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### **PROFESSIONAL PROFILE:**

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Assistant Professor, Department of Electrical Engineering, Faculty of Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran

Head of Advanced Protection of Power Systems (APPS) Research Lab.

## **EDUCATION BACKGROUND:**

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### **Bachelor**

- Location of Education: Amirkabir University of Technology, Tehran, Iran
  - Field of Study: Electrical Engineering – Power Systems
  - School start date: September 1999
  - School end date: September 2003
  - Title of the thesis: Development of a computer program for designing compact power transmission lines from the perspective of conductor selection
  - Supervisor: Dr. Seyed Hossein Hosseinian
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### **Master**

- Location of Education: Amirkabir University of Technology, Tehran, Iran
  - Field of Study: Electrical Engineering – Power Systems
  - School start date: September 2003
  - School end date: September 2005
  - Title of the thesis: Harmonic State Estimation in a Power System Using Weighted Least Squares Technique
  - Supervisor: Dr. Seyed Hossein Hosseinian
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### **Ph.D.**

- Location of Education: University of Tehran
  - The course of study: Electrical Engineering – Power Systems
  - School start date: September 2005
  - School end date: May 2011
  - Title of the thesis: Power System Instability Prevention using Combinational Load Shedding Methods
  - Supervisor: Dr. Majid Sanaye-pasand
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## **TEACHING AND TRAINING EXPERIENCE:**

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- Advanced Protection of Power Systems
- Electric Distribution Systems
- Digital Protection of Power Systems
- Power System Dynamics
- Protection and Relays
- Power System Analysis I
- Electric Machinery I
- Electric Machinery II

- Electric Circuits II
- Electric Measurement
- Electric Fundamentals II
- Electric Fundamentals I
- Technical Language
- Engineering Mathematics
- Protection and Relays Laboratory
- Power System Analysis Laboratory
- Electric Machinery I Laboratory
- Electric Fundamentals Laboratory

### **HONOURS AND AWARDS:**

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- Bachelor of Science Top Student: the highest GPA rank among graduated students of electric power engineering in Amirkabir University of Technology (2003)
- Master of Science Top Student: the highest GPA rank among graduated students of electric power engineering in Amirkabir University of Technology (2005)
- Top rank in PhD entrance exam of Amirkabir University of Technology (2005)
- Second rank in PhD entrance exam of University of Tehran (2005)

### **INTERESTS AND RESEACH FIELDS:**

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- Power System Protection
- Power System Stability
- Electric distribution systems
- Power quality and harmonics in the power grid
- Wide Area Protection of Power Systems
- Combinational Load Shedding in Power Systems
- Microgrid Protection
- Protection of HVDC Systems

### **RESARCH ACTIVITIES:**

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### **PUBLICATIONS:**

- M. Abasi, **A. Saffarian**, M. Joorabian, S. G. Seifossadat, “Location of double-circuit grounded cross-country faults in GUPFC-compensated transmission lines based on current and voltage phasors analysis,” *Electric Power Systems Research* 195, 107124
- M. Abasi, M. Joorabian, **A. Saffarian**, S. G. Seifossadat, “A Comprehensive Review of Various Fault Location Methods for Transmission Lines Compensated by FACTS devices and Series Capacitors,” *Journal of Operation and Automation in Power Engineering*, to be published. <https://doi.org/10.22098/joape.2021.7774.1551>
- M. Abasi, M. Joorabian, **A. Saffarian**, S. G. Seifossadat, “Inter-circuit fault location algorithm in generalized unified power flow controller-compensated double-circuit transmission lines based on synchronous current and voltage phasors of line terminals,” *IET Generation, Transmission & Distribution*, to be published. <https://doi.org/10.1049/gtd2.12139>
- M. Abasi, **A. Saffarian**, M. Joorabian, and S. G. Seifossadat, “Fault Location in Double-Circuit Transmission Lines Compensated by Generalized Unified Power Flow Controller (GUPFC) Based on Synchronous Current and Voltage Phasors,” *IEEE Systems Journal*, to be published. <https://doi.org/10.1109/JSYST.2020.3016910>.
- A. Behvandi, S. G. Seifossadat, **A. Saffarian**, “A New Modified Hyperbolic S Transform-Based Method for Discrimination of Internal Fault from Other Abnormal Conditions in Power Transformer,” *Tabriz Journal of Electrical Engineering*, vol. 50, no. 3, pp. 1085-1096, 2020 (in Persian).
- M. Abasi, **A. Saffarian**, M. Joorabian, and S. G. Seifossadat, “Fault classification and fault area detection in GUPFC-compensated double-circuit transmission lines based on the analysis of active and reactive powers measured by PMUs,” *Measurement*, vol. 169, paper no. 108499, 2021.
- A. Ghafari, M. Saniei, M. Razaz, **A. Saffarian**, “Analysis of an Active Superconducting Current Controller Considering the Protective Coordination and Voltage Compensation in Power Systems,” *Advances in Electrical and Computer Engineering*, vol. 20, no. 4, pp. 29-36, 2020.
- M. Abasi, M. Joorabian, **A. Saffarian**, and S. G. Seifossadat, “A Novel Complete Dynamic and Static Model of 48-Pulse VSC-based GUPFC for Parallel Transmission Lines,” *International Journal of Industrial Electronics, Control and Optimization*, vol. 3, no. 4, pp. 447-457, 2020.
- A. Ghafari, M. Saniei, M. Razaz, and **A. Saffarian**, “A New Method for Fault Current Limiting and Voltage Compensating in Power Systems Using Active Superconducting Current Controller,” *International Journal of Engineering and Technology Innovation*, vol. 10, no. 2, pp. 130-145, 2020.
- **A. Saffarian**, M. Abasi, “Fault location in series capacitor compensated three-terminal transmission lines based on the analysis of voltage and current phasor equations and

asynchronous data transfer,” *Electric Power Systems Research*, vol. 187, paper no. 106457, 2020.

