

**Elenco completo delle pubblicazioni di  
Piergiorgio ALOTTO**

- [1] P. Alotto, I. Isaza, P. Molfino, G. Molinari. A 2D finite element implementation of classical Preisach models for scalar and vector magnetic hysteresis. In *Proceedings of 5th IGTE Symposium, 28-30 September 1992, Graz, Austria*, pages 167-172, 1992.
- [2] P. Alotto, C. Emson, Y. Tanaka. Electromagnetic fields in high speed levitation systems. In *Proceedings of 5th Electromagnetic Symposium, Hitachi Civic Center, Hitachi City, Japan*, pages 342-345, 1993.
- [3] P. Alotto, P. Molfino, M. Nervi, R. Orlando. Vector and scalar 'Preisach engine' for hysteretic material modelisation in 2D finite element codes. In *Proceedings of 'CENTENAIRE ESIM', 18 June 1993, Marseille, France*, pages 54-61, 1993.
- [4] **P. Alotto, P. Girdinio, P. Molfino. A 2D finite element procedure for magnetic analysis involving non-linear and hysteretic materials. *IEEE Trans. on Magnetics*, 30(5):3379-3382, 1994.**
- [5] P. Alotto, P. Fernandes, P. Girdinio, P. Molfino, G. Molinari, M. Nervi, A. Manella. Error estimate and adaptive meshing in finite element solutions of electric and magnetic problems. In *Proceedings of LATSIS Symposium on Computational Electromagnetics, 19-21 September 1995, Zurich, Switzerland*, pages 1-20, 1995. Invited.
- [6] P. Alotto, I. Gallimberti, G. Molinari, M. Repetto. Numerical modelling of electrostatic and electrokinetic phenomena: A critical overview. *Inst. Phys. Conf. Ser. No 143: Section 5*, pages 165-176, 1995. Invited.
- [7] P. Alotto, B. Cranganu, V. Ionita, P. Molfino. Modelling of 2D magnetic fields in media with hysteresis. In *Proceedings of ISEM, 17-20 September 1995, Cardiff, Wales*, 1995.
- [8] P. Alotto, P. Molfino, G. Molinari, M. Nervi. A combined optimisation technique based on the generalized response surface method and adaptive meshing. In *Proceedings of 3rd Int. Workshop on Electric and Magnetic Fields from Numerical Models to Industrial Applications, 6-9 May 1996, Liege, Belgium*, pages 201-206, 1996.
- [9] P. Alotto, G. Molinari, M. Nervi. Optimization of magnetic devices using finite element analysis. In *Proceedings of MAFELAP, 25-28 June 1996, Brunel, Uxbridge, U.K.*, pages 3-4, 1996.
- [10] P. Alotto, G. Grenno, M. Mazzucchelli, P. Molfino. Finite element modelling of electrostatic microactuators. In *Proceedings of 7th IGTE Symposium, 23-25 September 1996, Graz, Austria*, pages 215-220, 1996.

