

Fabio Freschi

List of Publications by Year in descending order

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140
papers

1,558
citations

361413

20
h-index

414414

32
g-index

144
all docs

144
docs citations

144
times ranked

1179
citing authors

#	ARTICLE	IF	CITATIONS
1	Inductive Power Transfer for Automotive Applications: State-of-the-Art and Future Trends. IEEE Transactions on Industry Applications, 2018, 54, 4069-4079.	4.9	142
2	VIS: An artificial immune network for multi-objective optimization. Engineering Optimization, 2006, 38, 975-996.	2.6	70
3	Economic and environmental analysis of a trigeneration system for food-industry: A case study. Applied Energy, 2013, 107, 157-172.	10.1	63
4	SMES Optimization Benchmark Extended: Introducing Pareto Optimal Solutions Into TEAM22. IEEE Transactions on Magnetics, 2008, 44, 1066-1069.	2.1	50
5	Optimal energy management. IEEE Industry Applications Magazine, 2009, 15, 62-65.	0.4	47
6	Multiobjective Optimization by a Modified Artificial Immune System Algorithm. Lecture Notes in Computer Science, 2005, , 248-261.	1.3	43
7	Human Exposure Assessment in Dynamic Inductive Power Transfer for Automotive Applications. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	41
8	An Effective Semianalytical Method for Simulating Grounding Grids. IEEE Transactions on Industry Applications, 2013, 49, 256-263.	4.9	40
9	Challenges in the Electromagnetic Modeling of Road Embedded Wireless Power Transfer. Energies, 2019, 12, 2677.	3.1	32
10	High-Frequency Behavior of Residual Current Devices. IEEE Transactions on Power Delivery, 2012, 27, 1629-1635.	4.3	31
11	Magnetic shielding solutions for the junction zone of high voltage underground power lines. Electric Power Systems Research, 2012, 89, 109-115.	3.6	31
12	Dynamic Simulation of an Electromechanical Energy Scavenging Device. IEEE Transactions on Magnetics, 2010, 46, 2856-2859.	2.1	28
13	Interferences Phenomena Between Separate Grounding Systems. IEEE Transactions on Industry Applications, 2014, 50, 2853-2860.	4.9	28
14	Multilayer integral method for simulation of eddy currents in thin volumes of arbitrary geometry produced by MRI gradient coils. Magnetic Resonance in Medicine, 2014, 71, 1912-1922.	3.0	27
15	Simplified Approach for 3-D Nonlinear Induction Heating Problems. IEEE Transactions on Magnetics, 2009, 45, 1855-1858.	2.1	25
16	Exposure of Working Population to Pulsed Magnetic Fields. IEEE Transactions on Magnetics, 2010, 46, 2819-2822.	2.1	25
17	Magnetic Field Mitigation at Power Frequency: Design Principles and Case Studies. IEEE Transactions on Industry Applications, 2015, 51, 2009-2016.	4.9	24
18	Multiphysics Problems via the Cell Method: The Role of Tonti Diagrams. IEEE Transactions on Magnetics, 2010, 46, 2959-2962.	2.1	23

