

# Mikhail Svinin

## List of Publications by Year in descending order

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87  
papers

650  
citations

840776

11  
h-index

839539

18  
g-index

89  
all docs

89  
docs citations

89  
times ranked

316  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Motion Planning Strategy for a Spherical Rolling Robot Driven by Two Internal Rotors. IEEE Transactions on Robotics, 2014, 30, 993-1002.	10.3	43
2	Optimal control approach for establishing wMelPop Wolbachia infection among wild Aedes aegypti populations. Journal of Mathematical Biology, 2018, 76, 1907-1950.	1.9	38
3	Motion Planning Algorithms for a Rolling Sphere With Limited Contact Area. IEEE Transactions on Robotics, 2008, 24, 612-625.	10.3	32
4	Automatic tool for Gazebo world construction: from a grayscale image to a 3D solid model. , 2020, , .		31
5	On the dynamic model and motion planning for a spherical rolling robot actuated by orthogonal internal rotors. Regular and Chaotic Dynamics, 2013, 18, 126-143.	0.8	29
6	Development and Implementation of Spline-based Path Planning Algorithm in ROS/Gazebo Environment. SPIIRAS Proceedings, 2019, 18, 57-84.	0.8	28
7	Optimal control of dengue epidemic outbreaks under limited resources. Studies in Applied Mathematics, 2020, 144, 185-212.	2.4	20
8	Comparison of ROS-Based Monocular Visual SLAM Methods: DSO, LDSO, ORB-SLAM2 and DynaSLAM. Lecture Notes in Computer Science, 2020, , 222-233.	1.3	20
9	Artificial Intelligence Based Framework for Robotic Search and Rescue Operations Conducted Jointly by International Teams. Smart Innovation, Systems and Technologies, 2020, , 15-26.	0.6	19
10	Dynamic model and motion planning for a pendulum-actuated spherical rolling robot. , 2015, , .		18
11	Dynamics-Based Motion Planning for a Pendulum-Actuated Spherical Rolling Robot. Regular and Chaotic Dynamics, 2018, 23, 372-388.	0.8	18
12	Function Approximation Technique Based Immersion and Invariance Control for Unknown Nonlinear Systems. , 2020, 4, 934-939.		18
13	Modelling a Crawler Robot Using Wheels as Pseudo-Tracks: Model Complexity vs Performance. , 2020, , .		17
14	Embedded ArUco: a novel approach for high precision UAV landing. , 2021, , .		17
15	On the dynamic version of the minimum hand jerk criterion. Journal of Field Robotics, 2005, 22, 661-676.	0.7	15
16	Prediction of closed-chain human arm dynamics in a crank-rotation task. Journal of Biomechanics, 2016, 49, 2684-2693.	2.1	14
17	On the dynamic model and motion planning for a class of spherical rolling robots. , 2012, , .		13
18	Cooperative Multi-Robot Control for Monitoring an Expanding Flood Area. , 2020, , .		13

