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| <i>Onno C. Goemans, Ken Goldberg, A. Frank van der Stappen</i> | |
| Manipulating a Flat Object Against Stationary Barrier Using Airflows | 1737 |
| <i>Hyungpil Moon, Jonathan E. Luntz</i> | |
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| <i>Yusuke Maeda, Satoshi Makita</i> | |
| An Approach for Object Manipulation Using Cooperative Agents | 1749 |
| <i>Qingguo Li, Shahram Payنده</i> | |
| Simple Motion Planning Algorithms For Ball-Plate Systems With Limited Contact Area | 1755 |
| <i>Mikhail Svinin, Shigeyuki Hosoe</i> | |
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| <i>Taku Senoo, Akio Namiki, Masatoshi Ishikawa</i> | |

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| An Automated Biological Fluid Dispensing System For Microarray Fabrication Using Inkjet Technology <i>William Fisher, Mingjun Zhang</i> | 1786 |
| Characterization of Protein based Spring-like Elastic Joints for Biorobotic Applications <i>Mustapha Hamdi, Gaurav Sharma, Antoine Ferreira, Constantinos Mavroidis</i> | 1794 |
| Design of Classifier to Automate the Evaluation of Protein Crystallization States <i>Kanako Saitoh, Kuniaki Kawabata, Hajime Asama, Taketoshi Mishima, Mitsuaki Sugahara</i> | 1800 |

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| A Snake-like Swimming Robot Using IPMC Actuator/Sensor <i>Norihiro Kamamichi, Masaki Yamakita, Kinji Asaka, Zhi-Wei Luo</i> | 1812 |
| Nonlinear Grey-Box Identification of Linear Actuators Containing Hysteresis <i>Johan Gunnar, Erik Wernholt, Geir Hovland, Torgny Brogårdh</i> | 1818 |
| New Pneumatic Rubber Actuators to Assist Colonoscope Insertion <i>Koichi Suzumori, Takayuki Hama, Takefumi Kanda</i> | 1824 |
| Series Elasticity and Actuator Power Output <i>Daniel Paluska, Hugh Herr</i> | 1830 |
| Integrated Design of IPMC Actuator/Sensor <i>Masaki Yamakita, Akio Sera, Norihiro Kamamichi, Kinji Asaka, Zhi-Wei Luo</i> | 1834 |

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| Practical Kinematics for Real-Time Implementation of Continuum Robots | 1840 |
| <i>Bryan A. Jones, William McMahan, Ian D. Walker</i> | |
| Propagation of Errors in Hybrid Manipulators | 1848 |
| <i>Yunfeng Wang, Gregory S. Chirikjian</i> | |
| A Hyper-Redundant Continuous Robot | 1854 |
| <i>Jingzhou Yang, Potratz Jason, Karim Abdel-Malek</i> | |
| Human-like Movements of Robotic Arms with Redundant DOFs: Virtual Spring-Damper Hypothesis to Tackle the Bernstein Problem | 1860 |
| <i>Suguru Arimoto, Masahiro Sekimoto</i> | |
| Kinematic Modeling and Redundancy Resolution of Nonholonomic Mobile Manipulators | 1867 |
| <i>Alessandro De Luca, Giuseppe Oriolo, Paolo Robuffo Giordano</i> | |
| An Integrated Approach to Inverse Kinematics and Path Planning for Redundant Manipulators | 1874 |
| <i>Dominik Bertram, James Kuffner, Ruediger Dillmann, Tamim Asfour</i> | |

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| Balanced Micro/Macro Contact Model for Forward Dynamics of Rigid Multibody | 1880 |
| <i>Tomomichi Sugihara, Yoshihiko Nakamura</i> | |
| Port-based Modelling of Manipulators with Flexible Links | 1886 |
| <i>Alessandro Macchelli, Stefano Stramigioli, Claudio Melchiorri</i> | |
| Plücker Basis Vectors | 1892 |
| <i>Roy Featherstone</i> | |
| Optimal Braking for Impact Force Reduction Using the Dynamics of Redundant Manipulators | 1898 |
| <i>Seong-Hee Jeong, Takayuki Takahashi</i> | |
| Stable Penalty-Based Model of Frictional Contacts | 1904 |
| <i>Katsu Yamane, Yoshihiko Nakamura</i> | |