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19	Uncertainty Quantification for SAE J2954 Compliant Static Wireless Charge Components. IEEE Access, 2020, 8, 171489-171501.	4.2	21
20	Genetic optimisation of radial eddy current couplings. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 767-783.	0.9	20
21	Comparison of artificial immune systems and genetic algorithms in electrical engineering optimization. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2006, 25, 792-811.	0.9	20
22	To Bond or Not to Bond: That is the Question. IEEE Transactions on Industry Applications, 2011, 47, 989-995.	4.9	20
23	Educational value of the algebraic numerical methods in electromagnetism. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 1343-1357.	0.9	19
24	Modelling of road-embedded transmitting coils for wireless power transfer. Computers and Electrical Engineering, 2020, 88, 106850.	4.8	19
25	Multiobjective Optimization of Parallel Cable Layout. IEEE Transactions on Magnetics, 2007, 43, 3914-3920.	2.1	18
26	Wireless power transfer structure design for electric vehicle in charge while driving. , 2014, , .		18
27	Electrical Safety of Plug-In Electric Vehicles: Shielding the Public from Shock. IEEE Industry Applications Magazine, 2018, 24, 58-63.	0.4	18
28	Performance evaluation of wireless power transfer systems for electric vehicles using the opposition method. , 2015, , .		17
29	An improved asymmetric gradient coil design for high-resolution MRI head imaging. Physics in Medicine and Biology, 2016, 61, 8875-8889.	3.0	17
30	A Simplified Procedure for the Exposure to the Magnetic Field Produced by Resistance Spot Welding Guns. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	17
31	The high magnetic coupling passive loop: A steady-state and transient analysis of the thermal behavior. Applied Thermal Engineering, 2012, 37, 154-164.	6.0	16
32	Design of Wireless Power Transmission for a Charge While Driving System. IEEE Transactions on Magnetics, 2014, 50, 965-968.	2.1	16
33	Dual-PEEC Modeling of a Two-Port TEM Cell for VHF Applications. IEEE Transactions on Magnetics, 2011, 47, 1486-1489.	2.1	15
34	Inductive power transfer for automotive applications: State-of-the-art and future trends. , 2016, , .		15
35	Numerical Modeling and Material Characterization for Multilayer Magnetically Shielded Room Design. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	15
36	Metrology for Inductive Charging of Electric Vehicles (MICEV). , 2019, , .		15

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37	Numerical assessment of low-frequency dosimetry from sampled magnetic fields. <i>Physics in Medicine and Biology</i> , 2018, 63, 015029.	3.0	14
38	Influence of Posture and Coil Position on the Safety of a WPT System While Recharging a Compact EV. <i>Energies</i> , 2021, 14, 7248.	3.1	14
39	Numerical Simulation of Heart-Current Factors and Electrical Models of the Human Body. <i>IEEE Transactions on Industry Applications</i> , 2013, 49, 2290-2299.	4.9	13
40	Skin and proximity effects in the conductors of split gradient coils for a hybrid Linac-MRI scanner. <i>Journal of Magnetic Resonance</i> , 2014, 242, 86-94.	2.1	13
41	Identification of Equivalent Material Properties for 3-D Numerical Modeling of Induction Heating of Ferromagnetic Workpieces. <i>IEEE Transactions on Magnetics</i> , 2009, 45, 1851-1854.	2.1	12
42	Evaluation of workers exposure to magnetic fields. <i>EPJ Applied Physics</i> , 2010, 52, 23311.	0.7	12
43	A Cell Method Formulation of 3-D Electrothermomechanical Contact Problems With Mortar Discretization. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 503-506.	2.1	11
44	Natural Choice of Integration Surface for Maxwell Stress Tensor Computation. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 1717-1720.	2.1	11
45	Ground-Fault Conditions in Low-Voltage Systems: Potential Differences Between Exposed Conductive Parts. <i>IEEE Industry Applications Magazine</i> , 2014, 20, 33-39.	0.4	11
46	Electrical safety of electric vehicles. , 2017, , .		11
47	Analysis of Dynamic Wireless Power Transfer Systems Based on Behavioral Modeling of Mutual Inductance. <i>Sustainability</i> , 2021, 13, 2556.	3.2	11
48	Description of power lines by equivalent source system. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2005, 24, 893-905.	0.9	10
49	Identification of an Equivalent-Source System for Magnetic Stray Field Evaluation. <i>IEEE Transactions on Power Delivery</i> , 2009, 24, 1352-1358.	4.3	10
50	Multiobjective design optimization and Pareto front analysis of a radial eddy current coupler. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2010, 32, 219-236.	0.6	10
51	Intra-coil interactions in split gradient coils in a hybrid MRIâ€“LINAC system. <i>Journal of Magnetic Resonance</i> , 2016, 265, 52-58.	2.1	10
52	Arc Welding Processes: An Electrical Safety Analysis. <i>IEEE Transactions on Industry Applications</i> , 2017, 53, 819-825.	4.9	10
53	Unstructured PEEC formulation by dual discretization. <i>IEEE Microwave and Wireless Components Letters</i> , 2006, 16, 531-533.	3.2	9
54	Magnetic field mitigation by means of passive loop: technical optimization. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2012, 31, 870-880.	0.9	9

