

Professor Majtaba Mirsalim



(IEEE Senior Member)

*Dept. of Electrical Engineering
Office: 732 Abu- Rayhon Building
Amirkabir University of Technology
424 Hafez Ave. Tehran 15914, Iran*

ACADEMIC BACKGROUND

- Ph.D.* Electrical Power Engineering, [Oregon State University, Corvallis](#), USA, 1986.
M.S. Nuclear Engineering, [University of California, Berkeley](#), USA, 1980.
B.S. Electrical/Nuclear Engineering, [University of California, Berkeley](#), USA, 1978

MAJOR AREAS OF INTEREST

Design, Simulation, Prototyping, and Analysis of Electric Machinery and Transformers, Energy Conversion, Renewable Energy, Electric & Hybrid Electric Vehicles, Power Engineering

PROFESSIONAL EXPERIENCE

July 2004 - Present

Full Professor, [Department of Electrical Engineering](#) , Tehran Polytechnic University, Tehran, Iran

8/07- 5/08

Adjunct Professor, Department of Electrical Engineering, [Saint Mary's University, San Antonio, TX, USA](#)

1/98- July 2004

Associate Professor, Department of Electrical Engineering, Tehran Polytechnic University, Tehran, Iran.

2/01- 5/04

Senior Researcher, Project Manager, Irankhodro Power-Train Research, Development and Manufacturing Company (IPCO)

1/97-1/98

Post-Doctorate/Researcher, Department of Electrical and Computer Engineering, University of Toronto (On sabbatical leave from Tehran Polytechnic University, Tehran, Iran).

9/87-1/97

Assistant Professor, Department of Electrical Engineering, Tehran Polytechnic University, Tehran, Iran

8/93-1/97

Consultant Engineer, Mehrfza Industrial Company, Tehran, Iran.

3/89- 3/92

Consultant Engineer, Private Marine Supply and Manufacturing Company, Tehran, Iran.

3/88- 4/88

Adjunct Assistant Professor, Mashad University, Mashad, Iran. Lecturing short courses to graduate students.

6/87-9/87

Adjunct Assistant Professor, Electrical Engineering Department, Amirkabir University. Development of laboratory experiments for senior electrical engineering laboratory course.

1/81-12/86

Graduate Teaching/Research Associate, Department of Electrical Engineering, Oregon State University, Corvallis, Oregon, USA.

12/77- 6/80

Teaching Associate, Physics Department, University of California, Berkeley, California, USA.

BOOKS

1. **Electrical Machines and Transformers**, Prof. Hesabi Press, Tehran, Iran, 2000.
2. **Numerical Methods in Electromagnetic NDT**, Gilan University Press, 2006 (Translation; English to Persian with Changes).
3. **Transformer and Induction Machines**, Mohtasham Press, Tehran, Iran, 1995.
4. **Theory and Problems of Electrical Machines and Electromechanics**, Gostareh Press, Tehran, Iran, 1991 (Translation; English to Persian with Changes).
5. **Finite Element Analysis of Electrical Machines**, Amirkabir University Press, Tehran, Iran, 2002.
6. **Finite Element Analysis of Electrical Machines (Second Edition)**, Amirkabir University Press, Tehran, Iran, 2006

COURSES TAUGHT

- **Electric Machinery I - II - III**
- **Energy Conversion & Lab.**
- **Generalized Theory of Electrical Machines**
- **Computer Aided Design of Transformers and Electrical Machines I & II**
- **Materials in Electrical Engineering**
- **Fundamentals of Electrical Machines**
- **FEM in Electrical Machines**
- **Renewable Resources**
- **Electric Circuits**
- **Industrial Applications of Electrical Machines**
- **Electrical-Electronic & Power Systems**
- **Energy Storage Systems**
- **Hybrid Vehicles**

PUBLICATIONS

For a complete list, please go to my website at

<http://ele.aut.ac.ir/~mirsalim>

Selected Refereed Journal Publications :