#	ARTICLE	IF	CITATIONS
19	Adaptive Multi-Agent Coverage Control With Obstacle Avoidance. , 2022, 6, 944-949.		13
20	Design, Modeling, and Motion Analysis of a Novel Fluid Actuated Spherical Rolling Robot. Journal of Mechanisms and Robotics, 2019, 11, .	2.2	12
21	Adaptive trajectory tracking control for the ball-pendulum system with time-varying uncertainties. , 2017, , .		11
22	Motion planning strategies in human control of non-rigid objects with internal degrees of freedom. Human Movement Science, 2019, 63, 209-230.	1.4	10
23	Function Approximation Based Control for Non-Square Systems. SICE Journal of Control Measurement and System Integration, 2018, 11, 477-485.	0.7	9
24	Predictability of Rest-to-Rest Movements in Haptic Environments with 3D Constraints. Journal of Robotics and Mechatronics, 2006, 18, 458-466.	1.0	9
25	Hardware and software video encoding comparison. , 2020, , .		9
26	Real-Time Video Server Implementation for a Mobile Robot. , 2018, , .		8
27	Comparing Fiducial Markers Performance for a Task of a Humanoid Robot Self-calibration of Manipulators: A Pilot Experimental Study. Lecture Notes in Computer Science, 2018, , 249-258.	1.3	8
28	Motion planning for a pendulum-driven rolling robot tracing spherical contact curves. , 2015, , .		7
29	On Motion Planning and Control for Partially Differentially Flat Systems. Robotica, 2021, 39, 718-734.	1.9	7
30	On the motion planning problem for a spherical rolling robot driven by two rotors. , 2012, , .		6
31	Pilot Communication Protocols for Group of Mobile Robots in USAR Scenarios. , 2019, , .		6
32	Function Approximation Technique Based Adaptive Control for Chaos Synchronization between Different Systems with Unknown Dynamics. International Journal of Control, Automation and Systems, 2021, 19, 2611-2621.	2.7	6
33	Motion Planning for Rolling-Based Locomotion. Journal of Robotics and Mechatronics, 2005, 17, 537-545.	1.0	6
34	On the boundary conditions in modeling of human-like reaching movements. , 2008, , .		5
35	Planning of smooth motions for a ball-plate system with limited contact area. , 2008, , .		5
36	An analysis of the motion planning problem for a spherical rolling robot driven by internal rotors. , 2012, , .		5

#	ARTICLE	IF	CITATIONS
37	Motion planning for a hoop-pendulum type of underactuated systems. , 2016, , .		5
38	Inverse dynamics of underactuated planar manipulators without inertial coupling singularities. Multibody System Dynamics, 2021, 52, 407-429.	2.7	5
39	Backstepping trajectory tracking control for a spherical rolling robot. , 2016, , .		4
40	Darboux-frame-based parametrization for a spin-rolling sphere on a plane: A nonlinear transformation of underactuated system to fully-actuated model. Mechanism and Machine Theory, 2021, 164, 104415.	4.5	4
41	Facilitating a preparatory stage of real-world experiments in a humanoid robot assisted English language teaching using Gazebo simulator. , 2020, , .		4
42	Comparative Analysis of Monocular SLAM Algorithms Using TUM and EuRoC Benchmarks. Smart Innovation, Systems and Technologies, 2021, , 343-355.	0.6	4
43	Multi-Robot Control for Adaptive Caging and Tracking of a Flood Area. , 2020, , .		4
44	On the Influence of Arm Inertia and Configuration on Motion Planning of Reaching Movements in Haptic Environments. , 2007, , .		3
45	Modeling of human-like reaching movements in the manipulation of parallel flexible objects. , 2016, , .		3
46	Singularity-Free Inverse Dynamics for Underactuated Systems with a Rotating Mass. , 2020, , .		3
47	Function Approximation Technique Based Control for a Class of Nonholonomic Systems. , 2020, , .		3
48	Optimal release programs for dengue prevention using <i>Aedes aegypti</i> mosquitoes transfected with <i>wMel</i> or <i>wMelPop</i> Wolbachia strains. Mathematical Biosciences and Engineering, 2021, 18, 2952-2990.	1.9	3
49	Prioritizing Tasks Within a Robotic Transportation System for a Smart Hospital Environment. Lecture Notes in Computer Science, 2021, , 182-193.	1.3	3
50	Robust Adaptive Multi-Agent Coverage Control for Flood Monitoring. , 2021, , .		3
51	On Motion Planning for Ball-Plate Systems With Limited Contact Area. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	2
52	On the dynamics and motion planning for a rolling system With variable inertia. , 2007, , .		2
53	Dynamic Model, Haptic Solution, and Human-Inspired Motion Planning for Rolling-Based Manipulation. Journal of Computing and Information Science in Engineering, 2009, 9, .	2.7	2
54	On the percussion center of flexible links. , 2011, , .		2

