

## C.V.

### **Mohammad Reza ZOLGHADRI**

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#### **Field of Interests:**

**Power Electronics, Modeling and Control of Power Electronic Converters, Application of Power Electronics in Power Systems, Renewable Energy, Variable Speed Ac Drives,**

#### **Education:**

**1997: Ph.D.** in Electrical Engineering from **LEG-INPG** (Institute National Polytechnique de Grenoble), Grenoble FRANCE

Thesis: *Direct torque control of synchronous machines.*

**1994: DEA** in Electrical Engineering with a good degree from **LEG-INPG** (Institut National Polytechnique de Grenoble), Grenoble FRANCE

Thesis: *Vector Control of Voltage Source Inverter.*

**1992: M. Sc.** in Electrical Engineering with a mean of 17.86/20 from Electrical Engineering department of Sharif University of technology, Tehran Iran

Thesis: *Speed Control of Induction motors by Selective Harmonic Eliminated PWM Inverters.*

**1989: B. Sc.** in Electrical Engineering with a mean of 16.77/20 from Electrical Engineering department of Sharif University of technology, Tehran Iran

Project: *Computer Aided Power Line Towers positioning.*

#### **Academic Experiences:**

**1997 - Now** : Faculty member, School of Electrical Engineering, Sharif University of Technology, Tehran Iran

**Teaching** : Power Electronics, Control of AC Drives, Modeling and Control of Power electronic Converters, Energy Conversion I, Electrical Machines I, Electrical Machines II, Electrical Machines III, Industrial Electronics.

**Supervising** : more than 35 Ms Thesis and 7 PhD Thesis in the field of Power Electronics, Variable Speed Drives, and Application of Power Electronics in the Power Systems.

**2014-Now** : Head of Power System Engineering Group

**2013-14** : Department chair for industry relation and technology

**2011-14** : Coordinator of Electric machines and Power Electronics sub-group of Power System Engineering Group

**2007-Now** : Founder and Director of Energy conversion Lab (an educational Lab)

**2005- Now** : Founder and Director of Power Electronics and Electric Drive Lab (a research Lab)

**2003- 05** : Adjunct Associate Professor, Electrical & Computer Engineering Dept, North Carolina A&T State University, Greensboro, NC, USA

**Teaching** : Power Electronics I, Power Electronics II, Power System Analysis, Linear Control systems, Linear Control lab.

**Supervising** : 6 Ms Thesis and 2 PhD Thesis in the field of Power Electronics

**2001 - 03** : Head of Power system Engineering Group, School of Electrical Engineering, Sharif University of Technology

**1998-2001** : Vice chairman for student affairs, Electrical Engineering Dept., Sharif University of Technology

**1995-97: ENSIEG-INPG**, Grenoble France

**Lab Instructor** : Power electronic simulation lab ( 96 & 97, 2x14 hours), Energy conversion simulation lab (96 & 97, 2x14 hours)

**Teacher assistant** : Energy converters control

**Supervising** : two final DEA projects (Mars / Sep 96 & Jan / Jun 97), a final engineering school project (Mar / Jun 96)

**Jan 92-Apr 93**: Lecturer in the Electrical Engineering department, Sharif university of Technology, Tehran Iran

**Teaching** : Industrial Electronics, Principles of Electrical Engineering

**Lab Instructor** : Electric Machines I & II, Industrial Electronics, Principles of Electrical Engineering

**Industrial Experiences:**

**2002 – Now**, Member of managing board and Technical Manager of **Yekta Behineh Tavan Co.** ( an Authorized ESCO company active in Electric Power Quality and Renewable Energies)

**2000 - 2003 : Electronic Lab, SAM Electronics Co. Tehran Iran** (Manufacturer of SAMSUNG TVs in Iran), Working on Switching Power Supplies for TV Sets.

**98 – 99 : Electrogen Co. Tehran Iran**, Design and Implementation of a PC based controller for a Brush less DC Motor drive in a CNC set.