1. **M. Mirsalim**, "Why Electric Motors Fail in Iran", Amirkabir Journal of Science and Technology, Vol. 5, No. 18, pp. 145-148, Fall 1991.
2. **M. Mirsalim** and M. Mansuri, "Modeling and Adaptive Control of a Permanent Magnet DC Motor with Nonlinear Load using Feedback Linearization", Amirkabir Journal of Science & Technology, Vol. 10, No. 39, Fall 1999.
3. **M. Mirsalim**, "Design and Performance of Permanent Magnet Motors for High Efficiency Industrial Drives", Scientia Iranica, Vol.6, No. 1, pp 18-24, January 1999.
4. **M. Mirsalim**, J. Moghani and A. Doroudi, "A New Modified Model for Linear Induction Motors Using FEM", Amirkabir Journal of Science and Technology, Fall 2000.
5. A. Doroudi, **M. Mirsalim** and j. Moghani, "The Effect of Saturation of Secondary on the Performance of Single-Sided Linear Induction Motors", Journal of Engineering & Technology, Shahid-Chamran University, No. 2, Fall 2001.
6. H. Zabet and **M. Mirsalim**, "[Dynamic Modeling of High Power Single-Phase Written-Pole Motors](#)", Iranian Journal of Science & Technology, Transaction B, Vol. 26, No. B4, Autumn 2002. (ISI)
7. H. Zabet and **M. Mirsalim**, "Dynamic Modeling of Single-Phase Written-Pole Motors", Amirkabir Journal of Science & Technology, Vol.13, No. 50, pp265-270, Spring 2002.
8. **M. Mirsalim**, A. Doroudi, and J. Moghani, "[Obtaining the Operating Characteristics of Linear Induction Motors: A New Approach](#)", IEEE Transactions on Magnetics, Vol.38, No. 2, March 2002. (ISI)
9. A. Doroudi, **M. Mirsalim** and M. Menhaj, "Simple Analytical Functions for the Equivalent Circuit Parameters of Linear Induction Motors", Iranian Journal of Science & Technology, Transaction B, Volume 28, Number 1-6, Fall 2004. (ISI)
10. S. E. Abdollahi, M. Mirzayee, **M. Mirsalim**, M. Ehsani, and S. Gay, "[Two-Dimensional Finite Element and Analytical Modeling of a Solid Rotor Disk Induction Motor](#)", International Scientific Quarterly 'ELECTROMOTION' (ISSN 1223 – 057X), Vol. 10 (2003), No. 3.
11. M. Hosseini, S. E. Abdollahi, **M. Mirsalim**, and J.Ghadyani, "[Three-dimensional Finite-Element Modeling of a Tubular Linear Induction Motor](#)", International Scientific Quarterly 'ELECTROMOTION' (ISSN 1223 – 057X), Vol. 10 (2003), No. 3.
12. M. Mirzayee, **M. Mirsalim**, and E. Abdollahi, "A Novel Analytical Method for the Analysis of Disk Induction Motors", Amirkabir Journal of Science & Technology, Vol. 15, No. 58-A, Spring 2004
13. H. Khosousi and **M. Mirsalim** (IEEE Senior Member), "[Dynamic Modeling of a 20-Horsepower Single-Phase Written-Pole Motor](#)", IEEE Transactions on Magnetics, Vol. 40, Issue:4, July 2004, pp. 1901-1904 (ISI)
14. M. Mardaneh, **M. Mirsalim** (IEEE Senior Member) , and M. Aliahmadi, "A New Approach in Modelling and Design of Axial-Flux Permanent Magnet Machines", Amirkabir Journal of Science & Technology, Vol. 16, # 64, Spring & Summer 2006
15. H. Gholizad, **M. Mirsalim** (IEEE Senior Member) , M. Mirzaee, " An Improved Magnetic Circuit Network Method for Considerations of Motional Eddy Currents in a Solid Conductor ", Amirkabir International Journal of Science & Technology, Vol. 16, # 64, Spring & Summer 2006

