Francis Piriou

List of Publications by Year
in descending order

103 papers	1,230 citations	393982 19 h-index	414034 32 g-index
107 all docs	107 docs citations	107 times ranked	612 citing authors

#	Article	IF	Citations
1	3-D Numerical Modeling of Claw-Pole Alternators With its Electrical Environment. IEEE Transactions on Magnetics, 2020, 56, 1-4.	1.2	3
2	Two guaranteed equilibrated error estimators for Harmonic formulations in eddy current problems. Computers and Mathematics With Applications, 2019, 77, 1549-1562.	1.4	8
3	Comparison of Numerical Error Estimators for Eddy-Current Problems Solved by FEM. IEEE Transactions on Magnetics, 2018, 54, 1-4.	1.2	2
4	Canal lock variable speed hydropower turbine design and control. IET Renewable Power Generation, 2018, 12, 1698-1707.	1.7	10
5	Waveform relaxationâ€“Newton method to determine steady state of an electromagnetic structure. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2017, 36, 729-740.	0.5	4
6	Canal lock variable speed hydropower turbine energy conversion system. , 2017, , .		0
7	Quantitative Design of a High Performance Permanent Magnet Vernier Generator. IEEE Transactions on Magnetics, 2017, 53, 1-4.	1.2	6
8	Quantitative design of a high performance permanent magnet vernier generator. , 2017, , .		0
9	A guaranteed equilibrated error estimator for the harmonic A â€" Ït formulation in eddy current problems. , 2016, , .		0
10	Numerical modeling of steady state of magnetostatic problems coupled with nonlinear electric circuit. , 2016, , .		0
11	Time-Periodicity Condition of Nonlinear Magnetostatic Problem Coupled With Electric Circuit Imposed by Waveform Relaxation Method. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	3
12	Energetic Mesh-to-Mesh Projection of Magnetic Fields With Respect to Nonlinear B-H Curves. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	1
13	Space-Time Residual-Based <italic>a posteriori</italic> Estimator for the <inline-formula> <tex-math notation="LaTeX">$A-varphi$ </tex-math></inline-formula> Formulation in Eddy Current Problems. IEEE Transactions on Magnetics, 2015, 51, 1-5.	1.2	1
14	Finite Element Mesh Adaptation Strategy From Residual and Hierarchical Error Estimators in Eddy Current Problems. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	3
15	Residual <italic>a Posteriori</italic> Estimator for Magnetoharmonic Potential Formulations With Global Quantities for the Source Terms. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	1
16	A posterioriresidual error estimators with mixed boundary conditions for quasi-static electromagnetic problems. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2015, 34, 724-739.	0.5	1
17	Comparison of implementation techniques for Galerkin projection between different meshes. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2014, 27, 517-526.	1.2	4
18	Comparison of Residual and Hierarchical Finite Element Error Estimators in Eddy Current Problems. IEEE Transactions on Magnetics, 2014, 50, 501-504.	1.2	3

