

Daniel FODOREAN: Published Scientific Papers - June 2013

Articles and books: 53.

- **14 journal articles:** 10 of ISI type, 2 in international journals and 2 in university annals.
- **5 books/book-chapter:** 3 books in Romanian and one in English, plus 1 book chapter (in English).
- **34 article in international conferences.**

PhD thesis report: 1.

Patents: 1 national patent proposal.

Journal articles (14)

ISI type

- J1.** D.Fodorean, L. Idoumghar, and L. Szabo, "Motorization for electric scooter by using permanent magnet machines optimized based on hybrid metaheuristic algorithm", IEEE Transaction on Vehicular Technology, vol.62, n.1, pp.39-49, January 2013, ISSN 0018-9545.
- J2.** M. Ruba, D. Fodorean, "Analysis of Fault-Tolerant Multiphase Power Converter for a Nine-Phase Permanent Magnet", IEEE Transaction on Industry Applications, vol.48, nr.6, pp.2092-2101, November/December 2012, ISSN 0093-9994.
- J3.** D.Fodorean, L.Idoumghar, A.N'diaye, D.Bouquain and A.Miraoui: "Simulated Annealing Algorithm for the Optimisation of an Electrical Machine", IET Electric Power Applications, vol.6, n°9, pp.735-742, November, 2012, ISSN 1751-8660.
- J4.** A.R. Matyas, K.A. Biro, D. Fodorean, "Multi-Phase Synchronous Motor Solution for Steering Applications", Progress In Electromagnetics Research, vol.131, pp.63-80, Sept. 2012, ISSN 1559-8985.
- J5.** D. Fodorean, D.C. Popa, M. Ruba, "On the Fault-Tolerance of Permanent Magnet Synchronous Machines and Drives used in Hybrid Vehicle Application", International Review of Electrical Engineering, vol.7, n.2, pp.3795-3803, March-April 2012, ISSN 1827-6660.
- J6.** T.Raminosoa, B.Blunier, D.Fodorean and A.Miraoui, "Design and optimisation of a Switched Reluctance Motor driving a Compressor for a PEM Fuel Cell System for Automotive Applications", IEEE Transactions on Industrial Electronics, vol.57, n°9, pp.2988-2997, September 2010, ISSN 0278-0046.
- J7.** D.Fodorean, S.Giurgea, A.Djerdir, A.Miraoui: "Numerical Approach for Optimum Electromagnetic Parameters of Electrical Machines used in Vehicle Traction Applications", Energy Conversion and Management (Elsevier), vol.50, pp.1288-1294, Mai 2009, ISSN 0196-8904.
- J8.** S.Giurgea, D.Fodorean, G.Cirrincone, A.Miraoui, M. Cirrincone: "Multimodel Optimization Based on the Response Surface of the Reduced FEM Simulation Model With Application to a PMSM", IEEE Transactions on Magnetics, vol.44, n°9, pp.2153-2157, Septembre 2008, ISSN 0018-9464.
- J9.** D.Fodorean, I.A.Viorel, A.Djerdir, A.Miraoui: "Performances for a Synchronous Machine with Optimized Efficiency while Wide Speed Domain is Attempted", IET Electric Power Applications, vol.2, n°1, pp.64-70, January 2008, ISSN 1751-8660.
- J10.** D.Fodorean, A.Djerdir, I.A.Viorel, A.Miraoui: "A Double Excited Synchronous Machine for Direct Drive Application - Design and Prototype Tests", IEEE Transactions on Energy Conversion, vol.22, n.3, pp.656-665, September 2007, ISSN 0885-8969.

International Journals with reviewers

- Ji11.** D.Fodorean, A. Miraoui, "Rapid design of permanent magnet synchronous machines (original title in French: Dimensionnement rapide des Machines Synchrones à Aimants Permanents (MSAP))", Technique de l'Ingénieur, Paris, France, 2009, Document D3554 - 24 pages, ISSN:1963-062X.
- Ji12.** D.Fodorean, I.A.Viorel, A.Djerdir, A.Miraoui: "On a Double-Excited Synchronous Motor with Wide Speed Range, Numerical and Experimental Results", Iranian Journal of Electrical and Computer Engineering IJECE, vol.5, n°1, Winter-Spring 2006, pp.63-68, ISSN 1682-0053.

University annals (BDI type)

- Ji13.** M.Gutman, I.A.Viorel, D.Fodorean, C.Stet: "Different variants of permanent magnet synchronous motors with field weakening possibilities", University Oradea Annals, Electrotechnical Section, Oradea, Romania, 2005, pp. 150-154, ISSN 1223-2106.