16. Hooshang Gholizad, **Mojtaba Mirsalim** (IEEE Senior Member), Mehran Mirzaei, and Weiyang Cheng "Coupling Magnetic Equivalent Circuits and the Analytical Solution in the Air-gap of Squirrel Cage Induction Machines ", International Journal of Applied Electromagnetics and Mechanics (IJAEM), IOS press, April 2007 (ISI)
17. Mehran Mirzayee, **Mojtaba Mirsalim** (IEEE Senior Member), Hooshang Gholizad, and Weiyang Cheng, " Analysis of Solid Rotor Induction Machines Using Coupled Analytical Method and Reluctance Networks ", International Journal of Applied Electromagnetics and Mechanics (IJAEM), IOS press, April 2007 (ISI)
18. M. Mirzaei, **M. Mirsalim** (IEEE Senior Member), and E. Abdollahi, "Analytical Modeling of Axial Air-Gap Solid Rotor Induction Machines Using a Quasi-Three-Dimensional Method", IEEE TRANSACTIONS ON MAGNETICS, VOL.43, NO.7, July 2007. (ISI)
19. S. M. Hosseini, **M. Agha-Mirsalim** (IEEE Senior Member), and M. Mirzaei, "Design, Prototyping, and Analysis of a Low Cost Axial-Flux Coreless Permanent-Magnet Generator" , IEEE TRANSACTIONS ON MAGNETICS, VOL.44, NO.1, pp. 75-80, January 2008 (ISI)
20. S. M. Hosseini, M. Agha-**Mirsalim** (IEEE Senior Member), and M. Mirzaei, "Design, Prototyping, and Analysis of a Low-Cost Disk Permanent-Magnet Generator with Rectangular Flat-Shaped Magnets" , Iranian Journal of Science & Technology, Transaction B, Volume 32, Number B3, June 2008. (ISI)
21. M. Mardaneh, and **M. Agha-Mirsalim** (IEEE Senior Member), " Development of an Analytic Model for Flux Switching Motors", Amirkabir Journal of Science & Technology, Vol. 41/no. 1/ Summer 2009. (ISI)
22. P.Payvandy, M. Latifi, and **M. Mirsalim** (IEEE Senior Member), "Interlacing Conductive Filaments by a Rotational Permanent Magnet Field", Journal of Fibers and Polymers (FIPO), Vol. 9, No. 5. (1 October 2008), pp. 583-587 2008 (ISI)
23. S. Javadi, and **M. Mirsalim** (IEEE Senior Member), "A Coreless Axial-Flux Permanent-Magnet Generator for Automotive Applications", IEEE Transactions on Magnetics, Volume: 44, Issue: 12 , pp: 4591-4598, Dec. 2008 (ISI)
24. P. Naderi, **M. Mirsalim** (IEEE Senior Member), and M. Bathaee, " Driving/Regeneration and Stability Enhancement for a Two-Wheel-Drive Electric Vehicle", International Review of Electrical Engineering (IREE), Vol. 4, No. 1, January 2009 (ISI)
25. M. Mardaneh, and **M. Mirsalim** (IEEE Senior Member), " Control Strategies for Flux Switching Motors in Low and High-Speed Ranges of Operations", International Review of Electrical Engineering (IREE), Vol. 4, No. 5, October 2009 (ISI)
26. H. R. Baghaee, **M. Mirsalim** (IEEE Senior Member), A. Kashefi-Kaviani, G. B. Gharehpetian, "Optimal Allocation of Multi-Type FACTS Devices to Improve Security and Reduce the Losses and Fault Level using Multi-Objective Particle Swarm Optimization", International Review of Electrical Engineering (IREE), Vol. 4 N. 6-- Part B - December 2009 (ISI)
27. A. Damaki, **M. Mirsalim** (IEEE Senior Member), and M. Fazli Aghdaei, " A Simple Analytical Method to Model and Detect Non-Uniform Air-Gaps in Synchronous Generators ', Iranian Journal of Electrical & Electronic Engineering, March 2010, volume: 6, issue:1, pages: 29-35
28. S. Javadi, and **M. Mirsalim** (IEEE Senior Member), " Design and Analysis of 42-V Coreless Axial-Flux Permanent-Magnet Generators for Automotive Applications ", IEEE Transactions on Magnetics, Apr 2010, volume: 46, issue:4, pages: 1015 - 1023, ISSN: 0018-9464 (ISI)
29. S. Sadeghi, **M. Mirsalim** (IEEE Senior Member), and A. Hassanpour Isfahani, " Dynamic Modeling and Simulation of a Switched Reluctance Motor in a Series Hybrid Electric Vehicle ", Acta Polytechnica Hungarica, April 2010, volume:7, issue: 1, pages: 51-71 ISSN: 1785-8860 (ISI)

30. P. Payvandy ; M. Latifi ; **M. Agha-Mirsalim** (IEEE Senior Member); J. Shokrolahi-Moghani , " Rotational Electromagnetic-Field-Aided False Twisting of Metallic Filaments " , Journal of the Textile Institute, Volume 101, Issue 6 June 2010 , pages 514 - 519, ISSN: 1754-2340 (electronic) 0040-5000 (paper) **(ISI)**

Refereed Conferences :

