

# Ivan Virgala

## List of Publications by Year in descending order

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68  
papers

456  
citations

840119

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887659

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69  
all docs

69  
docs citations

69  
times ranked

305  
citing authors

#	ARTICLE	IF	CITATIONS
1	Finding the Optimal Pose of 2D LLT Sensors to Improve Object Pose Estimation. <i>Sensors</i> , 2022, 22, 1536.	2.1	1
2	A Non-Anthropomorphic Bipedal Walking Robot with a Vertically Stabilized Base. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 4108.	1.3	4
3	A Portable BVM-based Emergency Mechanical Ventilator. , 2021, , .		6
4	An Adaptive Neuro-Fuzzy Control of Pneumatic Mechanical Ventilator. <i>Actuators</i> , 2021, 10, 51.	1.2	6
5	A snake robot for locomotion in a pipe using trapezium-like travelling wave. <i>Mechanism and Machine Theory</i> , 2021, 158, 104221.	2.7	25
6	Substantiation of Parameters of Friction Elements of Bernoulli Grippers With a Cylindrical Nozzle. <i>International Journal of Manufacturing, Materials, and Mechanical Engineering</i> , 2021, 11, 17-39.	0.3	4
7	Chimney Sweeping Robot Based on a Pneumatic Actuator. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 4872.	1.3	7
8	POWER AND FORCE LIMITING TECHNIQUE AT COLLABORATIVE WORKPLACE. <i>MM Science Journal</i> , 2021, 2021, 4424-4427.	0.2	2
9	Using Virtual Scanning to Find Optimal Configuration of a 3D Scanner Turntable for Scanning of Mechanical Parts. <i>Sensors</i> , 2021, 21, 5343.	2.1	6
10	Design of a Unique Device for Residual Stresses Quantification by the Drilling Method Combining the PhotoStress and Digital Image Correlation. <i>Materials</i> , 2021, 14, 314.	1.3	8
11	Finding Optimal Manipulator Arm Shapes to Avoid Collisions in a Static Environment. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 64.	1.3	7
12	Improved Pose Estimation of Aruco Tags Using a Novel 3D Placement Strategy. <i>Sensors</i> , 2020, 20, 4825.	2.1	25
13	Specific Problems in Measurement of Coefficient of Friction Using Variable Incidence Tribometer. <i>Symmetry</i> , 2020, 12, 1235.	1.1	6
14	Influence of biofuels on production of gaseous emission from diesel engine with regard to air quality. <i>Air Quality, Atmosphere and Health</i> , 2020, 13, 763-772.	1.5	3
15	Investigation of Snake Robot Locomotion Possibilities in a Pipe. <i>Symmetry</i> , 2020, 12, 939.	1.1	19
16	Motion control of nonholonomic robots at low speed. <i>International Journal of Advanced Robotic Systems</i> , 2020, 17, 172988142090255.	1.3	0
17	Verification of the UR5 robot's properties after a crash caused by a fall of a transferred load from a crane. <i>International Journal of Advanced Robotic Systems</i> , 2020, 17, 172988142090420.	1.3	7
18	Case study: Performance analysis and development of robotized screwing application with integrated vision sensing system for automotive industry. <i>International Journal of Advanced Robotic Systems</i> , 2020, 17, 172988142092399.	1.3	25

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19	RECONFIGURABLE WHEEL-LEGGED ROBOT. MM Science Journal, 2020, 2020, 3960-3965.	0.2	0
20	Locomotive, principally kinematic system of snakelike robot mathematical model with variable segment length. , 2020, , .		1
21	Chimney Cleaning and Inspection Robot. Acta Mechanica Slovaca, 2019, 23, 6-9.	0.1	5
22	EXPERIMENTAL VERIFICATION OF OBJECT LEVITATION BY OPTICAL SENSOR. Acta Mechatronica, 2019, 4, 5-10.	0.1	0
23	Modeling and control of two-link snake. International Journal of Advanced Robotic Systems, 2018, 15, 172988141876063.	1.3	4
24	A Novel Approach for a Inverse Kinematics Solution of a Redundant Manipulator. Applied Sciences (Switzerland), 2018, 8, 2229.	1.3	41
25	Influence of pipe geometric deviation on bristled in-pipe mobile robot locomotion. International Journal of Advanced Robotic Systems, 2018, 15, 172988141877580.	1.3	9
26	Design of reconfigurable robot. , 2018, , .		0
27	Snake Robot Locomotion Patterns for Straight and Curved Pipe. Strojnický Casopis, 2018, 68, 91-104.	0.3	4
28	Robotic snakes. Acta Mechanica Slovaca, 2018, 22, 38-43.	0.1	5
29	Modeling of Two-Wheeled Self-Balancing Robot Driven by DC Gearmotors. International Journal of Applied Mechanics and Engineering, 2017, 22, 739-747.	0.3	15
30	A geometric approach to modeling of four- and five-link planar snake-like robot. International Journal of Advanced Robotic Systems, 2016, 13, 172988141666371.	1.3	12
31	An inspection of pipe by snake robot. International Journal of Advanced Robotic Systems, 2016, 13, 172988141666366.	1.3	27
32	Modeling and Simulation of Vertical Position Stability of Quadrocopter. Applied Mechanics and Materials, 2015, 816, 43-48.	0.2	1
33	Friction Force Identification for Machine Locomotion. Applied Mechanics and Materials, 2015, 816, 276-281.	0.2	1
34	Anisotropic Friction Difference Principle of In-Pipe Machine. Applied Mechanics and Materials, 2015, 816, 306-312.	0.2	0
35	New approach of fixation possibilities investigation for snake robot in the pipe. , 2015, , .		6
36	Speed Control of a DC Motor Using PD and PWM Controllers. Solid State Phenomena, 2015, 220-221, 244-250.	0.3	1

