Ranjan Mukherjee

List of Publications by Citations

80 papers	951 citations	18 h-index	28 g-index
86 ext. papers	1,183 ext. citations	3.4 avg, IF	4.59 L-index

#	Paper	IF	Citations
80	Unified Impedance and Admittance Control **2010**,		122
79	Motion Planning for a Spherical Mobile Robot: Revisiting the Classical Ball-Plate Problem. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2002**, 124, 502-511	1.6	74
78	Swing-Up Control of the Pendubot: An Impulse-Momentum Approach. *IEEE Transactions on Robotics*, **2009**, 25, 975-982	6.5	59
77	Output feedback stabilization of inverted pendulum on a cart in the presence of uncertainties. *Automatica*, **2015**, 54, 146-157	5.7	57
76	A Hybrid System Framework for Unified Impedance and Admittance Control. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2015**, 78, 359-375	2.9	48
75	Exponential stabilization of the rolling sphere. *Automatica*, **2004**, 40, 1877-1889	5.7	35
74	Optimally switched linear systems. *Automatica*, **2008**, 44, 1437-1441	5.7	34
73	Adaptive Compensation of Sensor Runout for Magnetic Bearings With Uncertain Parameters: Theory and Experiments. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2001**, 123, 211-218	1.6	28
72	Design, Fabrication and Control of Spherobot: A Spherical Mobile Robot. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2012**, 67, 117-131	2.9	25
71	Dynamics of pipes conveying fluid with non-uniform turbulent and laminar velocity profiles. *Journal of Fluids and Structures*, **2010**, 26, 804-813	3.1	25
70	Reconfiguration of a Rolling Sphere: A Problem in Evolute-Involute Geometry. *Journal of Applied Mechanics, Transactions ASME*, **2006**, 73, 590-597	2.7	24
69	Under-Actuated Kinematic Structures for Miniature Climbing Robots. *Journal of Mechanical Design, Transactions of the ASME*, **2003**, 125, 281-291	3	24
68	Enlarging the Region of Attraction of Equilibria of Underactuated Systems Using Impulsive Inputs. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 334-340	4.8	21
67	Flutter instability of a fluid-conveying fluid-immersed pipe affixed to a rigid body. *Journal of Fluids and Structures*, **2011**, 27, 1086-1096	3.1	21
66	MEMS implementation of axial and follower end forces. *Journal of Sound and Vibration*, **2005**, 286, 637-644	3.9	21
65	. *IEEE/ASME Transactions on Mechatronics*, **2014**, 19, 1469-1474	5.5	20
64	Comparing the mathematical models of Lighthill to the performance of a biomimetic fish. *Bioinspiration and Biomimetics*, **2008**, 3, 016002	2.6	20

63	Active Vibration Control of a Flexible Beam Using a Buckling-Type End Force. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2006**, 128, 278-286	1.6	19
62	Active Synthetic-Wheel Biped With Torso. *IEEE Transactions on Robotics*, **2010**, 26, 816-826	6.5	17
61	Vibration Suppression in Structures Using Cable Actuators. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2010**, 132,	1.6	14
60	Steady-State and Transient Analysis of a Steam-Reformer Based Solid Oxide Fuel Cell System. *Journal of Fuel Cell Science and Technology*, **2010**, 7,		13
59	. *IEEE Transactions on Robotics*, **2019**, 35, 618-632	6.5	12
58	Modeling, Simulation, and Performance of a Synergistically Propelled Ichthyoid. *IEEE/ASME Transactions on Mechatronics*, **2012**, 17, 36-45	5.5	12
57	Shared-Sensing and Control Using Reversible Transducers. *IEEE Transactions on Control Systems Technology*, **2009**, 17, 242-248	4.8	10
56	Vibration of a string wrapping and unwrapping around an obstacle. *Journal of Sound and Vibration*, **2010**, 329, 2707-2715	3.9	10
55	Impulsive Dynamics and Control of the Inertia-Wheel Pendulum. *IEEE Robotics and Automation Letters*, **2018**, 3, 3208-3215	4.2	10
54	Body-machine interface for control of a screen cursor for a child with congenital absence of upper and lower limbs: a case report. *Journal of NeuroEngineering and Rehabilitation*, **2016**, 13, 34	5.3	8
53	Swing-up control of the acrobot: An impulse-momentum approach **2011**,		8
52	Design considerations in the development of a spherical mobile robot **2001**, 4364, 61		8
51	An algorithm for enlarging the region of attraction using trajectory reversing **2017**,		7
50	Asymmetric post-flutter oscillations of a cantilever due to a dynamic follower force. *Journal of Sound and Vibration*, **2015**, 340, 253-266	3.9	7
49	Modeling and simulation of the dynamics of a submersible propelled by a fluttering fluid-conveying tail. *Journal of Fluids and Structures*, **2013**, 36, 83-110	3.1	7
48	Apex height control of a two-mass hopping robot **2013**,		7
47	Energy Dissipation in Dynamical Systems Through Sequential Application and Removal of Constraints. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2009**, 131,	1.6	7
46	Sample-and-Hold Inputs for Minimum-Phase Behavior of Nonminimum-Phase Systems. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 2103-2111	4.8	6