1. **M. Mirsalim** & A. Meshkatoddini, "A Novel Method of Determining Magnetic Characteristic of Power Transformers", Proceedings of the 6th International Power System Conference, pp. 233-243, Tehran, Iran, Nov. 7-9, 1991 (Persian).
2. **M. Mirsalim** & J. Nazarzadeh, "Single-Phase Operation of a Three-Phase Induction Motor", International AEGEAN Conference on Electrical Machines and Power Electronics, Vol. 2, pp., May 1992, Turkey.
3. **M. Mirsalim** & S. Manshaei, "Computer Aided Optimum Design of Transformers", Proceedings of the 7th International Power System Conference, pp. 304-314, Nov. 7-9, 1992 (Persian).
4. **M. Mirsalim** & A. Fallah, "A Novel Software Package for Computer Simulation and Operation of the Position Control System of a DC Motor", Proceedings of the 1st Iranian Electrical Engineering Conference, Payam Noor University Press, pp. 130-135, Tehran, Iran, May 18-21, 1993 (Persian).
5. **M. Mirsalim** & A. Gorjee, "A Software Package for Computer Simulation of the Steady-State Characteristics of Electrical Machines", Proceedings of the 1st Iranian Electrical Engineering Conference, Payameh-Noor University Press, pp. 48-55, Tehran, Iran, May 18-21, 1993 (Persian).
6. B. Hooshanfar & **M. Mirsalim**, "Determination of The Two Layer Soil Model Parameters", Proceedings of the 8th International Power System Conference, pp. 372-379, Tehran, Iran, Nov. 5-7, 1993 (Persian).
7. **M. Mirsalim** & B. Hooahanfar, "Simulation of Double-Cage Induction Motors Using Discrete Time Equation", Proceedings of the 8th International Power System Conference, pp. 258-269, Tehran, Iran, Nov. 5-7, 1993 (Persian).
8. M. Mansuri & **M. Mirsalim**, "Self-Tuning Adaptive Control of DC Motors with Nonlinear Compensation", Proceedings of the 3rd Iranian Conference on Electrical Engineering, pp. 101-108, May 15-18, 1995.
9. **M. Mirsalim** & M. Mansuri, "Nonlinear Modeling and Parameter Estimation of DC Motors", Proceedings of the 3rd Iranian Conference on Electrical Engineering, pp. 24-31, May 15-18, 1995 (Persian)
10. **M. Mirsalim** and A. Doroudi, "Finite Element Method Analysis of Linear Induction Motors", Proceedings of the 12th International Power System Conference, Nov. 6-8, 1995 (Persian).
11. B. Menhaj, **M. Mirsalim** & A. Doroudi, "Simulation of Neural Network and Fuzzy Logic Controlled Exciters for the Stability of Synchronous Machines", Proceedings of the 10th International Power System Conference, pp. 437-448, Nov. 6-8, 1995 (Persian).
12. **M. Mirsalim** & M. Mansuri, "Modeling and Adaptive Control of Permanent Magnet DC Motors with Nonlinear Loads Using Feedback Linearization", ENGIN' 96 Conference, Lodz, Poland, 1996.
13. **M. Mirsalim**, H. Meshgin-Kelk & A. Doroudi, "Optimum Design of Transformers, With the Consideration of Operating Cost", The 4th Iranian Conference on Electrical Engineering, May 14-17, 1996 (Persian)