#### **Funding Awards:**

**2016 - Now : Iran Energy Efficiency Organization (IEEO-SABA)**, Technical and financial investigation on using super-capacitors as the moving storage system for loss minimization using regenerative braking in subway trains, Investigator

**2015 - 2016 : Iran National Science Foundation**, Design and Implementation of an FPGA-Based Real-Time Digital Simulator for Power Electronic Converters, Investigator

**2015 - 2016 : BidBoland Gas Refinery Co.**, investigating the possibility of energy consumption optimization for 3.3kV high power motor of cooling pumps and proposing suitable methods for energy saving, Investigator

**2013 - 2014 : Guilan Province Electric Power Distribution Co.**, Potential Evaluation of Using Solar and Wind Energy for Electricity Generation in Guilan, Investigator

**2006-2007 : Kharg Petrochemical Company**, Investigating the grounding system, Power quality and the UPS as the origin of the Electronic card failure in the Compressor Control room, Investigator

**2006-2007 : Iranian Industries Development and Renovation organization**, Design and implementation of a 6 kW high efficiency power supply, Investigator

**2003-2005 : National Science Foundation through Center for Power Electronics Center**, Investigation on Thermal Based Load Sharing of Parallel Converters. Co-Investigator

**2003-2005 : National Science Foundation through Center for Power Electronics research center**, Investigation on Digital Control for Power Electronic Converters. Co-Investigator

**2003-2005 : Tehran Subway (Metro) CO.** Industrial Project, Design and implementation of Static Inverter instead of electromechanical auxiliary generator for Tehran subway locomotives, Principal Investigator

**2001-2003 : Iranian national Steel Mill Co.** Industrial project Investigating the origin of destructive arcs in the cooling system of Ahvaz steel mill arc furnaces and proposing practical solutions to reduce the arcs, Co-Investigator

**2001-2003 : Iranian national Steel Mill Co.** Industrial project, Harmonic study of Ahvaz steel mill utility system, and investigating the causes of capacitor/thyristor failure of its TSC systems Co-Investigator

#### **Funding Awards in Pipeline:**

#### **Academic Honors and Fellowships:**

Fellowship from Ministry of Culture and Higher Education of Iran for Ph.D. in France 1993-1997

Scholarship from Ministry of Culture and Higher Education of Iran for Msc. 1989-1992

**Professional Service :**

Workshop Presenter: *Programming FPGA systems Using MATLAB-SIMULINK*, The 7th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2016) 16-17 February 2016, Iran University of Science and Technology, Tehran, Iran

Tutorial presenter: *Programming DSP and FPGA systems Using MATLAB-SIMULINK*, Seminar of Technologies of Power Electronics systems, Sharif University of Technology, Iran, February 2015

Technical Chair of **The 7th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2016)** 16-17 February 2016, Iran University of Science and Technology, Tehran, Iran

Member of Founding Board of **Power Electronics Society of Iran (PESI)**

Member of Scientific committee of the **6th Power Electronics, Drive Systems and Technologies Conference, PEDSTC2015**

Member of Organizing committee of the **5th Power Electronics, Drive Systems and Technologies Conference, PEDSTC2014**

Member of Technical committee of the **The 3rd International Conference on Electric Power and Energy Conversion Systems, EPECS2013**, Turkey

Tutorial Presenter: *Design of Photovoltaic Power Systems*, Sharif conference on future electronics, Tehran IRAN, February 2013

Technical Program chair of **the third Power Electronics, Drive Systems and Technologies Conference, PEDSTC2012**

Member of Scientific committee of the **The 2nd International Conference on Electric Power and Energy Conversion Systems, EPECS2011**, UAE

Member of Technical committee of the **second Power Electronics, Drive Systems and Technologies Conference, PEDSTC2011**

Member of Organizing committee of the **first Power Electronics, Drive Systems and Technologies Conference, PEDSTC2010**