- [11] P. Alotto, P. Fernandes, P. Girdinio, M. Nervi. Mesh adaption in finite element analysis of 2D steady state time harmonic eddy current problems. *IEEE Trans. on Magnetics*, 32(3):1361-1364, 1996.
- [12] P. Alotto, A. Kuntsevitch, C. Magele, G. Molinari, C. Paul, K. Preis, M. Repetto, K. Richter. Multiobjective optimization in magnetostatics: A proposal for a benchmark problem. *IEEE Trans. on Magnetics*, 32(3):1238-1241, 1996.
- [13] P. Alotto, P. Fernandes, P. Molfino, M. Nervi. Comparison of conditions  $V=0$  and  $A \cdot n=0$  on conductor boundaries in A,V-A-psi formulations. *IEEE Trans. on Magnetics*, 32(3):800-803, 1996.
- [14] P. Alotto, P. Girdinio, P. Molfino, M. Nervi. Mesh adaption and optimization techniques in magnet design. *IEEE Trans. on Magnetics*, 32(4):2954-2957, 1996.
- [15] P. Alotto, A. Caiti, G. Molinari, M. Repetto. A multiquadrics-based algorithm for the acceleration of simulated annealing optimization procedures. *IEEE Trans. on Magnetics*, 32(3):1198-1201, 1996.
- [16] P. Alotto, P. Girdinio, P. Molfino, G. Molinari, M. Nervi. Linee di Ricerca sulle Tecniche di Ottimizzazione dei Dispositivi Elettromagnetici (in italian), In Proceedings of SIMAI '96, May 27-31, Salice Terme (Italy), pages 429-431, 1996.
- [17] P. Alotto, G. Molinari, P. Molfino, M. Nervi. Enhanced optimisation of electromagnetic devices by means of finite element analysis with adaptive meshing. In *Proceedings of UKMag Society Meeting, 25 April 1996, Imperial College, London, U.K.*, 1996. Invited.
- [18] P. Alotto, P. Fernandes, P. Girdinio, P. Molfino, G. Molinari, M. Nervi. Open problems in computational electromagnetics. In *Proceedings of ECCOMAS Conference, 9-13 September 1996, Paris, France*, pages 105-116, 1996. Invited.
- [19] P. Alotto, P. Molfino, G. Molinari, J. Simkin, B. Colyer, C. W. Trowbridge, U. Barberis, E. Picco, T. Gutierrez, A. Longo, C. Greenough, D. Thomas, G. Jared, N. Sormaz. Project MIDAS: Magnet Integrated Design and Analysis System. *IEEE Trans. on Magnetics*, 33(2):1143-1148, 1997.
- [20] P. Alotto, P. Girdinio, P. Molfino, M. Nervi. Time-harmonic mesh adaption with error estimate based on the 'Local Field Error' approach. *IEEE Trans. on Magnetics*, 33(2):1744-1747, 1997.
- [21] P. Alotto, G. Molinari, M. Nervi, M. Gaggero. A 'Design of Experiment' approach to enhance the 'Generalized Response Surface Method' in the optimization of multimimima problems. *IEEE Trans. on Magnetics*,

33(2):1896-1899, 1997.

- [22] P. Alotto, R. Janssen, M. Dracopulos, K. Parrot, C. Glasgow, J. Simkin. Bulk synchronous parallelization of industrial electromagnetic software. *Int. J. Supercomputer Applications and High Performance Computing*, 11(4):344-358, 1997.
- [23] P. Alotto. Robustness and generality issues in the generation of tetrahedral meshes for computational electromagnetics. *International Compumag Society Newsletter*, Vol.5, No.2, July 1998. (Contribution at Panel Session on mesh generation at Compumag Rio) (invited).
- [24] P. Alotto, A. Bertoni, B. Brandstätter, C. Magele, G. Molinari, M. Nervi, C. Ragusa, M. Repetto, K. Richter. A combined approach for the stochastic optimization of multim minima problems using adaptive fuzzy sets and radial basis functions. *IEEE Trans. on Magnetics*, 34(5):2837-2840, 1998.
- [25] P. Alotto, A. Castagnini, P. Fernandes, P. Girdinio. Error estimation and adaptive meshing in 3d electrostatic and magnetostatic problems. *IEEE Trans. on Magnetics*, 34(5):3260-3263, 1998.
- [26] P. Alotto, P. Molfino, M. Nervi, R. Janssen, M. Dracopulos, K. Parrott, E. Slessor, J. Simkin. Parallelisation of electromagnetic simulation codes. *IEEE Trans. on Magnetics*, 34(5):4323-4326, 1998.
- [27] P. Alotto, P. Molfino, G. Molinari, M. Nervi, R. Orlando. Three-dimensional coupled thermal-magnetic analysis of toroidal field coils of resistive high field tokamaks by f.e.m. *COMPEL*, 17(5/6):576-584, 1998.
- [28] P. Alotto, G. Fuertratt, C. Magele, G. Molinari, M. Nervi, M. Repetto, K. Richter. Some results on a SMES device optimization benchmark problem. *Int. J. Applied Electromagnetics and Mechanics*, 9:315-324, 1998.
- [29] P. Alotto, P. Delfino, P. Molfino, M. Nervi, I. Perugia. A mixed face-edge finite element formulation for 3D magnetostatic problems. *IEEE Trans. on Magnetics*, 34(5):2445-2448, 1998.
- [30] P. Alotto, A. Bertoni, P. Molfino. A combined FEM-BEM and Tableau Analysis for the modelling of moving devices fed by arbitrary lumped parameters electrical circuits. In *Proceedings of 4th Int. Workshop on Electric and Magnetic Fields from Numerical Models to Industrial Applications, 12-15 May 1998, Marseille, France*, pages 243-248, 1998.
- [31] P. Alotto, I. Perugia. An adaptive mixed formulation for 3D magnetostatics. In *Proceedings of SIMAI, 1-5 Giugno 1998, Taormina, Italia*, pages 38-41, 1998.

