

# CURRICULUM VITAE

## Jawad Faiz

### Professor of University of Tehran



#### 1. PERSONAL IDENTITIES

Name: Jawad  
 Family name: Faiz  
 Date and place of birth: 21.03.1952, Ghom, Iran  
 Nationality: Iranian  
 Positions: Lecturer, University of Tabriz, 1974-1979.  
 Assistant Professor, University of Tabriz, 1979-1985.  
 Associate Professor, University of Tabriz, 1979-1985  
 Professor, University of Tabriz, 1985-1991.  
 Professor, University of Tehran, 1999-till.

#### 2. EDUCATIONAL BACKGROUND

|       |                              |                                      |                                      |      |
|-------|------------------------------|--------------------------------------|--------------------------------------|------|
| B.Sc. | Electrical Engineering       | Department of Electrical Engineering | University of Tabriz                 | 1969 |
| M.Sc. | Electrical Power Engineering | Department of Electrical Engineering | University of Tabriz                 | 1971 |
| Ph.D. | Electrical Engineering       | School of Electrical Engineering     | University of Newcastle upon Tyne UK | 1974 |

#### 3. MEMBERSHIPS

##### 3.1 Academies

- a) Fellow of the Iranian Academy of Science (IAS) since 1400.
- b) Member of Euro-Med Academy of Arts and Sciences since 1385.

##### 3.2 Societies

- c) Fellow of the Iranian Association of Electrical and Electronics Engineers .
- d) Member of Illumination Engineering Association (....-....).
- e) Member of Iranian Association of Electrical Machines and Drive.
- f) Senior Member of Institute of Electrical and Electronics Engineering (IEEE, USA).

#### **4. COMMUNICATIONS WITH NATIONAL AND INTERNATIONAL JOURNALS**

1. International Journal of Engineering, Iran (Editorial Board Member))
2. Journal of Electrical Engineering, University of Tabriz, Iran (Editorial Board Member))
3. Journal of Electrical Engineering, Amirkabir University of Technology, Iran (Editorial Board Member)
4. Scientia Iranica, Iran (Editorial Board Member))
5. Engineering Education, Iranian Academy of Sciences (Editorial Board Member)
6. Journal of Intelligent Procedures in Electrical Technology (JIPET), Islamic Azad University, Iran.
7. Associate Editors, IET Electronics Letter, UK.
8. Journal of Iranian Association of Electrical and Electronics Engineers.
9. Journal of Renewable Energy and Sustainable Development, Egypt, Academ Publishing Center (Editorial Board Member).
10. International Advisory Board of Jordan Journal of Electrical Engineering

#### **5. MEMBER OF SCIENTIFIC COMMITTEES**

1. Iranian Conference on Electrical Engineering, Iran.
2. International Power Systems Conference, Iran.
3. International Conference of Power Electronics and Drives Systems (PEDSDC), Iran.
4. International Conference on Applied Electromagnetics (PES), Nis, Serbia.
5. International Conference on Electrical Drives and Power Electronics (EDPE), 2021.
6. IEEE International Electric Machines & Drives (IEMDC), USA.

#### **6. AWARDS**

1. The 3rd outstanding researcher in whole Universities in Iran, Iran Ministry of Higher education, 2002.
2. Advisory board of American Society of Biography, since 1993.
3. Member of Illumination Engineering Society, USA, 1977-1984.
4. Member of Board of Iranian Association of Electrical and Electronics Engineers, 2002.
5. Outstanding Researcher of University of Tehran, 1999.
6. Elite Professor of University of Tehran, 2003.
7. University of Tehran Award for International position achievement, 2012.
8. Book Prize awarded by the University of Tehran for writing the best book in the field of Fault Diagnosis of induction motors, published by International Publisher (IET), 2018.
9. Book Prize awarded by the University of Tehran for writing the best book in the field of Transformer tap-changer published by International Publisher (Springer), 2012.
10. Einstein Silver Medal awarded by United Nations Educational, Scientific and Cultural Organization (UNESCO) for the excellent research in 2007.
11. Kharazmi International Festival 1st prize for Basic Research, 2007.
12. First-class Medal for Lifetime Research from University of Tehran, 2007.
13. Elite Professor of whole Universities in Iran, Ministry of Higher Education, 2004.
14. Outstanding Professor of Iran National Elites Foundation (Allameh Tabatabaei), 2012. (INSF).
15. Listed as a Famous People of University of Tehran.
16. Gold Plate for Brilliant Face of Researchers in Electrical Engineering Industry from Iranian Association of Electrical and Electronics Engineers.
17. Distinguished Iranian Researcher among World Scientists in Electrical Engineering, Recognition by Iran Ministry of Power.
18. IEEE Iran Section Lifetime Research Award, 2015.
19. Author of the top 1% most highly cited papers worldwide 1% Top Scientists in the World reported by ISI/ESI, Thomson Reuters.
20. Google scholar h index 53.
21. Award for Distinguished Vice-Dean of Education and Graduate Studies of College of

- Engineering from Education Festival of University of Tehran.
- 22. Listed in Marquis Who's Who in Science and Engineering, 2000.
- 23. Distinguished researcher of University of Tabriz Award, 8 times, 1989-1996.
- 24. Member of Board of Iranian Association of Electrical & Electronics Engineers, 2002.
- 25. Best paper prize awarded by Power Electronics and Motion Conference (PEMC2018), Hungary Budapest, Hungary, 2018.

## **7. EXPERIENCES**

- a) Lecturing the following courses for the last 46 years in different Universities in undergraduate and postgraduate levels:
  - 1. Fundamentals of Electrical Engineering
  - 2. Electrical Insulations
  - 3. Technology of Electrical Engineering Materials.
  - 4. Illumination Engineering
  - 5. Electrical Installations
  - 6. Industrial Electricity
  - 7. Electrical Machines I: Electrical Energy Conversion and DC Machines.
  - 8. Electrical Machines II: Transformers and Induction Machines.
  - 9. Special Electrical Machines.
  - 10. Generalized Theory and Analysis of Electrical Machines.
  - 11. Design of Electrical Machines.
  - 12. Design of Small Electrical Machines.
  - 13. Advanced Special Electrical Machines: Step Motors and Switched Reluctance Motors.
  - 14. Numerical Methods in Electromagnetics.
  - 15. Electrical Engineering Materials.
- b) Supervision of M.Sc. Seminars for Graduate Students.
- c) Supervision of M.Sc and Ph.D. theses.
- d) Member of the Board of Trustees of Niroo Institute of Research.
- e) Member of the Board of Trustees of Nabeei Akram Higher Education, Tabriz.
- f) Consultant of Niroo Institute of Research.

## **8. INVITED LECTURES AND KEYNOTE SPEAKERS**

- 1. Switched Reluctance Analysis and Design, Ministry of Heavy Industry, Tehran, Iran, Feb. 1992.
- 2. Optimum Design of Transformers, Department of Electrical Machines and Drives, Varna, Bulgaria, Oct. 1994.
- 3. Design Optimization of Multiple Teeth Switched Reluctance Motors, Center of Intelligent Systems, Tehran, Iran, August 1997.
- 4. Electric Vehicle-Present and future, Iran Academy of Sciences, 2000,
- 5. Electric Vehicle Applications, University of Sistan & Blouchestan, 2001.
- 6. Performance of Transformers under non-sinusoidal mode, Chinese Academy of Sciences, Nov. 2010.
- 7. Fault Diagnosis in Permanent Magnet Synchronous Motors, Chinese Academy of Sciences, Nov. 2010.
- 8. Renewable Energies, Iran Academy of Science, Feb. 2013.
- 9. Fault Diagnosis in Power Transformers, Keynote Speaker, 11th International Conference on Applied Electromagnetics, PES 2013, 1-4 September 2013, Nis, Serbia. Sep. 2013.
- 10. Wind Energy Generation, IEEE AEECT 2015, Nov. 3-5 2015, The Dead Sea, Jordan.
- 11. Different Linear Generators Topologies for Direct-Driven Wave Energy Conversion, International Symposium on Hydrogen Energy, Renewable Energy and Materials, Thailand, 2018.
- 12. Design of Axial Flux Ferrite Permanent Magnet Synchronous Generator, Keynote Speaker, 14th International Conference on Applied Electromagnetics, PES 2019, Nis, Serbia. Sep. 2019.

