 401-411	5.5	75
189	Combined power management/design optimization for a fuel cell/battery plug-in hybrid electric vehicle using multi-objective particle swarm optimization. <i>International Journal of Automotive Technology</i> , <b>2014</b> , 15, 645-654	1.6	32
188	A dynamic priority based path planning for cooperation of multiple mobile robots in formation forming. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2014</b> , 30, 589-596	9.2	36
187	Topology design for router networks to accomplish a cooperative exploring task <b>2014</b> ,		2
186	A Novel Arch-Shape Nanogenerator Based on Piezoelectric and Triboelectric Mechanism for Mechanical Energy Harvesting. <i>Nanomaterials</i> , <b>2014</b> , 5, 36-46	5.4	33
185	Photocatalytic Property of Fe <sub>3</sub> O <sub>4</sub> /SiO <sub>2</sub> /TiO <sub>2</sub> Core-Shell Nanoparticle with Different Functional Layer Thicknesses. <i>Journal of Nanomaterials</i> , <b>2014</b> , 2014, 1-7	3.2	7
184	Modeling and development of a magnetically actuated system for micro-particle manipulation <b>2014</b> ,		7
183	Dielectrophoresis-based automatic 3D cell manipulation and patterning through a micro-electrode integrated multi-layer scaffold <b>2014</b> ,		2
182	Direct measurement of cell protrusion force utilizing a robot-aided cell manipulation system with optical tweezers for cell migration control. <i>International Journal of Robotics Research</i> , <b>2014</b> , 33, 1782-1792	5.7	36
181	Development of a high throughput robot-aided cell injection system for human cells <b>2014</b> ,		3
180	Laser-induced fusion of human embryonic stem cells with optical tweezers. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 033701	3.4	25
179	Probing cell biophysical behavior based on actin cytoskeleton modeling and stretching manipulation with optical tweezers. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 083706	3.4	14
178	Dynamic trapping and manipulation of biological cells with optical tweezers. <i>Automatica</i> , <b>2013</b> , 49, 1614-1625	5.7	67
177	Preserving Multirobot Connectivity in Rendezvous Tasks in the Presence of Obstacles With Bounded Control Input. <i>IEEE Transactions on Control Systems Technology</i> , <b>2013</b> , 21, 2306-2314	4.8	19
176	Development of an optical gas leak sensor for detecting ethylene, dimethyl ether and methane. <i>Sensors</i> , <b>2013</b> , 13, 4157-69	3.8	13
175	Dynamics Analysis and Motion Planning for Automated Cell Transportation With Optical Tweezers. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2013</b> , 18, 706-713	5.5	65
174	Rendezvous of wheeled mobile robots using bearings-only or range-only measurements <b>2013</b> ,		1

173	Automated manipulation of magnetic micro beads with electromagnetic coil system <b>2013</b> ,		1
172	A bounded controller for multirobot navigation while maintaining network connectivity in the presence of obstacles. <i>Automatica</i> , <b>2013</b> , 49, 285-292	5.7	48
171	Apply Robot-Tweezers Manipulation to Cell Stretching for Biomechanical Characterization <b>2013</b> , 223-239		1
170	Two-Stage Charging Strategy for Plug-In Electric Vehicles at the Residential Transformer Level. <i>IEEE Transactions on Smart Grid</i> , <b>2013</b> , 4, 1442-1452	10.7	63
169	Rendezvous of unicycles: A bearings-only and perimeter shortening approach. <i>Systems and Control Letters</i> , <b>2013</b> , 62, 401-407	2.4	26
168	Applying combined optical tweezers and fluorescence microscopy technologies to manipulate cell adhesions for cell-to-cell interaction study. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2013</b> , 60, 2308-15	5	27
167	Leader-follower-based dynamic trajectory planning for multirobot formation. <i>Robotica</i> , <b>2013</b> , 31, 1351-1359	3.5	1
166	Reorganization of cytoskeleton and transient activation of Ca <sup>2+</sup> channels in mesenchymal stem cells cultured on silicon nanowire arrays. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 13295-304	9.5	39
165	Dynamics calibration of optically trapped cells with adaptive control technology <b>2013</b> ,		2
164	Distributed circumnavigation by unicycles with cyclic repelling strategies <b>2013</b> ,		6
163	Automated laser-induced cell fusion based on microwell array <b>2013</b> ,		1
162	Cell manipulation tool with combined microwell array and optical tweezers for cell isolation and deposition. <i>Journal of Micromechanics and Microengineering</i> , <b>2013</b> , 23, 075006	2	30
