

# Curriculum Vitae

**ALI YAZDIAN – VARJANI**

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## Objective:

Seeking a responsible career opportunity in Education and Industry that will best utilize my past professional and educational experiences, and where making a significant contribution to the success of my employer will gain me career advancement opportunities.

## Academic Qualifications:

### **Doctor of Philosophy in Electrical Engineering**

School of Electrical, Computer and & Telecommunication Engineering University of Wollongong, Australia. 1995-1998.

Thesis Title: *"Harmonic Control Techniques for Inverters and Adaptive Active Power Filters"*

#### ***Courses and Subjects***

Real Computing (DSP based application programming),

Computer Controlled (Digital Control).

Advanced Robotics

### **Master of Engineering (Honors)**

School of Electrical, Computer and & Telecommunication Engineering University of Wollongong, Australia. 1993-1994.

Thesis Title: *"Artificial Neural Network Application in Power System Load Forecasting"*.

#### ***Courses and Subjects***

Artificial Neural Network (ANN),

Digital Signal Processing (DSP).

### **Bachelor of Science in Electrical Engineering.**

Department of Electrical and Computer Engineering, Sharif University of Technology, Teheran, Iran, 1984-1989,

Thesis Title: *"Digital Simulation of Self Control Synchronous Machine Fed by VSI and CSI"*.

## Projects:

Sept 2008-2009: "Establishment and Operation of Computer Emergency Response Team (CERT) for Tarbiat Modares University, Iran Telecommunication Research Centre, Ministry of Information & Communication Technology.

Sept 2005-2006: "National Plan for Protection of Iran Critical Communication Infrastructure ", Iran Telecommunication Research Centre, Ministry of Information & Communication Technology (through Tarbiat Modares University).

July Sept 2002-Feb 2003: "Management of Iran National Plan for Communication and Information Technology Development" Iranian Telecom Research Center Ministry of PTT, Manager of Project (through Tarbiat Modares University).

Sept 2002-Dec 2003: "National Strategic Plan for Information and Communication Technology Development of Iran ", Iran Telecommunication Research Centre, Ministry of, April 2003.

Sept 2001-Dec 2002: "Capability Evaluation of Iranian University and Institutes for Power Industry Research; A Database ", Research Deputy of Tavanir Teheran, Ministry of Energy.

July Sept 2001-July 2002: "Electrical Research Potential Evaluation of Iranian Universities and research Institutes and Database Preparation" Tavanir Research Deputy, Ministry of Energy Manager of Project (through Tarbiat Modares University).

July Sept 1999-Feb 2001: "Scientific Network of Iran, Iranian Research Organization for science and Technology (IROST) Technical Manager of Project.

## Publications:

### Conferences:

- [1] "Current and Voltage Capacitor Transformers Standard for 63, 132, 230, and 400 KV", Technical Bureau for Power, Teheran, Ministry of Energy, Published in Persian and English. 1991.
- [2] "Power Transformers Standard for 230 and 400 KV", Technical Bureau for Power, Teheran, Ministry of Energy, Published in Persian and English, 1992.
- [3] A. Yazdian, "Migrating Electromagnetic Transient Program, EMTP, fro Mainframe to PC: Line and Cable Constant", Electric Power Research Center, EPRC, Teheran, 1990.
- [4] A. Yazdian-Varjani and P. Doulai, "Application of Neural Network in Power System Load Forecasting" *Australasian Universities Power Engineering Conference, AUPEC'93*, pp 235-240, Sept. 1993.
- [5] P. Doulai, A Yazdian and M. Manoharan, "24-Hour Ahead Power Systems Load Forecasting Using Conventional and Kalman Filtering Methods", *Australasian Universities Power Engineering Conference AUPEC'94*, Sept. pp-664-668, 1994.
- [6] A. Yazdian and P. Doulai, "Neural Network versus Time Series method for Power System Short-term Load Forecasting" *International Power Engineering Conference, IPEC'95*, pp 677-672, Singapore, March 1995.
- [7] A. Yazdian-Varjani, B. S. P. Perera, J. F. Chicharo, and M. T. Kilani, "An Equal Area Based Pulse-width and Position Switching Strategy for Full-Bridge Inverter