Chair session in the **IEEE International Electric Motor and Drive Conference, IEMDC 2005**, San Antonio, TX USA

Member of Electrical Machine Committee of the **18<sup>th</sup> International Power System Conference, PSC03**, Sept 2003 Tehran Iran

Member of Scientific Committee of the first **National Conference on Fuel Cell Technology NCFCT**, Sept 2001 Tehran Iran

Iranian Journal of Science & Technology Reviewer

Iranian Journal of Electrical and Computer Engineering (IJECE) Reviewer

The Journal of Power Electronics Reviewer

International Journal of Engineering Reviewer

IEEE Transaction of Industrial Electronics Reviewer

IEEE Transaction on Power Electronics Reviewer

IEEE Transaction on Neural Networks Reviewer

IEEE Transaction of Industrial informatics

IEEE Power electronics and Drives Conference (PEDS) Reviewer

### **Supervised Thesis :**

1. Negar Norouzi, ***Performance improvement of grid-connected quasi-Z-Source photovoltaic inverter to reduce leakage currents***, PhD Thesis, Sharif University of technology, to be completed
2. Mohsen Rezayati, ***Design and implementation of FPGA based real time simulator for power electronic converters***, M.S. Thesis, Sharif University of technology, EE Dept. to be completed
3. Manouchehr fathi, ***Post fault vector control of CHB driven induction motor***, M.S. Thesis, Sharif University of technology, EE Dept. to be completed
4. Hossein Kazemi, ***Post-Fault Control of Fault-Tolerant Multi Module Converters***, M.S. Thesis, Sharif University of technology, EE Dept. Winter 2015
5. Morteza Rezaei Larijani, ***Design and implementation Real-Time simulator for CHB converter using FPGA***, M.S. Thesis, Sharif University of technology, EE Dept. summer 2015
6. Saeed Haghazari, ***Fast failure detection in modular multilevel converter power switches for fault tolerant operation***, PhD Thesis, Sharif University of technology, to be completed
7. Mohammad Amereh, ***Design and implementation of transformerless grid connected PV inverter with mitigating leakage currents***, M.S. Thesis, Sharif University of technology, EE Dept. fall 2014
8. Hamed Valipour, ***High Efficiency off-line light-emitting diode (LED) driver with long lifetime***, M.S. Thesis, Sharif University of technology, EE Dept. summer 2014
9. Abbas Komeijani, ***Optimum design hybrid energy storage systems in electric urban rail transport systems***, M.S. Thesis, Sharif University of technology, EE Dept. summer 2014
10. Masih Khodabande, ***Introducing a suitable structure and control method for main component of the direct AC to AC converter***, M.S. Thesis, Sharif University of technology, EE Dept. summer 2014
11. Mohammad Heydari, ***Design hybrid storage systems for electric urban rail transport systems***, M.S. Thesis, Sharif University of technology, EE Dept. fall 2013