13. Fault detection in Electrical Machines, 1st International Conference on Electrical Machines, Sabzevar, 2021.

## **9. REVIEWER FOR JOURNALS**

1. IEEE Transactions on Energy Conversion
2. IEEE Transactions on Power Delivery
3. IEEE Transactions on Industrial Electronics
4. IEEE Transactions on Industry Applications
5. IEEE Transactions on Control Systems
6. IEEE Transactions on Magnetics
7. IET Electric Power Applications
8. IET Generation, Transmission and Distribution
9. IET Renewable Energy
10. IET Power electronics
11. European Transactions on Electrical Power
12. Electric Power Systems Research
13. Electric Power Components and Systems
14. International Journal of Engineering (+Member of Editorial Board, Iran)
15. Iranian Journal of Science and Technology (Iran)
16. International Journal of Science and Technology (Iran)
17. Iranian Journal of Electrical & Electronics Engineering (Iran) (+Member of Editorial Board)

## **10. PROFESSIONAL INTERESTS**


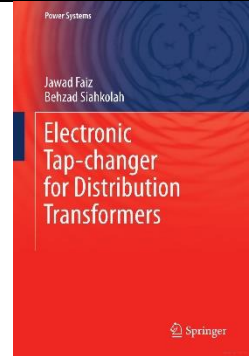
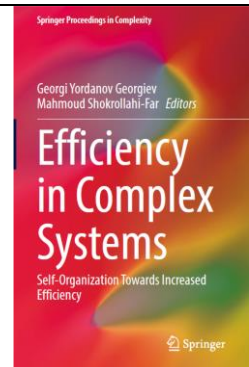
- Design and modeling of electrical machines
- Induction generators design
- Switched reluctance machines design, modeling and losses estimation
- Traction motor design and control for electric and hybrid vehicles
- DTC technique for induction and PM motors
- Condition monitoring of non-conventional electrical machines
- Slip recovery energy in induction motor
- Electric field and thermal computations in power transformer
- Solid-state tap-changer for distribution transformers
- Linear induction motor and generator design and modeling
- Condition monitoring of transformers
- Design of linear PM generator for wave energy conversion
- Design of linear and rotating Vernier machines
- Robust Design of PM motors
- Thermal modeling of power transformers
- Doubly-fed induction generators and its fault diagnosis
- Derating of Transformers
- Renewable energy generation

## **11. PUBLICATIONS**

### ***a) Thesis***

1. Radio Frequencies Amplifiers, M.Sc. thesis, Faculty of Engineering, University of Tabriz, 1354,
2. Computational Methods for the Design of Multiple-tooth-per-pole Stator Pole Switched Reluctance Motors, Ph.D. thesis, School of Electrical Engineering, University of Newcastle upon Tyne, UK, 1988.

### ***b) Books (in English)***

|   |  |  |  |
|---|--|--|--|
| 1 | <p>Jawad Faiz, Vahid Ghorbanian, Gojko Joksimovic</p> <p>Fault Diagnosis of Induction Motors, The Institution of Engineering and Technology (<i>IET</i>) Press, London, U.K., ISBN 878-1-785610320-9</p>   |    |  |
| 2 | <p>Jawad Faiz, Behzad Siahkolah</p> <p>Electronic Tap-changer for Distribution Transformers, <i>Springer Verlag</i>, GmbH, Wien-New York, 2011</p> <p>ISBN 978-3-642-19910-3</p> <p>ISBN 978-3-7091-1565-7 (eBook)</p> <p>DOI 10.1007/978-3-642-199111-0</p> |   | <p>Jawad Faiz - Behzad Siahkolah</p> <p>Electronic Tap-changer for Distribution Transformers</p> <p>Springer</p> |
| 3 | <p>J. Faiz and Farbod Parvin</p> <p>Chapter 5 of the book</p> <p>Springer Nature Switzerland AG 2022 G. Y. Georgiev, M. Shokrollahi-Far (eds.), doi.org/10.1007/978-3-030-69288-9</p>  |  | <p>Trends and Technical Advancements on High-Efficiency Electric Motors: A Review</p>                            |

**c) Book (in Farsi)**

1. Jawad Faiz, Arash Servatian, Analysis of Single Phase Induction Motors, Publisher Imam Reza University, 1375

**d) Books- Translated into Farsi**

1. **Jawad Faiz**, Fundamentals of Electrical machinery, Stephen J. Chapman, University of Tabriz Press, (6<sup>th</sup> Edition-1384).
2. **Jawad Faiz**, Properties of Materials for Electrical Engineers, Pasco, MarkazNashr Daneshgahi, Tehran, 1985.
3. E. S. Gogani, and **J. Faiz**, Cyril C. Veinot, Fractional and Sub-fractional Horsepower

- Electric Motors (1<sup>st</sup> Volume), Moto-Gen-Co., 1984.
4. E. S. Gogani, and **J. Faiz**, Cyril C. Veinot, Fractional and Sub-fractional Horsepower Electric Motors (2<sup>nd</sup> Volume), Publisher Nima, Tabriz, 1386.
5. **Jawad Faiz**, Response Analysis of AC Electrical Machines- Computer Models and Simulation, John R. Smith, University of Tabriz Press, 1998.
6. **Jawad Faiz**, AC Motor Design, H. C. J, de Jon, Sahand University of Technology Press, Tabriz, Iran, 1999.
7. **Jawad Faiz**, AC Synchronous Generators- Design and Application, Robert L. Ames, University of Tabriz Press, 1999.
8. **Jawad Faiz**, Small Electric Motors, H. Maezala et al., University of Tehran Press (2<sup>nd</sup> Edition), 2008.
9. **Jawad Faiz**, Siroos Hemmati, Analysis of Synchronous Machines, Tomas A. Lipo, University of Tehran Press, 2019.

#### *e) Papers Presented in International Conferences*

1987

1. Introduction of CAD of switched reluctance motors\*  
Finch, J.W, **Faiz, J.** and Harris, M.R.  
22nd Universities Power Engineering Conference (UPEC-87), April 1987, Sunderland, UK., paper No. 8.01.
2. Permeance calculation for complex pole shapes by assumed flux paths  
**Faiz, J.**, Metwally, H.M.B., Harris, M.R. Finch, J.W,  
22nd Universities Power Engineering Conference (UPEC-87), April 1987, Sunderland, UK., paper No. 9.09.

1988

3. Calculation of a switched reluctance motor performance using finite element method  
Metwally, H.M.B., Finch, J.W and , **Faiz, J.**  
23rd Universities Power Engineering Conference (UPEC-88), Sept 1988, Nottingham, UK.
4. Simplified unaligned permeance evaluation of doubly salient structures and estimation of finite slot depth effect  
**Faiz, J.**, Finch, J.W and Metwally, H.M.B.  
23rd Universities Power Engineering Conference (UPEC-88), Sept 1988, Nottingham, UK.
5. The multi-tooth per stator pole switched reluctance motor Four teeth per pole  
**Faiz, J.**, Finch, J.W. and Metwally, H.M.B.  
International conference of Electrical Machines (ICEM-88), Sept. 1988, Pisa. Italy. Vol. II, pp 563-568.
6. Core loss in switched reluctance motor structures-Experimental results  
Metwally, H.M.B., **Faiz, J.** and Finch, J.W.  
International conference of Electrical Machines (ICEM-88), Sept. 1988, Pisa. Italy, Vol. II, pp 31-34.

1989

7. Two-dimensional flux leakage estimation in switched reluctance motors  
**Faiz, J.** and Finch, J.W.  
4th International conference of Electrical Machines and Drives (EMD-89), Sept. 1989, London, UK, pp. 317-321.
8. Estimation of shallow slot on the permeance of doubly salient structure  
**Faiz, J.**  
IEEE Region 10 International Conference of on Information Technologies for the 90's, TENCON-89, Nov. 1989, Bombay, pp 1071-1075. India.

1990

9. A non-linear modelling of a loaded transformer using design data.

- Faiz, J.** and N. Mahdavi Tabatabayee  
International conference of control and modelling (ICCM'90), July 1990, Tehran, Iran, pp 653-657.
10. CAD of single-phase induction motors based on a new geometrical approach  
**Faiz, J.** and Honarparvar, Sh.  
3rd International Symposium of Modelling and Simulation of Electrical Machines and Converters (IMACS-TC1'90), Sept. 1990, Nancy, France, pp. 129-134.
  11. Two-dimensional finite element analysis of multi-tooth per stator switched reluctance motor-four teeth per stator pole  
**Faiz, J.**, Harris, M.R. and Finch, J.W.  
25th Annual Meeting of IEEE Industry Applications Society (IEEE/IAS), October 1990, Seattle, USA, pp 234-240.

1991

12. Steady-state test for switched reluctance motors",  
**Faiz, J.**  
China International Conference on Electrical Machines, Sep. 18-20, 1991, Wuhan, China. pp 454-459.
13. Comparison of switched reluctance motors with conventoinal motors  
**Faiz, J.**  
China International Conference on Electrical Machines, Sep. 18-20, 1991, Wuhan, China. pp 498-503.
14. Short circuit in three phase induction motors supplied by balanced and unbalanced voltages  
**Faiz, J.** and Khodadadi M.A.  
China International Conference on Electrical Machines, Sep. 18-20, 1991, Wuhan, China. pp 621-626.
15. Heat distribution and thermal calculations for switched reluctance motors  
**Faiz, J.** and Dadgari, A.  
5th International Conference on Electrical Machines and Drives, Sep. 1991, London, UK, pp 305-310.
16. Prediction of Static Magnetisation Characteristics of switched reluctance motors for general rotor positions  
**Faiz, J.**  
3rd European Conference on Power Electronics, EPE'91, Sep. 1991, Florence, Italy.
17. Brushless drives using multi-tooth per pole switched reluctance motors  
Finch, J.W., Metwally, H.M.B and **Faiz, J.**  
International Conference on the Evolution and Modern Aspects of Synchronou Machines, Aug. 27-29, 1991, Zurich, Switzerland, pp 469-474.