161	Manipulating cell adhesions with optical tweezers for study of cell-to-cell interactions. <i>Journal of Biomedical Nanotechnology</i> , <b>2013</b> , 9, 281-5	4	19
160	A microengineered cell fusion approach with combined optical tweezers and microwell array technologies. <i>RSC Advances</i> , <b>2013</b> , 3, 23589	3.7	12
159	Cell Manipulation with Robot-Aided Optical Tweezers Technology <b>2013</b> , 159-174		1
158	. <i>IEEE Transactions on Vehicular Technology</i> , <b>2012</b> , 61, 498-508	6.8	77
157	Modeling and experimental study for minimization of energy consumption of a mobile robot <b>2012</b> ,		9
156	Moving Groups of Microparticles Into Array With a Robot-Tweezers Manipulation System. <i>IEEE Transactions on Robotics</i> , <b>2012</b> , 28, 1069-1080	6.5	131

155	Multilevel-based topology design and shape control of robot swarms. <i>Automatica</i> , <b>2012</b> , 48, 3122-3127	5.7	36
154	Coordinated charging control of plug-in electric vehicles at a distribution transformer level using the vTOU-DP approach <b>2012</b> ,		6
153	Distributed multirobot shape control with a multilevel-based topology and market-based auction algorithm <b>2012</b> ,		1
152	Coalition-Based Approach to Task Allocation of Multiple Robots With Resource Constraints. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2012</b> , 9, 516-528	4.9	33
151	Probing the mechanobiological properties of human embryonic stem cells in cardiac differentiation by optical tweezers. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 123-8	2.9	52
150	Influence of semiflexible structural features of actin cytoskeleton on cell stiffness based on actin microstructural modeling. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 1900-8	2.9	27
149	Fiber surface modification technology for fiber-optic localized surface plasmon resonance biosensors. <i>Sensors</i> , <b>2012</b> , 12, 2729-41	3.8	29
148	Hand motion classification using a multi-channel surface electromyography sensor. <i>Sensors</i> , <b>2012</b> , 12, 1130-47	3.8	59
147	Automatic flocking manipulation of micro particles with robot-tweezers technologies <b>2012</b> ,		4
146	Dynamic path planning in robot-aided optical manipulation of biological cells <b>2012</b> ,		1
145	Force Sensing and Control in Robot-Assisted Suspended Cell Injection System. <i>Intelligent Systems Reference Library</i> , <b>2012</b> , 61-88	0.8	13
144	Apply RRT-based path planning to robotic manipulation of biological cells with optical tweezer <b>2011</b> ,		15
143	Enhanced cell sorting and manipulation with combined optical tweezer and microfluidic chip technologies. <i>Lab on A Chip</i> , <b>2011</b> , 11, 3656-62	7.2	283
142	Optical Tweezer Technology. <i>IEEE Nanotechnology Magazine</i> , <b>2011</b> , 5, 17-21	1.7	6
141	. <i>IEEE Transactions on Vehicular Technology</i> , <b>2011</b> , 60, 4238-4248	6.8	88
140	Force Sensing and Manipulation Strategy in Robot-Assisted Microinjection on Zebrafish Embryos. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2011</b> , 16, 1002-1010	5.5	65
139	Coordinated Motion Planning for Multiple Mobile Robots Along Designed Paths With Formation Requirement. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2011</b> , 16, 1021-1031	5.5	78
138	A universal piezo-driven ultrasonic cell microinjection system. <i>Biomedical Microdevices</i> , <b>2011</b> , 13, 743-52	3.7	38

137	Path planning for 3D transportation of biological cells with optical tweezers <b>2011</b> ,		5
136	Predictive control for Plug-in Microturbine powered Hybrid Electric Vehicles using telemetry information <b>2011</b> ,		3
135	Multilevel based topology design and formation control of robot swarms <b>2011</b> ,		1
134	Connectivity constrained multirobot navigation with considering physical size of robots <b>2011</b> ,		2
133	Mechanical force characterization in manipulating live cells with optical tweezers. <i>Journal of Biomechanics</i> , <b>2011</b> , 44, 741-6	2.9	74
132	A novel allocation-based formation algorithm for swarm of micro-scaled particles <b>2011</b> ,		4
131	Biophysical characterization of hematopoietic cells from normal and leukemic sources with distinct primitiveness. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 083702	3.4	29
130	Transportation of biological cells with robot-tweezer manipulation system <b>2011</b> ,		12