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37	Experimental Identification of Linear Actuator Properties. Acta Mechanica Slovaca, 2015, 19, 42-47.	0.1	4
38	The Use of Geometric Mechanics Concept at Kinematic Modeling in Mobile Robotics. Procedia Engineering, 2014, 96, 273-280.	1.2	3
39	Rapid Control Prototyping of Embedded Systems Based on Microcontroller. Procedia Engineering, 2014, 96, 215-220.	1.2	7
40	Inverse Kinematic Model of Humanoid Robot Hand. Applied Mechanics and Materials, 2014, 611, 75-82.	0.2	4
41	Simulation Model of Manipulator for Model Based Design. Applied Mechanics and Materials, 2014, 611, 175-182.	0.2	5
42	Puck Collecting Robot. Applied Mechanics and Materials, 2014, 611, 256-264.	0.2	0
43	Analyzing, Modeling and Simulation of Humanoid Robot Hand Motion. Procedia Engineering, 2014, 96, 489-499.	1.2	12
44	Uncertainty of Dust Mass Concentration Measurement. Applied Mechanics and Materials, 2014, 611, 511-518.	0.2	0
45	Miniature Mobile Bristled In-Pipe Machine. International Journal of Advanced Robotic Systems, 2014, 11, 189.	1.3	11
46	Theoretical Basics of Geometric Mechanics and Differential Geometry. American Journal of Mechanical Engineering, 2014, 2, 178-183.	0.4	1
47	Design of Mobile Inspection Robot. American Journal of Mechanical Engineering, 2014, 2, 219-225.	0.4	0
48	Didactic Tools for Education of Embedded Systems. American Journal of Mechanical Engineering, 2014, 2, 204-208.	0.4	1
49	Motion analysis of snake robot segment. , 2013, , .		4
50	Friction Effect Analysis of a DC Motor. American Journal of Mechanical Engineering, 2013, 1, 1-5.	0.4	47
51	Intelligent in-pipe machine adjustable to inner pipe diameter. , 2012, , .		3
52	Design of Robot Vehicle Undercarriage with Ability to Operate in Broken Terrain. Procedia Engineering, 2012, 48, 650-655.	1.2	5
53	Manipulator End-Effector Position Control. Procedia Engineering, 2012, 48, 684-692.	1.2	5
54	Algorithm for determining static characteristic on electromagnetic actuator for rectilinear locomotion structure of a snake-like robot. , 2012, , .		2

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55	Kinematic analysis of snake-like robot using obstacle aided locomotion. , 2012, , .		3
56	Investigation of the Magnetic Field Influence of Permanent Adjustable Magnets Matrix on the Whole Positioning Mechanism and Levitating Diamagnetic object. Procedia Engineering, 2012, 48, 583-591.	1.2	0
57	Modeling of a snake-like robot rectilinear motion and requirements for its actuators. , 2011, , .		6
58	Simplified model of the snake rectilinear motion. , 2011, , .		6
59	Using of bond graph for mechatronics systems. , 2011, , .		1
60	Dynamic Analysis of the Two-Mass System to Imitate Rectilinear Motion of a Snake. Acta Mechanica Slovaca, 2010, 14, 74-81.	0.1	5
61	Simulation Analysis of Pneumatic Rubber Bellows for Segment of Hyper-Redundant Robotic Mechanism. Applied Mechanics and Materials, 0, 611, 10-21.	0.2	4
62	Snake Robot Movement in the Pipe Using Concertina Locomotion. Applied Mechanics and Materials, 0, 611, 121-129.	0.2	12
63	Embedded Systems via Using Microcontroller. Applied Mechanics and Materials, 0, 816, 248-254.	0.2	4
64	Stepper Motor Control by ATMEL AVR Microcontroller. Applied Mechanics and Materials, 0, 816, 321-326.	0.2	1
65	The Process of Gait Generation for Snake-Like Robot with Nonholonomic Constraints. Applied Mechanics and Materials, 0, 816, 240-247.	0.2	1
66	Positioning of Pneumatic Actuator Using Open-Loop System. Applied Mechanics and Materials, 0, 816, 160-164.	0.2	4
67	Educational Model of Line Follower Robot LINA 2010. Solid State Phenomena, 0, 220-221, 989-994.	0.3	1
68	Kinematics of Serial Manipulators. , 0, , .		1