1992

18. Computer modelling of a three phase induction generator for power system  
**Jawad Faiz**, K. Banan Abbasi and A. Roshan Milani  
Second IASTED International Conference on Computer Applications in Industry, May 5-7, 1992, Alexandria, Egypt, pp 370-373.
19. Rewinding of a conventional induction motor as a switched reluctance motor  
**Jawad Faiz**, A.A. Khamenian and S. Ghasemzadeh  
International Aegean Conference on Electrical Machines and Power Electronics, May 27-29, 1992, Kusadasi, Turkey, pp 61-66.
20. Electrical Machines Computer Package Based on Generalized Theory of Electrical Machines  
**Jawad Faiz**, M.A. Khadadadi  
International Aegean Conference on Electrical Machines and Power Electronics, May 27-29, 1992, Kusadasi, Turkey, pp 618-623.
21. Modeling of a three phase induction generator connected to Electric Power System  
**Jawad Faiz**, K. Banan Abbasi and A. Roshan Milani  
International Aegean Conference on Electrical Machines and Power Electronics, May 27-29, 1992, Kusadasi, Turkey, pp 353-359.
22. Engineering Education in Iranian Universities: Past and Present  
**Jawad Faiz** and Sayed Ghasemzadeh  
5th World Conference on continuing Engineering Education, June 2-5, 1992, Hellsinki University of Technology, Espoo, Finland, pp 197-204.
23. A design package for single-tooth per stator pole switched reluctance motors\*  
**Faiz, J.** and Finch, J.W.

- International Conference on Electrical Drives and Power Electronics, September 14-16, 1992, Kosice, Czech and Sloval Federal Republic, pp. 87-92.
24. Software for Electrical machines laboratory  
**Faiz, J.** and Ghasemzadeh, S.  
International Conference on Electrical Drives and Power Electronics, September 14-16, 1992, Kosice, Czech and Sloval Federal Republic, pp. 102-106.
  25. Modification factor for sizing equation of electrical machines - Single and three phase induction motors  
**Faiz, J.** and Honarparvar, Sh.  
International Conference on Electrical Drives and Power Electronics, September 14-16, 1992, Kosice, Czech and Sloval Federal Republic, pp. 345-347
  26. Capacitance requirement for self-excited induction generator including core losses  
**Faiz, J.** and Khamnian, A.A.  
International Conference on Electrical Drives and Power Electronics, September 14-16, 1992, Kosice, Czech and Sloval Federal Republic, pp. 354-358.
  27. Design study of switched reluctance motor performance  
Finch, J.W., **Faiz, J.** and Metwally, H.M.B.  
27th Annual Meeting of IEEE Industry Applications Society (IEEE/IAS), October 1992, Houston, Texas, USA.

1993

28. Design of three phase self-excited induction generator, Part I: Influence of steady-state parameters  
**Jawad Faiz**, A.A. Dadgari and A.A. Khamenian  
7th International Conference on Electrical Machines and Drives (ELMA'93), October 1993, Varna, Bulgaria, pp. 116-123.
29. Design of three phase self-excited induction generator, Part II: Design procedure  
**Jawad Faiz** and A.A. Dadgari  
7th International Conference on Electrical Machines and Drives (ELMA'93), October 1993, Varna, Bulgaria, pp. 124-132.
30. Analysis of a self-excited induction generator and experimental verification of the developed model  
**Jawad Faiz** and A.A. Khamenian  
7th International Conference on Electrical Machines and Drives (ELMA'93), October 1993, Varna, Bulgaria, pp. 133-139.
31. Educational package for the design of a three phase core type distribution transformer  
**Jawad Faiz**, S. Ghasemzadeh and M. Shahed-behrouz  
7th International Conference on Electrical Machines and Drives (ELMA'93), October 1993, Varna, Bulgaria, pp. 140-146.
32. Minimazation of starting time and improvement of performance of a capacitor-run single-phase induction motor  
**Jawad Faiz** and M. Tarafdar-Haque  
7th International Conference on Electrical Machines and Drives (ELMA'93), October 1993, Varna, Bulgaria, pp. 147-152.
33. Performance prediction and analysis of shaded pole induction motors considering asymmetrical flux distribution and saturation effects  
**Jawad Faiz**, M.R. Feyzi and K.B. Ali-Abbasi  
International Conference on Computational Aspects of Electromechanical Energy Converters and Drives, IMACS-TC1'93, July 1993, Montreal, Canada, pp. 183-188.
34. Optimum design of three phase induction motor based on efficiency optimisation  
**Faiz, J.** and M.B.B. Shrifian  
6th International Conference on Electrical Machines and Drives, Sep. 1993, University of Oxford, UK, pp. 139-143.

1994

35. Comparison of different power factor improvement techniques for induction generator performance  
**Faiz, J.** and Roshan Milani A.  
11th International Conference on Electrical Drives and Power Electronics, October 1994, the High Tatras, Slovakia, pp. 194-198.



36. Simulation of a variable reluctance stepping motor for sinusoidal and step excitations  
**Faiz, J.** and Iranpour R.  
11th International Conference on Electrical Drives and Power Electronics, October 1994, the High Tatras, Slovakia, pp. 296-301.
37. A systematic design procedure for variable reluctance step motor based on permeance model  
**Faiz, J.** and Banan-Ali-Abasi K.  
11th International Conference on Electrical Drives and Power Electronics, October 1994, the High Tatras, Slovakia, pp. 361-366.
38. Comparison of two circuit models for simulation of a three phase squirrel-cage induction motor  
Sharifian, M.B.B and **Faiz, J.**  
11th International Conference on Electrical Drives and Power Electronics, October 1994, the High Tatras, Slovakia, pp. 378-382.
39. Simulation of a capacitor single phase induction motor using two models  
**Faiz, J.** and A. Servatian  
11th International Conference on Electrical Drives and Power Electronics, October 1994, the High Tatras, Slovakia, pp. 446-450.

1995

40. Transient operation of transformers  
**Faiz, J.** and M.B.B. Sharifian  
6th International Symposium of Electromagnetic Fields in Electrical Engineering, September 1995, Thessaloniki, Greece, pp. 339-344.

1996

41. Simulation of induction motor using EMT  
**Faiz, J.,** E. Shafagh and S. Esmaeeli  
7th International Power Electronics & Motion Control Conference, September 1996, Budapest, Hungary, pp. 387-391.
42. Sensitivity studies for an induction motor steady-state operation  
**Faiz, J.,** M. Mosavian and P. Pillay  
7th International Power Electronics & Motion Control Conference, September 1996, Budapest, Hungary, pp. 331-335.
43. Transient torque in three phase induction motor  
**Faiz, J.,** M. Abolghasemian and G. Shahgholian  
7th International Power Electronics & Motion Control Conference, September 1996, Budapest, Hungary, pp. 78-82.
44. Steady state performance of three phase induction motors with different ratings connected to a single phase supply  
**Faiz, J.,** Khandar, Gh.  
7th International Power Electronics & Motion Control Conference, September 1996, Budapest, Hungary, pp. 460-464
45. Evaluation of pulsating torque of a single phase induction motor using rotating field theory.  
**Faiz, J.,** Servatian, A.  
7th International Power Electronics & Motion Control Conference, September 1996, Budapest, Hungary, pp. 465-468.

1997

46. A fast boundary element method to electric field computation within the tank of power transformers  
**Faiz, J.** and M. Ojaghi  
7th International Symposium of Electromagnetic Fields in Electrical Engineering, September 1997, Gdansk, Poland, pp. 235-240.
47. Hysteresis loop modelling techniques and core loss estimation of magnetic cores  
**Faiz, J.** and M. B. B. Sharifian  
7th International Symposium of Electromagnetic Fields in Electrical Engineering, September 1997, Gdansk, Poland, pp. 398-403.