12. Ayoub Balador, *Design of medium voltage multilevel inverter with reliability consideration*, M.S. Thesis, Sharif University of technology, EE Dept. summer 2013
13. M. Yazdani, *Optimum Design of a Low Speed Superconducting Synchronous Machine*, PhD Thesis, Sharif University of technology, Summer 2013 (co-supervised)
14. S. Tohidi, *Analysis and improvement of dynamic behavior of brushless doubly fed generators in wind turbines*, PhD Thesis, Sharif University of technology, fall 2012 (co-supervised)
15. M. Shahbazi, *Fault tolerant converter for doubly-fed induction generator wind turbines based on five-leg converter*, PhD Thesis, Sharif University of technology-Nancy1 University, fall 2012 (co-supervised)
16. J. Babaei, *Design & implementation of a wide output power range, high efficiency inverter for PV application*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2012
17. M. Hanifi, *Energy savings in the urban electrified railway using onboard storage systems*, M.S. Thesis, Sharif University of technology, EE Dept. winter 2011
18. P. Elhaminia, *Optimum Design of magnetic circuit of Superconducting Synchronous Machine*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2011
19. M. Shirazi, *Balanced Three Phase Load Voltage Control of a Stand-Alone Hybrid System including Wind Turbine, PV and Fuel cells*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2010
20. N. Noroozi, *Efficiency improvement Methods for a Buck + Boost Single stage PWM rectifier*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2010
21. R. Haghi, *Efficiency improvement of a PWM rectifier using soft switching and Redesign of the modified converter*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2010
22. R. Beiranvand, *Design and Implement of the Ion Implanters Ion Gun Power Supplies by Using the Resonant Converters*, PhD. Thesis, Sharif University of technology, EE Dept. fall 2010, (co-supervisor)
23. S. Kazemloo, *Direct Torque Control of Induction Motor Fed by Reduced Switch Three Phase Inverter* M.S. Thesis, Sharif University of technology, EE Dept. fall 2009
24. S. Ouni, *Design and Simulation of a Four Switch Three Phase 6 kW Rectifier with Input Power Factor Correction*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2009
25. Mohammadpour, *Design and simulation of a three-phase single-stage power factor correction rectifier*, MS. Thesis, Sharif University of technology, EE Dept. summer 2009
26. H. Mousavian, *Design and Implementation of a Solar Charger with Maximum Power Point Tracking Ability*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2008
27. Sahari, *Designing a Passivity Based Controller for a Three Phase PFC Rectifier*, M.S. Thesis, Sharif University of technology, EE Dept. summer 2008
28. Mirmousa, *Simulation and Design of an Electronic Power Transformer for Distribution Systems*, M.S. Thesis, Sharif University of technology, EE Dept. fall 2007

29. Moallem, *DSP-Based Controller Design and Implementation for a Three Phase Rectifier of a Telecommunication Power Supply with Power Factor Correction*, M.S. Thesis, Sharif University of technology, EE Dept. 2007
30. H. Mirzaei, *Design and Prototyping of Three-Phase/Level/Switch VIENNA I Rectifier to Operate Under Unbalanced Mains*, M.S. Thesis, Sharif University of technology, EE Dept. 2007
31. S. Kaboli, *Optimization of direct torque control method in induction motor drives to reduce torque pulsation and loss in complete set of motor and inverter* PhD Thesis, Sharif University of technology, EE Dept. 2006
32. V. Jalali, *Design and Simulation of a High efficiency 6 kW Switching Power Supply with Input Power Factor Correction*, M.S. Thesis, Sharif University of technology, EE Dept. 2006
33. Ghafouri, *Transient Stability Improvement of Power Systems Using Fuzzy Controlled STATCOM*, M.S. Thesis, Sharif University of technology, EE Dept. 2006
34. Bassirou Sock, *Digital controller using dynamic pole placement by polynomial approach for power factor correction circuit*, M.S. Thesis, North Carolina A&T State University, ECE Dept, 2005 (co advisor)
35. Clarissa Jennifer John Joseff, *Thermal based current sharing of parallel converters*, M.S. Thesis, North Carolina A&T State University, ECE Dept, 2004 (co advisor)
36. P. Murphy, *Predictive digital control of switching power supplies with the introduction of dead time*, M.S. Thesis, North Carolina A&T State University, ECE Dept, 2004 (co advisor)
37. Mahboubi, *Design and implementation of a five level three phase voltage inverter for induction motor drive* M.S. Thesis, Sharif University of technology, EE Dept. 2003
38. J.H. Park, *Digital Control of Asymmetrical Half-Bridge Converter with Range Winding Based on LQG regulation*, M.S. Thesis, North Carolina A&T State University, ECE Dept, 2003 (co advisor)
39. H. Keyhani, *Improvement of DTC induction motor drive performance using a discrete space vector modulation technique* M.S. Thesis, Sharif University of technology, EE Dept. 2003
40. S. Abazari, *Power System Transient Stability Improvement Using ASVC* , PhD Thesis, Sharif University of technology, EE Dept. 2003 (co adviser)
41. S. Haghbin, *Real time stator resistance estimation for direct torque controlled induction motor drive* M.S. Thesis, Sharif University of technology, EE Dept. 2002
42. Hamani, *Direct torque control of induction motors using multilevel inverters* M.S. Thesis, Sharif University of technology, EE Dept. 2002
43. A.M. Rahimi, *Samsung S51 switching power supply analysis and optimization* M.S. Thesis, Sharif University of technology, EE Dept. 2001
44. Arefi, *Precise control of position, speed and acceleration in AC servo motors* M.S. Thesis, Sharif University of technology, EE Dept. 2001