- Applications," Australasian Universities Power Engineering Conference, AUPEC'96, Melbourne, pp. 143-149, 1996.
- [8] A. Yazdian-Varjani, B. S. P. Perera, J. F. Chicharo, and M. T. Kilani, "Sliding Measurement of Power System Harmonics," Australasian Universities Power Engineering Conference, AUPEC'96, Melbourne, pp. 293-299, 1996.
  - [9] A. Yazdian-Varjani, J. F. Chicharo, and B. S. P. Perera, "An Introduction to Wavelets in Power Quality Analysis," Australasian Universities Power Engineering Conference, AUPEC'97, Sydney, pp. 277-281, 1997.
  - [10] A. Yazdian-Varjani, B. S. P. Perera, and J. F. Chicharo, "A Centroid Based PWM Switching Technique for Full-Bridge Inverter Applications," IEEE Transaction on Power Electronics, vol. 13, pp. 115-124, Jan. 1998.
  - [11] M. T. Kilani and A. Yazdian-Varjani, "ECG Hear Estimation" Proceedings of the Eighth Iranian Conference on Electrical Engineering, ICEE-2000, Isfahan, Iran, May 2000.
  - [12] A. Yazdian-Varjani, B. S. P. Perera, and J. F. Chicharo, " Adaptive Active Power Filtering Scheme," International Power System Conference, Tehran, Iran November 2000.
  - [13] R. Keypour, H. Seifi and A. Yazdian-Varjani "A Genetic Based Algorithm for Allocation and Sizing of Active Power Filter," 14th International Power System Conference, Tehran, Iran November 2000 (Persian).
  - [14] A. Yazdian-Varjani, B. S. P. Perera, and J. F. Chicharo, "Adaptive Active Power Filtering Scheme," 14th Power System International Conferences, Tehran, Iran November 2000.
  - [15] A. Yazdian-Varjani, B. S. P. Perera, and J. F. Chicharo, "A Novel Adaptive Active Power Filtering Scheme," Tarbiat Modares University Engineering Journal , 2002, Vol,2 No7 .
  - [16] A. Yazdian-Varjani "Capability Evaluation of Iranian University and Institutes for Power Industry Research; A Database", Technical Project Report, Research Deputy of Tavanir Teheran, Ministry of Energy, February 2003.
  - [17] N. Moghdam Ali Yazdian and M. Hooshmand E-commerce and Developing Countries; Obstacles and Motivations, First Erou-Asia Conference In Information and Communication Technology EroAsia\_ICT2002, Shiraz, 2002.
  - [18] N. Moghdam M. Hooshmand and Ali Yazdian E-Readiness for ICT Development Iran Case Study" Second International Symposium of IST2003 Isfahan, 2003.
  - [19] N. Moghdam, Sheikholeslami F. Safara and Ali Yazdian University-Industry Collaboration via Technoparks" Second International Symposium of IST2003 Isfahan, 2003.
  - [20] H. Baghgar, A.Yazdian and H. Seifi, "Constant Flow Based Fuzzy Controller for Speed Control of Induction Motor", First Mechatronics Conference of Iran Mechatronics\_2003, Qazvin, July, 2003.
  - [21] H. Baghgar, A.Yazdian and H. Seifi "Fuzzy Controller for Speed Control of Induction" 5<sup>th</sup> Conference on Intelligent Systems (CIS 2003), Mashad, Sep. 2003
  - [22] Khadijeh Fazeli, Ali Yazdian, H. Sharafat," Modification of IPsec packet structure to improve performance in satellite network" Proceedings of Eleventh Iranian Conference on Electrical Engineering, ICEE2003, Shiraz, Iran

