

Pavel Karban

List of Publications by Year in descending order

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91
papers

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687363

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all docs

99
docs citations

99
times ranked

642
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization of selected operation characteristics of array antennas. Journal of Computational and Applied Mathematics, 2022, 399, 113726.	2.0	3
2	Performance Comparison of Quantized Control Synthesis Methods of Antenna Arrays. Electronics (Switzerland), 2022, 11, 994.	3.1	4
3	FEM based robust design optimization with Agros and Ärtap. Computers and Mathematics With Applications, 2021, 81, 618-633.	2.7	29
4	FEM-based transformer design optimization technique with evolutionary algorithms and geometric programming. International Journal of Applied Electromagnetics and Mechanics, 2021, 64, S41-S49.	0.6	4
5	Optimization of Selected Electroheat Models Based on Calibration of Material Properties. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	2
6	Robust Design Optimization and Emerging Technologies for Electrical Machines: Challenges and Open Problems. Applied Sciences (Switzerland), 2020, 10, 6653.	2.5	81
7	Comparison of simplified techniques for solving selected coupled electroheat problems. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2020, 39, 220-230.	0.9	10
8	FEM Based Preliminary Design Optimization in Case of Large Power Transformers. Applied Sciences (Switzerland), 2020, 10, 1361.	2.5	23
9	Sensitivity analysis of time of induction heating process on charge parameters. , 2020, , .		0
10	Calibration of Numerical Model of Magnetic Induction Brazing. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	9
11	Power Transformer Design Optimization for Carbon Footprint. , 2019, , .		4
12	Reduced-Order Model Based Temperature Control of Induction Brazing Process. , 2019, , .		13
13	Calibration of laser welding model based on optimization techniques. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2019, 39, 43-52.	0.9	1
14	Structural Optimization of BLDC Machine and its Control. , 2019, , .		0
15	Model of Self-Sensing Microactuator with Embedded Sensor and its Control. , 2019, , .		0
16	Optimization of Reluctance Motor with Printed Rotor. , 2019, , .		4
17	Artap: Robust Design Optimization Framework for Engineering Applications. , 2019, , .		14
18	Design of Linear Peristaltic Pump. , 2019, , .		1

#	ARTICLE	IF	CITATIONS
19	Electromagnetic Radiation Efficiency of Body-Implanted Devices. Physical Review Applied, 2018, 9, .	3.8	45
20	Shape optimization of laboratory induction pump. , 2018, , .		1
21	Bayes approach to solving T.E.A.M. benchmark problems 22 and 25 and its comparison with other optimization techniques. Applied Mathematics and Computation, 2018, 319, 681-692.	2.2	10
22	Induction clamping of high-revolution tools by rotation in a system of unmovable permanent magnets. International Journal of Microstructure and Materials Properties, 2018, 13, 99.	0.1	1
23	Shape and Topology Optimization of High Power Converter Busbar. , 2018, , .		1
24	Optimal design of MHD pump. , 2018, , .		1
25	Subsurface cracks evaluation using pulsed eddy current and cross correlation. , 2018, , .		0
26	Numerical models of array of electroacoustic transducers in anechoic chamber. , 2018, , .		0
27	Model of induction brazing of nonmagnetic metals using model order reduction approach. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2018, 37, 1515-1524.	0.9	5
28	Calculation of radiation field iso-surfaces using numerical continuation method. , 2018, , .		0
29	434 MHz ISM band antenna for in-body biotelemetry capsules. , 2017, , .		8
30	Fully adaptive higher-order finite element analysis of fast transient phenomena on overhead lines. Electrical Engineering, 2017, 99, 1255-1261.	2.0	1
31	Robust Ultraminiature Capsule Antenna for Ingestible and Implantable Applications. IEEE Transactions on Antennas and Propagation, 2017, 65, 6107-6119.	5.1	93
32	Calibration of numerical models based on advanced optimization and penalization techniques. Journal of Electrical Engineering, 2017, 68, 396-400.	0.7	0
33	Numerical modeling of acoustic field of loudspeaker. , 2017, , .		1
34	Conformal antennas for miniature in-body devices: The quest to improve radiation performance. URSI Radio Science Bulletin, 2017, 2017, 52-64.	0.1	18
35	Numerical analysis for reducing negative impact of power transformers on the environment. , 2016, , .		0
36	Utilization of algebraic multigrid for solving electromagnetic field by HP-FEM. , 2016, , .		3

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37	Fast algorithm for evaluation of critical parameters of smart overalls. , 2016, , .		3
38	Optimization of process of induction clamping. , 2016, , .		1
39	Impedance analysis of transmission line cells for EMC applications using Agros2D. Applied Mathematics and Computation, 2016, 289, 381-387.	2.2	8
40	Increasing the radiation efficiency and matching stability of in-body capsule antennas. , 2016, , .		16
41	Experimental electrostatic separator for charged particles of plastic mixture. , 2016, , .		1
42	Cross-correlation technique for revealing defects in differential pulsed eddy current defectoscopy. , 2016, , .		0
43	Modeling of fast transients on transmission line using higher-order adaptive methods. , 2016, , .		0
44	Utilization of advanced optimization and penalization techniques for calibration of numerical models. , 2016, , .		0
45	Multiphysics field analysis and multiobjective design optimization: a benchmark problem. Inverse Problems in Science and Engineering, 2014, 22, 1214-1225.	1.2	26
46	Cross-correlation as a new evaluation tool in pulsed eddy current defectoscopy. , 2014, , .		0
47	Induction heating of rotating cylindrical nonmagnetic billets with prescribed temperature profile. , 2014, , .		0
48	Estimation of charges and critical velocity of plastic particles in triboelectric separator. , 2014, , .		1
49	Model-based determination of nonlinear material parameters of metals with low melting points. , 2014, , .		0
50	Optimization of electrical properties of parallel plate antenna for EMC testing. Journal of Computational and Applied Mathematics, 2014, 270, 283-293.	2.0	7
51	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
52	Shape optimization of electromagnetic actuators. , 2014, , .		5
53	Higher-Order Eggshell Method for Computation of Forces Acting on Ferromagnetic Bodies. , 2014, , .		0
54	Model of Induction Heating of Rotating Non-Magnetic Billets and its Experimental Verification. IEEE Transactions on Magnetics, 2014, 50, 309-312.	2.1	11