45. S. Mohammadi, *Static drivers for synchronous drives* M.S. Thesis, Sharif University of technology, EE Dept. 2000
46. S.M. Sadrieh, *A current source based driver for Linear Piezoelectric step motor* M.S. Thesis, Sharif University of technology, EE Dept. 2000 (co adviser)
47. R. Maleki, *Design and implementation of a PC based controlled harmonic generator* M.S. Thesis, Sharif University of technology, EE Dept. 2000 (co adviser)
48. M. Jokar, *Static excitation of a synchronous generator* M.S. Thesis, Sharif University of technology, EE Dept. 1999 (co adviser)
49. D. Dideban, *Design and implementation of a virtual test bed for DC/Dc converters* M.S. Thesis, Sharif University of technology, EE Dept. 2000 (co adviser)
50. B. Vafakhah, *Investigation on machine modeling error on direct torque control of induction motor and proposing a modified model* M.S. Thesis, Sharif University of technology, EE Dept. 1999
51. H. Khademizadeh, *Investigation on reduced switch inverter fed variable speed low power induction motor drive* M.S. Thesis, Sharif University of technology, EE Dept. 1999

#### **Publications:**

#### **Books:**

- MohammadReza Zolghadri, Shahriar Kaboli, *Power Electronics*, book translated into Persian, published by Sharif Publishing Co., Tehran, Iran, 2005
- H. Mokhtari, M. Parniani, M.R. Zolghadri, *An introduction to electric power quality*, Tutorial course material, Sharif University of Technology, 2003 (in Persian)

#### **Journal Papers:**

1. M. Shahbazi, P. Poure, S. Saadte, M. Zolghadri, *Open-Circuit Switch Fault Tolerant Wind Energy Conversion System Based on Six/Five-leg Reconfigurable Converter Electric Power Systems Research*, Paper accepted to be published in Journal of Electric Power Systems Research, Elsevier
2. M. Khodabande, M.Zolghadri, N. Noroozi, M. Shahbazi, *A T-Type Direct AC/AC Converter Structure*, Accepted to be published in IET Power Electronics
3. H. Valipour, G. Rezazadeh, M.Zolghadri, *Flicker-Free Electrolytic Capacitor-Less Universal Input Off-line LED Driver with PFC*, Accepted to be published IEEE transaction on Power Electronics
4. Saeed Haghazari; Masih Khodabandeh; Mohammad Reza Zolghadri, *Fast fault detection method for modular multilevel converter semiconductor power switches*, IET Power Electronics, 2016, Volume: 9, Issue: 2