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55	Power Lines Made of Many Parallel Single-Core Cables: A Case Study. IEEE Transactions on Industry Applications, 2013, 49, 1744-1750.	4.9	9
56	Comparison of Numerical Techniques for the Evaluation of Human Exposure From Measurement Data. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	9
57	Multiobjective Optimization and Artificial Immune Systems. , 2009, , 1-21.		9
58	An innovative next generation E-mobility infrastructure: The eCo-FEV project. , 2014, , .		8
59	Finite Formulation of Surface Impedance Boundary Conditions. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	8
60	Chassis Influence on the Exposure Assessment of a Compact EV during WPT Recharging Operations. Magnetochemistry, 2021, 7, 25.	2.4	8
61	Mitigation of Intra-coil Eddy Currents in Split Gradient Coils in a Hybrid MRI-LINAC System. IEEE Transactions on Biomedical Engineering, 2016, 64, 1-1.	4.2	7
62	Electrical Model of Building Structures Under Ground-Fault Conditionsâ€”Part II. IEEE Transactions on Industry Applications, 2016, 52, 1285-1289.	4.9	7
63	The coil array method for creating a dynamic imaging volume. Magnetic Resonance in Medicine, 2017, 78, 784-793.	3.0	7
64	Nonlinear Dynamics of an Electro-Mechanical Energy Scavenger. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 339-349.	0.5	7
65	Fast Block-Solution of PEEC Equations. IEEE Transactions on Magnetics, 2013, 49, 1753-1756.	2.1	6
66	Currents Passing Through the Human Body: The Numerical Viewpoint. IEEE Transactions on Industry Applications, 2017, 53, 826-832.	4.9	6
67	Investigation of Factors Affecting Induced Voltages on Underground Pipelines Due to Inductive Coupling With Nearby Transmission Lines. IEEE Transactions on Industry Applications, 2020, 56, 1266-1274.	4.9	6
68	Identification of Power Frequency Industrial Magnetic Field Sources for Shielding Purposes. IEEE Transactions on Industry Applications, 2008, 44, 1834-1840.	4.9	5
69	Localization of Sources of Brain Activity: A MILP Approach. IEEE Transactions on Magnetics, 2010, 46, 3429-3432.	2.1	5
70	Electrical Safety of Aeronautical Ground Lighting Systems. IEEE Transactions on Industry Applications, 2015, 51, 2003-2008.	4.9	5
71	Mixed-dimensional elements in transient thermal analysis of gradient coils. Numerical Heat Transfer; Part A: Applications, 2016, 69, 265-282.	2.1	5
72	How Safe Are Spot Welding Guns to Use?: An Analysis of Occupational Exposure to Their Magnetic Field. IEEE Industry Applications Magazine, 2018, 24, 39-47.	0.4	5