- Ji14.** D.Fodorean, I.A.Viorel, A.Miraoui, A.Djerdir, M.Gutman: "On the performances of a synchronous motor with different rotor configurations", University Oradea Annals, Electrotechnical Section, Oradea, Romania, 2004, pp. 105-109, ISSN 1223-2106.

PhD thesis report (1)

- T1.** D. Fodorean. *Design and Prototype Realization of a Double Excited Synchronous Machine: Electric Vehicle Propulsion Application* (original title in French: "*Conception et réalisation d'une machine synchrone à double excitation : Application à l'entraînement direct*"), PhD thesis report, Université de Technologie de Belfort-Montbéliard, Belfort-France, public defense on 12th of July 2005.

Books (5)

- B1.** D. Fodorean, F.Jurca, M.Ruba and D.C. Popa. *Motorization Variants for Light Electric Vehicles – design, magnetic, mechanical and thermal aspects*, AlmaMater, June 2013, ISBN 978-606-504-160-8.
- B2.** D.Fodorean: *Global Design and Optimization of a Permanent Magnet Synchronous Machine used for Light Electric Vehicle*, Intech, June 2011 –book chapter in monograph: *Electric Vehicles – Modelling and Simulations*, edited by Serif Soylu, ISBN 978-953-307-477-1.
- B3.** D.Fodorean: *Initiation in programming the digital signal processors of TMS320LF2407(A) type* (original title in Romanian: *Inițiere în programarea procesoarelor digitale de semnal din clasa TMS320LF2407(A)*), UT Press, Cluj-Napoca, Romania, 2010, ISBN 978-973-662-533-6.
- B4.** L.Szabo and D.Fodorean: *Simulation of the converter-machine assembly used in electromechanical systems* (original title in Romanian: *Simularea ansamblului convertor-masina utilizat in sisteme electromecanice*), UT Press 2009, ISBN 978-973-662-480-3.
- B5.** I-A.Viorel, D.Fodorean, F.N.Jurca: *Special Electrical Machines - Applications* (original title in Romanian: *Masini Electrice Speciale – Aplicatii*), Mediamira 2007, Cluj-Napoca, Romania, ISBN 978-973-713-183-6.

Articles in International Conferences (34)

Articles in international conferences with reviewers

- C1.** D. Fodorean, L. Szabo, "Control of a permanent magnet synchronous motor for electric scooter application", International Symposium on Power Electronics, Electrical Drives, Automation and Motion - SPEEDAM 2012, Sorrento, Italy, June 20-22, 2012, pp.1178-1181, ISBN-978-1-4673-1300-1.
- C2.** M. Ruba, L. Szabo, D. Fodorean, "Design and analysis of low voltage high current SRM for small automotive applications", International Symposium on Power Electronics, Electrical Drives, Automation and Motion - SPEEDAM 2012, Sorrento, Italy, June 20-22, 2012, pp.341-346, ISBN-978-1-4673-1300-1.
- C3.** F. Jurca, D. Fodorean, "Axial Flux Interior Permanent Magnet Synchronous Motor for Small Electric Traction Vehicle", International Symposium on Power Electronics, Electrical Drives, Automation and Motion - SPEEDAM 2012, Sorrento, Italy, June 20-22, 2012, pp.365-368, ISBN-978-1-4673-1300-1.
- C4.** F. Jurca, C. Martis, D. Fodorean, "Analysis of a radial flux synchronous machine with outer rotor for integrated starter-alternator", International Symposium on Power Electronics, Electrical Drives, Automation and Motion - SPEEDAM 2012, Sorrento, Italy, June 20-22, 2012, pp.496-500, ISBN-978-1-4673-1300-1.
- C5.** D. Fodorean, D.C. Popa, F. Jurca, M. Ruba: "Optimizing the Design of Radial/Axial PMSM and SRM used for Powered Wheel-Chairs", Proceedings of the International Conference on Electrical, Computer, Electronics and Communication Engineering, Paris, France, 14-16 November 2011, pp.120-125.
- C6.** D. Fodorean, F. Jurca, C. Oprea, L. Szabo: "Permanent Magnet Synchronous Machines with Improved Energetic Performances and Reduced Torque Ripples used for Electric Vehicles", Proceedings of the 3rd International Conference on Clean Electrical Power (ICCEP'11), 14-16 June 2011, pp.289-292.
- C7.** F. Jurca, Claudia S. Martis, C. Oprea, D. Fodorean: "Claw-Pole Machine Design and Tests for Small Scale Direct Driven Applications", Proceedings of the 3rd International Conference on Clean Electrical Power (ICCEP'11), 14-16 June 2011, pp.237-242.
- C8.** C. Oprea, Claudia S. Martis, F. Jurca, D. Fodorean, L. Szabo: "Permanent Magnet Linear Generator for Renewable Energy Applications: Tubular vs. Four-Sided Structures", Proceedings of the 3rd International Conference on Clean Electrical Power (ICCEP'11), 14-16 June 2011, pp.588-592.