1998

48. Design criterion for a capacitor controlled single-phase induction motor  
**Faiz, J.** and Servatian, A.  
the 8th International Power Electronics & Motion Control Conference, September 1998. Prague, Czech Republic, pp. 2.107-2.109
49. Effects of airgap dimensions and magnetic flux density on the performance of variable reluctance step motor  
**Faiz, J.** and K. Banan.  
the 8th International Power Electronics & Motion Control Conference, September 1998. Prague, Czech Republic, pp. 5.1-5.6
50. Transient performance of cascade induction motors  
**Faiz, J.** and Sharifian, M.B.B.  
the 8th International Power Electronics & Motion Control Conference, September 1998. Prague, Czech Republic, pp. 3.97-3.102
51. Brushless dc motors control using artificial neural network  
**Faiz, J.** and Tonkaboni-pour, S.H.  
the 8th International Power Electronics & Motion Control Conference, September 1998. Prague, Czech Republic, pp. 3.103-3.107
52. Voltage dip of system on starting of large induction motors  
**Faiz, J.** and Sharifian, M.B.B.  
the 8th International Power Electronics & Motion Control Conference, September 1998. Prague, Czech Republic, pp. 2.125-2.129
53. Influence of optimally designed induction motors on the reduction of electrical energy consumptions  
**Faiz, J.** and Sharifian, M.B.B.  
1st International, Conference on Energy Research & Development (ICER), November 1998, State of Kuwait, pp. 348-358.

1999

54. Accurate modelling of single-sided linear induction motor  
**Faiz, J.** and Jafari  
1999 IEEE International Magnetics Conference, Digest of INTERMAG 99, p. AS19.
55. A simple speed control technique and pulsating torque elimination method in a brushless dc motor  
**Faiz, J.**, M.A. Azami and Moallem, M.  
4th International Conference on Unconventional Electromechanical and Electrical Systems, St. Petersburg, Russia, June 21-24, 1999, pp. 339-344.
56. Study of maximum permissible slip for synchronous motor based on actual stator current  
**Faiz, J.** and Pillay, P.  
4th International Conference on Unconventional Electromechanical and Electrical Systems, St. Petersburg, Russia, June 21-24, 1999, pp. 336-350.
57. Transient of three phase induction motor supplied by unbalanced voltages  
Sharifian, M.B.B., **Faiz, J.** and Guobiao, G.  
the Third Chinese in International Conference on Electrical Machines, August 29-31, 1999, Xi'an, China, Vol. 1, pp. 72-75.
58. Comparison of optimally designed three phase squirrel-cage induction motors with industrial motor  
**Faiz, J.**, Sharifian, M.B.B. and Guobiao, G.  
the Third Chinese in International Conference on Electrical Machines, August 29-31, 1999, Xi'an, China, Vol. 2, pp. 646-651.
59. Inrush current in parallel and cascade transformers  
**Faiz, J.**, Sharifian, M.B.B. and Guobiao, G.  
the Third Chinese in International Conference on Electrical Machines, August 29-31, 1999, Xi'an, China, Vol. 1, pp. 425-428.
60. The switched reluctance motor drive for distributed generation  
Humiston, T, Pillay, P. and **Faiz, J.**  
5th IEEE Africon Conference in Africa, 28 September-10 October 1999, Cape Town, South Africa, Vol. 2, pp. 669-674.

2000

61. Fast response solid-state on load transformers tap-changer  
**Faiz, J.** and Javidnia, H.  
8<sup>th</sup> International Conference on Power Electronics and Variable Speed Drives, 18-19 September 2000, London, UK, pp. 355-359.
62. Minimization of current harmonics of DTC controller using a suitable switching pattern  
**Faiz Jawad**, Sharifian, Mohammad B. B. and Fedak Viliam  
9<sup>th</sup> International Conference on Power Electronics and Motion Control, EPE-PEMC 2000, Kosice, Slovakia, September 2000, Vol. 3, pp. 161-166.

2001

63. EMTP base simulation of reclosing transients in induction motors  
**Jawad Faiz** and M. H. Abbas-zadeh  
4<sup>th</sup> International Symposium on Advanced Electromechanical Motion Systems, 19-20 June 2001, Bologna, Italy, Vol. 1, pp. 53-57.
64. Optimum design of permanent-magnet motor for electric vehicle  
**Jawad Faiz**, M. Ghaneei and M. Ojaghi  
4<sup>th</sup> International Symposium on Advanced Electromechanical Motion Systems, 19-20 June 2001, Bologna, Italy, Vol. 1, pp. 293-298.

2002

65. Optimal design of brushless permanent magnet motor for electric vehicle  
**Jawad Faiz**  
Second International Conference on Energy Research & Development (ICERD-2), April 8-10, 2002, State of Kuwait, Vol. II, pp. 551-562.
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  168. Three-dimensional Magnetic Field Evaluation of Induction Motors under Static Eccentricity Fault  
**Jawad Faiz**, Mostafa Valavi and Bashir Mahdi Ebrahimi  
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Ghazanfar Shahgholian, **Jawad Faiz**, Bahador Fani, Mohammad Reza Yousefi  
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  171. Design and Simulation of UPFC for Enhancement of Power Quality in Transmission Lines  
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176. Optimal Design of a Small Permanent Magnet Wind Generator for Rectified Loads  
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181. Fault Diagnosis in Permanent Magnet Synchronous Motors- An Overview (Invited Paper- Keynote Lecture)  
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183. Analytical Estimation of Flux Waveforms in 8/6 Switched Reluctance Motors Based on Excitation of Flux Tube Method  
Mojtaba Babaei, **Jawad Faiz**, Maryam Bahramgiri and Sohrab Amini  
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**Jawad Faiz** and Mahdi Ebrahimi-Salari  
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191. A New Analytical Technique for Losses Estimation of Broken Rotor Bars Induction Motors with Different Control Strategies  
**Jawad Faiz**, Bashir Mahdi Ebrahimi and Amir Masoud Takbash  
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192. An Analytical Method for Modeling Induction Motors with Bars Breakage Fault  
**Jawad Faiz**, Bashir Mahdi Ebrahimi and Vahid Ghorbanian  
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193. Teaching Electrical Machinery in Undergraduate Course  
**Jawad Faiz**  
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194. Pspice-Assisted Dynamic Modeling and Simulation of a Hard Disk Drive Spindle Motor  
**Jawad Faiz** and Masour Ojaghi  
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195. Enhancement of Maximum Starting Torque and Efficiency in Permanent Magnet Synchronous Motor.  
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196. Core Losses Estimation Techniques in Electrical Machines wit Different Supplies- A Review  
**Jawad Faiz**, Amir Masoud Takbash and Bashir Mahdi Ebrahimi  
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197. Application of Signal Processing Tools for Fault Diagnosis in Induction Motors- A Review  
**Jawad Faiz**, Amir Masoud Takbash, Bashir Mahdi Ebrahimi and Subhasis Nandi  
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198. Saturable Model of Squirrel-cage Induction Motors under Stator Inter-turn FaultCore Losses Estimation Techniques in Electrical Machines with Different Supplies- A Review  
**Jawad Faiz**, Mansour Ojaghi and Mahdi Sabouri and Bashir Mahdi Ebrahimi  
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199. A Survey on Condition Monitoring and Fault Diagnosis in Line-start and Inverter-fed Broken Bar Induction Motors  
**Jawad Faiz**, Vahid Ghorbanian and Bashir Mahdi Ebrahimi  
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200. A New Criterion for Rotor Broken Bar Fault Diagnosis in Line-start and Inverter-fed Induction Motors using Hilbert-Huang Transform  
**Jawad Faiz**, Vahid Ghorbanian and Bashir Mahdi Ebrahimi  
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201. Eccentricity Fault Diagnosis in Induction Motors using Global Processors- A Review  
 W. S. Abu- Elhaija, A. M. Takbash, **Jawad Faiz**, Bashir Mahdi Ebrahimi  
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202. Impact of Closed-loop Control on Behavior of Inverter-fed Induction Motors with Rotor Broken-Bars Fault  
 W. S. Abu- Elhaija, Vahid Ghorbanian, **Jawad Faiz**, Bashir Mahdi Ebrahimi  
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**H. Ehya, Jawad Faiz** and W.S. Abu-Elhaija  
The 8<sup>th</sup> Jordanian International Electrical & Electronics Conference, 16-18 April 2013, Amman, Jordan, pp. 189-194.
204. Three-Dimensional Magnetic Equivalent Circuit Modeling of Induction Motor  
**Jawad Faiz**, Mahmud Ghasemi Bijan, Bashir Mahdi Ebrahimi and W.S. Abu-Elhaija  
The 8<sup>th</sup> Jordanian International Electrical & Electronics Conference, 16-18 April 2013, Amman, Jordan, pp. 201-206.
205. New Optimal Configurations for Two-phase Switched Reluctance Motors  
**Jawad Faiz**, Hossein Ehya and W.S. Abu-Elhaija  
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206. Derating of three-phase squirrel-cage induction motor under broken bars fault  
**Jawad Faiz**, Amir Takbash  
11<sup>th</sup> International Conference on Applied Electromagnetics, PES 2013, 1-4 September 2013, Nis, Serbia (in CD).
207. Improvement of induction machine inductances estimation based on machine geometry  
Mahmoud Ghasemi Bijan, **Jawad Faiz**  
11<sup>th</sup> International Conference on Applied Electromagnetics, PES 2013, 1-4 September 2013, Nis, Serbia (in CD)
208. Faults diagnosis in power transformers (Keynote speech)  
**Jawad Faiz**, Reza Hydarabadi  
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209. Broken bars fault diagnosis in industrial induction motors using current envelope modulation via TSDM  
**Jawad Faiz**, Vahid Ghorbanian, Hossein Ehya  
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210. Dynamic eccentricity fault diagnosis in a salient pole synchronous generator  
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211. Cogging torque reduction in a single-phase surface-mounted permanent magnet motor by locating PM in different positions  
**Jawad Faiz**, Amir Hossein Tavakol-zadeh and Ghazanfar Shahgholian  
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Mansour Ojaghi and **Jawad Faiz**  
2014 IEEE International Conference on Industrial Technology (ICIT), Feb. 26-Mar. 1, 2014, Busan, Korea, pp. 143-148.
213. Dynamic and Static Eccentricity Fault Diagnosis in Salient-pole Synchronous Generator using Time Stepping Finite Element Method  
**Jawad Faiz**, Hossein Ehya, Bashir mahdi Ebrahimi  
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214. Dynamic Eccentricity Fault Diagnosis in a Salient-pole Synchronous Generator under Non-linear Loads.  
**Jawad Faiz**, Hossein Ehya, Bashir mahdi Ebrahimi  
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215. Review of Series Connected Wound Rotor Three Phase Induction Motors  
**W. S. Abu-Elhaija, Jawad Faiz**  
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216. Prediction of Magnetic Flux Densities Waveforms in Switched Reluctance Motors  
**Mojtaba Nabaei and Jawad Faiz**  
10<sup>th</sup> International Conference on Technical and Physical Problems of Electrical Engineering (ICTPE), 7-8 September 2014, Baku, Azerbaijan, pp. 77-81.
217. Inter-Turn Short Circuit Fault in Electrical Motors  
**Jawad Faiz** and Seyed Amir Hossein Exiry  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 8 (Abstract)
218. Recent Progresses in Bus-ducts Design  
**J. Faiz, H. Ehya, S. Shojaei, M. Hamidian and A. Ghorbani**  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 9 (Abstract)
219. Diagnosis of Air Gap Asymmetry Fault in ALIMs  
**Jawad Faiz, A. Tajadiny and B. Fahimi**  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 10 (Abstract).
220. Diagnosis of Eccentricity Fault and its Type in Three-phase Squirrel-cage Induction Motors using Harmonic Analysis of Developed Torque  
**Jawad Faiz and Mahmud Ghasmi-Bijan**  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 42 (Abstract).
221. A New Pattern for Detecting On-line Eccentricity Fault in Switched Reluctance Motor  
**J. Faiz, E. Ehya and B. M. Ebrahimi**  
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222. Impact of Rotor Broken Bars Fault on Life Span of a Three-phase Squirrel-cage Induction Motor  
**Jawad Faiz and A. M. Takbash**  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 44 (Abstract)
223. Aspects of Optimal Design in Low-Voltage Bus-ducts under Unbalanced and Harmonic Loads  
**J. Faiz, H. Ehya, S. Shojaei, M. Hamidian and A. Ghorbani**  
The 16<sup>th</sup> International IGTE Symposium on Numerical Field Calculation in Electrical Engineering, Sept. 14-17, 2014, Graz, Austria. P. 27 (Abstract)
224. Modeling and Fault Diagnosis of Wind Turbine Generators: A Review  
**Jawad Faiz and Mohammad Hoseintabar**  
3<sup>rd</sup> International Conference on Built Environment and Sustainable Development, 24-28 Nov. 2014, Havana, Cuba (in CD).
225. Design Aspects of Linear Permanent Magnet Generators for Converting Sea Waves Energy to Electrical Energy  
**Jawad Faiz and Mehdi Ebrahim-salari**  
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226. Modeling and Damping Controller Design for Static VAR Compensator  
**Jawad Faiz and Ghazanfar Shahgolian**  
5<sup>th</sup> International Scientific Conference on Power Engineering, Energy and Electrical Drives (POWERENG2015), May 11-13, 2015, Riga, Latvia (in CD).
227. Review of Eccentricity Fault Detection Techniques in IMS Focusing on DFIG  
**Jawad Faiz and S. M. Moosavi**  
5<sup>th</sup> International Scientific Conference on Power Engineering, Energy and Electrical Drives (POWERENG2015), May 11-13, 2015, Riga, Latvia (in CD).
228. Planetary Gearbox Torsional Vibration Effects on Wound Rotor Induction Generator Electrical Signature