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19	Energetic Galerkin Projection of Electromagnetic Fields Between Different Meshes. IEEE Transactions on Magnetics, 2014, 50, 613-616.	1.2	4
20	Residual Based a Posteriori Error Estimators for Harmonic ${f A}/varphi$ and ${f T}/Omega$ Formulations in Eddy Current Problems. IEEE Transactions on Magnetics, 2013, 49, 1721-1724.	1.2	6
21	Electromagnetic Field Projection on Finite Element Overlapping Domains. IEEE Transactions on Magnetics, 2013, 49, 1290-1298.	1.2	8
22	Residual and equilibrated error estimators for magnetostatic problems solved by finite element method. IEEE Transactions on Magnetics, 2013, 49, 5715-5723.	1.2	23
23	A posteriori error estimator for harmonic Aâ€Ï† formulation. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 1219-1229.	0.5	5
24	RESIDUAL-BASED A POSTERIORI ESTIMATORS FOR THE A - Ï† MAGNETODYNAMIC HARMONIC FORMULATION OF THE MAXWELL SYSTEM. Mathematical Models and Methods in Applied Sciences, 2012, 22, 1150028.	1.7	20
25	Interlaminar short circuit detection: modeling and measurement. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2012, 31, 1448-1457.	0.5	2
26	Mortar Method Using Bi-Orthogonal Nodal Functions Applied to ${m A}hbox{-}varphi$ Formulation. IEEE Transactions on Magnetics, 2012, 48, 491-494.	1.2	5
27	An Approach to Determine the Circulation of Magnetic Field in FEM Computation Code With Vector Potential Formulation. IEEE Transactions on Magnetics, 2011, 47, 1354-1357.	1.2	5
28	Parallel direct solver for the finite integration technique in electromagnetics. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2010, 29, 941-949.	0.5	0
29	Parallel Direct Solver for the Finite Integration Technique in Electrokinetic Problems. IEEE Transactions on Magnetics, 2010, 46, 3269-3272.	1.2	0
30	Hysteresis Phenomenon Implementation in FIT: Validation With Measurements. IEEE Transactions on Magnetics, 2010, 46, 3285-3288.	1.2	4
31	Periodic and Anti-Periodic Boundary Conditions With the Lagrange Multipliers in the FEM. IEEE Transactions on Magnetics, 2010, 46, 3417-3420.	1.2	14
32	Reduction of force ripples in PM planar actuator. , 2010, , .		1
33	An approach to determine the circulation of magnetic field in FEM computation code with vector potential formulation. , 2010, , .		0
34	Preconditioner for Mortar method applied to the FEM. , 2010, , .		0
35	Accurate Projection Method of Source Quantities in Coupled Finite-Element Problems. IEEE Transactions on Magnetics, 2009, 45, 1132-1135.	1.2	8
36	Method to Connect Nonconforming Mesh in 3-D With the Overlapping Method. IEEE Transactions on Magnetics, 2009, 45, 1420-1423.	1.2	6

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37	Iterative Solvers for Singular Symmetric Linear Systems in Low Frequency Electromagnetics. IEEE Transactions on Magnetics, 2009, 45, 1428-1431.	1.2	2
38	Analytical Calculation of Interaction Force Between Orthogonally Magnetized Permanent Magnets. Sensor Letters, 2009, 7, 442-445.	0.4	31
39	Discrete finite element characterizations of source fields for volume and boundary constraints in electromagnetic problems. Journal of Computational and Applied Mathematics, 2008, 215, 438-447.	1.1	9
40	Implementation of an Anisotropic Vector Hysteresis Model in a 3-D Finite-Element Code. IEEE Transactions on Magnetics, 2008, 44, 918-921.	1.2	10
41	Comparison Between the Mortar Element Method and the Polynomial Interpolation Method to Model Movement in the Finite Element Method. IEEE Transactions on Magnetics, 2008, 44, 1314-1317.	1.2	13
42	Using a Galerkin Projection Method for Coupled Problems. IEEE Transactions on Magnetics, 2008, 44, 830-833.	1.2	13
43	Numerical solutions in primal and dual meshes of magnetostatic problems solved with the finite integration technique. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2008, 27, 47-55.	0.5	5
44	Modeling of A Linear and Rotary Permanent Magnet Actuator. IEEE Transactions on Magnetics, 2008, 44, 4357-4360.	1.2	71
45	Analysis of a rotational single sheet tester using 3D finite element model taking into account hysteresis effect. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 1037-1048.	0.5	4
46	Computation of the magnetic flux in the finite elements method. EPJ Applied Physics, 2007, 39, 119-128.	0.3	0
47	Design and study of a linear actuator using an analytical approach and the 3D FEM. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 1005-1016.	0.5	7
48	Source Field Computation in NDT Applications. IEEE Transactions on Magnetics, 2007, 43, 1785-1788.	1.2	16
49	Study of a Stator Current Excited Vernier Reluctance Machine. IEEE Transactions on Energy Conversion, 2006, 21, 823-831.	3.7	46
50	Comparison of slip surface and moving band techniques for modelling movement in 3D with FEM. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2006, 25, 17-30.	0.5	15
51	Determination of the magnetic parameters at noâ€load of a variable reluctance machine excited by DC and AC currents. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2006, 25, 102-116.	0.5	0
52	Calculation of extra copper losses with imposed current magnetodynamic formulations. IEEE Transactions on Magnetics, 2006, 42, 767-770.	1.2	13
53	Design and study of a multiphase axial-flux machine. IEEE Transactions on Magnetics, 2006, 42, 1427-1430.	1.2	38
54	Consideration of the coupling of the magnetic and electric equations with Finite Integration Technique (FIT). EPJ Applied Physics, 2005, 30, 17-21.	0.3	2