- [32] P. Alotto, B. Brandstätter, C. Eranda, G. Fürntratt, C. Magele, G. Molinari, M. Nervi, K. Preis, M. Repetto, K. R. Richter. Stochastic algorithms in electromagnetic optimization. *IEEE Trans. on Magnetics*, 34(5):3674-3684, 1998.
- [33] P. Alotto, G. Molinari, G. Drago, P. Brochet, C. Furmaniak, R. Janssen, C. R. Riley, J. F. Lemoine, J. Simkin, R. C. F. McLatchie, A. Longo, T. Gutierrez. An environment for electromagnetic design optimization. In *Proceedings of 8th IGTE Symposium, 21-24 September 1998, Graz, Austria*, pages 63-68, 1998.
- [34] P. Alotto, C. Magele. Optimization in electromagnetics. *International Compumag Society Newsletter*, Vol.6, No.3, November 1999.
- [35] P. Alotto, T. Ebner, C. Magele, B. Brandstätter, M. Luschin. Approximation of the objective function : multiquadrics versus neural networks. *COMPEL*, 18(3):250-265, 1999.
- [36] P. Alotto, S. DeMarchi, G. Secondo. Advanced modelling techniques for the design of an innovative asynchronous motor. In *Proceedings of EMD '99, 1-3 September 1999, Canterbury Christ Church College, UK*, pages 12-15, 1999.
- [37] P. Alotto, P. Molfino, G. Molinari. A combined advancing-front/Delaunay technique for the tetrahedral meshing of non-convex volumes in 3D. In *Proceedings of 12th COMPUMAG, 25-28 October 1999, Sapporo, Japan*, pages 16-17, 1999.
- [38] P. Alotto, I. Perugia. Mixed finite element methods and tree-cotree implicit condensation. *CALCOLO*, 36(4):233-248, 1999.
- [39] P. Alotto, C. Bianchi, P. Girdinio, M. Nervi, A. Pitto. Static and sinusoidal analysis of current flow problems in imperfect dielectrics. In *Proceedings of 12th COMPUMAG, 25-28 October 1999, Sapporo, Japan*, pages 454-455, 1999.
- [40] P. Alotto, A. Castagnini, P. Girdinio, M. Nervi. Adaptive FEM in 3D nonlinear magnetostatics. *COMPEL*, 19(1):39-47, 2000.
- [41] P. Alotto, P. Girdinio, G. Molinari, M. Nervi. Hybrid deterministic/stochastic fuzzy methods for the optimization of electromagnetic devices. *COMPEL*, 19(1):30-38, 2000.
- [42] P. Alotto, I. Perugia. An adaptive mixed formulation for 3d magnetostatics. *COMPEL*, 19(1):106-120, 2000.
- [43] P. Alotto, I. Perugia. A field-based finite element method for magnetostatics derived from an error minimisation approach. *Internat. J. Numer. Methods Engrg.*, 49(4) :573-598, 2000.

