# Maria Chiara Carrozza

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 137 papers | 8,832 citations | 44069 48 h-index | 46799 89 g-index |
| 145 all docs | 145 docs citations | 145 times ranked | 6932 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Predicting SARS-CoV-2 infection duration at hospital admission:a deep learning solution. Medical and Biological Engineering and Computing, 2022, 60, 459-470. | 2.8 | 2 |
| 2 | A meta-learning algorithm for respiratory flow prediction from FBG-based wearables in unrestrained conditions. Artificial Intelligence in Medicine, 2022, 130, 102328. | 6.5 | 7 |
| 3 | Poststroke shoulder pain in subacute patients and its correlation with upper limb recovery after robotic or conventional treatment: A secondary analysis of a multicenter randomized controlled trial. International Journal of Stroke, 2021, 16, 396-405. | 5.9 | 7 |
| 4 | Age is negatively associated with upper limb recovery after conventional but not robotic rehabilitation in patients with stroke: a secondary analysis of a randomized-controlled trial. Journal of Neurology, 2021, 268, 474-483. | 3.6 | 4 |
| 5 | Endoscopic Tactile Capsule for Non-Polypoid Colorectal Tumour Detection. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 64-73. | 3.2 | 5 |
| 6 | Influence of Cognitive Impairment on the Recovery of Subjects with Subacute Stroke Undergoing Upper Limb Robotic Rehabilitation. Brain Sciences, 2021, 11, 587. | 2.3 | 12 |
| 7 | Predictors of Function, Activity, and Participation of Stroke Patients Undergoing Intensive Rehabilitation: A Multicenter Prospective Observational Study Protocol. Frontiers in Neurology, 2021, 12, 632672. | 2.4 | 15 |
| 8 | Respiratory rate monitoring of video terminal operators based on fiber optic technology. , 2021, , . | | 1 |
| 9 | A Wearable System Based on Flexible Sensors for Unobtrusive Respiratory Monitoring in Occupational Settings. IEEE Sensors Journal, 2021, 21, 14369-14378. | 4.7 | 32 |
| 10 | Data-driven prediction of decannulation probability and timing in patients with severe acquired brain injury. Computer Methods and Programs in Biomedicine, 2021, 209, 106345. | 4.7 | 12 |
| 11 | Feasibility of subacute rehabilitation for mechanically ventilated patients with COVID-19 disease: a retrospective case series. International Journal of Rehabilitation Research, 2021, 44, 77-81. | 1.3 | 16 |
| 12 | Cognitive reserve as a useful variable to address robotic or conventional upper limb rehabilitation treatment after stroke: a multicentre study of the Fondazione Don Carlo Gnocchi. European Journal of Neurology, 2020, 27, 392-398. | 3.3 | 18 |
| 13 | Upper Limb Robotic Rehabilitation After Stroke: A Multicenter, Randomized Clinical Trial. Journal of Neurologic Physical Therapy, 2020, 44, 3-14. | 1.4 | 73 |
| 14 | Tactile sensing with gesture-controlled collaborative robot. , 2020, , . | | 3 |
| 15 | Feasibility and Efficacy of the Pulmonary Rehabilitation Program in a Rehabilitation Center. Journal of Cardiopulmonary Rehabilitation and Prevention, 2020, 40, 205-208. | 2.1 | 27 |
| 16 | Design and Experimental Characterization of a Shoulder-Elbow Exoskeleton With Compliant Joints for Post-Stroke Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1485-1496. | 5.8 | 69 |
| 17 | Identification of Slippage on Naturalistic Surfaces via Wavelet Transform of Tactile Signals. IEEE Sensors Journal, 2019, 19, 1260-1268. | 4.7 | 8 |
| 18 | On the Way to Robotics. Biosystems and Biorobotics, 2019, , 13-26. | 0.3 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Our Friend the Robot. Biosystems and Biorobotics, 2019, , 41-52. | 0.3 | 1 |