5. S.Tohidi, H. Oraee, M. Zolghadri, P Tavner, **Influence of Different Series Dynamic Resistors on Low Voltage Ride-Through of Brushless Doubly Fed Induction Generator**, Electric Power Components and Systems, Vol 43-No.8-10, 2015, pp995-1005
6. P. Elhaminia, M. Yazdanian, M.R. Zolghadri, M. Fardmanesh, **Optimal Electromagnetic Design of a Nonsalient Magnetic-Cored Superconducting Synchronous Machine Using Genetic Algorithm**, IEEE Transactions on Applied Superconductivity, Volume: 25, No. 1, 2015, P:5200309
7. S.Tohidi, P Tavner, Mc Mahon, H. Oraee, M. Zolghadri, S. Shao, E Abdi, **Low voltage ride-through of DFIG and brushless DFIG: Similarities and differences**, Elsevier, Electric Power Systems Research, March 2014, pp 64-72
8. Vahidreza Nasirian, Yaser Karimi, Ali Davoudi, Mohammad Reza Zolghadri, **Dynamic Model Development and Variable Switching Frequency Control for DCVM Cúk Converters in PFC Applications**, IEEE Transaction on Industry Applications VOL. 49, NO. 6, NOV/DEC 2013, pp 2636-2650
9. M. Shahbazi, P. Poure, S. Saadate, M. Zolghadri, **FPGA-based Fast Detection with Reduced Sensor Count for a Fault-Tolerant Three-Phase Converter** , IEEE Transaction on Industrial Informatics, Volume: 9 , Issue: 3, August 2013, pp 1343-1350
10. M. Shahbazi, E. Jamshidpour, P. Poure, S. Saadate, M. Zolghadri, **Open and Short-Circuit Switch Fault Diagnosis for Non-Isolated DC-DC Converters using Field Programmable Gate Array**, IEEE Transaction on Industrial Electronics, Vol. 60, Issue 9, Sept 2013, pp: 4136-4146
11. M. Yazdanian , P. Elhaminia , M. R. Zolghadri , M. Fardmanesh, **Analytical Investigation on Fundamental Electrical Characteristics of Large Air-gap Superconducting Synchronous Machine**, Journal of Magnetism, Volume 18, Number 3, 30 Sep 2013, Pages 260-267
12. M. Shahbazi, P. Poure, S. Saadate, M. Zolghadri, **Fault-Tolerant Five-Leg Converter Topology With FPGA-Based Reconfigurable Control**, IEEE Transaction on Industrial Electronics, Vol. 60, Issue 6, June 2013, pp: 2284-2294
13. S. Tohidi, H. Oraee, M. Zolghadri, S. Shao, P. Tavner, **Analysis and Enhancement of Low Voltage Ride-through Capability of Brushless Doubly Fed Induction Generator** , IEEE Transactions on Industrial Electronics, Vol 60, Issue 3 March 2013, pp 1146-1155
14. M. Shahbazi, P. Poure, S. Saadate, M. Zolghadri, **FPGA-based reconfigurable control for fault-tolerant back-to-back converter without redundancy** , IEEE Transaction on Industrial Electronics, Vol. 60, Issue 3, March 2013, pp: 1146-1155
15. M. Yazdanian, P. Elhaminia, M. Zolghadri, M. Fardmanesh, **Analytical Modeling of Magnetic Flux in Superconducting Synchronous Machine**, IEEE Transactions on Applied Superconductivity, Vol 23, Issue 1, Feb 2013, pp 5200406
16. Rasool Haghi, Mohamadreza Zolghadri, Reza Beiranvand, **Novel Zero-Voltage-Switching Bridgeless PFC Converter**, Journal of Power Electronics, Vol. 13, No. 1, January 2013, pp 40-50