- M. Hoseintabar Marzabali, S. H. Kia, H. Henao, G. Capolino and **J. Faiz**  
IEEE International Electric Machines and Drives Conference (IEMDC2015), May 10-13, 2015, Coeur d Alene, ID, USA, pp. 1440-1445.
229. A Novel Robust Design for LPMSM with Minimum Motor Current THD based on Improved Space Vector Modulation Technique  
**Jawad Faiz**, Mehdi Manoochehrai and Ghazanfar Shahgholian  
Joint International Conference ACEMP-Optim-Eletromotion , 2-4 September 2015, Side, Turkey, pp. 1-7. (in CD)
230. Short-circuit Fault Diagnosis in Permanent Magnet Synchronous Motors- An Overview  
**Jawad Faiz** and A. A. S. Exiri  
Joint International Conference ACEMP-Optim-Eletromotion , 2-4 September 2015, Side, Turkey, pp. 18-27. (in CD).
231. Impact of Rotor Inter-turn Short Circuit Fault upon Performance of Wound Rotor Induction Motor  
**Jawad Faiz**, M. Keravand and M. Ghasemi-Bijan  
Joint International Conference ACEMP-Optim-Eletromotion , 2-4 September 2015, Side, Turkey, pp. 681-686. In (CD).
232. Predicting Radial and Tangential No-Load Air-Gap Flux Density in IPMSM Using a Novel Conformal Mapping and Lumped Parameter Model  
Hooshang Mirahki, Mehdi Moallem and **Jawad Faiz**  
Joint International Conference ACEMP- Optim- Eletromotion , 2-4 September 2015, Side, Turkey, pp. 75-80. In (CD).
233. Impact of Rotor Winding and Stator Stepped End Core on Magnetic Force Distribution on Stator  
Alireza Ghaempanah and **Jawad Faiz**  
2015 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies, 3-5 November 2015, The Dead Sea, Jordan. (in CD).
234. Simple modeling of rotor skew in induction machines using 2-D FEM packages  
Hossein Ehya, Sadegh Shamlou and **Jawad Faiz**  
12th International Conference on Applied Electromagnetics - IIEC 2015  
August 31 – September 02, 2015, Niš, Serbia.
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235. Simulation of Permanent Magnet Synchronous Motors Under Short Circuit Fault  
**Jawad Faiz**, A. H. Exiri and H. Nejadi-Koti  
18<sup>th</sup> Mediterranean Electrotechnical Conference (MELECON 2016), 18-20 April 2016, Limassol, Cyprus (in CD).
236. Coordinated Control of Power System Stabilizer and FACTS Devices for Dynamic Performance Enhancement – State of Art.  
Ghazanfar Shahgholian and **Jawad Faiz**  
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237. Design of a Radial Flux Permanent Magnet Wind Generator with Low Coercive Force Magnets  
**Jawad Faiz**, Zahra Valipour, M. Shokri-Kojouri and M. Azeem Khan.  
2016 2<sup>nd</sup> International Conference on Intelligent Energy and Power Systems (IEPS), Kyiv, Ukraine, June 7-11, 2016, pp. 155-161.
238. Effet d'un multiplicateur planetaire sur les signaux electriques de la machine induction a rotor bobine dans la production d'energie eolienne  
M. Marzabali, S. Kia, H. Henao, G.A. Capolino and **J. Faiz**  
Symposium de Genie Electrique (SGE 2016), Grenoble, France, June 7-9, 2016.
239. Detection, Location and Estimation of Severity of Interturn Faults in Power Transformers  
**Jawad Faiz**, J. Gharaeei and S. Lotfifard  
IEEE 10<sup>th</sup> International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2016), 29 June-1 July 2016, Bydgoszcz, Poland, pp. 39-44 (in CD).
240. Current-Based Inter-Turn Short Circuit Fault Modeling in Permanent Magnet Synchronous Machine using Magnetic Equivalent Circuit Model  
**Jawad Faiz**, A. H. Exiri and H. Nejad-Koti.  
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241. Torque Ripple Alleviation of Interior Permanent Magnet Brushless DC Motor Drives