- [23] Ahmad R. Sharafat, Mehdi Rasti, and Ali Yazdian "Neural Network Based Dynamic Anomaly Detection in Computer Networks: A Novel Training Paradigm Using Abnormal Behavior" 16th International Conference on Computer Applications in Industry and Engineering (CAINE03), Las Vegas, November, 2003.
- [24] E. Heydarnejad, A. Yazdian, F. Safara and S. Dastranj "E-Commerce Potential in Developing Small and Medium Industry Firms" Second Iranian Computer Conference, Mashhad, Iran pp. Dec 2003.
- [25] E. Heydarnejad, A. Yazdian, F. Safara and S. Dastranj "Information Technology Incubator and their Role in Developing Small and Medium Firms" Seventh Iranian Universities, Industry & Government Cooperation Congress, Isfahan, Iran, Dec 2003.
- [26] A.S.Larijani, M. Mohamadian, A.Yazdian, M.Shahparasti, A.Amiri and, "A Novel Three-level Inverter Induction Motor Direct Torque Control System with Neutral Point Voltage Deviation Minimization", International Conference on Electric Power and Energy Conversion Systems (EPECS'09), 10-12 Nov 2009, Sharjah, UAE.
- [27] M.Shahparasti, S.M.Deighan, A.S.Larijani, A.Yazdian and M. Mohamadian, "A Z-Source AC/DC/AC with Reduced Semiconductor Stress", ICEE 2009, May 2009, pp. 331-336, Tehran, Iran.
- [28] A.H.Rajaei, M. Mohamadian and A.Yazdian, "Space-Vector Modulation Strategy for Single phase Induction Motor Drive System using Z-Source Inverter", ICEE 2009, May 2009, pp. 429-434, Tehran, Iran.
- [29] H.Ghoreishi, A.Yazdian, Sh.Farhangi and M. Mohamadian, "A New Pulse and Amplitude Selective Harmonic Elimination Method For Multi-Level Inverters", ICEE 2009, May 2009, pp. 245-250, Tehran, Iran.
- [30] H.Zahedi, A.H.Rajaei, S.M.Deighan, A.Yazdian and M. Mohamadian, "Nine Switch AC/AC Converter with Random Pulse Width Modulation", ICEE 2009, May 2009, pp. 337-342, Tehran, Iran.
- [31] Deighan, S.M., Mohamadian, M., Yazdian, A., Ashrafzadeh, F., "A novel space vector modulation for nine-switch converters", Energy Conversion Congress and Exposition, 2009. ECCE 2009. IEEE, 20-24 Sept. 2009, San Jose, CA, pp. 885 - 891.
- [32] Deighan, S.M., Mohamadian, M., Yazdian, A., Ashrafzadeh, F., "Dual-input dual-output z-source inverter", Energy Conversion Congress and Exposition, 2009. ECCE 2009. IEEE, 20-24 Sept. 2009, San Jose, CA, pp. 3668 – 3674.
- [33] Gharakhany, R., Mohamadian, M., Yazdian-Varjani, A., "Reactive power compensation using Z-source based photovoltaic system", Power & Energy Society General Meeting, 2009. PES '09. IEEE, Calgary, Canada, 26-30 July 2009, pp. 1-7.
- [34] Shahriari, S.A.A., Abardeh, M.H., Yazdian-Varjani, A., Mohamadian, M., "Using Fault Current Limiter to minimize effect of Thyristor Controlled Series Capacitor on over reach problem of distance protection", Power Systems Conference and Exposition, 2009. PSCE '09. IEEE/PES, Seattle, WA, 15-18 March 2009, pp. 1-6.
- [35] M.Shahparasti, A.S.Larijani, A.Yazdian and M.Mohamadian, "Parallel Single-Phase Low Power Grid Connected Z-source Inverter", 24th Int. Power System Conf, Tehran, Iran, PSC2009, Nov. 2009.

