INTERCOUNTRY LECTURESHIP QUESTIONNAIRE 2010

For Professors and Journalists

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GRANT PERIOD:	March 2011-June 2011
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PRESENT POSITION US:	Arlington, Texas, U.S.A.
LANGUAGES:	English, Farsi, Deutsch

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RWTH-Aachen, Germany;
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ACADEMIC DISCIPLINE
Electrical Engineering

AREAS OF RESEARCH
Electromechanical Energy Conversion

POSSIBLE LECTURE TOPICS
Numerical Methods in Analysis of Electric Machinery

ACADEMIC TRAINING AND DEGREES
PhD in Electrical Engineering, Texas A&M University, 1999

PREVIOUS POSITIONS
Associate Professor, University of Texas at Arlington
Assistant Professor, University of TExas at Arlington
Assistant Professor, Missouri University of Science and Technology

PUBLICATIONS (selected)

1. A. Khoobroo, D. Torregrossa, B. Fahimi," Prediction of Acoustic Noise and Torque Pulsation in PM Synchronous Machines with Rotor Eccentricity and Partial Demagnetization using Field Reconstruction Method", accepted for publication in IEEE Transactions on Industrial Electronics.
2. M.A. Abbasian, M. Moallem, B. Fahimi," Double-Stator Switched Reluctance Machines (DSSRM): Fundamentals and Magnetic Force Analysis" Accepted for publication in IEEE Transactions on Energy Conversion.
3. Wei Jiang, B. Fahimi," Multi-port Power Electronic Interface: Concept, Modeling, and Design", accepted for publication in IEEE Transactions on Power Electronics.
4. Wei Wang, M. Kiani, B. Fahimi, "Optimal design of doubly fed induction generators using field reconstruction method", accepted for publication in IEEE Transactions on Magnetics.
5. Wei Jiang, B. Fahimi," Active current sharing in fuel cell battery hybrid power systems", IEEE Transactions on Industrial Electronics, Vol.57, No. 2, pp.752-761.

6. Wei Jiang, B. Fahimi," Current reconstruction technique for survivable three phase AC drives ",IEEE Transactions on Power Electronics, Vol.25, No. 1, pp. 188-192.
7. D. Wu, S. Pekarek, B. Fahimi," A Voltage-Input-Based Field Reconstruction Technique for Efficient Modeling of the Fields and Forces within Induction Machines", accepted for publication in IEEE Transactions on Industrial Electronics.
8. D. Wu, S. Pekarek, B. Fahimi, "A Field Reconstruction Technique for Efficient Modeling of the Fields and Forces within Induction Machines", IEEE Transactions on Energy Conversion, Vol. 24, No.2, June 2009, pp.366-374.
9. B. Fahimi, "On the impact of on-board fuel reformers on the efficiency of fuel cell vehicles" PELS Newsletter, October 2008.
10. I. Boldea, B. Fahimi, "Electric machines for adjustable speed drives: A review", accepted for publication in IEEE Transactions on Industrial Electronics.
11. B. Fahimi, I. Boldea, "Guest Editorial: Special section on electric machines and adjustable speed motor drives (part-II)", IEEE Transactions on Industrial Electronics, Vol. 55, No. 2, February 2008, pp.478-480.
12. B. Fahimi, I. Boldea," Guest editorial: Special sections on electric machines and adjustable speed motor drives", IEEE Transactions on Industrial Electronics, Vol. 54, No.5, October 2007, pp. 2363-2365.
13. B. Fahimi, T. Sebastian," Guest Editorial: Special section on automotive electromechanical converters", IEEE Transactions on Vehicular Technology, Vol. 56, No. 4, July 2007, pp.1470-1476.
14. B. Fahimi, "High efficiency and compact DC/DC converter for high power fuel cell systems", IEEE PELS newsletter, August 2007.
15. Ali Emadi, Y.P. Patel, B. Fahimi," Thyristor-based resonant current controlled switched reluctance generator for distributed generation" KIEE Transactions, Vol. 2, No.1, pp.68-80.
16. R. Jayabalan, B. Fahimi," Diagnosis of solid state DC/DC cascaded converter faults in Hybrid Electric Automotive Power Systems", SAE 2006 Transactions Journal of Passenger Cars-Electronic and Electrical Systems(2006-01-0370).
17. R. Jayabalan, B. Fahimi, "Next Generation Naval Shipboard Power System: Issues and Challenges," Accepted for publication in Marine Engineers Review, London UK, 2006.
18. A. Mirzaie, M. Moallem, B. Mirzaeian, and B. Fahimi," Design of an optimal fuzzy controller for antilock braking systems", IEEE Transactions on Vehicular Technology, Vol. 55, No.6 , November 2006, pp. 1725-1730.
19. C. S. Edrington, M. Krishnamurthy, B. Fahimi," An auto-calibrating inductance model for switched reluctance motor drives", IEEE Transactions on Industrial Electronics, Vol. 54, No.4, August 2007, pp. 2165-2173.
20. W. Zhu, S. Pekarek, B. Fahimi," Investigation of force generation in permanent magnet synchronous machines", IEEE Transactions on Energy Conversion, Vol. 22, No.3, September 2007, pp. 557-565.
21. A. Kioumarsi, M. Moallem, B. Fahimi, Mitigation of Torque Ripple in Interior Permanent Magnet Motors by Optimal Shape Design, IEEE Transactions on Magnetics, Volume 42, Issue 11, Nov. 2006 pp. 3706 - 3711
22. R. Jayabalan, B. Fahimi, Monitoring and Fault Diagnosis of Multi-converter Systems in Hybrid Electric Vehicles, IEEE Transactions on Vehicular Technology, Volume 55, Issue 5, Sept. 2006, pp. 1475-1484.
23. W. Zhu, B. Fahimi, S. Pekarek, A field reconstruction method for optimal excitation of permanent magnet synchronous machines, IEEE Transactions on Energy Conversion, Volume 21, Issue 2, June 2006, pp. 305 – 313.
24. M. Krishnamurthy, C. S. Edrington, A. Emadi, P. Asadi, M. Ehsani, B. Fahimi, "Making the case for applications of switched reluctance motor technology in automotive products", IEEE Transactions on Power Electronics, Volume 21, Issue 3, May 2006 Page(s):659 – 675.
25. H. Wang; S. Pekarek, B. Fahimi, Multilayer control of an induction motor drive: A strategic step for automotive applications, IEEE Transactions on Power Electronics, Volume 21, Issue 3, May 2006, pp. 676 – 686.
26. C. H. Rivetta, A. Emadi, G. A. Williamson, R. Jayabalan, B. Fahimi, Analysis and control of a buck DC-DC converter operating with constant power load in sea and undersea vehicles, IEEE Transactions on Industry Applications, Volume 42, Issue 2, March-April 2006, pp. 559-572.
27. M. Krishnamurthy, C. S. Edrington, B. Fahimi, "Prediction of rotor position at standstill and rotating shaft conditions in switched reluctance machines", IEEE Transactions on Power Electronics, Vol. 21, Issue 1, Jan. 2006, pp.225 – 233.
28. C. S. Edrington, B. Fahimi, "Investigation of electromagnetic force components in SR machines: design and control issues", IEEE Transactions on Industry Applications, Vol. 41, No. 4, July/August 2005, pp.1-11 .
29. D. Kaluvagunta, B. Fahimi, "Three dimensional magnetic effects in permanent magnet synchronous machines", IEEE Transactions on Magnetics,
Volume 41, Issue 8, Aug. 2005, pp. 2398 – 2405.