| 20 | Design and validation of a miniaturized SEA transmission system. Mechatronics, 2018, 49, 149-156. | 3.3 | 11 |
| 21 | Haptic-assistive technologies for audition and vision sensory disabilities. Disability and Rehabilitation: Assistive Technology, 2018, 13, 394-421. | 2.2 | 46 |
| 22 | Neuromorphic Artificial Sense of Touch: Bridging Robotics and Neuroscience. Springer Proceedings in Advanced Robotics, 2018, , 617-630. | 1.3 | 6 |
| 23 | Neuromorphic Vibrotactile Stimulation of Fingertips for Encoding Object Stiffness in Telepresence Sensory Substitution and Augmentation Applications. Sensors, 2018, 18, 261. | 3.8 | 18 |
| 24 | Robotic endoscopic capsule for closed-loop force-based control and safety strategies. , 2017, , . | | 3 |
| 25 | Phase-II Clinical Validation of a Powered Exoskeleton for the Treatment of Elbow Spasticity. Frontiers in Neuroscience, 2017, 11, 261. | 2.8 | 12 |
| 26 | Slippage Detection with Piezoresistive Tactile Sensors. Sensors, 2017, 17, 1844. | 3.8 | 38 |
| 27 | Encapsulation of Piezoelectric Transducers for Sensory Augmentation and Substitution with Wearable Haptic Devices. Micromachines, 2017, 8, 270. | 2.9 | 23 |
| 28 | Functional Design of a Powered Elbow Orthosis Toward its Clinical Employment. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1880-1891. | 5.8 | 33 |
| 29 | Intraneural stimulation elicits discrimination of textural features by artificial fingertip in intact and amputee humans. ELife, 2016, 5, e09148. | 6.0 | 286 |
| 30 | Relevance of Series-Elastic actuation in rehabilitation and assistance robotic: Two cases of study. , 2015, , . | | 3 |
| 31 | Neuro-robotics Paradigm for Intelligent Assistive Technologies. Springer Tracts in Advanced Robotics, 2015, , 1-40. | 0.4 | 4 |
| 32 | A Mechatronic System for Robot-Mediated Hand Telerehabilitation. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1753-1764. | 5.8 | 56 |
| 33 | Providing Time-Discrete Gait Information by Wearable Feedback Apparatus for Lower-Limb Amputees: Usability and Functional Validation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 250-257. | 4.9 | 74 |
| 34 | Bioinspired Fingertip for Anthropomorphic Robotic Hands. Applied Bionics and Biomechanics, 2014, 11, 25-38. | 1.1 | 19 |
| 35 | Distinct neural patterns enable grasp types decoding in monkey dorsal premotor cortex. Journal of Neural Engineering, 2014, 11, 066011. | 3.5 | 16 |
| 36 | Restoring Natural Sensory Feedback in Real-Time Bidirectional Hand Prostheses. Science Translational Medicine, 2014, 6, 222ra19. | 12.4 | 805 |

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| 37 | Improving Domiciliary Robotic Services by Integrating the ASTRO Robot in an AmI Infrastructure. Springer Tracts in Advanced Robotics, 2014, , 267-282. | 0.4 | 10 |
| 38 | Design of Artificial Hands: A Review. Springer Tracts in Advanced Robotics, 2014, , 219-246. | 0.4 | 86 |
| 39 | Self-Alignment Mechanisms for Assistive Wearable Robots: A Kinetostatic Compatibility Method. IEEE Transactions on Robotics, 2013, 29, 236-250. | 10.3 | 116 |
| 40 | On the design, development and experimentation of the ASTRO assistive robot integrated in smart environments. , 2013, , . | | 33 |
| 41 | Automated detection of gait initiation and termination using wearable sensors. Medical Engineering and Physics, 2013, 35, 1713-1720. | 1.7 | 92 |
| 42 | NEUROExos: A Powered Elbow Exoskeleton for Physical Rehabilitation. IEEE Transactions on Robotics, 2013, 29, 220-235. | 10.3 | 225 |