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| Proximity Queries between Convex Objects: An Interior Point Approach for Implicit Surfaces | 1910 |
| <i>Nilanjan Chakraborty, Jufeng Peng, Srinivas Akella, John Mitchell</i> | |

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| A Visual Compass based on SLAM | 1917 |
| <i>J.M.M. Montiel, Andrew J. Davison</i> | |
| A Unified Framework for Nearby and Distant Landmarks in Bearing-Only SLAM | 1923 |
| <i>Nikolas Trawny, Stergios I. Roumeliotis</i> | |
| Active Control for Single Camera SLAM | 1930 |
| <i>Teresa Vidal-Calleja, Andrew J. Davison, Juan Andrade-Cetto, David W. Murray</i> | |
| Evaluation of Algorithms for Bearing-Only SLAM | 1937 |
| <i>Kostas E. Bekris, Max Glick, Lydia E. Kavraki</i> | |
| A Framework for Vision Based Bearing Only 3D SLAM | 1944 |
| <i>P. Jensfelt, D. Kragic, J. Folkesson, M. Björkman</i> | |
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| <i>Xiang Wang, Hong Zhang</i> | |

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| <i>Douglas Turk, Gordon Wyeth</i> | |
| Contact Consistent Control Framework for Humanoid Robots | 1963 |
| <i>Jaeheung Park, Oussama Khatib</i> | |
| Zero Moment Point Manipulability Ellipsoid | 1970 |
| <i>Nirut Naksuk, C. S. George Lee</i> | |
| A Universal Stability Criterion of the Foot Contact of Legged Robots - Adios ZMP | 1976 |
| <i>Hirohisa Hirukawa, Shizuko Hattori, Kensuke Harada, Shuuji Kajita, Kenji Kaneko, Fumio Kanehiro, Kiyoshi Fujiwara, Mitsuharu Morisawa</i> | |

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| <i>Yizhar Or, Elon Rimon</i> | |
| Feedback Control of a Simple Walking Model driven by an Oscillator | 1990 |
| <i>Shinya Aoi, Kazuo Tsuchiya</i> | |

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| <i>Daniel Zamoski, Gregory Starr, John Wood, Ron Lumia</i> | |
| Self-Motion Graph in Path Planning for Redundant Robots along Specified End-Effector Paths | 2004 |
| <i>Zhenwang Yao, Kamal Gupta</i> | |
| Pushing using Compliance | 2010 |
| <i>Dennis Nieuwenhuisen, A. Frank van der Stappen, Mark H. Overmars</i> | |
| Manipulability Optimization for Trajectory Generation | 2017 |
| <i>Luis Guilamo, James Kuffner, Koichi Nishiwaki, Satoshi Kagami</i> | |
| Searching Methodology with Goal State Optimization Considering Computational Resource Constraints - Application of the Method to the Task of Rearranging Several Movable Objects | 2023 |
| <i>Jun Ota</i> | |
| Reactive Rearrangement of Parts under Sensor Inaccuracy: Particle Filter Approach ... | 2029 |
| <i>Haluk Bayram, Ayşin Ertüzün, H. Işıl Bozma</i> | |

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| <i>Gideon Kowadlo, David Rawlinson, R. Andy Russell, Ray Jarvis</i> | |
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| <i>Adam J. Rutkowski, Mark A. Willis, Roger D. Quinn</i> | |
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| An Ecological Approach to Odour Recognition in Intelligent Environments | 2066 |
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| <i>Joseph Djugash, Sanjiv Singh, George Kantor, Wei Zhang</i> | |
| Towards the Deployment of a Mobile Robot Network with End-To-End Performance Guarantees | 2085 |
| <i>Mong-ying A. Hsieh, Anthony Cowley, Vijay Kumar, Camillo J. Taylor</i> | |
| Data Muling over Underwater Wireless Sensor Networks using an Autonomous Underwater Vehicle | 2091 |
| <i>Matthew Dunbabin, Peter Corke, Iuliu Vasilescu, Daniela Rus</i> | |
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