129	Automatic transportation of biological cells with a robot-tweezer manipulation system. <i>International Journal of Robotics Research</i> , <b>2011</b> , 30, 1681-1694	5.7	121
128	Robot-assisted automatic cell sorting with combined optical tweezer and microfluidic chip technologies <b>2011</b> ,		5
127	Robotic cell manipulation with optical tweezers for biomechanical characterization <b>2011</b> ,		5
126	Pairing and moving swarm of micro particles into array with a robot-tweezer manipulation system <b>2011</b> ,		1
125	Optimal motion planning of a mobile robot with minimum energy consumption <b>2011</b> ,		15
124	Resource constrained multirobot task allocation based on leader-follower coalition methodology. <i>International Journal of Robotics Research</i> , <b>2011</b> , 30, 1423-1434	5.7	31
123	Automated transportation of single cells using robot-tweezer manipulation system. <i>Journal of the Association for Laboratory Automation</i> , <b>2011</b> , 16, 263-70		17
122	Resource constrained multirobot task allocation with a leader-follower coalition method <b>2010</b> ,		1
121	Force characterization of live cells in automated transportation with robot-tweezers manipulation system <b>2010</b> ,		1
120	Coordinated motion planning of multiple mobile robots in formation <b>2010</b> ,		5

119	Mechanical modeling of red blood cells during optical stretching. <i>Journal of Biomechanical Engineering</i> , <b>2010</b> , 132, 044504	2.1	19
118	Leader-Follower Formation Control of Multiple Non-holonomic Mobile Robots Incorporating a Receding-horizon Scheme. <i>International Journal of Robotics Research</i> , <b>2010</b> , 29, 727-747	5.7	157
117	An experimental study on leader-follower coalition method for solving multirobot task allocation problems <b>2010</b> ,		1
116	Characterizing mechanical properties of biological cells by microinjection. <i>IEEE Transactions on Nanobioscience</i> , <b>2010</b> , 9, 171-80	3.4	23
115	Localization for Multirobot Formations in Indoor Environment. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2010</b> , 15, 561-574	5.5	58
114	Cell sorting with combined optical tweezers and microfluidic chip technologies <b>2010</b> ,		3
113	Integrated Design and Control under Uncertainty: A Fuzzy Modeling Approach. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2010</b> , 49, 1312-1324	3.9	17
112	Motion planning of multirobot formation <b>2010</b> ,		1
111	An online coalition based approach to solving resource constrained multirobot task allocation problem <b>2010</b> ,		1
110	Motion planning of multiple mobile robots with formation requirement <b>2010</b> ,		1
109	A new piezo-driven ultrasonic cell microinjection system <b>2010</b> ,		11
108	Mechanical characterization of human red blood cells under different osmotic conditions by robotic manipulation with optical tweezers. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2010</b> , 57, 1816-25	5	110
107	Path planning in automated manipulation of biological cells with optical tweezers <b>2009</b> ,		4
106	Mechanical characterization of human red blood cells by robotic manipulation with optical tweezers <b>2009</b> ,		1
105	A force control based cell injection approach in a bio-robotics system <b>2009</b> ,		6
104	A decentralized local constraint path planner for multiple mobile robots <b>2009</b> ,		1
103	Networked architecture for multi-robot task reallocation in dynamic environment <b>2009</b> ,		1
102	Visual-Based Impedance Control of Out-of-Plane Cell Injection Systems. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2009</b> , 6, 565-571	4.9	75

101	A dynamic priority strategy in decentralized motion planning for formation forming of multiple mobile robots <b>2009</b> ,		9
100	Localization strategies for indoor multi-robot formations <b>2009</b> ,		1
99	Robotic Cell Injection System With Position and Force Control: Toward Automatic Batch Biomanipulation. <i>IEEE Transactions on Robotics</i> , <b>2009</b> , 25, 727-737	6.5	137
98	Mechanical modeling characterization of biological cells using microrobotics cell injection test bed <b>2009</b> ,		3
97	Penetration force measurement and control in robotic cell microinjection <b>2009</b> ,		9
96	Global localization of multirobot formations using ceiling vision SLAM strategy. <i>Mechatronics</i> , <b>2009</b> , 19, 617-628	3	26
95	Global Stability of a Saturated Nonlinear PID Controller for Robot Manipulators. <i>IEEE Transactions on Control Systems Technology</i> , <b>2009</b> , 17, 892-899	4.8	31