- Jawad Faiz**, Mehdi Heydari and Alireza Nemat Saberi  
31<sup>st</sup> International Power System Conference (PSC 2016), 24-26 Oct. 2016, Tehran, Iran )in CD).
2٤٢. A New Method for Estimation of Losses in Inverter-fed Induction Machines including Electrical Insulation Losses  
**Jawad Faiz**, and A. Ghasemi  
Power Electronics and Motion Control Conference 2016, 25-30 September 2016, Varna, Bulgaria, pp. 561-565 (in CD).
2٤٣. Performance Verification of Saturated IPM Bearingless Motors Considering Magnetic Pull Variation  
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2٤٤. Eccentricity Fault Indices in Large Induction Motors-An Overview  
Iman Sadeghi, Hossein Ehya and **Jawad Faiz**  
8th Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017)  
14-16 Feb. 2017, Ferdowsi University of Mashhad, Mashhad, Iran,
24٥. A New Control Method for Improving the Performance of Modular Multilevel Converter  
Alireza Hadizadeh, Hossein Iman-Eini, Shahrokh Farhangi, Milad Soleimani, and **Jawad Faiz**  
8th Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017)  
14-16 Feb. 2017, Ferdowsi University of Mashhad, Mashhad, Iran,
24٦. A Novel Demagnetization Fault Detection of Brushless DC Motors Based on Current Time-Series Features  
**Jawad Faiz** and Ehsan Mazaheri-Tehrani  
11<sup>th</sup> IEEE International Symposium on Diagnosis for Electrical Machines, Power Electronics and Drives (SDEMPED2017).Tinos, Greece, August 29-September 1, 2017 (in CD).
24٧. A Fast, Precise and Low Cost Stator Inter-turn Fault Diagnosis Technique for Wound Rotor Induction Motors Based on Wavelet Transform of Rotor Current  
Mehran Keravand, **Jawad Faiz**, Milad Soleimani, Mahmud Ghasemi-Bijan, Mohsen Bandar-Abadi and Sérgio M.Â. Cruz  
11<sup>th</sup> IEEE International Symposium on Diagnosis for Electrical Machines, Power Electronics and Drives (SDEMPED2017).Tinos, Greece, August 29-September 1, 2017 (in CD).
24٨. Simulation and Experimental Analyses of Planetary Gear Tooth Defect Using Electrical and Mechanical Signatures of Wound Rotor Induction Generators  
Shahin Hedayati Kia, Mohammad Hoseintabar Marzebali, Humberto Henao, Gérard-André Capolino and **Jawad Faiz**.  
11<sup>th</sup> IEEE International Symposium on Diagnosis for Electrical Machines, Power Electronics and Drives (SDEMPED2017).Tinos, Greece, August 29-September 1, 2017 (in CD).
24٩. Online Condition Monitoring of Large Synchronous Generator under Eccentricity Fault  
Hossein Ehya, Iman Sadeghi and **Jawad Faiz**  
2017 12<sup>th</sup> IEEE Conference on Industrial Electronics and Applications, 18-20 June 2017, Siem Reap, Cambodia, pp. 19-24.
2٥٠. Linear Permanent Magnet Generator Concepts for Direct-drive Wave Energy Converters: A Comprehensive review  
**Jawad Faiz** and Alireza Nematsaberi  
2017 12<sup>th</sup> IEEE Conference on Industrial Electronics and Applications, 18-20 June 2017, Siem Reap, Cambodia, pp. 619-624.
2٥١. Design and Analysis of a Linear Wound Field Vernier Machine with Partitioned Stator  
**Jawad Faiz** and Alireza Nematsaberi  
21<sup>st</sup> International Conference on the Computation of Electromagnetic Fields (COMPUMAG2017), June 18-22, 2017 (Digest, in CD).
2٥٢. Analysis of Surface Mounted Permanent Magnet Motors Using Combined Winding Function and Conformal Mapping Method  
**Jawad Faiz** and Farhad Rezaee-Alam  
21<sup>st</sup> International Conference on the Computation of Electromagnetic Fields (COMPUMAG2017), June 18-22, 2017 (Digest, in CD).
2٥٣. An Accurate Magnetic Equivalent Circuit Model for Analysis of Surface Mounted Permanent

- Magnet Motors  
**Jawad Faiz** and Farhad Rezaee-Alam  
 21<sup>st</sup> International Conference on the Computation of Electromagnetic Fields (COMPUMAG2017), June 18-22, 2017 (Digest, in CD).
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IET Electric Power Applications 15 (5), 528-541, 1, 2021.



#### g) National Conferences Papers (in Persian)

- 1 Effective factor on the performance of incandescent lamps  
**J. Faiz**  
1st Researches Seminar on Lamp Industries, 1988, University of Tehran
- 2 Circuit model of a small five-legs three-phase transformer  
**J. Faiz**, A. Chenaghlo, A.H. Novin and M.B.B. Sharifian  
1<sup>st</sup> Iranian Conference of Electrical Engineering, Amir Kabir University of Technology, 1992
- 3 Air-coils and design technique of its special type, 5<sup>th</sup> Power System conference, 1990, Tavanir, Tehran.  
**J. Faiz** and A. Mohammadi
- 4 Transient analysis of induction motor and its effect upon power distribution networks  
**J. Faiz** and M.B.B. Sharifian  
11<sup>th</sup> Power System conference, 1997, Tavanir, Tehran
- 5 A precise analysis of two-dimensional magnetic field in external-rotor PM motor  
**J. Faiz** and H. Jafari  
7<sup>th</sup> Iranian Conference of Electrical Engineering, Telecommunications Research Center, Tehran, 1999
- 6 Comparison of soft and quick starting of a rotor-wound induction motor using three different circuits in the rotor circuit  
**J. Faiz** and Gh. Soltani-Khosroshahi  
8<sup>th</sup> Iranian Conference of Electrical Engineering, Isfahan University of Technology, Isfahan, 2000.
- 7 Electric vehicles: Present and future  
**J. Faiz**  
Ministry of Industries Environment Seminar, 1990, Tehran
- 8 Reclosing torque of a three-phase induction motor supplied by inverter-noload and on-load  
**J. Faiz** and A. Noozade-Amaneh  
8<sup>th</sup> Iranian Conference of Electrical Engineering, Isfahan University of Technology, Isfahan, 2000.
- 9 Calculation of influence of different eccentricities on inductances of induction motor  
**J. Faiz**, Iman Tabatabaei and E. Sharifi-Ghazvini  
10<sup>th</sup> Iranian Conference of Electrical Engineering, University of Tabriz, 2002
- 10 Optimal design of a three-phase induction motor for electric vehicle  
**J. Faiz**, and M.B.B. Sharifian  
10<sup>th</sup> Iranian Conference of Electrical Engineering, University of Tabriz, 2002.
- 11 Analysis of stability and predictive control of step motor oscillations  
**J. Faiz** and K. Banan-Ali-Abbasi  
10<sup>th</sup> Iranian Conference of Electrical Engineering, University of Tabriz, 2002
- 12 Adaptive control of a PMSM motor using neural network  
**J. Faiz** and A. R. Ghaffari  
10<sup>th</sup> Iranian Conference of Electrical Engineering, University of Tabriz, 2002
- 13 Estimation of losses in power transformers and reduction technique for the losses  
**J. Faiz**, M.B.B. Sharifian and A. Zraatparvar  
10<sup>th</sup> Iranian Conference of Electrical Engineering, University of Tabriz, 2002
- 14 Optimal design of a three-phase induction motor for electric vehicle over voltage and speed domains.  
**J. Faiz** and M. Ghaneei  
1<sup>th</sup> Hybrid and Electric Vehicles Seminar, University of Sciences and Technology, Tehran, 2001.
- 15 Computation of short circuit impedance of transformer using energy method  
Naderian, H. Mohseni and **J. Faiz**  
16<sup>th</sup> Power System conference, 2001, Tavanir, Tehran A.
- 16 Study of saturation effect on a salient-pole synchronous generator using phase domain model  
A. Rezaeei-zarea and **J. Faiz**  
16<sup>th</sup> Power System conference, 2001, Tavanir, Tehran A.
- 17 Performance of a squirrel-cage three-phase induction motor under mixed eccentricity.

