Frantisek Duchon

List of Publications by Year
in descending order

65 papers	**1,150** citations	687363 **13** h-index	414414 **32** g-index
65 all docs	**65** docs citations	**65** times ranked	**891** citing authors

#	Article	IF	Citations
1	Path Planning with Modified a Star Algorithm for a Mobile Robot. Procedia Engineering, 2014, 96, 59-69.	1.2	533
2	Visual Localization of Mobile Robot Using Artificial Markers. Procedia Engineering, 2014, 96, 1-9.	1.2	66
3	Comparison of various quaternion-based control methods applied to quadrotor with disturbance observer and position estimator. Robotics and Autonomous Systems, 2016, 79, 87-98.	5.1	59
4	Intelligent Vehicles as the Robotic Applications. Procedia Engineering, 2012, 48, 105-114.	1.2	40
5	VFH*TDT (VFH* with Time Dependent Tree): A new laser rangefinder based obstacle avoidance method designed for environment with non-static obstacles. Robotics and Autonomous Systems, 2014, 62, 1098-1115.	5.1	38
6	Foundations of Visual Linear Human–Robot Interaction via Pointing Gesture Navigation. International Journal of Social Robotics, 2017, 9, 509-523.	4.6	38
7	Optimal Navigation for Mobile Robot in Known Environment. Applied Mechanics and Materials, 0, 282, 33-38.	0.2	24
8	Visual system-based object tracking using image segmentation for biomedical applications. Electrical Engineering, 2017, 99, 1349-1366.	2.0	23
9	Justification of design and parameters of Bernoulli–vacuum gripping device. International Journal of Advanced Robotic Systems, 2017, 14, 172988141774174.	2.1	23
10	Gasdynamic analysis of the Bernoulli grippers interaction with the surface of flat objects with displacement of the center of mass. Vacuum, 2019, 159, 524-533.	3.5	22
11	Modifications of VFH Navigation Methods for Mobile Robots. Procedia Engineering, 2012, 48, 10-14.	1.2	19
12	Vector Field Histogram* with look-ahead tree extension dependent on time variable environment. Transactions of the Institute of Measurement and Control, 2018, 40, 1250-1264.	1.7	18
13	Energy efficiency analysis of the manipulation process by the industrial objects with the use of Bernoulli gripping devices. Journal of Electrical Engineering, 2017, 68, 496-502.	0.7	17
14	Modeling of Bernoulli gripping device orientation when manipulating objects along the arc. International Journal of Advanced Robotic Systems, 2018, 15, 172988141876267.	2.1	15
15	GRIPPING DEVICES OF INDUSTRIAL ROBOTS FOR MANIPULATING OFFSET DISH ANTENNA BILLETS AND CONTROLLING THEIR SHAPE. Transport, 2021, 36, 63-74.	1.2	15
16	High Precision GNSS Guidance for Field Mobile Robots. International Journal of Advanced Robotic Systems, 2012, 9, 169.	2.1	14
17	Machine vision application in animal trajectory tracking. Computer Methods and Programs in Biomedicine, 2016, 127, 258-272.	4.7	13
18	Experimental research of the manipulatiom process by the objects using bernoulli gripping devices. , 2017, , .		12

#	Article	IF	Citations
19	Investigation of the Energy Consumption on Performance of Handling Operations Taking Into Account Parameters of the Grasping System. , 2018, , .		12
20	Generalized dynamic model and control of ambiguous mono axial vehicle robot. International Journal of Advanced Robotic Systems, 2016, 13, 172988141665817.	2.1	10
21	Localization of mobile robot using visual system. International Journal of Advanced Robotic Systems, 2017, 14, 172988141773608.	2.1	10
22	Sensoric subsystem of automated guided vehicle: TCP communication between SIMATIC S7 PLC and Arduino. , 2014, , .		9
23	Automated Detection of Multi-Rotor UAVs Using a Machine-Learning Approach. Applied System Innovation, 2020, 3, 29.	4.6	9
24	Versatile Approach to Probabilistic Modeling of Hokuyo UTM-30LX. IEEE Sensors Journal, 2016, 16, 1814-1828.	4.7	8
25	Analysis of Frontal Resistance Force Influence During Manipulation of Dimensional Objects. , 2018, , .		8
26	Control Methods Comparison for the Real Quadrotor on an Innovative Test Stand. Applied Sciences (Switzerland), 2020, 10, 2064.	2.5	8
27	Avalanche forecasting using neural network. , 2018, , .		7
28	Research of Energy Efficiency of Manipulation of Dimensional Objects with the Use of Pneumatic Gripping Devices. , 2019, , .		7
29	Experimental Investigations of the Dynamics of Contactless Transportation by Bernoulli Grippers. , 2020, , .		6
30	3D map reconstruction with sensor kinect: Searching for solution applicable to small mobile robots. , 2014, , .		5
31	Making a map for mobile robot using laser rangefinder. , 2014, , .		5
32	Comparing approaches to quadrocopter control. , 2014, , .		4
33	Multi-Robot System for Mapping of the Unknown Environment. Applied Mechanics and Materials, 2014, 511-512, 827-833.	0.2	4
34	Justification of Influence of the Form of Nozzle and Active Surface of Bernoulli Gripping Devices on Its Operational Characteristics. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 263-272.	0.5	4
35	Analysis of Operational Characteristics of Pneumatic Device of Industrial Robot for Gripping and Control of Parameters of Objects of Manipulation. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 504-510.	0.5	4
36	Localization of iRobot create using inertial measuring unit. , 2014, , .		3