14. **M. Mirsalim** and N. Fath-Ali, "Capacitor Starting of Three-Phase Induction Motors with the Consideration of Skin Effect", ICEE-1997.
15. H. Zabet-Khosousi, K. Barkeshli, and **M. Mirsalim**, "Leakage Flux Calculations in Transformers Using FEM and Delaunay Meshing", ICEE-1997.
16. **M. Mirsalim**, A. Naghibadeh, H. Shahverdi, and A. Shafi-Raiyat "Application of SUMT in the Optimum Design of Power Transformers", 13th International Power System Conference, Nov. 9-11, 1998 (Persian)
17. P. Naddoff, M. Karrari, and **M. Mirsalim** "Robust Control of Sub-Synchronous Resonance Using Linear Quadratic Gaussian Method", ICEE-1999, pp. 259-269, May 16-19, 1999 (Persian)
18. **M. Mazadi** and **M. Mirsalim**, "Fast Starting of Three-Phase Induction Motors Using the Combination of Applied Voltage and Increasing Resistance to the Rotor Winding", ICEE-2000, pp. 123-129, May 17-19, 2000 (Persian)
19. A. Doroudi, **M. Mirsalim** and J. Moghani, "A Simple & Accurate Model to Estimate the Behavior of Single-Sided Linear Induction Motors", The Eighth Iranian Conference on Electrical Engineering (ICEE), pp. 234-242, May 17-19, 2000 (Persian)
20. P. Naddoff, M. Karrari, and **M. Mirsalim**, "Variable Structure Control Strategy for SSR in Power Systems", World Automation Congress (WAC), Florida, U.S.A, June 11-13, 2000
21. **M. Mirsalim**, J. Moghani, and A. Doroudi, "A New Modified Model for Linear Induction Motors", UPEC 2000, September 6-8, 2000, Queen's University, Belfast.
22. H. Zabet-Khosousi, **M. Mirsalim**, "A Model for Single-Phase Written-Pole Motors", ICEE 2001, May 8-10, 2001 (Persian)
23. A. Shad-Del, **M. Mirsalim**, "Simulink Simulation of a Single-Phase Induction Motor with Capacitor Starting and Consideration of Saturation", ICEE 2001, May 8-10, 2001 (Persian)
24. H. Gholizad, **M. Mirsalim**, "A New Method for the Reduction of Flux and Torque Ripples in DTC", ICEE 2001, May 8-10, 2001 (Persian)
25. **M. Mirsalim**, H. Kamonkesh, "Simulink Modeling of Three-Phase Induction Motors with Saturation", ICEE 2001, May 8-10, 2001 (Persian)
26. M. Ranjbar and **M. Mirsalim**, "Feasibility Studies of Hybrid Vehicles in Iran", Proceedings of the First Hybrid Vehicles Conference, Iran Science and Technology University, pp. 75-88, July 2001
27. H. Zabet-Khosousi, **M. Mirsalim**, "[Modeling of a Single-Phase Written-Pole Motor](#)", UPEC 2001, September 12-14, 2001, University of Wales, United Kingdom.
28. R. Hajinajaf, and **M. Mirsalim**, "Transient and Steady-State Modeling of Three-Phase Induction Motors with Saturation Using 2-D Finite Element Method", ICEE 2002, May 14-16, 2002, Tabriz University (Persian), pp. 300-307
29. A. Kalantari, **M. Mirsalim**, and H. Rastegar, "Adjustable Speed Drive Based on Fuzzy Logic for a Dual Three-Phase Induction Machine", Electrimacs 2002, August 18-21, 2002, Montreal, Canada.
30. M. Mirzayee, **M. Mirsalim**, and S.E. Abdollahi, "[Analytical Modeling of a Disk Induction Motor](#)", XII International Symposium on Theoretical Electrical Engineering, ISTET 03, July 6-9, 2003, Warsaw, Poland
31. M. Mirzayee, **M. Mirsalim**, A. Nicomanesh, "[Evaluation of Cell Reynolds Number Value Effects on Thrust Force of Linear Induction Motors with Non-Ferromagnetic Secondary](#)", Proceedings of the 4th

International Symposium on Linear Drives for Industry Applications (LDIA), 8-10 September 2003, Birmingham, UK

32. M. Mirzayee, M. Mirsalim, A. Nicomanesh, "[Analysis of a Linear Induction Motor Using Two-Dimensional Magnetic Equivalent Circuits \(EMC\)](#)", Proceedings of the 4th International Symposium on Linear Drives for Industry Applications (LDIA), 8-10 September 2003, Birmingham, UK
33. M. Hosseini, M. Mirsalim, and J. Ghadiani, "[Three-Dimensional Finite- Element Modeling of a Tubular Linear Induction Motor](#)", 5th International Symposium on Advanced Electromechanical Motion Systems, ELECTROMOTION 2003, November 26-29, 2003, Marrakesh, Morocco
34. M. Mirzayee, M. Mirsalim, S.E. Abdollahi, M. Ehsani, and S. Gay "[2D-FEM and Analytical Modeling of a Disk Induction Motor](#)", *Invited Paper*, ELECTROMOTION 2003, 26-29 Nov. 2003, Marrakesh, Morocco
35. M. Mirzayee, M. Mirsalim, A. Nicomanesh, and A. Zanganeh, "[Finite Element Analysis of a Linear Induction Motor with and without End Effects](#)", XI. International Symposium on Electromagnetic Fields in Electrical Engineering (ISEF 2003), 18-20 Sep. 2003, Maribor, Slovenia
36. M. Mirzayee, M. Mirsalim, S.E. Abdollahi, "[Modeling Disk Induction Motors with Analytical Method](#)", 6th International Symposium on Electric & Magnetic Fields, EMF 2003, October 6-9, 2003, Aachen, Germany
37. M. Hosseini, M. Mirsalim, and S. E. Abdollahi, "[2D-Finite Element Model of Reluctance Synchronous for Power Factor Calculation](#)", The 46th IEEE Midwest Symposium on Circuits and System. MWSCAS, December 27-30, 2003
38. M. Hosseini, M. Mirsalim, S. E. Abdollahi, "[Power Factor Estimation of a Reluctance Synchronous Machine Using Artificial Neural Networks](#)", The 46th IEEE Midwest Symposium on Circuits and System. MWSCAS, December 27-30, 2003
39. S. E. Abdollahi, M. Mirsalim, M. Mirzayee, and M.Hosseini, "[Electromagnetic Field Calculation in an Axial Flux Solid Rotor Induction Machine](#)", The 46th IEEE Midwest Symposium on Circuits and System. MWSCAS, December 27-30, 2003
40. S. E. Abdollahi, M. Mirsalim, M. Hosseini, and M. Mirzayee, "[Prediction of Torque and Normal Force in a Solid Rotor Disk Induction Motor Utilizing Artificial Neural Networks](#)", The 46th IEEE Midwest Symposium on Circuits and System. MWSCAS, December 27-30, 2003
41. B. Yousefpour, M. Mirsalim, "[A New Model for Order Reduction in Induction Motors Based on Wavelet](#)", Progress In Electromagnetics Research Symposium (PIERSA), March 28-31, 2004 Pisa, Italy
42. M. Hosseini, M. Mirsalim, and B. Yousefpour, "[Neural Network Estimation of Maximum Power Factor in Reluctance Synchronous Machine Based on Finite Element Analysis](#)", Progress In Electromagnetic Research Symposium (PIERSA), March 28-31, 2004 Pisa, Italy