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73	The Project "Metrology for Inductive Charging of Electric Vehicles", 2018, , .		5
74	Scaling Rules at Constant Frequency for Resonant Inductive Power Transfer Systems for Electric Vehicles. Energies, 2018, 11, 1754.	3.1	5
75	A cone-shaped gradient coil design for high-resolution MRI head imaging. Physics in Medicine and Biology, 2019, 64, 085003.	3.0	5
76	Application of vector immune system to distribution network reconfiguration. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2019, 32, e2262.	1.9	5
77	Comparative Economical Analysis of a Small Scale Trigenerative Plant: A Case Study. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2007, , .	0.0	4
78	Ecodesign of Low-Voltage Systems and Exposure to ELF Magnetic Fields. IEEE Transactions on Industry Applications, 2011, 47, 984-988.	4.9	4
79	Latent potential differences between exposed-conductive-parts under ground-fault conditions in low-voltage systems. , 2013, , .		4
80	Modal Analysis of Currents Induced by Magnetic Resonance Imaging Gradient Coils. IEEE Transactions on Magnetics, 2014, 50, 945-948.	2.1	4
81	Electromagnetic modeling and performance comparison of different pad-to-pad length ratio for dynamic inductive power transfer. , 2016, , .		4
82	Analysis of Causation of a Flour Dust Explosion in an Industrial Plant. IEEE Transactions on Industry Applications, 2017, 53, 5182-5186.	4.9	4
83	Algebraic formulation of nonlinear surface impedance boundary condition coupled with BEM for unstructured meshes. Engineering Analysis With Boundary Elements, 2018, 88, 104-114.	3.7	4
84	Identification of Material Properties and Optimal Design of Magnetically Shielded Rooms. Magnetochemistry, 2021, 7, 23.	2.4	4
85	Analysis of Numerical Artifacts Using Tetrahedral Meshes in Low Frequency Numerical Dosimetry. Applied Sciences (Switzerland), 2022, 12, 6526.	2.5	4
86	Hybrid method coupling AIS and zeroth order deterministic search. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 784-795.	0.9	3
87	Thermo-mechanical analysis using a multiphysics approach. Journal of Physics: Conference Series, 2009, 181, 012095.	0.4	3
88	A Source Identification Problem for the Electrical Activity of Brain During Hand Movement. IEEE Transactions on Magnetics, 2011, 47, 878-881.	2.1	3
89	A Second-Order Cell Method for Poisson's Equation. IEEE Transactions on Magnetics, 2011, 47, 1430-1433.	2.1	3
90	Electrical Model of Building Structures Under Ground-Fault Conditions, Part I.. IEEE Transactions on Industry Applications, 2015, , 1-1.	4.9	3

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91	District Heating Safety Issues: Interactions Between Grounding Systems and Thermal Installations. IEEE Transactions on Industry Applications, 2016, 52, 2040-2045.	4.9	3
92	A Method for Reducing Secondary Field Effects in Asymmetric MRI Gradient Coil Design. IEEE Transactions on Biomedical Engineering, 2016, 63, 924-932.	4.2	3
93	Behavioral Models for the Analysis of Dynamic Wireless Charging Systems for Electrical Vehicles. , 2020, , .		3
94	Modeling of Exposure to Low-Frequency Electromagnetic Fields of Workers in Arbitrary Posture. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	3
95	Current Distribution Modeling in the Open-Source OPENSCT ² Tool for the Multi-Physics Analysis of HTS and LTS Cables. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	3
96	Identification of power frequency industrial magnetic field sources for shielding purposes. , 0, , .		2
97	Power Lines Made by Many Parallel Single Core Cables: a Case Study. , 2006, , .		2
98	Force Computation by Hybrid Cell Method. IEEE Transactions on Magnetics, 2008, 44, 1198-1201.	2.1	2
99	Ecodesign of low-voltage systems and exposure to ELF magnetic fields. , 2010, , .		2
100	Device Used for Magnetic Treatment of Fuel Fluids before Burner. Applied Mechanics and Materials, 0, 186, 214-218.	0.2	2
101	Interferences phenomena between separate grounding systems. , 2013, , .		2
102	From the magnetic field measurement to the numerical evaluation of the human exposure. , 2016, , .		2
103	Currents flowing through the human body: The numerical viewpoint. , 2016, , .		2
104	Coupled Magnetothermal Analysis of Gradient Coils in MRI Scanners. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	2
105	Optimal design of closed multilayer magnetic shields. , 2017, , .		2
106	Investigation of low-frequency behaviour of two surface integral full-Maxwell formulations. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 842-858.	0.9	1
107	Analysis of the lightning behavior of an earthing system including ionization via the cell method. , 2009, , .		1
108	Experimental validation of a numerical multiphysics technique for electro-thermo-mechanical problem. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2010, 29, 1642-1652.	0.9	1