- C9.** D.Fodorean, M.Ruba, D.C.Popa and A.Miraoui: "Fault Tolerant Permanent Magnet Machines used in Automobile Applications", Proceedings of the 19th International Conference on Electrical Machines, 6-8 September 2010, pp.1-6, ISBN 978-1-4244-4175-4.
- C10.** D.Fodorean, A.N'diaye, D.Bouquain and A.Miraoui: "Characterization and control of a permanent magnet synchronous motor used in vehicle application", Proceedings of the IEEE International Conference on Automation Quality and Testing Robotics (AQTR), 28-30 May 2010, pp.1-6, ISBN 978-1-4244-6724-2.
- C11.** L.Idoumghar, D.Fodorean and A.Miraoui: "Using Hybrid Constricted Particles Swarm and Simulated Annealing Algorithm for Electric Motor Design", Proceedings of the 14th Biennial IEEE Conference on Electromagnetic Field Computation, Chicago, Illinois, USA, May 2010.
- C12.** L.Idoumghar, D.Fodorean and A.Miraoui: "Simulated Annealing Algorithm for Multi-Objective Optimization: Application to Electric Motor Design", Proceedings of the 29th IASTED International Conference: Modeling, Identification and Control'10 February 2010, pp.190-196.
- C13.** D.Fodorean, D. Bouquain, M.B. Camara and A.Miraoui, "Energy Management on board of a Reduced Scale Hybrid Automobile", Proceedings of the International Electrical Machines and Drives Conference, May 2009, pp.197-201, ISBN 9781424442515.
- C14.** D.Fodorean, L. Szabo and A.Miraoui: "Generator Solutions For Stand Alone Pico-Electric Power Plants", Proceedings of the International Electrical Machines and Drives Conference, May 2009, pp.434-438, ISBN 9781424442515.
- C15.** D.Fodorean, A.Miraoui: "Permanent Magnets Thermal Operation Limits in a Hybrid Excited Synchronous Machine used on Wide Speed Applications", Proceedings of the 11th IEEE International Conference on Optimization of Electrical and Electronic Equipment – OPTIM'08, Brasov, Romania, 22-24 May 2008, pp.21-26, ISBN 978-973-131-028-2.
- C16.** L.Szabo, M.Ruba, D.Fodorean: "Study on a Simplified Converter Topology for Fault Tolerant Motor Drives", Proceedings of the 11th IEEE International Conference on Optimization of Electrical and Electronic Equipment – OPTIM'08, Brasov, Romania, 22-24 May 2008, pp.197-202, ISBN 978-973-131-028-2.
- C17.** D.Fodorean, M.Ruba, L.Szabo, A.Miraoui: "Comparison of the Main Types of Fault-Tolerant Electrical Drives used in Automobile Applications", Proceedings of the IEEE International Symposium on Power Electronics, Electrical Drives, Automation and Motion – SPEEDAM'08, Ischia, Italy, 11-13 June 2008, pp.895-900, ISBN 978-1-4244-1664-6.
- C18.** M.B.Camara, D.Fodorean, H.Gualous, D; Bouquain, A.Miraoui: "Hybrid Sources Control for Electric Drives Traction Applications", Proceedings of the IEEE International Symposium on Power Electronics, Electrical Drives, Automation and Motion – SPEEDAM'08, Ischia, Italy, 11-13 June 2008, pp.744-749, ISBN 978-1-4244-1664-6.
- C19.** M.Ruba, L.Szabo, D.Fodorean: "On the Fault Tolerant Switched Reluctance Machines", MICROCAD'08, Miskolc, Hungary, 2008, pp.73-78, ISBN 978-963-661-812-6.
- C20.** L.Szabo, M.Ruba, D.Fodorean: "Simple converter structure for fault tolerant motors", Proceedings of the IEEE International Conference on Automation Quality and Testing Robotics – AQTR'08, Cluj-Napoca, Romania, 22-25 May 2008, pp.244-249, ISBN:978-1-4244-2576-1.
- C21.** T.Raminosa, B.Blunier, D.Fodorean, A. Miraoui: "Design and Comparison of High Speed Switched and Synchronous Reluctance Machines to Drive the Compressor of an Automotive PEM Fuel Cell", Proceedings of the IEEE International Conference on Electrical Machines – ICEM'08, Vilamoura, Portugal, 6-9 September 2008, paper ID 792, ISBN: 978-1-4244-1736-0.
- C22.** D.Fodorean, A.Djerdir, A.Miraoui, I.A.Viorel: "FOC and DTC Techniques for Controlling a Double Excited Synchronous Machine", Proceedings of the IEEE International Electric Machines and Drives Conference – IEMDC'07, Antalya, Turkey, 3-5 May 2007, pp.1258-1263, ISBN:1-4244-0743-5.
- C23.** D.Fodorean, S. Giurgea, I.A.Viorel, A.Djerdir, A.Miraoui: "Adequate Parameters Determination for Three Types of Electric Machines with Enlarged Speed Domain via an Optimization Procedure and Magnetic Field Calculation", Proceedings of the 16th Conference on the Computation of the Electromagnetic Fields - COMPUMAG'07, Aachen, Germany, 24-28 July 2007, pp.371-372.
- C24.** S.Giurgea, D.Fodorean, G.Cirincione, A.Miraoui, M.Cirincione: "Multi Model Optimization Strategies Applied to a PMSM", Proceedings of the 16th Conference on the Computation of the Electromagnetic Fields - COMPUMAG'07, Aachen, Germany, 24-28 July 2007, pp.1129-1130.