17. S. Tohidi, M. Zolghadri, H. Oraee, S. Shiyi, P. Tavner, *Performance of the brushless doubly-fed machine under normal and fault conditions* IET Electric Power Applications, Vol6 Issue 9, Nov 2012, pp 621-627
18. R. Beiranvand, B. Rashidian, M. Zolghadri, M. Alavi, *Optimizing the LLC-LC Resonant Converter Topology for Wide-Output Voltage and Wide-Output Loads Applications*, IEEE Trans. On Power Elecetronics, Vol 26, No. 11, Nov. 2011, PP 3192-3204
19. R. Beiranvand, B. Rashidian, M. Zolghadri, M. Alavi, *Using LLC Resonant Converter for Designing Wide-Range Voltage Source* IEEE Trans. On Industrial Elecetronics, Vol, 58, No. 5, May 2011, pp: 1746-1756
20. R. Beiranvand, B. Rashidian, M. Zolghadri, M. Alavi, *A Design Procedure for Optimizing the LLC Resonant Converter as a Wide Output Range Voltage Source*, IEEE Trans. On Power Elecetronics, Vol 27, No. 8, Aug 2012, PP 3749-3763
21. M. Shahbazi, P. Poure, S. Saadate, and M. R. Zolghadri, *Five-leg converter topology for wind energy conversion system with doubly fed induction generator*, Elsevier, Renewable Energy, vol. 36, pp. 3187-3194, 2011
22. Mohammadpour, M. Zolghadri, *Constant Input Power Control of Three-Phase Isolated Buck+Boost Rectifier* , Iranian Journal of Science & Technology, Transaction B: Engineering, Vol. 34, No. B6, pp 637-64, 2010
23. R. Beiranvand, B. Rashidian, M. Zolghadri, M. Alavi, *Optimizing the Normalized Dead-Time and Maximum Switching Frequency of a Wide Adjustable Range LLC Resonant Converter*, IEEE Trans. On Power Elecetronics, Vol. 26, No. 2, Feb 2010, PP: 462-472
24. R. Beiranvand, B. Rashidian, M. Zolghadri, M. Alavi, *Designing an Adjustable Wide Range Regulated Current Source*, IEEE Trans. On Power Elecetronics, Volume: 25 , No. 1 ,Jan 2010, Page(s): 197 - 208
25. Mohammadpour, H. Mokhtari, M. Zolghadri, *Control of Seriss Resonant Converter With Robust Performance Against Load and Power Circuit Components Uncertainties*, Iranian Journal of Electrical and Electronic Engineering, IJEEEE, Vol 5. No. 4, pp244-252, 2009
26. Ghafari, M. Zolghadri, M. Ehsan, *Transient Stability Enhancement Using Fuzzy Control of STATCOM*, Sharif Journal of Science and Technology, fall 2009 (in Persian)
27. Sh. Kaboli, M.R. Zolghadri, S. Haghbin, P. Eskandari, *Investigation on the Flux-Based Torque-Ripple Behavior in DTC Based Induction Motor Drives* Iranian Journal of Science & Technology, Transaction A, Vol. 32, No A1, Winter 2008, pp 7-16,
28. S. Kaboli, M. Zolghadri and E. Vahdati-Khajeh, *A Fast Flux Search Controller for Direct Torque Controlled Induction Motor Drives* IEEE Transaction on Industrial Electronics, Vol 54, no. 5, oct 2007, pp2407-2416,

29. SH. Kaboli, M.R. Zolghadri, P. Eskandari, D. Roye, ***Prediction Algorithm for Torque Ripple Reduction in DTC-Based Drives***, Iranian Journal of Science & Technology, Transaction A, Vol. 31, No A4, pp 344-355, Autumn 2007
30. S. Abazari M.R. Zolghadri J. Mahdavi M. Ehsan, ***A Rule-Based Advanced Static Var Compensator Control Scheme for Transient Stability Improvement***, Journal of Scientia Iranica, Vol 13, no 4, fall 2006, pp 327-336
31. S. Kaboli, E. Vahdati-Khajeh, M.R. Zolghadri, ***Probabilistic Voltage Harmonic Analysis of Direct Torque Controlled Induction Motor Drives***, IEEE Transaction on Power Electronics, Vol 21 ,no. 4, July 2006, pp1041-1062
32. M. Zolghadri, S. Kaboli, B. Bahrani, ***Optimal flux controller for induction motors operating with maximum efficiency***, Bargh Journal of Electrical Science and Technology, Vol 18, No. 45 , pp53-67, 2005(Persian)
33. Maleki, M.R. Zolghadri, J. Mahdavi, ***A New Space Vector Modulation for Three Phase Harmonic Generators*** Sharif Journal of Science and Technology, Vol 25, Fall/Winter 2003, pp 78-85 (in Persian)
34. M.R. Zolghadri, D. Roye, ***A fully digital sensor less direct torque controlled synchronous machine*** Electric Machines and Power Systems, 1998, Vol 26 no. 7