- ١٨ **J. Faiz**, Iman Tabatabaei, E. Sharifi-Ghazvini and H. Mekin-Kelk  
17<sup>th</sup> Power System conference, 2002, Tavanir, Tehran  
Solid-state tap-changer of distribution transformers for power quality improvement
- ١٩ **J. Faiz** and B. Siahkollah  
17<sup>th</sup> Power System conference, 2002, Tavanir, Tehran.  
Comparison of two analytical models and modified magnetic circuit model in prediction of dynamic performance of switched reluctance motor using experimental results
- ٢٠ **J. Faiz**, B. Ganji, M. Moallem and K. Moayed-zadeh  
11<sup>th</sup> Iranian Conference of Electrical Engineering, University of Shiraz, 2003 .  
Induction generator performance after disconnection from the power system network
- ٢١ **J. Faiz** and M. Davar-panah  
18<sup>th</sup> Power System conference, 2003, Tavanir, Tehran  
Diagnosis of rotor broken bars fault in squirrel-cage induction motor using Neural Network
- ٢٢ M. R. Rafie-Manzelat, B. Najjar-Aarabi, **J. Faiz** and E. Sharifi-Ghazvini  
19<sup>th</sup> Power System conference, 2004, Tehran  
Thermal modeling of switched reluctance motors
- 23 Ha. Rouhani, **J. Faiz**, C. Lucas and Ho. Rouhani  
19<sup>th</sup> Power System conference, 2004, Tehran  
Design of switched reluctance generator for wind energy
- J. Faiz** and R. Fazaei  
19<sup>th</sup> Power System conference, 2004, Tehran
- 24 Optimal selection of excitation angles in high speed switched reluctance generator  
**J. Faiz** and R. Fazaei  
19<sup>th</sup> Power System conference, 2004, Tehran
- 25 Line current signature analysis for identification of turn-to-turn fault of induction motors considering magnetic saturation  
Mansour Ojaghi, **Jawad Faiz** and Mahdi Sabouri,  
26<sup>th</sup> Power System conference, 31 Oct. - 2 Nov, 2011, Tehran
- 26 Impact of magnetic saturation on swing pendulum index for turn-to-turn fault of induction motors  
Mansour Ojaghi, **Jawad Faiz**, Vahid Rashtchi and Mahdi Sabouri,  
26<sup>th</sup> Power System conference, 31 Oct. - 2 Nov, 2011, Tehran
- 27 Determining optimal poles arc in switched reluctance motor to achieve maximum mean torque and minimum torque ripple  
Jafar Nouroozi, Babak Gangi and **Jawad Faiz**  
25<sup>th</sup> Iranian Conference of Electrical Engineering, Khajeh-Nasirrodyn University of Technology, Tehran, 2-4 May 2018.

#### **h) National Journals Papers (in Persian)**

- 1 Incandescent lamp filament and recent researches, 1980,  
**J. Faiz**  
Journal of Faculty of Engineering, University of Tabriz, Iran
- 2 Capacitance requirement for induction generator including core losses,  
**J. Faiz** and A.A. Khamenian  
1993, Journal of Faculty of Engineering, University of Ferdosi, Mashad, Iran.
- 3 Closed-loop performance of induction motor drives with slip recovery energy for load and voltage signal disturbance,  
**J. Faiz** and H. Barati  
1997, Journal of Amir Kabir University of Technology, Tehran, Iran.
- 4 A proper technique for improvement of starting and performance of a three-phase induction motor connected to a single-phase system,  
**J. Faiz** and M. Yari  
1996, Journal of Faculty of Engineering, University of Tabriz, Iran.
- 5 A dynamic analysis of a two-teeth per stator pole switched reluctance motor using PSPICE and experimental verification,

- J. Faiz** and J. Raddadi  
2002, Journal of Faculty of Engineering, University of Tehran, Iran.
- 6 Calculation of short-circuit impedance of transformer using electromagnetic energy,  
**J. Faiz**, H. Mohseni, E. Sabet-Marzooghi and A. Naderian-Jahromi, 2004, Journal of  
Faculty of Engineering, University of Tehran, Iran.
- 7 Modeling of mutual coupling effects of phases in 6/4 SRM using finite element method  
M. Farshad, **J. Faiz**, C. Lucas and H. Ghafori-Faed,  
2004, Journal of Faculty of Engineering, University of Tehran, Iran

## 12. LIST OF THE M.Sc. STUDENTS AND THESES

- 1 Sh. Honarparvar, Investigation of Design Technique for Commercial Single-phase Induction motor and Design Computer Program based on the Minimum Consumed Iron, University of Tabriz, September 1989.
- 2 S. Ghasem-zadeh, Introduction on Expert Systems application in Design of Three-phase Squirrel-cage Induction Motor, University of Tabriz, September 1990.
- 3 A. A. Khamenian, Application of Three-phase Induction Machine as Generator, University of Tabriz, September 1990.
- 4 A. A. Dadgari, Induction Generator Design, University of Tabriz, October 1990.
- 5 M. B. B. Sharifian, Optimal Design of Three-phase Squirrel-cage Induction Motor, University of Tabriz, March 1991.
- 6 K. Banan-Ali-Abbasi, Computerized Design of Step Motors, University of Tabriz, June 1991.
- 7 R. Iranpour, Steady-state and Transient Thermal Model of Three-phase Induction Motor and its Extension to Switched Reluctance Motor, University of Tabriz, March 1993.
- 8 M. A. Azami, Non-linear Control of Brushless DC Motors, University of Tabriz, Nov. 1994.
- 9 E. Shafagh, Comparative Study of Different Switched Reluctance Motors with Three-phase Induction Motor, University of Tabriz, March 1995.
- 10 H. Zamani, Design and Performance Prediction of Low-power Single-phase Switched Reluctance Motor, University of Tabriz, March 1995.
- 11 H. Barati, Extension of Analysis of Induction Motor Drives with Energy Slip Recovery, University of Tabriz, July 1996.
- 12 M. Ojaghi, Calculation of Equipotential Electric Lines between the wound core and Tank of Distribution and Power Transformers, University of Tabriz, March 1997.
- 13 M. Ghaneei, Design of Three-phase Induction Machine for Electric Vehicle, University of Tabriz, March 1997.
- 14 B. Honarvar Shakibaei Asl, Extended Kalman Filter Application for Estimation of Synchronous Generators Parameters, University of Tabriz, August 1998.
- 15 H. Jafari, Design of Three-phase Linear Induction Motors, University of Tabriz, September 1998.
- 16 J. Raddadi, Dynamic Characteristics Prediction of a 12/10 Switched Reluctance Motor Using PSPICE, University of Tehran, August 2000.
- 17 A. Zeraatparvar, Estimation of Stray Losses in Transformers and Their reduction, University of Tabriz, Nov. 2000.
- 18 M. R. Salehi, Comparative Study of Switched Reluctance Motors Converters and Their Improvement, University of Tabriz, Feb. 2001.
- 19 A. Fakheri, Performance of Transformer under Non-linear Loads and Ratings Modification for Optimal Performance, University of Tabriz, March 2001.
- 20 A. R. Ghaffari-Kashani, Control of Speed and Position of a PMSM Using a Linear adaptive Technique with Time Variant Parameters Based on a Non-linear Neural Network, University of Tehran, Feb. 2002.
- 21 A. R. Ghahramani, Modeling of Saturation of CT using EMTP and Presenting a Suitable Technique for Compensation of the Secondary Current of Saturated CT, University of Tabriz, May 1998.
- 22 S. H. Mohseni-Zonoozi, Application of DTC in PMSM, University of Tabriz, March 2001.
- 23 B. Ganji, Estimation of Precise Core Losses of Switched Reluctance Motor, University of Tehran, September 2002.
- 24 B. Keyvani-Bourojeni, Optimal Design of IPM Motor for Starter/Alternator in Hybrid Electric

- Vehicle, University of Tabriz, September 2002.
- 25 I. Tabatabaeei-Ardakani, Performance of Three-phase Squirrel-cage Induction Motor in Eccentricity and Other Faults, University of Tehran, March 2003.
  - 26 K. Moayed-zadeh, Design of switched reluctance machine for starter/alternator of hybrid electric vehicle, University of Tehran, May 2003.
  - 27 H. Ebrahimpour, Unbalanced three-phase voltage and its effect on the performance of a three-phase induction motor, University of Tehran, September 2003.
  - 28 M. Ahmadi, Fault diagnosis in a brushless PM motor and control of motor for fault tolerance, University of Tehran, September 2004.
  - 29 R. Fazaeei, Evaluation of switched reluctance generator for wind energy application, University of Tehran, September 2004.
  - 30 A. Fakhri, Two-dimensional finite element modeling of three-phase transformers, University of Tabriz, September 2004.
  - 31 A. H. Pouramini, Virtual Motor for PWM, University of Tehran, September 2005.
  - 32 S. Lotfifard, Study of switching transients on power system components, University of Tehran May 2006.
  - 33 S. Pakdelian, Analysis of air-gap nonuniformity in SRM, September 2006.
  - 34 M. Ghofrani, Precise calculation of derating of distribution transformers for non-linear loads using FEM, July 2008.
  - 35 M. Rajabi, Design of a PM wind generator and its optimization for energy capture over a wide operating speed range, September 2008.
  - 36 A. Frazmand, Performance of Distribution transformer under non-linear Loads and Unbalanced voltages, September 2009.
  - 37 S. Saffari, Modeling inrush current of transformer based on a complete hysteresis model. September 2009.
  - 38 H. Ebrahimi, Misalignment fault diagnosis in three-phase squirrel cage induction motors, University of Tehran, October 2010.
  - 39 M. Valavi, Eccentricity fault modeling and diagnosis in three-phase squirrel-cage induction motor using 3D finite element method, M.Sc. Thesis, University of Tehran, October 2010.
  - 40 V. Ghorbanian, Broken bar fault diagnosis in three-phase squirrel-cage induction motors under mains voltage and drive supply modes, M.Sc. Thesis, University of Tehran, October 2010.
  - 41 M. Ebrahimi salari, Design and analysis of permanent magnet linear generators, Islamic Azad University, Summer 2009.
  - 42 M. Manoochehri, Performance improvement of permanent magnet linear synchronous motor base on direct force control, Islamic Azad University, Summer Spring 2011.
  - 43 A.M. Takbash, A new method for loss calculation in induction motors under internal faults, University of Tehran, August 2011.
  - 44 A. Hakimi Tehrani, Speed control of wind turbine using DPFC and Fuzzy controllers, Islamic Azad University, Summer 2012.
  - 45 Mahmud Ghasemi Bijan, Diagnosis of eccentricity fault in squirrel-cage induction motor modeled by three-dimensional magnetic equivalent circuit method, University of Tehran, July 2013.
  - 46 Hossein Ehya, Diagnosis of eccentricity fault in wound rotor synchronous generator modeled by finite element method, University of Tehran, August 2013.
  - 47 Milad Ghazizadeh, Analysis of distribution transformer derating under non-linear loads, Sharif University of Technology, July 2014 (jointly supervised with Prof. H. Oraee).
  - 48 Arman Tajdiny, Fault detection of asymmetrical air gap on single side linear induction motor, September 2014.
  - 49 Tohid Asefi, Axial Flux Synchronous Alternator Design with Ferrit Permanent Magnet for Wind Turbine, University of Tehran, May 2015.
  - 40 Mehran Keralvand, Introducing Proper Index for Winding Inter-turn Short Circuit Fault Diagnosis in Wound Rotor Induction Motor Modeled by Finite Element, University of Tehran, September 2015.
  - 41 Ali Dolatian Shirvan, Forces exerted on Electrical Equipment due to Two- and three-phase Short Circuit Faults, University of Tehran, September 2016, (jointly supervised with Prof. H. Mohseni).
  - 42 Hasan Masjedi, Study of switching transient on MV induction motor and Shunt Capacitor's Bank, University of Tehran. December 2016.