- [44] P. Alotto, P. Molfino, G. Molinari. A combined advancing-front/Delaunay technique for the meshing of curved surfaces in 3D. *COMPEL*, 19(2): 195-199, 2000.
- [45] P. Alotto, I. Perugia. Tree-cotree implicit condensation in magnetostatics. *IEEE Trans. on Magnetics*, 36(4):1523-1526, 2000.
- [46] P. Alotto, P. Brochet, G. Drago, C. Furmaniak, C. Glasgow, T. Gutierrez, R. Janssen, J-F. Lemoine, R. C. F. McLatchie, G. Molinari, C. P. Riley, J. Simkin. An environment for the optimisation of electromagnetic design. *IEEE Trans. on Magnetics*, 36(4):1640-1644, 2000.
- [47] P. Alotto, P. Molfino, G. Molinari. A WWW-based tool for the remote optimisation of electromagnetic devices. *IEEE Trans. on Magnetics*, 37(5): 3592-3595, 2001
- [48] P. Alotto, S. Bobbio, F. Delfino, P. Girdinio, P. Molfino. Equivalent source methods for 3d force calculation with nodal and mixed FEM in magnetostatic problems. *IEEE Trans. on Magnetics*, 37(5): 3137-3140, 2001.
- [49] P. Alotto, A. Bertoni. A mesh modification technique for the study of rotating machines. In *Proceedings of 9th CEFC, 4-7 June 2000, Milwaukee, Wisconsin, USA*, 2000.
- [50] P. Alotto, A. Bertoni, P. Girdinio, M. Nervi. A numerical procedure for the design of active shields for DC applications. In *Proceedings of 9th CEFC, 4-7 June 2000, Milwaukee, Wisconsin, USA*, 2000
- [51] P. Alotto, P. Molfino, G. Molinari. Optimisation of electromagnetic problems with uncertain parameters and tolerances in the design variables. *COMPEL*, 20(3):808-812, 2001.
- [52] P. Alotto, P. Molfino, G. Molinari. Optimisation of electromagnetic problems with uncertain parameters and tolerances in the design variables. In *Proc. of 6th Int. Wksp. on Optim. And Inv. Pbs. in Electromagn.*, 25-27 Sept. 2000, Torino, Italy, pages 59-60, 2000.
- [53] P. Alotto, A. Bertoni, I. Perugia, D. Schoetzau. Discontinuous finite element methods for the simulation of rotating electrical machines. *COMPEL*, 20(2): 448-462, 2001.
- [54] P. Alotto, M. Nervi. An efficient hybrid algorithm for the optimisation of problems with several local minima. *Internat. J. Numer. Methods Engrg.*, 50 :847-868, 2001.
- [55] P. Alotto, A. Bertoni, I. Perugia, D. Schoetzau. Efficient use of the Local Discontinuous Galerkin method for meshes sliding on a circular boundary. *IEEE Trans. on Magnetics*, 28(2): 405-408, 2002.