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55	Dual finite element formulations for lumped reluctances coupling. IEEE Transactions on Magnetics, 2005, 41, 1396-1399.	1.2	24
56	Estimation of Numerical Errors Due to Time and Space Discretizations. IEEE Transactions on Magnetics, 2004, 40, 1061-1064.	1.2	0
57	3-D Approaches to Determine the End Winding Inductances of a Permanent-Magnet Linear Synchronous Motor. IEEE Transactions on Magnetics, 2004, 40, 758-761.	1.2	9
58	Comparison of the Preisach and Jilesâ€Atherton models to take hysteresis phenomenon into account in finite element analysis. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2004, 23, 825-834.	0.5	8
59	Comparison of 3D magnetodynamic formulations in terms of potentials with imposed electric global quantities. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2004, 23, 885-893.	0.5	4
60	Comparison of Preisach and Jilesâ€“Atherton models to take into account hysteresis phenomenon for finite element analysis. Journal of Magnetism and Magnetic Materials, 2003, 261, 139-160.	1.0	97
61	Machines Ã rÃ©luctance vernier : conditions de fonctionnement. Revue Internationale De GÃ©nie Ã©lectrique, 2003, 6, 637-664.	0.0	2
62	A non linear analytical model of switched reluctance machines. EPJ Applied Physics, 2002, 18, 163-172.	0.3	5
63	Study of head winding effects in a switched reluctance machine. IEEE Transactions on Magnetics, 2002, 38, 989-992.	1.2	3
64	Determination of lossesâ€™ local distribution for transformer optimal designing. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2001, 20, 187-204.	0.5	7
65	Numerical modelling of an unbalanced short shunt induction generator using finite element method. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2000, 19, 787-804.	0.5	3
66	Adaptive meshing in 3D multi-static problem with variable sources. EPJ Applied Physics, 2000, 12, 187-193.	0.3	1
67	3D computation of a claw pole permanent magnet machine using a scalar potential formulation. EPJ Applied Physics, 2000, 11, 175-182.	0.3	0
68	3D compatible magnetostatic potential formulations coupled with electrical circuits. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2000, 19, 776-786.	0.5	1
69	A direct identification method of the hysteresis model for the design of SMC transformers. IEEE Transactions on Magnetics, 2000, 36, 3466-3469.	1.2	4
70	Calculation of complementary solutions in 2D finite element method application to error estimation. IEEE Transactions on Magnetics, 2000, 36, 1583-1587.	1.2	11
71	Numerical model to discretize source fields in the 3D finite element method. IEEE Transactions on Magnetics, 2000, 36, 676-679.	1.2	31
72	Comparison between two approaches to model induction machines with skewed slots. IEEE Transactions on Magnetics, 2000, 36, 1453-1457.	1.2	37