- [36] M. Dehghan, M. Mohamadian and A.Yazdian, "Maximum Boost Control and Current Ripple Reduction of Z-Source Inverter With Space Vector Modulation", ICEE 2008, May 2008, Tehran, Iran.
- [37] A.H.Rajaei, M. Mohamadian and A.Yazdian, "Improving Single-Phase Induction Motor Drive, Output Voltage Using Z-Source Inverter", ICEE 2008, May 2008, Tehran, Iran.
- [38] M. Dehghan,, A.Yazdian and M. Mohamadian "Short Circuit Current Reduction With Z-Source Inverter and Dynamic Voltage Restorer", ICEE 2008, May 2008, Tehran, Iran.
- [39] M. Hoseinpour, R. Gharekhani, A. Yazdian and M. Mohamadian, "Hybrid Operation of Unified Power Quality Conditioner and Photovoltaic Array", 13<sup>th</sup> Power System Distribution Conf, Zibakenar, Iran, 2008.
- [40] M. Nayeripour, A.Yazdian, M.Mohamadian, and R. Khorshidi, " Optimization of an Improved Sliding Mode Controller for Shunt Active Power Filter", International Conference on Power Engineering, Energy and Electrical Drives, 2007. POWERENG 2007.
- [41] M. Hoseinpour, A.Yazdian and M. Mohamadian, "Maximum Power Point Tracking of Induction Generator in Variable Speed Wind Turbine", 22<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2007.
- [42] M. Dehghan, M. Mohamadian, and A.Yazdian, "Sensorless Maximum Power Point Tracking of PMSG Wind Turbine", 22<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2007.
- [43] M.Abadi, M. Mohamadian, A.Yazdian, and "Improving DFIG Wind Turbine Flicker Using Grid Side Converter", 22<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2007.
- [44] J. Nourouzi, M. Mohamadian and A. Yazdian, "Evaluation of Fixed Point Digital Signal Processors in Vector Control of Induction Motors", ICEE 2007, May 2007, pp:611-616, Tehran, Iran.
- [45] M.H.Zadeh, A.Yazdian, M.Mohamadian,"Robust Position Control in DC motor by Fuzzy Sliding Mode Control", International Symposium on Power Electronics, Electrical Drives, Automation and Motion, 23-26 May 2006, PP:1413-1418, Taormina, Italy.
- [46] M.Parsa, A.Yazdian, M.Noorouzbeigi and M. Mohamadian, "Power Plant Energy Efficiency Improvement with Variable Speed Drives, Case Study: Arak Power Plant", 20<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2005.
- [47] M.Hendijanizadeh, A.Yazdian, M.Mohamadian, "A Novel Sliding Mode Robust DC Motor Position Control System", 20<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2005.
- [48] R.Nasirpour, A.Yazdian, M.Mohamadian, "A Robust PWM Rectifier with Reduced Input Current THD", 20<sup>th</sup> Int. Power System Conf, Tehran, Iran, 2005.
- [49] M.Azizi, A.Fatemi, M. Mohamadian and A.Yazdian," A Novel Z-source Four-leg Inverter with two Independent Four-wire Outputs", 1<sup>st</sup> Power Electronics & Drive Systems & Technologies Conference, 17-18 Feb 2010, p.p. 163-168, Tehran, Iran.
- [50] H.Ghoreishi, A.Yazdian, Sh. Farhangi and M. Mohamadian, "Reducing Common-Mode Voltage and Power Dissipation in Cascaded Multilevel Inverters with Flexible dc Sources", 1<sup>st</sup> Power Electronics & Drive Systems & Technologies Conference, 17-18 Feb 2010, p.p. 175-179, Tehran, Iran.



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- [52] M.Zamanzadeh , T.Shahrabi , A.Yazdian , M.Alioff khazraie , 'Optimization of conditions for fotmation of calcareous deposits on cathodically protected mild steel in seawater with Taguchi method', 10th congress of iranian metallurgical engineers, Iranian metallurgical engineers institute, Iran , pp.
- [53] M.Zamanzadeh , T.Shahrabi , A.Yazdian , M.Alioff khazraie , 'Effect of frequenci of pulse potential application on morphology and kinetiecs of calcareous deposits on cathodically protected mild steel in seawater', 10th congress of iranian metallurgical engineers, Iranian metallurgical engineers institute, Iran , pp.
- [54] M.Zamanzadeh , T.Shahrabi , M.G.Hossaini , A.Yazdian 2006, 'Characterization of calcareous deposits in artificial sea water by pulsed cathodic protection ', Eurocorr, Eurocorr, Holand , pp.