43. M. Hosseini, **M. Mirsalim**, and B. Yousefpour, "[Finite Element Modeling of Reluctance Synchronous Machines with Gramme and Ordinary Windings](#)", Progress In Electromagnetic Research Symposium (PIERSA), March 28-31, 2004 Pisa, Italy
44. R. Hajinajaf and **M. Mirsalim** , " Simulation of a Seies Hybrid Samand with ADVISOR" , The Third International Conference on Internal Combustion Engines (ICICE), February 17-19, 2004, Tehran, Iran (in Persian)
45. M. Mirzayee, **M. Mirsalim**, S.E. Abdollahi, and A. Ghaempanah, "[Evaluation of Current Distribution in the Secondary of a High-Speed Linear Induction Motor](#)", The XVI International Conference on Electrical Machines (ICEM 2004), 5-8 September 2004, Cracow, Poland
46. S.E. Abdollahi, **M. Mirsalim**, and M. Mirzayee, "[Performance Analysis of a Solid Rotor Disk Induction Motor](#)" , The XVI International Conference on Electrical Machines (ICEM 2004), 5-8 September 2004, Cracow, Poland
47. M. Mirzayee, and **M. Mirsalim**, " Use of Ferrite in the Core of High-Speed Disk Induction Motors " , Accepted for the 9th International Conference on Ferrites, The American Ceramic Society, August 22-27, 2004, San Francisco, U.S.A.
48. H.Gholizad, and **M. Mirsalim**, " Development of 2D Magnetic Equivalent Circuit (MEC) Theory for Consideration of Motional Eddy Current in a Solid Conductor", Accepted for the 49th Conference on Magnetism and Magnetic Materials (MMM 2004), November 7-11, 2004, Florida, U.S.A
49. H. Gholizad, **M. Mirsalim**, and M. Mirzayee, " Motional Eddy Current Analysis in Moving Solid Iron Using Magnetic Equivalent Circuit Method", 2005 IEEE/ACES , International Conference on Applied Computational Electromagnetics, April 3-7, 2005, Hawaii, U.S.A.
50. H. Gholizad, **M. Mirsalim**, and M. Mirzayee, "Analysis of Electromagnetic Fields Using a Modified Magnetic Equivalent Circuit Method", The 15th Conference on the Computation of Electromagnetic Fields (COMPUMAG 2005), June 26-30, 2005, CHINA
51. M. Mirzayee, **M. Mirsalim**, and H. Gholizad, " Analysis of a High-Speed Linear Induction Motor with Slotted Secondary Using a Three-Dimensional reluctance network Method", COMPUMAG 2005, June 26-30, 2005, CHINA
52. Hooshang GHOLIZAD, **Mojtaba Mirsalim** (IEEE Senior Member), Mehran MIRZAYEE, and , "+Weiying Cheng [Coupled Magnetic Equivalent Circuits and the Analytical Solution in the Air-gap of Squirrel Cage Induction Machines](#) ", International Symposium on Interdisciplinary Electromagnetic, Mechanic& Biomedical Problems , ISEM 2005, Bad Gastein (Salzburg), Austria, September 12-14, 2005