| 43 | Preliminary evaluation of SensHand V1 in assessing motor skills performance in Parkinson disease. , 2013, 2013, 6650466. | | 22 |
| 44 | Real-Time Estimate of Velocity and Acceleration of Quasi-Periodic Signals Using Adaptive Oscillators. IEEE Transactions on Robotics, 2013, 29, 783-791. | 10.3 | 56 |
| 45 | Powered Hip Exoskeletons Can Reduce the User's Hip and Ankle Muscle Activations During Walking. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 938-948. | 4.9 | 169 |
| 46 | A Flexible Sensor Technology for the Distributed Measurement of Interaction Pressure. Sensors, 2013, 13, 1021-1045. | 3.8 | 75 |
| 47 | Development of an Experimental Set-Up for Providing Lower-Limb Amputees with an Augmenting Feedback. Biosystems and Biorobotics, 2013, , 321-325. | 0.3 | 6 |
| 48 | Transfer of tactile input from an artificial hand to the forearm: experiments in amputees and able-bodied volunteers. Disability and Rehabilitation: Assistive Technology, 2013, 8, 249-254. | 2.2 | 39 |
| 49 | Effects of proximal and distal robot-assisted upper limb rehabilitation on chronic stroke recovery. NeuroRehabilitation, 2013, 33, 33-39. | 1.3 | 37 |
| 50 | Upper Limb Robot-Assisted Therapy in Chronic and Subacute Stroke Patients. American Journal of Physical Medicine and Rehabilitation, 2013, 92, e26-e37. | 1.4 | 38 |
| 51 | Synthetic and Bio-Artificial Tactile Sensing: A Review. Sensors, 2013, 13, 1435-1466. | 3.8 | 124 |
| 52 | NEUROExos: A powered elbow orthosis for post-stroke early neurorehabilitation. , 2013, 2013, 342-5. | | 21 |
| 53 | Kinematics and design of a portable and wearable exoskeleton for hand rehabilitation. , 2013, 2013, 6650414. | | 45 |
| 54 | Effects of upper limb robot-assisted therapy on motor recovery of subacute stroke patients: A kinematic approach. , 2013, 2013, 6650503. | | 5 |

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|---|---|---|---|
| 55 | Controlling Assistive Machines in Paralysis Using Brain Waves and Other Biosignals. Advances in Human-Computer Interaction, 2013, 2013, 1-9. | 2.8 | 17 |
| 56 | Soft-neuromorphic artificial touch for applications in neuro-robotics. , 2012, , . | | 24 |
| 57 | Influence of the skin thickness on tactile shape discrimination. , 2012, , . | | 2 |
| 58 | Ambient Assisted Living and ageing: Preliminary results of RITA project. , 2012, 2012, 5823-6. | | 16 |
| 59 | On the design of ergonomic wearable robotic devices for motion assistance and rehabilitation. , 2012, 2012, 6124-7. | | 26 |
| 60 | Learning tactile skills through curious exploration. Frontiers in Neurorobotics, 2012, 6, 6. | 2.8 | 41 |
| 61 | Early recognition of gait initiation and termination using wearable sensors. , 2012, , . | | 5 |
| 62 | Real-time estimate of period derivatives using adaptive oscillators: Application to impedance-based walking assistance. , 2012, , . | | 14 |
| 63 | Real-time myoelectric control of a multi-fingered hand prosthesis using principal components analysis. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 40. | 4.6 | 88 |
| 64 | Mechatronic Design and Characterization of the Index Finger Module of a Hand Exoskeleton for Post-Stroke Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2012, 17, 884-894. | 5.8 | 208 |
| 65 | A Miniature Vibrotactile Sensory Substitution Device for Multifingered Hand Prosthetics. IEEE Transactions on Biomedical Engineering, 2012, 59, 400-408. | 4.2 | 127 |
| 66 | Intention-Based EMG Control for Powered Exoskeletons. IEEE Transactions on Biomedical Engineering, 2012, 59, 2180-2190. | 4.2 | 312 |