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55	Non-Linear Multi-Physics Analysis and Multi-Objective Optimization in Electroheating Applications. IEEE Transactions on Magnetics, 2014, 50, 673-676.	2.1	28
56	Evolutionary algorithm-based multi-criteria optimization of triboelectrostatic separator. Journal of Computational and Applied Mathematics, 2014, 270, 134-142.	2.0	8
57	Fourth international conference on finite element methods in engineering and sciences (FEMTEC 2013). Journal of Computational and Applied Mathematics, 2014, 270, 1.	2.0	1
58	Induction heating of rotating nonmagnetic billet in magnetic field produced by high-parameter permanent magnets. Electrical Engineering & Electromechanics, 2014, .	0.6	0
59	Numerical solution of coupled problems using code Agros2D. Computing (Vienna/New York), 2013, 95, 381-408.	4.8	81
60	Modeling of loudspeaker using hp-adaptive methods. Computing (Vienna/New York), 2013, 95, 473-485.	4.8	2
61	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
62	Optimized control of field current in thermoelastic actuator for accurate setting of position. Applied Mathematics and Computation, 2013, 219, 7187-7193.	2.2	2
63	Modeling of rotational induction heating of nonmagnetic cylindrical billets. Applied Mathematics and Computation, 2013, 219, 7170-7180.	2.2	5
64	Advanced adaptive algorithms in 2D finite element method of higher order of accuracy. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 834-849.	0.9	3
65	Advanced Adaptive Algorithms in 2D Finite Element Method of Higher Order of Accuracy. Studies in Computational Intelligence, 2013, , 255-271.	0.9	1
66	Hard-Coupled Modeling of Induction Shrink Fit of Gas-Turbine Active Wheel. Studies in Computational Intelligence, 2013, , 325-339.	0.9	1
67	Hard-Coupled Modeling of Induction Shrink Fit of Gas-Turbine Active Wheel. Studies in Computational Intelligence, 2013, , 287-301.	0.9	0
68	Separation of Plastic Particles in Electrostatic Field Produced by Electrodes of Optimized Shape. Communications - Scientific Letters of the University of Zilina, 2013, 15, 40-45.	0.6	1
69	Hard-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
70	Genetic algorithms for multicriteria shape optimization of induction furnace. , 2012, , .		0
71	Optimized arrangement of device for electrostatic separation of plastic particles. , 2012, , .		1
72	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

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73	Hard-coupled model of local direct resistance heating of thin sheets. Journal of Computational and Applied Mathematics, 2012, 236, 4725-4731.	2.0	5
74	Numerical Model of Induction Shrink Fits in Monolithic Formulation. IEEE Transactions on Magnetics, 2012, 48, 315-318.	2.1	14
75	Hard-coupled modeling of induction shrink fit of gas-turbine active wheel. , 2011, , .		0
76	Advanced adaptive algorithms in finite element method of higher order of accuracy. , 2011, , .		1
77	Nonlinear Coupled Problems Solved by hp-FEM. , 2011, , .		0
78	Monolithic model of continuous induction hardening of a steel mandrel. , 2011, , .		0
79	Higher-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
80	Continual induction hardening of steel bodies. Mathematics and Computers in Simulation, 2010, 80, 1771-1782.	4.4	16
81	Accurate Control of Position by Induction Heating-Produced Thermoelasticity. IEEE Transactions on Magnetics, 2010, 46, 2888-2891.	2.1	4
82	Inductively Heated Incompressible Flow of Electrically Conductive Liquid in Pipe. IEEE Transactions on Magnetics, 2010, 46, 2899-2902.	2.1	2
83	Integrodifferential approach to solution of eddy currents in linear structures with motion. Mathematics and Computers in Simulation, 2010, 80, 1636-1646.	4.4	0
84	Higher-order finite element modeling of electromagnetically driven flow of molten metal in pipe. , 2009, , .		0
85	Limit Operation Regimes of Actuators Working on the Principle of Thermoelasticity. IEEE Transactions on Magnetics, 2008, 44, 810-813.	2.1	12
86	Dynamic behavior of actuator working on principle of thermoelasticity. , 2008, , .		0
87	Numerical model of a thermoelastic actuator solved as a coupled contact problem. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 1063-1072.	0.9	5
88	Computation of general nonstationary 2D eddy currents in linear moving arrangements using integrodifferential approach. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2006, 25, 635-641.	0.9	3
89	Modelling of continual induction hardening in quasi-coupled formulation. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 251-260.	0.9	11
90	Optimization of electromagnetic shielding of induction device for isothermic stirring of Molten Steel. , 2005, , .		0

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91	Design of power magnetic chute separator and minimization of its external magnetic field. , 2005, , .		0