53. Mehran Mirzayee, **Mojtaba Mirsalim** (IEEE Senior Member), Hooshang Gholizad, Saied Javadi, and Weiyang Cheng, " [Analysis of Solid Rotor Induction Machines Using Coupled Analytical Method and Reluctance Networks](#) ", International Symposium on Interdisciplinary Electromagnetic, Mechanic& Biomedical Problems , ISEM 2005, Bad Gastein (Salzburg), Austria, September 12-14, 2005
54. Mehran Mirzayee, **Mojtaba Mirsalim** (IEEE Senior Member), and Mojtaba Ghodsi, " [Analysis of High-Speed Linear Induction Motors with Slotted Secondary](#) ", The Fifth International Symposium on Linear Drives for Industry Applications ,LDIA2005, September 25-28, 2005, Awaji Yumebutai, Hyogo, Japan
55. Amin-Hasan Yazdavar, and **Mojtaba AghaMirsalim** (IEEE Senior Member), " Reduction of Torque Ripples in Switched Reluctance Motors ", 20th International power system Conference, Tehran, Iran, November 14-16, 2005
56. Amin-Hasan Yazdavar, and **Mojtaba AghaMirsalim** (IEEE Senior Member), " Implementation of Torque Ripple Minimization in a Switched Reluctance Motor with TMS320LF2407A ", 2005 WSEAS International Multi Conference , Venice, Italy , November 2-4, 2005
57. S. Sadeghi, **M. Mirsalim** (IEEE Senior Member), M. Salehi, " Finite Element Method for the Prediction of Magnetic Fields in Underground SF6 Insulated Cables ", IEEE – INMIC 2005 International Conference , Karachi, Pakistan, 24th,25th December, 2005
58. S. Sadeghi, J. Milimofared, **M. Mirsalim** (IEEE Senior Member), and H. Meshginklk, "Dynamic Modeling and Simulation of a Switched Reluctance Motor in Electric Vehicles", To be presented at the 1st IEEE Conference on Industrial Electronics and Applications (ICIEA 2006), Singapore on 24 - 26 May 2006
59. A. Ghaempanah, **M. Mirsalim** (IEEE Senior Member), and M. Mirzayee, " [Simulation of Linear Induction Generators in Hybrid Vehicle Applications](#) ", The 3rd IEE International Conference on Power Electronics & Machines (PEMD 2006), 4-6 April 2006, Dublin, Ireland
60. H. Bahrami, **M. Mirsalim** (IEEE Senior Member), and M. Mirzayee, " [A Novel High-Speed Flux Alternator](#) ", The 3rd International Conference on Power Electronics & Machines (PEMD 2006), 4-6 April 2006, Dublin, Ireland
61. M. Mardaneh, **M. Mirsalim** (IEEE Senior Member), and M. Aliahmadi, " [Modeling and Design of Axial-Flux Permanent Magnet Machines: A New Approach](#) ", The 3rd International Conference on Power Electronics & Machines (PEMD 2006), 4-6 April 2006, Dublin, Ireland
62. M. Hosseini, **M. Mirsalim** (IEEE Senior Member), and M. Mirzayee, " [Design and Analysis of a Novel Disk Permanent Magnet Generator](#) ", International Symposium on Power Electronics, Electrical Drives, Automation and Motion. IEEE-SPEEDAM 2006 , Sicily, Italy, 23 - 26 May, 2006

63. A. Ghaempanah, **M. Mirsalim** (IEEE Senior Member), and M. Mirzayee, " [Design and Finite Element Simulation of a Reciprocating Self-Excited Linear Induction Generator](#) ", International Symposium on Power Electronics, Electrical Drives, Automation and Motion. IEEE-SPEEDAM 2006 , Sicily, Italy, 23 - 26 May, 2006
64. M. Hosseini, **M. Mirsalim** (IEEE Senior Member), and M. Mirzayee, " A Novel Structure for Disk Permanent-Magnet Axial-Flux Generators ", 14th Iranian Electrical Engineering Conference, (ICEE 2006), 16 -18 May 2006, Tehran, Iran
65. M. Hosseini, **M. Mirsalim** (IEEE Senior Member), and J. Moghani, " Design and Finite Element Analysis of a Novel Disk Permanent Magnet Generator ", [International conference on "Electrical and Control Technologies 2006"](#) (ECT 2006) , Lithuania, Italy, May 4-5, 2006
66. M. Mardaneh and **M. Mirsalim** (IEEE Senior Member) , " Modeling and Design of Axial-Flux Permanent Magnet Machines: A New Approach " , IEEE TENCON 2006, Hong Kong, 14-17 Nov, 2006
67. . S. Javadi, M. Mirzaei, and **M. Mirsalim** (IEEE Senior Member) , " Analysis of Solid Rotor Induction Machines Using a Coupled Numerical and Analytical Method ", The 2006 International Conference on Electrical Machines and Systems (ICEMS 2006), November 20-23, 2006, Nagasaki, Japan
68. M. Mirzaei, S. Javadi, and **M. Mirsalim** (IEEE Senior Member) , " A Novel Coreless Linear Permanent Magnet Generator " , The 2006 International Conference on Electrical Machines and Systems (ICEMS 2006), November 20-23, 2006, Nagasaki, Japan
69. M. Hosseini, **M. Mirsalim** (IEEE Senior Member), and M. Mirzaei, " Performance Improvement of the Axial Flux Permanent Magnet Disk Generator by the Modification of Its Structure", The 21st International Power System Conference (PSC 2006), November 13-15, 2006, Tehran, Iran
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71. M. Mardaneh, M. Mirsalim (IEEE Senior Member), and M. Aliahmadi, "Analytic Modeling and Optimum Design of a Disk Axial-Flux PM Machine", The 21st International Power System Conference of Iran (PSC2006), Nov. 3-15, 2006
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FUNDED RESEARCH EXPERIENCE