- [56] P. Alotto, F. Delfino, G. Molinari, M. Rossi, V. Siciliano, O. P. Ventura. Field and current flow analysis of the buried feeding line of the innovative electric transport concept STREAM, *COMPEL*, 21(4):591-603, 2002.
- [57] P. Alotto, T. Fortuna, C. Magele, H. Pfluegl, G. Steiner, A. Weber. Robust optimization in electromagnetic design. *Proceedings of IEEE CEFC*, June 16-19, 2002, Perugia, Italy, 2002.
- [58] P. Alotto, A. D'Souza, A.P. Jay, J. Madail Vaiga, A.M. Michaelides, G. Molinari, C.P. Riley, M. Rossi, A. Zubiani. A transient formulation for the design of electric insulating/conducting components: EU Project ADETEC. *Proceedings of X IGTE Symposium*, 16-18 September 2002, Graz, Austria, 2002.
- [59] P. Alotto, A. D'Souza, A.P. Jay, J. Madail Vaiga, A.M. Michaelides, G. Molinari, C.P. Riley, and A. Zubiani. Parametric FEA for the Design of Electric Insulating Components: EU Project ADETEC. *Proceedings of MedPower2002*, 4-6 November 2002, Athens, Greece, 2002.
- [60] P. Alotto. Linear systems of equations arising in the (almost) FEM solution of low-frequency electromagnetic problems. *Numerical Mathematics and Advanced Applications, Proceedings of Enumath 2001*, Ischia, Italy, July 2001, pages 931-940, 2003.
- [61] P. Alotto, C. Magele, W. Renhart, G. Steiner, A. Weber. Robust target functions in electromagnetic design. *COMPEL*, 22(3): 549-560, September 2003.
- [62] P. Alotto, P. Girdinio, G. Molinari, M. Nervi. Generalized Response Surface Optimizers: description of the algorithm, applications, and improvement strategies. *Proceedings of Electromagnetics in Telecommunication*, 22-23 sept. 2003. Naples, Italy, 2003.
- [63] P. Alotto, I. Perugia. Matrix properties of a vector potential cell method for magnetostatics. *IEEE Trans. On Magnetics* 40(2): 1045-1048, 2004.
- [64] P. Alotto, A. De Cian, G. Molinari. A Time-domain 3-D full-Maxwell solver based on the Cell Method. *IEEE Trans. on Magnetics*, 42(4): 799-802, 2006.
- [65] P. Alotto, R. Specogna, F. Trevisan. A Theta-method for eddy currents in time-domain with a discrete geometric approach. *IEEE Trans. on Magnetics*, 42(4): 779-782, 2006.
- [66] P. Alotto, L. dos Santos Coelho. Electromagnetic Device Optimization using Improved Differential Evolution Methods. In *Proceedings of IEEE CEFC 2006, Miami, FL USA - April 30th - May 3<sup>rd</sup>*, 2006.

- [67] P. Alotto, M. Guarnieri, F. Moro. A Boundary Integral Formulation on Unstructured Dual Grids for Eddy Current Analysis in Thin Shields *IEEE Trans. on Magnetics*, 43(4): 1173-1176, 2007.
- [68] P. Alotto, L. dos Santos Coelho. Electromagnetic Device Optimization by Hybrid Evolution Strategy Approaches. *COMPEL*, 26(2):269-279, 2007.
- [69] P. Alotto, L. dos Santos Coelho. TEAM Problem 22 Optimization using a Particle Swarm Approach with Local Search. In *Proceedings of IGTE Symposium 2006, Graz University of Technology, Austria, September 17-20, 2006*.
- [70] P. Alotto, A. De Cian, G. Molinari, M. Rossi. Implementation of Surface Impedance Boundary Conditions in the Cell Method via the Vector Fitting Technique. *COMPEL*, 26(3):859-872, 2007.
- [71] P. Alotto, L. Codecasa, F. Freschi, G. Gruosso, F. Moro, M. Repetto. Finite formulation for quasi-magnetostatics with integral boundary conditions. In *Proceedings of IGTE Symposium 2006, Graz University of Technology, Austria, September 17-20, 2006*.
- [72] P. Alotto, M. Bullo, M. Guarnieri, F. Moro. A Coupled Thermo-Electromagnetic Formulation Based on the Cell Method. *IEEE Trans. on Magnetics*, 44(6): 702-705, 2008.
- [73] P. Alotto, L. Dos Santos Coelho. Global Optimization of Electromagnetic Devices Using an Exponential Quantum-Behaved Particle Swarm Optimizer. *IEEE Trans. on Magnetics*, 44(6): 1074 - 1077, 2008.
- [74] P. Alotto, G. Gruosso, F. Moro, M. Repetto. A Boundary Integral Formulation for Eddy Current Problems Based on the Cell Method. *IEEE Trans. on Magnetics*, 44(6): 770-773, 2008.
- [75] P. Alotto, U. Baumgartner, F. Freschi, M. Jaendl, A. Koestinger, Ch. Magele, W. Renhart, M. Repetto, G. Steiner. SMES Optimization Benchmark Extended: Introducing Uncertainties and Pareto Optimal Solutions into TEAM22. *IEEE Trans. on Magnetics*, 44(6): 106 -1069, 2008.
- [76] P. Alotto, L. Dos Santos Coelho. Loney's Solenoid Design Using Artificial Immune Network with Local Search Using Nelder-Mead Simplex Method. *IEEE Trans. on Magnetics*, 44(6): 1070-1073, 2008.