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- [2] R. Keypour, H. Seifi and A. Yazdian-Varjani "A Genetic Based Algorithm for Allocation and Sizing of Active Power Filter," Estghelal Technical Journal Vol 21 No 1 pp29-42, 2002 (Persian).
- [3] R. Haghighat, H. Seifi and A. Yazdian-Varjani "An Instantaneous Power Theory based Control Scheme for Unified Power Flow Controller in Transient and Steady State Conditions", Elsevier Electric Power Systems Research, No 64, pp175-180, 2003
- [4] M. Nayeripoor, A.Yazdian, M.Mohamadian, H.R.Mohammadi, "Design and Control of Three-Phase Shunt Active Power Filter Using the Sliding Mode Control and Energy Feedback", Iranian Journal of Electrical and Computer Engineering (IJECE), V:5, No:1, Spring 2007, pp:32-40.
- [5] M. Nayeripoor, A.Yazdian, M.Mohamadian, , "Bilinear Design of Unified Power Flow Controller for Improved Power System Stability", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.6, No.3, Fall 2008, pp. 199-207.
- [6] M. Nayeripoor, A.Yazdian, M.Mohamadian, "Design and Optimization of Three-Phase Shunt Active Filter Using a Modified Sliding Mode Control", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol:5, No:4, pp:215-223, Winter 2008.
- [7] M.Hendijanizadeh, A.Yazdian, M.Mohamadian, "A New Design Method for Robust Sliding Mode Position Control of DC Motor", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.6, No.3, Fall 2008, pp. 208-214.
- [8] A. Abrishami, A.Yazdian, H. Seifi, "Analysis and allocation of UPFC for Competitive Electricity Power Market ", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.7, No.1, Spring 2009, pp. 50-57.

- [9] H.R.Mohammadi, A. Yazdian Varjani, and H. Mokhtari, " A New Configuration of Unified Power Quality Conditioner for Simultaneous Compensation in Adjacent Feeders", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.7, No.1, Winter 2009, pp. 14-22.
- [10] H.R.Mohammadi, A. Yazdian Varjani, and H. Mokhtari, " A New Hybrid Configuration for Estimation of Power Quality Phenomena using Adaptive Neural Network", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.6, No.4, Winter 2007, pp. 317-325.
- [11] H.R.Mohammadi, A. Yazdian Varjani, and H. Mokhtari, " Multiconverter Unified Power Quality Conditioning System: MC-UPQC ", IEEE Trans. on Power Delivery, Vol.24, No.3, July 2009, pp. 1679-1686.
- [12] S.M.Deighan, A.Yazdian, M.Mohamadian, "A New Method For DC Voltage Ripple Reduction Using Active Filters", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol:5, No:4, pp:224-232, Winter 2008
- [13] S.M.Deighan, A.Yazdian, M.Mohamadian, "Hybrid Series and Shunt Active DC Line Conditioner", Iranian Journal of Electrical and Electronic Engineering, V:2, No:2, pp:47-56. April 2006.
- [14] H.Ezati and A.Yazdian, "Comparison of Whack-a-mole compensations methods in long Distribution Feeder using Active Power Filter", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.4, No.2, Fall 2006, pp. 81-90.
- [15] H.Afrakhteh, M.R.Haghifam and A.Yazdian, "Identification of Control Parameters in Power Systems for Maximum Load Restoration ", Iranian Journal of Electrical and Computer Engineering (IJECE), Vol.5, No.2, Summer 2007, pp. 88-95.
- [16] S.M.Deighan, M. Mohamadian and A.Yazdian, "A New Variable Speed Wind Energy Conversion System Using Permanent Magnet Synchronous Generator and Z-Source Inverter ", IEEE Trans. On Power Conversion, Volume 24, Issue 3, Page(s):714 - 724. Sept. 2009
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- [18] S.M.Deighan, M.Mohamadian, A.Yazdian, F.Ashrafzadeh, "Space Vectors Modulation for Nine-Switch Converters", IEEE Transactions on Power Electronics, Accepted for Publication.
- [19] S.M.Deighan, M.Mohamadian, A.Yazdian and F.Ashrafzadeh, "Space Vectors Modulation for Nine Switch Converters", IEEE Transactions on Power Electronics, Volume 25, Issue 102, Page(s):1488-1496. June 2010.
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- [22] A.M.Rajaei, M.Mohamadian, S.M.Deighan, A.Yazdian, "Single phase Induction Motor Drive System using Z-Source Inverter", IET Electric Power Applications, vol. 4, Issue. 1, pp.17-25, Jan. 2010.