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73	Error estimators in 3D linear magnetostatics. IEEE Transactions on Magnetics, 2000, 36, 1588-1591.	1.2	7
74	A time-stepped 2D-3D finite element method for induction motors with skewed slots modeling. IEEE Transactions on Magnetics, 1999, 35, 1262-1265.	1.2	26
75	Characterisation and modelling of hysteresis phenomenon. Mathematics and Computers in Simulation, 1998, 46, 301-311.	2.4	5
76	Error estimation of finite element solution in nonlinear magnetostatic 2D problems. IEEE Transactions on Magnetics, 1998, 34, 3268-3271.	1.2	13
77	Determination and utilization of the source field in 3D magnetostatic problems. IEEE Transactions on Magnetics, 1998, 34, 2509-2512.	1.2	48
78	Numerical models for rotor cage induction machines using finite element method. IEEE Transactions on Magnetics, 1998, 34, 3202-3205.	1.2	23
79	Design and optimization of an excited reluctance generator using field computation. IEEE Transactions on Magnetics, 1998, 34, 3491-3494.	1.2	3
80	ModÃ©lisation 3D du circuit Ã©lectrique et du mouvement : application Ã la machine asynchrone. EPJ Applied Physics, 1998, 1, 67-71.	0.3	2
81	Error estimator in linear magnetostatic 2D. EPJ Applied Physics, 1998, 1, 203-209.	0.3	3
82	Comparison between finite element method and magnetic equivalent scheme to model an induction machine. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1996, 15, 82-87.	0.5	3
83	Hybrid formulation A-Î© with finite element method to model in 3D electromagnetic systems. IEEE Transactions on Magnetics, 1996, 32, 659-662.	1.2	6
84	Comparison of Potential Dual Formulations Developed with Different Elements. , 1995, , 111-114.		1
85	Study of 3D formulations to model electromagnetic devices. IEEE Transactions on Magnetics, 1994, 30, 3228-3231.	1.2	20
86	Comparison between two formulations in terms of potential for the coupling of magnetic and electric circuit equations. IET Science, Measurement and Technology, 1994, 141, 486-490.	0.7	5
87	Numerical simulation of a power transformer using 3D finite element method coupled to circuit equation. IEEE Transactions on Magnetics, 1994, 30, 3224-3227.	1.2	38
88	COUPLING OF ELECTRIC AND MAGNETIC EQUATIONS IN ELECTROMAGNETIC DEVICES WITH FINITE ELEMENT METHOD. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1994, 13, 75-78.	0.5	1
89	Finite element analysis in electromagnetic systems-accounting for electric circuits. IEEE Transactions on Magnetics, 1993, 29, 1669-1675.	1.2	83
90	NUMERICAL SIMULATION OF SYNCHRONOUS GENERATOR ON STEADY STATE. Electric Power Components and Systems, 1993, 21, 507-518.	0.1	2

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91	A non-linear coupled 3D model for magnetic field and electric circuit equations. IEEE Transactions on Magnetics, 1992, 28, 1295-1298.	1.2	42
92	A model for coupled magnetic-electric circuits in electric machines with skewed slots. IEEE Transactions on Magnetics, 1990, 26, 1096-1100.	1.2	71
93	Numerical simulation of a nonconventional alternator connected to a rectifier. IEEE Transactions on Energy Conversion, 1990, 5, 512-518.	3.7	22
94	Simulation of electromagnetic systems by coupling of magnetic and electric equations. Mathematics and Computers in Simulation, 1989, 31, 189-194.	2.4	15
95	AN ADAPTED CHOLESKY DECOMPOSITION METHOD FOR THE SOLUTION OF COUPLED MAGNETICâ€ELECTRIC EQUATIONS. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1989, 8, 203-208.	0.5	4
96	Coupling of saturated electromagnetic systems to non-linear power electronic devices. IEEE Transactions on Magnetics, 1988, 24, 274-277.	1.2	56
97	Complete Study For The Performance Of Self Controlled Permanent Magnet Synchronous Motor. , 1987, 0854, 438.		0
98	Calculation of saturated inductances for numerical simulation of synchronous machines. IEEE Transactions on Magnetics, 1983, 19, 2628-2631.	1.2	24
99	A NUMERICAL MODEL FOR SATURATED INDUCTANCES IN SYNCHRONOUS MACHINES. Electric Power Components and Systems, 1983, 8, 215-224.	0.1	2
100	Parallelization of a 3D magnetostatic code using High Performance Fortran. , 0, , .		0
101	A hybrid movement method to model electrical machines with end winding in 3D Finite Element Method. , 0, , .		0
102	Source Field Computation in NDT Applications. , 0, , .		1
103	Influence of the Source Potential Distribution on FEM Potential Formulations in Magnetostatics. , 0, , .		0