- [77] **P. Alotto, L. Dos Santos Coelho. Multiobjective Electromagnetic Optimization Based on a Non-Dominated Sorting Genetic Approach with a Chaotic Crossover Operator. *IEEE Trans. on Magnetics*, 44(6): 1078 -1081, 2008.**
- [78] P. Alotto, M. Guarnieri, F. Moro. Low Frequency Eddy Current Analysis in Thin Non Magnetic Plates by a Boundary Integral Method. *In Proceedings of HES-07: International Symposium on Heating by Electromagnetic Sources, Padova, Italy, June 20-22, 2007.*
- [79] **P. Alotto, G. Gruosso, F. Moro, M. Repetto. Three-dimensional Eddy Current Analysis in Unbounded Domains by a DEM-BEM Formulation. *COMPEL*, vol. 27, no. 2, pp. ,460-466, 2008.**
- [80] P. Alotto, M. Guarnieri, F. Moro and R. Turri, Mitigation of residential magnetic fields generated by MV/LV substations, *Proc. of 42<sup>th</sup> UPEC Conf., Brighton (UK)*, 4-6 Sept. 2007.
- [81] P. Alotto, M. Guarnieri, F. Moro, R. Turri, 3D Modelling of ELF thin magnetic screens, *In Proceedings of EHE 07, Int. Conf. on Electromagnetic Fields, Health and Environment, Wroclaw, Poland*, Sept. 10-12, 2007.
- [82] P. Alotto, M. Guarnieri, F. Moro, Two-dimensional analytical modelling of passive-feed direct methanol fuel cells, *In Proceedings of "International Conference on Renewable Energies and Power Quality (ICREPQ'08)", Santander (SP)*, 12-14 March 2008.
- [83] **P. Alotto, M. Guarnieri, F. Moro. Modeling non-linear passive direct methanol fuel cells, *COMPEL*, vol. 28, no. 3, pp. 523-539, 2009.**
- [84] **P. Alotto, M. Guarnieri, F. Moro. A coupled electro-chemical model of a direct methanol fuel cell for portable electronic devices, *COMPEL*, vol. 28, no. 4, pp. 1005-1019, 2009.**
- [85] **P. Alotto, M. Guarnieri, F. Moro. Optimal design of micro direct methanol fuel cells for low-power applications, *IEEE Trans. on Magnetics*, 45(3): 1570 -1573, 2009.**
- [86] P. Alotto, M. Bullo, M. Guarnieri, C. Majorana, G. Mazzucco, F. Moro. Coupled mechanical-electrical-thermal modeling of separable micro connectors, *Proc. of IEEE CEFC 08 Conf., Athens (GR)*, 11-15 May 2008.
- [87] **P. Alotto, L. dos Santos Coelho. Electromagnetic Optimization Using a Cultural Self-Organizing Migrating Algorithm Approach Based on Normative Knowledge, *IEEE Trans. on Magnetics*, 45(3): 1446 -1449, 2009.**