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55	Optimal short-term policies for protection of single biological species from local extinction. Ecological Modelling, 2013, 263, 273-280.	2.5	2
56	Motion planning of drifting vehicle with friction model considering nonholonomic constraint. , 2015, , .		2
57	Effects of the slope on the motion of spherical RollRoller robot. , 2016, , .		2
58	DCEGen: Dense Clutter Environment Generation Tool for Autonomous 3D Exploration and Coverage Algorithms Testing. Lecture Notes in Computer Science, 2019, , 216-225.	1.3	2
59	A Fluid-Actuated Driving Mechanism for Rolling Robots. , 2019, , .		2
60	Toward Cooperative Multi-robot Control for Detecting and Tracking an Expanding Flood Area. , 2019, , .		2
61	Combining Voronoi Graph and Spline-Based Approaches for a Mobile Robot Path Planning. Lecture Notes in Electrical Engineering, 2020, , 475-496.	0.4	2
62	Visual Data Processing Framework for a Skin-Based Human Detection. Lecture Notes in Computer Science, 2021, , 138-149.	1.3	2
63	A Vision-Based Robust Adaptive Control for Caging a Flood Area via Multiple UAVs. , 2021, , .		2
64	A Motion Estimation Filter for Inertial Measurement Unit With On-Board Ferromagnetic Materials. IEEE Robotics and Automation Letters, 2021, 6, 4939-4946.	5.1	2
65	On the Iterative Steering of a Rolling Robot Actuated by Internal Rotors. Springer Proceedings in Mathematics and Statistics, 2015, , 205-218.	0.2	2
66	Towards Total Coverage in Autonomous Exploration for UGV in 2.5D Dense Clutter Environment. , 2019, , .		2
67	Survivor searching in a dynamically changing flood zone by multiple unmanned aerial vehicles. Artificial Life and Robotics, 0, , 1.	1.2	2
68	Sensors modelling for Servosila Engineer crawler robot in Webots simulator. , 2022, , .		2
69	On the motion planning of human-like reaching movements by a minimum variance model. , 2010, , .		1
70	Simple models in trajectory planning of human-like reaching movements. , 2010, , .		1
71	A mathematical analysis of the minimum variance model of human-like reaching movements. , 2011, , .		1
72	A dynamically realizable reconfiguration strategy for steering a spherical rolling with two internal rotors. , 2013, , .		1

#	ARTICLE	IF	CITATIONS
73	On the geometric phase approach to motion planning for a spherical rolling robot in dynamic formulation. , 2013, , .		1
74	Modeling of tire friction force of vehicle considering nonholonomic constraints. , 2014, , .		1
75	Motion Planning Strategies and Human Performance in the Manipulation of Underactuated Flexible Objects. , 2018, , .		1
76	Motion Planning and Control for a Class of Partially Differentially Flat Systems. , 2019, , .		1
77	LIDAR-based parking spot search algorithm. , 2021, , .		1
78	Mobile application for controlling multiple robots. , 2021, , .		1
79	On the Problems of SLAM Simulation for Mobile Robots in the Arctic Conditions. Lecture Notes in Computer Science, 2020, , 34-44.	1.3	1
80	Testing Procedures Architecture for Establishing a Fiducial Marker Recognition Quality in UAV-based Visual Marker Tracking Task in Gazebo Simulator. Proceedings of International Conference on Artificial Life and Robotics, 2022, 27, 691-694.	0.1	1
81	Gear Wheels based Simulation of Crawlers for Mobile Robot Servosila Engineer. , 2022, , .		1
82	Haptic Solutions and Bio-Mimetically Inspired Motion Planning Strategy for Rolling-Based Locomotion. , 2008, , .		0
83	Motion analysis and feedforward control of a tail-slide vehicle. , 2015, , .		0
84	On the Influence of Hand Dynamics on Motion Planning of Reaching Movements in Haptic Environments. , 0, , .		0
85	Natural Human Movements in Geometrically Constrained Haptic Environments. Lecture Notes in Electrical Engineering, 2018, , 13-19.	0.4	0
86	Function Approximation Technique Based Immersion and Invariance Control for an Underactuated Tower Crane System. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2021, , 530-537.	0.6	0
87	A mathematical analysis of the minimum variance model of human-like reaching movements. , 2011, , .		0