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- [25] I.Ahmadi, A. Yazdian and M. Khederzadeh, "Mapping Based Technique for Distance Relays Setting in Presence of IPFC", IEEE Transactions on Power and Energy, vol. 46, no. 8, pp.1411-1418, Nov 2009.
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- [27] M.Saemi, M.Ahmadi and A. Yazdian "Design of neural network using algorithm for the permeability estimation of the reservoir" Elsevier Journal of Petroleum Science and Engineering Volume 59, Issues 1-2, October 2007, Pages 97-105
- [28] M.Zamanzadeh , T.Shahrabi , A.Yazdian , "Improvement of corrosion protection properties of calcareous deposits on carbon steel by pulse cathodic protection in artificial seawater", *Emerald Anti-corrosion Methods And Materials*, Vol. 2, No. 54, pp. 74-81
- [29] A.Yazdian, J.F.Chicharo and B.S.P.Perera, "A Novel active power filter control methodology", *Modares Technical and Engineering Journal*, Vol. 7, No 2 pp. 127-138, 2002.
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- [34] M. Monjezi, H. Amini Khoshalan and A. Yazdian Varjani " Prediction of flyrock and backbreak in open pit blasting operation: a neuro-genetic approach", *Arabian Journal of Geosciences*", Elsevier *International Journal of Rock*, Vol 47, No 3, pp. 476-480, March 2010.
- [35] M.Monjezi, M.Rezaie and A. Yazdian-Varjani " Prediction of rock fragmentation due to blasting in Gol-E-Gohar iron mine using fuzzy logic," Elsevier, *International Journal of Rock Mechanics and Mining Sciences*, Volume 46, Issue 8, December 2009, Pages 1273-1280
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## **Work and Research Experience:**

<b><i>July 2008- Now</i></b>	Tarbiat Modares University, Dean of Faculty of Electrical and Computer Engineering
<b><i>July 1999- Now</i></b>	Tarbiat Modares University, Electrical and Computer Engineering Dept., Assistant Professor in: Power Electronics
<b><i>July 2002- Sep 2004</i></b>	Iran Telecom Research Centre, Head of Planning and Management Dept., Senior Advisor and Board Member.
<b><i>July 1999-March 2001</i></b>	"Scientific Network of Iran Project", Iranian Research Organization for science and Technology (IROST) Senior Advisor and Technical Manager of Project.
<b><i>July 1999-Feb 2000</i></b>	University of Shahid Beheshti, Electrical and Computer Engineering Dept., Associate Professor in: Circuit Theory, Electronics.
<b><i>July 1995- Dec 1998:</i></b>	University of Wollongong, Electrical and Computer Engineering Dept., Teaching Assistant in: Circuit Theory, Electronics,
<b><i>Nov. 1994- April 1995:</i></b>	Broken Hill Petroleum (BHP) Engineering, Wollongong, Metallic Coating Line, Supervisory System programming.
<b><i>July 1993- Dec 1994:</i></b>	University of Wollongong, Electrical and Computer Engineering Dept., Teaching Assistant in: Electronic Circuit Theory, C++ Programming
<b><i>Dec 1991- Oct. 1992:</i></b>	Iran Electric Organization, Ministry of Energy, Teheran, Senior Engineer, "400 and 230 KV Power Transformers Standard project".
<b><i>April 1990- Sep 1991:</i></b>	Ministry of Energy, Technical Bureau for Power, Teheran, Expert Engineer, Standard & Substation Groups, "CT and CVT Standard Project".
<b><i>Mar 1989- Mar 1990:</i></b>	Electric Power Research Center (EPRC), Teheran, Senior Computer and Electrical Engineer, EMTP & PSS projects.
<b><i>May 1986- Dec. 1986:</i></b>	Sharif University Research Center, Teheran, Research Assistant, "Design and implementation Z80 based microcontroller for CNC Machine" project.