- [88] **P. Alotto, L. dos Santos Coelho. Tribes Optimization Algorithm Applied to Loney's Solenoid Design, *IEEE Trans. on Magnetics*, 45(3): 1526 -1529, 2009.**
- [89] P. Alotto, L. dos Santos Coelho. A Cauchy-Based Particle Swarm Approach Applied to TEAM Workshop Benchmark Problem 22, *Proc. of IEEE CEFC 08 Conf., Athens (GR)*, 11-15 May 2008.
- [90] P. Alotto, L. dos Santos Coelho. An Improved Cauchy Particle Swarm Optimizer Based on Dynamic Inertia Weight and Mutation Operator Applied to Electromagnetic Optimization, *Proc. of 13th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria*, September 21-24, 2008.
- [91] P. Alotto, L. dos Santos Coelho, Viviana Cocco Mariani. Global Optimization of Electromagnetic Devices Using a Simple Adaptive Differential Evolution Approach, *Proc. of 13th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria*, September 21-24, 2008.
- [92] **P. Alotto, L. dos Santos Coelho. Electromagnetic Optimization Based on an Improved Diversity-Guided Differential Evolution Approach and Adaptive Mutation Factor, *COMPEL*, vol. 28, no. 5, pp. 1112-1119, 2009.**
- [93] **P. Alotto, L. dos Santos Coelho. Particle Swarm Optimization Combined with Normative Knowledge Applied to Loney's Solenoid Design, *COMPEL*, vol. 28, no. 5, pp. 1155-1161, 2009.**
- [94] P. Alotto. Data structures for mesh-based electromagnetic simulation codes, *Proc. of 8th International Symposium on Electric and Magnetic Fields, Mondovi, Italy*, May 27-29, 2009.
- [95] **P. Alotto, L. dos Santos Coelho. A Multiobjective Gaussian Particle Swarm Approach Applied to Electromagnetic Optimization, *IEEE Trans. on Magnetics*, 46(8): 3289-3292, 2010.**
- [96] **P. Alotto, L. dos Santos Coelho. Improved Bacterial Foraging Strategy Applied to TEAM Workshop Benchmark Problem 22, *IEEE Trans. on Magnetics*, 46(8): 2903 - 2906, 2010.**
- [97] P. Alotto, L. dos Santos Coelho. A Populational Particle Collision Algorithm Applied to Electromagnetic Optimization, *Proc. of 17th COMPUMAG, 22-26 November 2009, Florianopolis, Brazil*, 2009.

- [98] P. Alotto, M. Guarnieri, F. Moro. A Fully Coupled Three-dimensional Dynamic Model of Polymeric Membranes for Fuel Cells, *IEEE Trans. on Magnetics*, 46(8): 3257 - 3260, 2010.
- [99] P. Alotto, F. Freschi, M. Repetto. Multiphysics problems via the Cell Method: the role of Tonti diagrams, *IEEE Trans. on Magnetics*, 46(8): 2959 - 2962, 2010.
- [100] P. Alotto, F. Freschi. A Second Order Cell Method for Poisson's Equation, *IEEE Trans. on Magnetics*, 47(5): 1430-1433, 2011.
- [101] P. Alotto, A. Spagnolo, B. Paya. Particle Swarm Optimization of a Multi-Coil Transverse Flux Induction Heating System, *IEEE Trans. on Magnetics*, 47(5): 1270-1273, 2011.
- [102] P. Alotto, D. Desideri, F. Freschi, A. Maschio, M. Repetto. Dual-PEEC Modeling of a Two-Port TEM Cell for VHF Applications, *IEEE Trans. on Magnetics*, 47(5): 1486-1489, 2011.
- [103] P. Alotto, M. Guarnieri, F. Moro, A. Stella. A Proper Generalized Decomposition Approach for the Modelling of Fuel Cell Polymeric Membranes, *IEEE Trans. on Magnetics*, 47(5):1462-1465, 2011
- [104] P. Alotto, M. Guarnieri, F. Moro. A Mortar Cell Method for Electro-Thermal Contact Problems, *IEEE Trans. on Magnetics*, 2011.
- [105] P. Alotto, M. Barcaro, N. Bianchi, M. Guarnieri. Optimization of IPM Motors with Machaon Rotor Flux Barriers, *IEEE Trans. on Magnetics*, 47(5): 958-961, 2011.
- [106] L. dos Santos Coelho, V. Cocco Mariani, P. Alotto. Improved Differential Evolution Optimization Algorithm for the Design of a Brushless DC Wheel Motor, *Proc. of IEEE CEFC 2010, 11-13 May 2010, Chicago, Illinois, USA*, 2010.
- [107] L. dos Santos Coelho, P. Alotto. Gaussian Artificial Bee Colony Algorithm Approach Applied to Loney's Solenoid Benchmark Problem, *IEEE Trans. on Magnetics*, 47(5): 1326-1329, 2011.
- [108] P. Alotto, M. Guarnieri, F. Moro, A. Stella. A Cell Method based Numerical Model for Resistance Welding, *Proc. of HES 2010, May 2010, Padova, Italy*, 2010.
- [109] P. Alotto, M. Guarnieri, F. Moro, A. Stella. Modeling Polymer Electrolyte Membranes with a Proper Generalized Decomposition Method. *Electrochimica Acta*, 2011 (accepted).