#	Article	IF	Citations
37	Improved GNSS Localization with the Use of DOP Parameter. Applied Mechanics and Materials, 2014, 611, 450-466.	0.2	3
38	Real-time path planning for the robot in known environment. , 2014, , .		3
39	Hardware and Software Realization of EDSD for Acupuncture Research and Practice. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1207-1213.	6.3	3
40	Investigation of the Influence of the Parameters of the VFH + Method on the Navigation Efficiency of the Mobile Robot. WSEAS Transactions on Systems and Control, 2021, 16, 328-334.	0.8	3
41	Control of a small quadrotor for swarm operation. Journal of Electrical Engineering, 2019, 70, 3-15.	0.7	3
42	Evaluation Criteria for Trajectories of Robotic Arms. Robotics, 2022, 11, 29.	3.5	3
43	Influence of Pipe Geometric Deviations on In-Pipe Machine Locomotion. Applied Mechanics and Materials, 0, 611, 221-226.	0.2	2
44	Detection of Welds in Automated Welding. Applied Mechanics and Materials, 2014, 611, 519-528.	0.2	2
45	Analysis of Uncertainty of Tilt Measurement with Accelerometer. Applied Mechanics and Materials, 0, 611, 548-556.	0.2	2
46	RGB-D map for robot navigation. , 2014, , .		2
47	Detection of door's components in automotive industry by simple image processing. , 2016, , .		2
48	Hand Guiding a Virtual Robot Using a Force Sensor. Acta Mechanica Et Automatica, 2021, 15, 177-186.	0.6	2
49	Cartesian Constrained Stochastic Trajectory Optimization for Motion Planning. Applied Sciences (Switzerland), 2021, 11, 11712.	2.5	2
50	Homogenous multi-robot system for mapping of unknown environment. , 2016, , .		1
51	Laboratory animals tracking in videosequences. , 2016, , .		1
52	General concepts of teleoperated systems. , 2018, , .		1
53	Preventing method of acoustic resonance in the high-pressure discharge lamps. Journal of Electrical Engineering, 2020, 71, 69-77.	0.7	1
54	Crash course learning: an automated approach to simulation-driven LiDAR-based training of neural networks for obstacle avoidance in mobile robotics. Turkish Journal of Electrical Engineering and Computer Sciences, 2020, 28, 1107-1120.	1.4	1

#	Article	IF	Citations
55	Investigation of the Accuracy of the Base of the Object of Manipulation of Bernoulli Gripping Devices. , 2021, , .		1
56	Simple Image Processing Algorithms for Robot Navigation in Unknown Environment. Applied Mechanics and Materials, 0, 613, 66-75.	0.2	0
57	Puck Collecting Robot. Applied Mechanics and Materials, 2014, 611, 256-264.	0.2	0
58	Probabilistic Approach to Mobile Robot Localization Based on Gaussian Models of Sensors. Applied Mechanics and Materials, 0, 607, 803-810.	0.2	0
59	Uncertainty of Dust Mass Concentration Measurement. Applied Mechanics and Materials, 2014, 611, 511-518.	0.2	0
60	Making an environment map using laser rangefinder. , 2014, , .		0
61	Mechatronic Concepts of Automated Weather Radars (a survey). Procedia Engineering, 2014, 96, 101-110.	1.2	0
62	DETECTION AND CLUSTERING OF THE ERRONEOUS TORQUES DEVELOPED IN THE FEMUR JOINT OF A WALKING ROBOT. , 2008, , .		0
63	Android-Based Mobile Robotic Platform Performance Testing for Real-Time Navigation. Advances in Intelligent Systems and Computing, 2017, , 153-169.	0.6	0
64	Investigation of object manipulation positioning accuracy by bernoulli gripping devices in robotic cells. Scientific Journal of the Ternopil National Technical University, 2021, 102, 21-36.	0.3	0
65	RGBD mapping solution for low-cost robot. Machine Vision and Applications, 2022, 33, 1.	2.7	0