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109	To Bond or Not to Bond: That Is the Question. , 2010, , .		1
110	Electromechanical Energy Scavenger for Automotive Tires. , 2011, , .		1
111	Numerical simulation of heart-current factors and electrical models of the human body. , 2012, , .		1
112	An effective semi-analytical method for simulating grounding grids. , 2012, , .		1
113	Algebraic Second Order Hodge Operator for Poisson's Equation. IEEE Transactions on Magnetics, 2013, 49, 1761-1764.	2.1	1
114	Multi-physics optimisation of an energy harvester device for automotive application. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2014, 33, 846-855.	0.9	1
115	Magnetic field mitigation at power frequency: Design principles and case studies. , 2014, , .		1
116	Coupling spin waves to circuits through PEEC approach. , 2014, , .		1
117	Electrical model of building structures under ground-fault conditions. Part II. , 2015, , .		1
118	Electrical safety in arc welding processes. , 2016, , .		1
119	Assessment of the occupational exposure to the magnetic field produced by spot welding guns in controlled environment and actual working conditions. , 2016, , .		1
120	Analysis of causation of a dust explosion in industrial plant. , 2017, , .		1
121	Modelling of nonlinear magnetic damping in vibrating coupled structures. , 2019, , .		1
122	Artificial Immune System in the Management of Complex Small Scale Cogeneration Systems. , 2009, , 141-158.		1
123	Exposure of Infants to Gradient Fields in a Baby MRI Scanner. Bioelectromagnetics, 2022, 43, 69-80.	1.6	1
124	Low Voltage Distribution Transformers: Analysis of the Exposure to ELF Magnetic Fields. , 2007, , .		0
125	Coupling of finite formulation with integral techniques. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 37-46.	0.9	0
126	Field model of electrical activity of the brain during the hand movement: a source identification problem. , 2010, , .		0

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127	PEEC modeling of a two-port TEM cell for radio frequency applications. , 2010, , .		0
128	Computation of eddy currents in human body due to pulsed magnetic field. , 2010, , .		0
129	A Second order Cell Method for Poisson's equation. , 2010, , .		0
130	Electrical safety of aeronautical ground lighting systems. , 2014, , .		0
131	Electrical model of building structures under ground-fault conditions. Part I. , 2015, , .		0
132	District heating safety issues: Interactions between grounding systems and thermal installations. , 2015, , .		0
133	Analysis of the Circuit-Field Interactions in Propagating Spin-Wave Experiments. IEEE Transactions on Magnetism, 2015, 51, 1-4.	2.1	0
134	Nonlinear BEM-surface impedance boundary condition formulation for unstructured meshes. , 2016, , .		0
135	Synthesis of the cooling pathways optimal layout for MRI gradient coils. , 2016, , .		0
136	Human exposure assessment in dynamic inductive power transfer for automotive applications. , 2016, , .		0
137	Synthesis of the Cooling Pathways Optimal Layout for MRI Split Gradient Coils. IEEE Transactions on Magnetism, 2017, 53, 1-4.	2.1	0
138	Tonti Diagrams and Algebraic Methods for the Solution of Coupled Problems. Mathematics in Industry, 2012, , 195-203.	0.3	0
139	Classical Physical Problems. Lecture Notes in Electrical Engineering, 2013, , 49-90.	0.4	0
140	Multiphysics Problems. Lecture Notes in Electrical Engineering, 2013, , 91-114.	0.4	0