30. C. S. Edrington, M. Krishnamurthy, B. Fahimi, ”Bipolar switched reluctance machines: A novel solution for automotive applications”, IEEE transactions on Vehicular technology, Volume: 54, No. 3, May 2005, pp. 795 - 808.
31. B. Fahimi, A. Emadi, R.B. Sepe,” Four-Quadrant Position Sensorless Control in SRM Drives over the Entire Speed Range”, IEEE Transactions on Power Electronics, Volume: 20, Issue: 1, Jan. 2005, pp.154 - 163.
32. F. R. Salmasi, B. Fahimi, ”A novel approach to model switched reluctance machines based on decomposition of double magnetic saliency”, IEEE Transactions on Magnetics, Vol. 40, No. 3, May 2004, pp. 1556-1561.
33. B. Fahimi, A. Emadi, R.B. Sepe,” A Switched reluctance machine based starter/alternator for more electric cars”, IEEE Transactions on Energy Conversion, Vol. 19, No. 1, March 2004, pp. 116-125.
34. M. Ehsani, B. Fahimi, “ Position sensorless control of switched reluctance motor drives,” IEEE Transactions on Industrial Electronics, Vol. 49, NO.1, February 2002, pp.40-48.
35. K.M.Rahman, B.Fahimi, G.Suresh, A.V.Rajarathnam, M.Ehsani, "Advantages of Switched Reluctance Motor Applications to EV and HEV: Design and Control Issues", IEEE Transactions on Industry Applications, Jan/Feb 2000, pp.111-121.
36. K.M.Rahman, G.Suresh, B.Fahimi, A.V.Rajarathnam, M.Ehsani, "Optimized Torque Control of Switched Reluctance Motor at All Operating Regimes using Neural Network", IEEE Transactions on Industry Applications, Vol. 37, No. 3, May/June 2001, pp.904-914.
37. Emadi, A., B. Fahimi, and M. Ehsani, "On the Concept of Negative Impedance Instability in the More Electric Aircraft Power Systems with Constant Power Loads," SAE Journal, paper No. 1999-01-2545, 1999.
38. A. Emadi, B. Fahimi, M. Ehsani, and J. Miller," On the suitability of low voltage (42V) electrical power system for traction applications in the parallel hybrid electric vehicles,” SAE Journal 2000-01-1558.
39. B. Fahimi, A. Emadi, R.B. Sepe, “Position sensorless control: presenting technology ready for switched reluctance machine drives applications”, January/February 2004 Issue of the IEEE Industry Applications Society Magazine.
40. B. Fahimi, R. B. Sepe,” Driven to excel: Switched Reluctance Motor Technology” October/November 2001 Issue of Motion Control Magazine.