#### **Conference Papers:**

1. M. Rezaei Larijani, M.R. Zolghadri, M. Shahbazi, ***Design and Implementation of an FPGA-Based Real-Time Simulator for H-Bridge Converter***, Proceedings of the The 7th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2016) 16-17 February 2016, Iran University of Science and Technology, Tehran, Iran, pp 526-532
2. M. Shabazi, M. Zolghadri, S. Ouni, ***Fast and Simple Open-Circuit Fault Detection Method for Interleaved DC-DC Converters***, Proceedings of the The 7th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2016) 16-17 February 2016, Iran University of Science and Technology, Tehran, Iran, pp 462-467
3. S. Haghazari, M. Shahbazi, M. Zolghadri, ***A New Fault Detection Method for Modular Multilevel Converter Semiconductor Power Switches***, Proceeding of the 41st Annual Conference of the IEEE Industrial Electronics Society, IECON2015, Yokohama, Japan, November 9-12, 2015
4. S. Haghazari, M. Zolghadri, ***A Novel Voltage Measurement Technique for Modular Multilevel Converter Capacitors***, Proceeding of the 41st Annual Conference of the IEEE Industrial Electronics Society, IECON2015, Yokohama, Japan, November 9-12, 2015
5. S. Ouni, A. U. Schmeisser, M. Zolghadri, H. Oraee, J. Rodriguez, P. Lezana, ***A Decision Algorithm to Select the Proper Control for a Cascaded Multilevel Inverter Under Faulty Conditions***, Proceeding of

the 41st Annual Conference of the IEEE Industrial Electronics Society, IECON2015, Yokohama, Japan, November 9-12, 2015

6. H. Mousavian, A. Bakhshaei, P. Jain, M. Zolghadri, *A novel ZVT/ZCT PWM Converter Used for Solar Battery Chargers with Reduced Conduction Loss*, Proceeding of IEEE Energy Conversion Congress and Exposition, ECCE2015, Montreal, Canada, September 20-24 2015
7. S. Ouni, M. Khodabandeh, M. Zolghadri, J. Rodríguez and H. Oraee, *A Reduced Switch Cascaded Transformer Multi Level Inverter*, 15th IEEE International Conference on Environment and Electrical Engineering, Rome, Italy, June 10-13, 2015
8. S. Ouni, J. Rodriguez, M. Shahbazi, M. Zolghadri, H. Oraee, P. Lezana, A. Ulloa Schmeisser, *A Fast and Simple Method to Detect Short Circuit Fault in Cascaded H-Bridge Multilevel Inverter*, Proceedings of 2015 IEEE International Conference on Industrial Technology, ICIT2015, March 17<sup>th</sup>-19<sup>th</sup> 2015, Seville, Spain, pp 866-871
9. M. Khodabandeh, M. Zolghadri, N. Noroozi, *A New T-Type Direct AC/AC Converter*, The 6th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2015) 3-4 February 2015, Shahid Beheshti University, Tehran, Iran, pp 247-252
10. Mahmoud Shahbazi, MohammadReza Zolghadri, *Fast Detection of Open-Switch Fault in Cascaded H-Bridge Multilevel Converter*, The 6th International Power Electronics Drive Systems and Technologies Conference (PEDSTC2015) 3-4 February 2015, Shahid Beheshti University, Tehran, Iran, pp 430-535
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**Languages:**

**Persian:** mother tongue

**English:** written, read, conversational

**French:** written, read, conversational

**Programming:**

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Matlab, MathCAD, OrCAD, MSoffice

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