- [110] P. Alotto, A Hybrid Multiobjective Differential Evolution Method for Electromagnetic Device Optimization, *COMPEL*, vol. 30, no. 5, pp. 1479-1486, 2011.
- [111] P. Alotto, F. Freschi, A Parallel Implementation of dual-PEEC for Multicore and Multithreaded CPUs, *Proc. of 14th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria*, September 19-22, 2010.
- [112] P. Alotto, M. Guarnieri, F. Moro, A. Stella. A 3D Proper Generalized Decomposition Approach for Modeling Fuel Cell Polymeric Membranes, *Proc. of 14th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Graz, Austria*, September 19-22, 2010.
- [113] P. Alotto, M. Jaindl, R. Kutschera, C. Magele, A. Köstinger, Numerical Simulation Framework for Weakly Coupled Multiphysical Problems in Electrical Engineering. *Proc. of IV Int. Conf. on Comp. Meth. For Coupled Problems in Science and Engineering, 20-22 June 2011, Kos, Greece*, 2011. (accepted)
- [114] P. Alotto, F. Freschi, M. Guarnieri, F. Moro A Cell Method Formulation of Three Dimensional Electro-Thermo-Mechanical Contact Problems with Mortar Discretization. *Proc. of 18th COMPUMAG, 12-15 July 2011, Sydney, Australia*, 2011. (accepted)
- [115] P. Alotto, F. Freschi. A Parallel Implementation of dual-PEEC for Multicore and Multithreaded CPUs, *Proc. of 18th COMPUMAG, 12-15 July 2011, Sydney, Australia*, 2011. (accepted)
- [116] L. dos S. Coelho, J. Xavier Vianna Neto, P. Alotto. Continuous-GRASP Algorithm Combined with Local Differential Evolution Search for the Solution of Electromagnetic Design Problems. *Proc. of 18th COMPUMAG, 12-15 July 2011, Sydney, Australia*, 2011. (accepted)
- [117] P. Alotto, C. Magele. A Fuzzy Niching Evolution Strategy for Multiobjective Optimization. *Proc. of 18th COMPUMAG, 12-15 July 2011, Sydney, Australia*, 2011. (accepted)
- [118] L. dos S. Coelho, C. E. Klein, P. Alotto. Covariance Matrix Adaptation Evolution Strategy Using a Diversity-Guided Step-Size Tuning for Optimization in Electromagnetics. *Proc. of 18th COMPUMAG, 12-15 July 2011, Sydney, Australia*, 2011. (accepted)
- [119] L. dos S. Coelho, L. D. Afonso, P. Alotto. A Modified Imperialist Competitive Algorithm for Optimization in Electromagnetics. *Proc. of 18th COMPUMAG*,

*12-15 July 2011, Sydney, Australia, 2011. (accepted)*

**Sono indicati in neretto i lavori apparsi su rivista internazionale, per un totale di 67**

Sono indicati in caratteri normali i lavori apparsi su atti di congressi internazionali per un totale di 48

Sono indicati in caratteri normali i lavori apparsi su atti di congressi nazionali o in altre sedi, per un totale di 4

Padova, 24.20.2011

Piergiorgio Alotto