94	A Synchronization Approach for the Minimization of Contouring Errors of CNC Machine Tools. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2009</b> , 6, 720-729	4.9	38
93	A mechanical model of biological cells in microinjection <b>2009</b> ,		1
92	An Inverse-Kinematics Table-Based Solution of a Humanoid Robot Finger With Nonlinearly Coupled Joints. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2009</b> , 14, 273-281	5.5	16
91	A Synchronization Approach to Trajectory Tracking of Multiple Mobile Robots While Maintaining Time-Varying Formations. <i>IEEE Transactions on Robotics</i> , <b>2009</b> , 25, 1074-1086	6.5	146
90	Vision-Based 2-D Automatic Micrograsping Using Coarse-to-Fine Grasping Strategy. <i>IEEE Transactions on Industrial Electronics</i> , <b>2008</b> , 55, 3324-3331	8.9	35
89	Approaches to Robust Filtering Design of Discrete Time Fuzzy Dynamic Systems. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2008</b> , 16, 331-340	8.3	40
88	Mechanical modeling of biological cells in microinjection. <i>IEEE Transactions on Nanobioscience</i> , <b>2008</b> , 7, 257-66	3.4	67
87	A synchronization control strategy for multiple robot systems using shape regulation technology <b>2008</b> ,		1
86	Control Mechanism Analysis of Small-Agent Networks Using a Distinguished Node Model for Urban Traffic Controls. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2008</b> , 5, 420-430	4.9	3
85	Trajectory Tracking Control for a 3-DOF Planar Parallel Manipulator Using the Convex Synchronized Control Method. <i>IEEE Transactions on Control Systems Technology</i> , <b>2008</b> , 16, 613-623	4.8	33
84	Integrated vision and force control in suspended cell injection system: Towards automatic batch biomanipulation <b>2008</b> ,		10

83	A synchronous controller for multiple mobile robots in time-varied formations <b>2008</b> ,		1
82	Distributed neural network-based policy gradient reinforcement learning for multi-robot formations <b>2008</b> ,		2
81	A RECEDING-HORIZON FORMATION TRACKING CONTROLLER WITH LEADER-FOLLOWER STRATEGIES. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2008</b> , 41, 4400-4405		1
80	Automatic suspended cell injection under vision and force control biomanipulation <b>2007</b> ,		7
79	Development of a New Robot Controller Architecture with FPGA-Based IC Design for Improved High-Speed Performance. <i>IEEE Transactions on Industrial Informatics</i> , <b>2007</b> , 3, 312-321	11.9	64
78	A Model-Free Cross-Coupled Control for Position Synchronization of Multi-Axis Motions: Theory and Experiments. <i>IEEE Transactions on Control Systems Technology</i> , <b>2007</b> , 15, 306-314	4.8	126
77	A Climbing Robot for Cleaning Glass Surface with Motion Planning and Visual Sensing <b>2007</b> ,		3
76	Integrated design of trajectory planning and control for micro air vehicles. <i>Mechatronics</i> , <b>2007</b> , 17, 245-253		19
75	Visual-based Impedance Force Control of Three-dimensional Cell Injection System. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , <b>2007</b> ,		19
74	Adaptive Synchronization Control of Multiple Spacecraft Formation Flying. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2007</b> , 129, 337-342	1.6	31
73	3-D Automatic Microassembly by Vision-Based Control <b>2007</b> ,		8
72	. <i>IEEE Transactions on Industrial Electronics</i> , <b>2007</b> , 54, 3428-3429	8.9	108
71	. <i>IEEE Transactions on Control Systems Technology</i> , <b>2007</b> , 15, 982-988	4.8	46
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69	Adaptive Synchronized Control for a Planar Parallel Manipulator: Theory and Experiments. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2006</b> , 128, 976-979	1.6	26
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67	Global Stability of a Saturated Nonlinear PID Controller for Robotic Manipulators <b>2006</b> ,		5
66	Performance Improvement of Tracking Control for a Planar Parallel Robot Using Synchronized Control <b>2006</b> ,		2



65	Multi-Sensory Fusion for Mobile Robot Self-Localization <b>2006</b> ,		1
64	A Visual Based Extended Monte Carlo Localization for Autonomous Mobile Robots <b>2006</b> ,		4
63	A Visual Impedance Force Control of A Robotic Cell Injection System <b>2006</b> ,		8
62	Investigation of the onset voltage for the design of a microfabricated colloid thruster. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2006</b> , 11, 66-74	5.5	3