## **Courses:**

<b><i>February 1991:</i></b>	"Computer Aided Design in Power System Distribution", UN-ESCAP, Bangalore, India, Electric Power Research Institute (One week).
<b><i>Oct-Dec 1991:</i></b>	"Design and Planning of Electrical instrument of Iranshaheer's Power Plant", Schkoda Firm Co. Ltd Berno, Bratislava, Prague,

Czech (Former Czechoslovakia ) (Three Months).

- July 1992:** "Application Expert System in Power System: Prolog Programming", Electric Power Research Center, EPRC, Teheran, Iran (Two Weeks).
- June 1997:** "Quality of Electricity Supply", Electricity Association of Australia (ESAA) University of Wollongong, Australia (One week).
- August 1997:** "Surge Spike and transient Risk Management "Precision Power Pty Ltd, University of Wollongong, Australia (One week).
- January 1999:** "Advanced Java and IBM VisualAge based Programming in Education" IBM Education Dept, Sydney, Australia (4 Day).
- September 1999:** "Advanced Data Communication Network Management" Tellabs Company, Helsinki, Finland (4 week).
- February 2000:** "IP Management of Data Communication Network" RIPE, Ankara Turkey.
- September 2005:** "Lead Auditory for Information Security Management System (ISMS) "British Standard Institute (BSI) , Tehran, IRAN. (One Week)

### **Membership in Professional Societies:**

IEEE Member (1999-Now),

Iran Electrical Engineering Association Member, (2003-Now)

Iran Computer Society Board Member, (2004-Now)

Iran Society Cryptography Member (2004-Now)

Iran Power Electronics Society Member, (2003-Now)

IEEE Student Branch Consoler Tarbiat Modares University, (2001-Now)

Tavanir PSC "Power Quality" and "Information Technology" Committee Member, (2001-Now)

Union Board of Management of the University of Wollongong (1995-1997)

Chairperson of IEEE student branch at the University of Wollongong (1994-995),

IEEE student member (1994-1999),

### **Computer Experience:**

Information Security Management System (ISMS) Lead Auditor BSI 2009

Texas Instrument DSP TMS320C3X programming,

Matlab and Mathematica programming.

C/C++ (Visual) , Java, and "FORTRAN" programming,

VAX\_VMS, DOS, Mac, Windows, Linux, and Unix Operating System

## **Contributions:**

### ***During my PhD Study:***

A new PWM switching strategy has been developed for full-bridge inverter which produces the lower total harmonic distortion and higher voltage magnitude. Also a new adaptive structure using resonator filter-bank and frequency demodulation techniques has been proposed for online harmonic estimation and reduction in active power filters. The proposed control strategy along with partial harmonic reduction schemes reduces the power rating required for active power filter while fulfilling the harmonic standard requirements.

### ***During my Master Study:***

A new structure for neural network-based short -term load forecasting is proposed which reduces the design complexity of the two stages, clustering and forecasting, neural network structures to a single stage. Further, it provides more accurate forecasting when compared with conventional methods.

## **Research Interests:**

Power Electronics, PWM Based Drive,

Digital Signal Processing Applications in Power Electronics and System,

Power Quality, Active Power Filtering, Harmonic Cancellation

Artificial Intelligence, Artificial Neural Networks, Fuzzy Expert Systems in Power.

Application of IT technology in Education and Power System

Information Security Management

## **Consultant and Workshop:**

Internet and Web based Techniques in Academic Research

E-Learning and Web based Teaching in Academic Research

Technical Consultant of Data Communication Company of Iran (DCI)

Member of IT Committee of Tarbiat Modares University

Member of Technical Committee of Iran Telecom Research Centre (ITRC)

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