| 67 | Oscillator-based walking assistance: A model-free approach. , 2011, 2011, 5975352. | | 34 |
| 68 | NEUROExos: A variable impedance powered elbow exoskeleton. , 2011, , . | | 40 |
| 69 | Sensing Pressure Distribution on a Lower-Limb Exoskeleton Physical Human-Machine Interface. Sensors, 2011, 11, 207-227. | 3.8 | 96 |
| 70 | Roughness Encoding for Discrimination of Surfaces in Artificial Active-Touch. IEEE Transactions on Robotics, 2011, 27, 522-533. | 10.3 | 125 |
| 71 | Measuring humanâ€“robot interaction on wearable robots: A distributed approach. Mechatronics, 2011, 21, 1123-1131. | 3.3 | 64 |
| 72 | A Novel Method for Assessing Sense of Body Ownership Using Electroencephalography. IEEE Transactions on Biomedical Engineering, 2011, 58, 12-15. | 4.2 | 6 |

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| 73 | Humanâ€“Robot Synchrony: Flexible Assistance Using Adaptive Oscillators. IEEE Transactions on Biomedical Engineering, 2011, 58, 1001-1012. | 4.2 | 129 |
| 74 | Online Myoelectric Control of a Dexterous Hand Prosthesis by Transradial Amputees. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2011, 19, 260-270. | 4.9 | 201 |
| 75 | A robotic model to investigate human motor control. Biological Cybernetics, 2011, 105, 1-19. | 1.3 | 12 |
| 76 | A mechatronic platform for human touch studies. Mechatronics, 2011, 21, 604-613. | 3.3 | 26 |
| 77 | Oscillator-based assistance of cyclical movements: model-based and model-free approaches. Medical and Biological Engineering and Computing, 2011, 49, 1173-1185. | 2.8 | 159 |
| 78 | The SmartHand transradial prosthesis. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 29. | 4.6 | 209 |
| 79 | A capacitive tactile sensor array for surface texture discrimination. Microelectronic Engineering, 2011, 88, 1811-1813. | 2.4 | 101 |
| 80 | Development of a bioinspired MEMS based capacitive tactile sensor for a robotic finger. Sensors and Actuators A: Physical, 2011, 165, 221-229. | 4.1 | 87 |
| 81 | Decoding of individuated finger movements using surface EMG and input optimization applying a genetic algorithm. , 2011, 2011, 1608-11. | | 14 |
| 82 | Vibrotactile sensory substitution in multi-fingered hand prostheses: Evaluation studies. , 2011, 2011, 5975477. | | 19 |
| 83 | Influence of the weight actions of the hand prosthesis on the performance of pattern recognition based myoelectric control: Preliminary study. , 2011, 2011, 1620-3. | | 20 |
| 84 | Roughness Encoding in Human and Biomimetic Artificial Touch: Spatiotemporal Frequency Modulation and Structural Anisotropy of Fingerprints. Sensors, 2011, 11, 5596-5615. | 3.8 | 46 |
| 85 | Upper limb spasticity reduction following active training: A robot-mediated study in patients with chronic hemiparesis. Journal of Rehabilitation Medicine, 2010, 42, 279-281. | 1.1 | 33 |
| 86 | Electromagnetic wobble micromotor for microrobots actuation. Sensors and Actuators A: Physical, 2010, 161, 234-244. | 4.1 | 13 |
| 87 | Miniaturized non-back-drivable mechanism for robotic applications. Mechanism and Machine Theory, 2010, 45, 1395-1406. | 4.5 | 74 |
| 88 | Modification of Pointing Performance in Altered Gravitational Environments. Microgravity Science and Technology, 2010, 22, 123-128. | 1.4 | 1 |
| 89 | A sensorless torque control for Antagonistic Driven Compliant Joints. Mechatronics, 2010, 20, 355-367. | 3.3 | 30 |
| 90 | Principal components analysis based control of a multi-dof underactuated prosthetic hand. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 16. | 4.6 | 105 |