- C25.** D.Fodorean, I.A.Viorel, A.Djerdir, A.Miraoui: "Mechanical and Thermal Designing Aspects for a PM Synchronous Machine with Wound Rotor", International Aegean Conference on Electric Machines, Power Electronics and Electromotion Joint Conference - ACEMP-Electromotion'07, Bodrun, Turkey, 10-12 Sept. 2007, pp.502-506, ISBN 978-975-93410-2-2.
- C26.** D.Fodorean, I.A.Viorel, A.Djerdir, A.Miraoui: "Improved Efficiency for an In-Wheel Motor in Large Speed Operating", Proceedings of the 12th IEEE Conference on Electromagnetic Field Computation - CEFC 2006, Miami, Florida-USA, 29-03 May, 2006, Digest-Book, pp.313, ISBN 1-4244-0319-7.
- C27.** I.A.Viorel, D.Fodorean, A.Viorel, L.Szabó: "Stand-Alone Double Excited Synchronous Generator Operating on a Variable Load", Proceedings of the International Conference on Power Electronics, Intelligent Motion and Power Quality (PCIM '2006), Nürnberg (Germany), 30 May-1 June, 2006, pp. 675-680. ISBN 3-928613-43-6.
- C28.** D.Fodorean, I.A.Viorel, A.Djerdir, A.Miraoui: "Wide Speed Control of a Hybrid Excited Synchronous Machine", Proceedings of the 17th International Conference on Electrical Machines - ICEM '06, Chania, Crete Island, Greece, 2-5 Sep. 2006, pp. 290, on CD.
- C29.** I.A.Viorel, R.Munteanu, D.Fodorean, L.Szabo: "On the possibility to use a Hybrid Synchronous Machine as an Integrated Starter-Generator", Proceedings of the 5th IEEE International Conference on Industrial Technology - ICIT '06, Mumbai, India, 15-17 Dec. 2006, pp. 1195-1200, ISBN 1-4244-0726-5.
- C30.** M. Gutman, I.A. Viorel, D.Fodorean: "Extended speed range drive system with synchronous motors", Proceedings of the 5th International Conference on Electromechanical and Power System (SIELMEN '2005), Chişinău (Moldova), 2005, vol.2, pp.815-818, ISBN 973-716-230-7.
- C31.** D.Fodorean, I.A.Viorel, A.Miraoui, M.Gutman: "Comparison of Hybrid Excited Synchronous Motors for Electrical Vehicle Propulsion", Proceedings of Aegean Conferences on Electrical Machines and Power Electronics - ACEMP '04, Istanbul, Turkey, 26-28 May, 2004, pp. 52-57, ISBN 975-93410-1-8.
- C32.** D.Fodorean, A.Djerdir, A.Miraoui, I.A.Viorel: "Flux Weakening Performances for a Double-Excited Machine", Proceedings of the 16th International Conference on Electrical Machines - ICEM '04, Krakow-Poland, 5-8 Sep. 2004, paper number 434, on CD, ISBN 12-345678-90.

Other articles

- Co33.** A.Miraoui, D.Fodorean, I.A.Viorel: "Hybrid Synchronous Motor with Flux Weakening Winding", Proceedings of the Workshop on Variable Reluctance Electrical Machines, Cluj (Romania), 2003, pp. 10-15, ISBN 973-8335-98-1.
- Co34.** A.Miraoui, I.A.Viorel, D.Fodorean: "Synchronous Direct Drive System with Extended Speed Domain", Workshop on Electrical Drives and Control System in Industry, 25-26 July, 2002, Cluj-Napoca (Romania), pp. 15-21.

Patent (1)

Porposal of national patent:

- Pn1.** M. Ruba and D. Fodorean, "Maşină cu reluctanţă comutată cu autoventilaţie internă la rotor", nr. A00884/2012.