10/96-06/2003

Project Supervisor and Principal Investigator, "Investigation of Special Purpose DC Motors Used in Biomedical & Rehabilitation Engineering Control & Drives)", Supported by Djanbazan Biomedical & Rehabilitation Engineering Research Center, Iran.

1996-1999

Development of an Electrical Drive Research Laboratory for Graduate Students, Co-Chair with J. Monfared and H. Fathi.

1996-1999

The Use of Expert Networks in Power Systems, Co-Chair with M. Abedi, M. Menhaj, M. Karrari.

2001- Now

Founder and Director of the "Electrical Machines & Transformer Research Laboratory" ([EMTRL](#)) for Graduate Students.

2002-2003

[Design and Prototyping of a High-Speed Disk Induction Motor](#), M. Mirsalim, M. Mirzayee, Amirkabir University of Technology

July 2005 - September 2005

[Design, Analysis, and Prototyping of an Electromagnetic Levitation Device](#), Click to watch [Levitation.mpeg](#); M. Mardaneh and M. Mirsalim, Amirkabir University of Technology

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Design and Manufacturing a DC Watt/WattHour Meter; Ehsan Ghaemi, M. Mirsalim, Supported by the Organization of Renewable Energy of Iran

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

The Institute of Electrical and Electronics Engineering, Iran (IIEEE), 1993-Present.

[Associate Editor of International Amirkabir Journal of Science & Research](#)

Reviewer for IEE Proc. Science, Measurement & Technology, April 2005 - Present

Reviewer for IEEE International Electric Machines and Drive Conference (IEMDC 2003)

Member of the editorial advisory panel, Journal of Electrical Science and Technology, A National Quarterly, 1989-1996.

Member of Scientific Council, Djanbazan Biomedical & Rehabilitation Engineering Research center, 1990-1992.

Member of Engineering Committee, 1989-1993.

Reviewer for International Journal of Engineering.

Reviewer for Scientia Iranica.

Reviewer for Amirkabir Journal of Science & Technology.

Reviewer for Iranian Journal of Science & Technology (Shiraz University)

Reviewer for Esteghlal Journal of Engineering (Esfahan University of Technology).

Reviewer for Journal of the Faculty of Engineering (Ferdowsi University of Mashad).

Reviewer for International Power System Conferences (IPSC).

Reviewer for Iranian Conferences on Electrical Engineering (ICEE).

Reviewer for Iranian Biomedical Engineering Seminars.

Reviewer for IEE Proc. Science, Measurement & Technology , 2006 - Present

Co-Chairman and Organizer of a Session on “DC Brushless Motors and Drives” 1993

Iranian Conference on Electrical Engineering, Tehran Polytechnic University, Tehran, Iran, May 18-21, 1993.

Co-Chairman of Sessions for ICEE, 1994-Present.

Head of The Power Systems Group, EE Dept., Tehran Polytechnic University, 1989-1991.

Vice Chairman in Charge of Education, EE Dept., Tehran Polytechnic University, 1991-1994.

Deputy of Vice Chancellor in Charge of Educational Evaluations, Tehran Polytechnic University, 1994-1997.

Vice Chairman in Charge of Education, EE Dept., Tehran Polytechnic University, 2000- 2002.

General Director in Charge of Academic Assessments , Tehran Polytechnic University, 2002- 2006.

HONORS and AWARDS

- Honor standing student at Oregon State University, and University of California at Berkeley, USA. 1978, 1980, 1986
- Distinguished Academic Member of the year 1996 (Awarded by the Chancellor of Amirkabir University of Technology, Dr. Hossein Salimi)
- Cited in 1997 " Marquis Who Is Who " in Science & Engineering
- Elevated to Senior Member of IEEE, 2004
- Distinguished Researcher of the year 2005 (Awarded by the Chancellor of Amirkabir University of Technology, Dr. Alireza Rahai)