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| 91 | Objectives, criteria and methods for the design of the SmartHand transradial prosthesis. Robotica, 2010, 28, 919-927. | 1.9 | 119 |
| 92 | Adaptive oscillators with human-in-the-loop: Proof of concept for assistance and rehabilitation. , 2010, , . | | 43 |
| 93 | Bio-inspired mechanical design of a tendon-driven dexterous prosthetic hand. , 2010, 2010, 499-502. | | 24 |
| 94 | Title is missing!. Journal of Medical and Biological Engineering, 2010, 30, 399. | 1.8 | 42 |
| 95 | Artificial Roughness Encoding with a Bio-inspired MEMS-based Tactile Sensor Array. Sensors, 2009, 9, 3161-3183. | 3.8 | 58 |
| 96 | Development of a Biomimetic MEMS based Capacitive Tactile Sensor. Procedia Chemistry, 2009, 1, 124-127. | 0.7 | 10 |
| 97 | Towards Humanlike Social Touch for Sociable Robotics andÂProsthetics: Comparisons onÂtheÂCompliance, Conformance and Hysteresis of Synthetic and Human Fingertip Skins. International Journal of Social Robotics, 2009, 1, 29-40. | 4.6 | 53 |
| 98 | The neuro-robotics paradigm: NEURARM, NEUROExos, HANDEXOS. , 2009, 2009, 2430-3. | | 23 |
| 99 | A biomimetic MEMS-based tactile sensor array with fingerprints integrated in a robotic fingertip for artificial roughness encoding. , 2009, , . | | 20 |
| 100 | A first step toward a pervasive and smart ZigBee sensor system for assistance and rehabilitation. , 2009, , . | | 12 |
| 101 | A Novel Concept for a Prosthetic Hand With a Bidirectional Interface: A Feasibility Study. IEEE Transactions on Biomedical Engineering, 2009, 56, 2739-2743. | 4.2 | 44 |
| 102 | A bio-inspired predictive sensory-motor coordination scheme forÂrobot reaching and preshaping. Autonomous Robots, 2008, 25, 85-101. | 4.8 | 22 |
| 103 | On the Use of Longitudinal Intrafascicular Peripheral Interfaces for the Control of Cybernetic Hand Prostheses in Amputees. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 453-472. | 4.9 | 106 |
| 104 | Bio-inspired sensorization of a biomechatronic robot hand for the grasp-and-lift task. Brain Research Bulletin, 2008, 75, 785-795. | 3.0 | 90 |
| 105 | Development and Experimental Analysis of a Soft Compliant Tactile Microsensor for Anthropomorphic Artificial Hand. IEEE/ASME Transactions on Mechatronics, 2008, 13, 158-168. | 5.8 | 98 |
| 106 | Design and Development of a Novel Robotic Platform for Neuro-Robotics Applications: the NEURobotics ARM (NEURARM). Advanced Robotics, 2008, 22, 3-37. | 1.8 | 11 |
| 107 | Characterization of the NEURARM bio-inspired joint position and stiffness open loop controller. , 2008, , . | | 15 |
| 108 | Development of an innovative and compliant robotic wrist. , 2008, , . | | 1 |

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| 109 | On the Shared Control of an EMG-Controlled Prosthetic Hand: Analysis of Userâ€“Prosthesis Interaction. IEEE Transactions on Robotics, 2008, 24, 170-184. | 10.3 | 409 |
| 110 | RobotCub implementation of real-time least-square fitting of ellipses. , 2008, , . | | 5 |
| 111 | Assessing Mechanisms of Recovery During Robot-Aided Neurorehabilitation of the Upper Limb. Neurorehabilitation and Neural Repair, 2008, 22, 50-63. | 2.9 | 136 |
| 112 | The NEURARM: towards a Platform for joint Neuroscience Experiments on Human Motion Control Theories. , 2007, , . | | 10 |
| 113 | DESIGN AND DEVELOPMENT OF FIVE-FINGERED HANDS FOR A HUMANOID EMOTION EXPRESSION ROBOT. International Journal of Humanoid Robotics, 2007, 04, 181-206. | 1.1 | 22 |