61	Integration of saturated PI synchronous control and PD feedback for control of parallel manipulators <b>2006</b> , 22, 202-207		103
60	Development of an FPGA-Based Motion Control ASIC for Robotic Manipulators <b>2006</b> ,		13
59	A synchronisation approach to mutual error compensation in controlling the vehicle with an installed manipulator. <i>International Journal of Vehicle Design</i> , <b>2006</b> , 42, 287	2.4	
58	Development of a small air vehicle based on aerodynamic model analysis in the tunnel tests. <i>Mechatronics</i> , <b>2006</b> , 16, 41-49	3	1
57	Orientation control of a differential mobile robot through wheel synchronization. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2005</b> , 10, 345-351	5.5	22
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54	A New Flux Observer Design for Backstepping Controls of Induction Motors. <i>Electric Power Components and Systems</i> , <b>2005</b> , 33, 113-126	1	2
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51	A MODEL-FREE CROSS-COUPLED CONTROL FOR POSITION SYNCHRONIZATION OF MULTI-AXIS MOTIONS: THEORY AND EXPERIMENTS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2005</b> , 38, 1-6		4
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45	Model identification of a small-scale air vehicle for loitering control design <b>2004</b> ,		1
44	A PZT actuator control of a single-link flexible manipulator based on linear velocity feedback and actuator placement. <i>Mechatronics</i> , <b>2004</b> , 14, 381-401	3	91
43	A simple hybrid fuzzy PD controller. <i>Mechatronics</i> , <b>2004</b> , 14, 877-890	3	18
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40	Micro air vehicle: configuration, analysis, fabrication, and test. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2004</b> , 9, 108-117	5.5	37
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38	Robust component synthesis vibration suppression for maneuver of flexible spacecrafts <b>2004</b> ,		1
37	Position synchronization of multiple motion axes with adaptive coupling control. <i>Automatica</i> , <b>2003</b> , 39, 997-1005	5.7	188
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23	Development of partial model-based torque control of AC induction motors. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2001</b> , 17, 100-107		5
22	Stabilizing a flexible beam handled by two manipulators via PD feedback. <i>IEEE Transactions on Automatic Control</i> , <b>2000</b> , 45, 2159-2164	5.9	25
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20	Performance Improvement of Industrial Robot Trajectory Tracking Using Adaptive-Learning Scheme. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>1999</b> , 121, 285-292	1.6	12
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17	Development and application of ultrasonic surgical instruments. <i>IEEE Transactions on Biomedical Engineering</i> , <b>1997</b> , 44, 462-7	5	21
16	Modeling and cooperation of two-arm robotic system manipulating a deformable object		2
15	Development of Micro Air Vehicle Based on Aerodynamic Modeling Analysis in Tunnel Tests		1
14	A FPGA-based motion control IC design		2
13	A new motion control hardware architecture with FPGA-based IC design for robotic manipulators		4
12	Nonlinear trajectory tracking control of a closed-chain manipulator		1

11	A Model Free Synchronization Approach to Controls of Parallel Manipulators		6
10	Development of a nonlinear PID controller with saturated function design		2
9	Nonlinear PD Synchronized Control for Parallel Manipulators		17
8	Uniform synchronization in multi-axis motion control		6
7	Tracking control of differential mobile robots using adaptive coupling scheme		2
6	Tracking stabilization of differential mobile robots using adaptive synchronized control		3
5	Adaptive synchronized control for coordination of two robot manipulators		1
4	Position and force tracking of a two-manipulator system manipulating a flexible beam payload		1
3	Synchronization and Control of Multiagent Systems		13
2	Development of a Cell-Loading Microrobot with Simultaneously Improved Degradability and Mechanical Strength for Performing In Vivo Delivery Tasks. <i>Advanced Intelligent Systems</i> ,2100052	6	5
1	Robot-Aided Micromanipulation of Biological Cells with Integrated Optical Tweezers and Microfluidic Chip. <i>Advanced Micro &amp; Nanosystems</i> ,393-416		1