- 43 Milad Soleimani, Fault Diagnosing and Locating in Power and Distribution Transformers, University of Tehran, May 2017.
- 44 Ehsan Mazaheri-Tehrani, Analysis and Detection of Demagnetization Faults un Brushless DC (BLDC) Motors, University of Tehran, July 2017.
- 45 Mehdi Heidari, Design of BLDC Motor for Electric Vehicle, University of Tehran, July 2018.
- 46 Mohamad Sadegh Bozorgian, Eccentricity Fault Diagnosis in Inverter-fed Permanent Magnet Synchronous Motors, University of Tehran, July 2018.
- 47 Vahid Rafiee, Robust Design and Anaysis of a Rotating Synchronous Motor with Particular Application to Hybrid Vehicles, University of Tehran, Sept. 2018.
- 48 Mohammad Fazlalizadeh, Introducing a New Analytical Method for Modeling Vernier Hybrid Machines for Direct Drive Applications, University of Tehran, Sept. 2018.
- 49 Alireza Nemat-Saberi, "Design and Analysis of a Linear Synchronous Generator with Particular Application to Direct-drive Marine Wave Energy Converters", University of Tehran, 2018.
- 50 Rahid Sadeghian, Reliability Assesment of Power Transformers in Parallel and stanby Structures (jointly with Dr. F. Aminifar)..
- 51 Majid Maktobian, Design and optimization of hybrid excitation flux switching motor for electric vehicle with wide constant-power speed range (CPSSR), University of Tehran, October 2021.
- 52 Saeed Tofighian, Inter-turn fault in PM motors, University of Tehran, 2020
- 53 Vahid Shiravand, Combining Thermography Methods and Thermal Models to Detect Transformer Cooling System Fault, University of Tehran, October 2021.
- 54 Amir Hossein Erfani Nik, Design optimization of synchronous reluctance motor, University of Tehran 2020.
- 55 Ghasemi Parchini, Frequency Response Analysis of Turn-to-Turn Fault in the Transformer, University of Tehran, 2020.
- 56 Shahin Imanzadeh, Analysis and Detection of Fault in Switched Reluctance Motors, University of Tehran, Sept. 2019.
- 57 Mohammad Amin Bazrafshan, Analysis and diagnosis of demagnetization fault in permanent magnet synchronous machines under transient mode, University of Tehran, Dec. 2021.
- 58 Mohammad Hossein Arianborna, Opuimal power point tracking of wind permanent magnet synchronous generator based on intellegent control method, University of Tehran, Sept. 2020.
- 59 Saeed Sedigh, Thermal analysis of healthy and faulty synchronous generator, University of Tehran, October 2021.
- 60 Sina Kholesidoost, Thermal Analysis of Permanent Magnet Synchronous Machines Under Fault, University of Tehran, Sept. 2021.

### **13. LIST OF THE Ph.D. STUDENTS AND THESES**

- 1 Mohammad Bagher Banaee Sharifian, Induction motor design for Electric vehicle, University of Tabriz, 2000.
- 2 Behzad Siahkollah, Dsign and Optimization of Electronic Tap-changer for Distribution Transformers, University of Tehran, July 2004.
- 3 Behrooz Rezaeei-Alam, Linear Induction generator, University of Tehran, 2005.
- 4 Gh. Shahgholian, UPS using multiple filters, Islamic Azad University, Tehran, 2006.
- 5 B. Ganji, Coupled Electromagnetic and Thermal modeling of SRM using FEM, University of Tehran, 2008.
- 6 M. Ojaghi, Eccentricity Faults diagnosis for Converter-fed Induction Motors, University of Tehran, 2008.
- 7 A. R. Ghaffari-Kashani, H-Infinity Control of PMSM, University of Tehran, 2009 (jointly with Prof. M. J. Yazdanpanah).
- 8 B. M. Ebrahimi, Eccentricity fault diagnosis in Three-phase Surface Mounted PMSMs, University of Tehran, September 2011.
- 9 M. Babaei, Eccentricity faults Diagnosis in synchronous generators, Islamic Azad University, Tehran, 2010.
- 10 Mohammad Hoseintabar-Marzebali, Condition Monitoring of Gearbox in Wound Rotor

Induction generator, University of Tehran, January 2017.

- 11 S. M. M. Moosavi, Eccentricity Fault Diagnosis in DFIG, University of Tehran, 2016.
- 12 M. R. Hassanzadeh, Fault Diagnoses in Permanent-Magnet Synchronous Generators, Islamic Azad University, 2018.
- 13 Mahdi Sabouri, Identification and Separation of Mixed Faults in 3-phase squirrel-cage induction motors by taking into account the load variations and the voltage unbalance, Zanzan University (Jointly with Dr. M.Ojaghi).
- 14 Morteza Mikhak Byravand, Thermal Modeling of Power Transformer, Lorestan University 2020, (Jointly with Dr. B Rezaeialam).

#### **14. ADMINISTRATIVE ACTIVITIES**

- Director of educational affairs, Faculty of Engineering, University of Tabriz, 1976-1983.
- Deputy of University and industry relation office, University of Tabriz, 1980-1983.
- Head of Department of Electrical Engineering, University of Tabriz, 1981.
- Vice-Dean Faculty of Engineering, University of Tabriz, 1982.
- Dean of Faculty of Engineering, University of Tabriz, 1989-1991.
- Dean of Faculty of Engineering, University of Tabriz, 1994-1998.
- Deputy of Graduate Studies, Department of Electrical and Computer Engineering, Faculty of Engineering, University of Tehran, 2000-2002.
- Vice-Dean of Graduate Studies, Faculty of Engineering, University of Tehran, 2002-2005.
- Director of Center of Excellence on Applied Electromagnetic Systems, since 2000.
- Vice-Dean of Graduate Studies and education, Faculty of Engineering, University of Tehran, 2005-2009.
- Director of Center on Excellence on Applied Electromagnetic Systems, University of Tehran, Since 2003.

#### **15. PROJECTS**

1. Analysis and design of a self-excited induction generator, University of Tabriz.
2. Distribution transformer derating, East Azarbaijan region Electricity Company.
3. Designing and Engineering Know How, Prototyping and Testing of low voltage (up to 1000 V) Bus Ducts and Accessories up to 6 kV, Mapna Group, Tehran. Iran.
4. Prototyping a novel controllers for wind turbine system to improve output power quality and requirements for network connection. Iran Electrical Energy development organization, Ministry of Energy.
5. Design, optimization and prototyping a linear Vernier machine with armature winding and separate field for direct-drive applications. Iran National Sciences Foundation.
6. Design and Simulation of Linear Permanent Magnet Generators for Wave Energy to Electrical Energy Conversion in Persian Seas, University of Tehran.
7. Study of Transformer Energizing and induction motor starting effects on protection algorithms and introducing new methods for improving them, University of Tehran.
8. Effect of Unbalanced supply voltage upon steady-state performance of three-phase squirrel-cage induction motor, University of Tehran.
9. Application of magnetic equivalent circuit method in performance analysis of a wound rotor machine, University of Tehran.
10. Design and optimization of linear generator with particular application by direct-drive wave energy converters, University of Tehran.