| 114 | iCub: the design and realization of an open humanoid platform for cognitive and neuroscience research. Advanced Robotics, 2007, 21, 1151-1175. | 1.8 | 234 |
| 115 | Assistive Technology: a New Approach to Evaluation. , 2007, , . | | 9 |
| 116 | A Wearable Biomechatronic Interface for Controlling Robots with Voluntary Foot Movements. IEEE/ASME Transactions on Mechatronics, 2007, 12, 1-11. | 5.8 | 58 |
| 117 | Biomechatronic Design and Control of an Anthropomorphic Artificial Hand for Prosthetic and Robotic Applications. IEEE/ASME Transactions on Mechatronics, 2007, 12, 418-429. | 5.8 | 287 |
| 118 | Investigation on calibration methods for multi-axis, linear and redundant force sensors. Measurement Science and Technology, 2007, 18, 623-631. | 2.6 | 45 |
| 119 | Polymer sensorised microgrippers using SMA actuation. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , . | 0.0 | 14 |
| 120 | Guest Editorial Special Issue on Rehabilitation Robotics: From Bench to Bedside to Community Care. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 325-326. | 4.9 | 3 |
| 121 | The Uncanny Valley and the Search for Human Skin-Like Materials for a Prosthetic Fingertip. , 2006, , . | | 19 |
| 122 | Design and fabrication of an electrostatically driven microgripper for blood vessel manipulation. Microelectronic Engineering, 2006, 83, 1651-1654. | 2.4 | 50 |
| 123 | Design of a cybernetic hand for perception and action. Biological Cybernetics, 2006, 95, 629-644. | 1.3 | 287 |
| 124 | Biomechanical Characterization of Needle Piercing Into Peripheral Nervous Tissue. IEEE Transactions on Biomedical Engineering, 2006, 53, 2373-2386. | 4.2 | 21 |
| 125 | Development of a Bioinstrumentation System in the Interaction between a Human and a Robot. , 2006, , . | | 29 |
| 126 | Mechanical Design of Emotion Expression Humanoid Robot WE-4RII. , 2006, , 255-262. | | 20 |

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| 127 | Design and fabrication of a hybrid silicon three-axial force sensor for biomechanical applications. Sensors and Actuators A: Physical, 2005, 120, 370-382. | 4.1 | 168 |
| 128 | Robotics as a future and emerging technology biomimetics, cybernetics, and neuro-robotics in european projects. IEEE Robotics and Automation Magazine, 2005, 12, 29-45. | 2.0 | 57 |
| 129 | On the Development of a Biomechatronic System to Record Tendon Sliding Movements. IEEE Transactions on Biomedical Engineering, 2005, 52, 1110-1119. | 4.2 | 9 |
| 130 | A Simple Robotic System for Neurorehabilitation. Autonomous Robots, 2005, 19, 271-284. | 4.8 | 67 |
| 131 | Guest Editorial: Special Issue on Rehabilitation Robotics. Autonomous Robots, 2003, 15, 5-6. | 4.8 | 2 |
| 132 | A SMA-actuated miniature pressure regulator for a miniature robot for colonoscopy. Sensors and Actuators A: Physical, 2003, 105, 119-131. | 4.1 | 31 |
| 133 | Micromechatronics in surgery. Transactions of the Institute of Measurement and Control, 2003, 25, 309-327. | 1.7 | 24 |
| 134 | Analysis and development of locomotion devices for the gastrointestinal tract. IEEE Transactions on Biomedical Engineering, 2002, 49, 613-616. | 4.2 | 186 |
| 135 | Towards a force-controlled microgripper for assembling biomedical microdevices. Journal of Micromechanics and Microengineering, 2000, 10, 271-276. | 2.6 | 124 |
| 136 | Micro-systems in biomedical applications. Journal of Micromechanics and Microengineering, 2000, 10, 235-244. | 2.6 | 176 |
| 137 | Development and in Vitro Testing of a Miniature Robotic System for Computer-Assisted Colonoscopy. Computer Aided Surgery, 1999, 4, 1-14. | 1.8 | 38 |