FrantiÅ¡ek Mach

List of Publications by Year
in descending order

38 papers	228 citations	1478505 6 h-index	1058476 14 g-index
39 all docs	39 docs citations	39 times ranked	197 citing authors

#	Article	IF	Citations
1	Numerical solution of coupled problems using code Agros2D. Computing (Vienna/New York), 2013, 95, 381-408.	4.8	81
2	Induction heating of cylindrical nonmagnetic ingots by rotation in static magnetic field generated by permanent magnets. Journal of Computational and Applied Mathematics, 2012, 236, 4732-4744.	2.0	23
3	Higherâ€order finite element modeling of rotational induction heating of nonferromagnetic cylindrical billets. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2011, 30, 1517-1527.	0.9	17
4	Finite-Element 2-D Model of Induction Heating of Rotating Billets in System of Permanent Magnets and its Experimental Verification. IEEE Transactions on Industrial Electronics, 2014, 61, 2584-2591.	7.9	12
5	Model of Induction Heating of Rotating Non-Magnetic Billets and its Experimental Verification. IEEE Transactions on Magnetics, 2014, 50, 309-312.	2.1	11
6	Optimization of the system for induction heating of nonmagnetic cylindrical billets in rotating magnetic field produced by permanent magnets. Computing (Vienna/New York), 2013, 95, 537-552.	4.8	9
7	Evolutionary algorithm-based multi-criteria optimization of triboelectrostatic separator. Journal of Computational and Applied Mathematics, 2014, 270, 134-142.	2.0	8
8	Magnetically Guided Soft Robotic Grippers. , 2019, , .		6
9	Bistable Fully Electromagnetic Valve for High-Speed and Fail-Safe Operations. IEEE Transactions on Industrial Electronics, 2019, 66, 349-357.	7.9	6
10	Hard-coupled model of local direct resistance heating of thin sheets. Journal of Computational and Applied Mathematics, 2012, 236, 4725-4731.	2.0	5
11	Modeling of rotational induction heating of nonmagnetic cylindrical billets. Applied Mathematics and Computation, 2013, 219, 7170-7180.	2.2	5
12	Shape optimization of electromagnetic actuators. , 2014, , .		5
13	Design, fabrication and testing of electroadhesive interdigital electrodes. Open Physics, 2018, 16, 430-434.	1.7	5
14	Magnetic Actuation of Multiple Robots by the Coplanar Coils System. , 2019, , .		5
15	Positioning Uncertainty Reduction of Magnetically Guided Actuation on Planar Surfaces. , 2019, , .		5
16	Collective Planar Actuation of Miniature Magnetic Robots Towards Individual Robot Operation. , 2020, , .		4
17	Fast algorithm for evaluation of critical parameters of smart overalls. , 2016, , .		3
18	Monostable electromagnetic actuator for high-speed and fail-safe valve operation. Electrical Engineering, 2017, 99, 1317-1324.	2.0	3

#	Article	IF	Citations
19	Measured and Simulated Distributions of Voltage and Temperature along Stator Coils of Synchronous Generator. Advances in Electrical and Electronic Engineering, 2015, 13, .	0.3	3
20	Novel monostable fail-safe electromagnetic actuator for straight valve in high-speed operation. , 2016, , .		2
21	N-body simulation of electrically charged plastic particles motion in free-fall electrostatic separator. , 2017, , .		2
22	Trade-off Between Resolution and Frame Rate for Visual Tracking of Mini-robots on Planar Surfaces. , 2019, , .		2
23	Optimized arrangement of device for electrostatic separation of plastic particles. , 2012, , .		1
24	Estimation of charges and critical velocity of plastic particles in triboelectric separator. , 2014, , .		1
25	Experimental electrostatic separator for charged particles of plastic mixture. , 2016, , .		1
26	Numerical and experimental analysis of electrostatic adhesion force generated by interdigital electrodes. , 2017, , .		1
27	Trade-off between resolution and frame rate of visual tracking of mini-robots on an experimental planar platform. Journal of Micro-Bio Robotics, 2020, 16, 123-135.	2.1	1
28	Magnetic Forces Behind Hyperelastic Behavior of Magnetorheological Elastomers. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	1
29	Hardâ€coupled nonlinear model of induction heating of nonmagnetic cylindrical billets in rotation. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2012, 31, 1368-1378.	0.9	0
30	Genetic algorithms for multicriteria shape optimization of induction furnace. , 2012, , .		0
31	Induction heating of rotating cylindrical nonmagnetic billets with prescribed temperature profile. , 2014, , .		0
32	Model-based determination of nonlinear material parameters of metals with low melting points. , 2014, , .		0
33	Numerical analysis for reducing negative impact of power transformers on the environment. , 2016, , .		0
34	Utilization of advanced optimization and penalization techniques for calibration of numerical models. , 2016, , .		0
35	Calibration of numerical models based on advanced optimization and penalization techniques. Journal of Electrical Engineering, 2017, 68, 396-400.	0.7	0
36	Induction heating of rotating nonmagnetic billet in magnetic field produced by high-parameter permanent magnets. Electrical Engineering & Electromechanics, 2014, .	0.6	0

#	Article	IF	Citations
37	Uncertainty Quantification for Real-Time Operation of Electromagnetic Actuators. Mathematics in Industry, 2019, , 597-603.	0.3	0
38	Non-contact Electromagnetic Actuator for a Ball Valve. , 2021, , .		0