45	Modal disparity and its experimental verification. *Journal of Sound and Vibration*, **2008**, 311, 1465-1475	3.9	6
44	Enhancing Controllability and Observability in Underactuated and Undersensed Systems Through Switching: Application to Vibration Control. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2004**, 126, 790-799	1.6	6
43	Apex height control of a two-mass robot hopping on a rigid foundation. *Mechanism and Machine Theory*, **2016**, 105, 44-57	4	6
42	Age-dependent differences in learning to control a robot arm using a body-machine interface. *Scientific Reports*, **2019**, 9, 1960	4.9	6
41	Vibration suppression of a string through cyclic application and removal of constraints. *Journal of Sound and Vibration*, **2012**, 331, 4395-4405	3.9	5
40	Vibration control of a string using a scabbard-like actuator. *Journal of Sound and Vibration*, **2011**, 330, 2721-2732	3.9	5
39	Efficient swing-up of the acrobot using continuous torque and impulsive braking **2011**,		5
38	Feedback control strategies for a nonholonomic mobile robot using a nonlinear oscillator. *Journal of Field Robotics*, **1999**, 16, 237-248		5
37	Orbital Stabilization of Underactuated Systems using Virtual Holonomic Constraints and Impulse Controlled Poincar Maps. *Systems and Control Letters*, **2020**, 146, 104813	2.4	5
36	Stabilization of Homoclinic Orbits of Two Degree-of-Freedom Underactuated Systems **2019**,		5
35	Divergence and flutter instabilities of a cantilever beam subjected to a terminal dynamic moment. *Journal of Sound and Vibration*, **2019**, 455, 402-412	3.9	4
34	Performance recovery under output feedback for input nonaffine nonlinear systems **2012**,		4
33	Class of Rotations Induced by Spherical Polygons. *Journal of Guidance, Control, and Dynamics*, **2000**, 23, 746-749	2.1	4
32	Effect of intermediate support on critical stability of a cantilever with non-conservative loading: Some new results. *Journal of Sound and Vibration*, **2020**, 485, 115564	3.9	4
31	Non-prehensile manipulation of a devil-stick: planar symmetric juggling using impulsive forces. *Nonlinear Dynamics*, **2021**, 103, 2409-2420	5	4
30	Vibration Suppression in a Simple Tension-Aligned Array Structure. *AIAA Journal*, **2014**, 52, 504-515	2.1	3
29	Enlarging the Region of Attraction of equilibria of underactuated systems using Sum of Squares and Impulse Manifold Method **2017**,		3
28	Enlarging the region of attraction for underactuated systems using impulsive inputs **2013**,		3

27	Pushing and Steering Wheelchairs using a Holonomic Mobile Robot with a Single Arm **2006**,		3
26	Control of Planar Space Robots Using Smooth and Time-Invariant Feedback.. *Journal of the Robotics Society of Japan*, **1998**, 16, 399-406	0.1	3
25	Kinetic to Potential Energy Transformation Using a Spring as an Intermediary: Application to the Pole Vault Problem. *Journal of Applied Mechanics, Transactions ASME*, **2019**, 86,	2.7	2
24	Underwater shear-based grooming of marine biofouling using a non-contact Bernoulli pad device. *Biofouling*, **2020**, 36, 951-964	3.3	2
23	A five degree-of-freedom body-machine interface for children with severe motor impairments **2017** ,		2
22	Swing-up of the inertia wheel pendulum using impulsive torques **2017**,		2
21	Apex height control of a four-link hopping robot **2013**,		2
20	Balance maintenance of the Synthetic-Wheel Biped in the presence of impulsive disturbances **2011**,		2
19	Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs. *PLoS ONE*, **2020**, 15, e0226052	3.7	2
18	Power Scaling of Radial Outflow: Bernoulli Pads in Equilibrium. *Journal of Fluids Engineering, Transactions of the ASME*, **2019**, 141,	2.1	1
17	Variable Structure Control of a Mass Spring Damper Subjected to a Unilateral Constraint: Application to Radio-Frequency MEMS Switches. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2018**, 140,	1.6	1
16	Two-mass robot hopping on an elastic foundation: Apex height control **2016**,		1
15	An impulse-momentum approach to swing-up control of the pendubot **2008**,		1
14	Energy-Based Orbital Stabilization of Underactuated Systems Using Impulse Controlled Poincar Maps **2021**,		1
13	Performance improvement demonstration of an NMP system using sample and hold inputs. *International Journal of Dynamics and Control*, **2021**, 9, 109-120	1.7	1
12	**2022**, 6, 1304-1309		1
11	Stabilization of energy level sets of underactuated mechanical systems exploiting impulsive braking. *Nonlinear Dynamics*, **2021**, 106, 279-293	5	0
10	Authors reply to comments on Optimally switched linear systems *Automatica*, **2009**, 45, 1591	5.7	

9 Ilene J. Busch-Vishniac, Electromechanical Sensors and Actuators, Springer, New York, ISBN: 0-387-98495-X ($99.00; 341pp).. *Automatica*, **2005**, 41, 1663-1665 5.7

8 A Simple Derivation of the Gauss-Bonet Theorem. *Journal of the Astronautical Sciences*, **2005**, 53, 185-191 1.1

7 Force–displacement characteristics of circular-shaped massless elastica. *Acta Mechanica*, **2020**, 231, 4585-4602 2.6

6 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052

5 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052

4 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052

3 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052

2 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052

1 Controlling a robotic arm for functional tasks using a wireless head-joystick: A case study of a child with congenital absence of upper and lower limbs **2020**, 15, e0226052