- M. Abasi, M. Joorabian, **A. Saffarian**, and S. G. Seifossadat, “A Novel Complete Dynamic and Static Model of 48-Pulse VSC-based GUPFC for Parallel Transmission Lines,” *International Journal of Industrial Electronics, Control and Optimization*, vol. 3, no. 4, pp. 447-457, 2020.
- M. Abasi, M. Joorabian, **A. Saffarian**, and S. G. Seifossadat, “Accurate Simulation and Modeling of the Control System and the Power Electronics of a 72-pulse VSC-based Generalized Unified Power Flow Controller (GUPFC),” *Electrical Engineering*, vol. 102, pp. 1795-1819, 2020.
- S. Afrasiabi, **A. Saffarian**, E. Mashhour, "Dynamic state estimation of power systems using intelligent particle filtering based on ant colony optimisation for continuous domains," *IET Generation, Transmission & Distribution*, vol. 13, no. 13, pp. 2627-2636, 2019.
- S. A. Alavi, V. Ilea, **A. Saffarian**, C. Bovo, A. Berizzi, and S. Gh. Seifossadat, " Feasible Islanding Operation of Electric Networks with Large Penetration of Renewable Energy Sources considering Security Constraints," *Energies*, vol.12, no. 3, paper no. 537, Feb. 2019.
- A. Hajary, R. Kianinezhad, S. G. Seifossadat, S. S. Mortazavi, and **A. Saffarian**, “Detection and Localization of Open-phase Fault in Three-Phase Induction Motor Drives using Second Order Rotational Park Transformation”, *IEEE Transactions on Power Electronics*, vol. 34, no. 11, pp. 11241-11252, Nov. 2019.
- A. Behvandi, S. G. Seifossadat, **A. Saffarian**, “A New Method for Discrimination of Internal Fault from Other Transient States in Power Transformer Using Clarke's Transform and Modified Hyperbolic S-Transform,” *Electric Power Systems Research*, vol. 178, 106023, Jan. 2020.
- A. Hajary, S. G. Seifossadat, R. Kianinezhad, **A. Saffarian**, and S. S. Mortazavi, “An adaptive PI control design for multi-phase machines in healthy and faulty operations,” *COMPEL - The International Journal for Computation and Mathematics in Electrical and Electronic Engineerin*, vol. 38 no. 6, pp. 1986-2000.
- H. Mohammadzadeh-Shourabeh, **A. Saffarian**, M. Joorabian, “Presentation of an economical centralized combinational load shedding scheme for self-healing of power system,” *Tabriz Journal of Electrical Engineering*, vol. 48, no. 1, pp. 303-314, 2018 (in Persian).
- A. Hajary, R. Kianinezhad, **A. Saffarian**, and S. S. Mortazavi, “Robust control of symmetrical six-phase induction machine under open-phase fault condition based on ADRC method,” *Journal of Control*, vol. 11, no. 1, pp. 51-60, 2017 (in Persian).

- S. Rahimi-Taghanaki, S. G. Seifossadat, M. Razzaz and **A. Saffarian**, "A new technique for determining the location of ground fault in the rotor of synchronous generators with various types of excitation systems", *International Transactions on Electrical Energy Systems*, vol. 26, no. 12, pp. 2672–2683, Dec. 2016.
- M. Payami, **A. Saffarian**, and M. Saniei, "Comparing the Performance of the Thyristor Controlled Phase Shifter and Superconducting Magnetic Energy Storage for Load-Frequency Control," *The Quarterly Journal of Applied Science Studies in Engineering*, vol. 2, no. 2, pp. 25-35, 2016 (in Persian).
- Z. Khosravi, and **A. Saffarian**, "A new algorithm for protection of small scale synchronous generators against transient instability", *TELKOMNIKA Indonesian Journal of Electrical Engineering*, vol. 16, no. 3 , pp. 454 – 462, Dec. 2015.
- **A. Saffarian**, and M. Sanaye-Pasand, "Enhancement of power system stability using adaptive combinational load shedding methods," *IEEE Transactions on Power Systems*, vol. 26, no. 3, pp. 1010 - 1020, Aug. 2011.
- P. Ghaleh, M. Sanaye-Pasand, and **A. Saffarian**, "Power system stability enhancement using a new combinational load shedding algorithm," *IET Generation, Transmission and Distribution*, vol. 5, no. 5, pp. 551-560, 2011.
- **A. Saffarian**, and M. Sanaye-Pasand, "New Local Adaptive Load Shedding Methods to Mitigate Power System Blackouts," *Journal of Electric Power Components and Systems*, vol. 40, no. 3, pp. 348-368, 2012.
- **A. Saffarian**, M. Sanaye-Pasand, A. P. Ghaleh, "Application of Combinational Adaptive Load Shedding Schemes to Improve Power System Voltage Stability - Part I: General Concept & the Algorithms," *Iranian Journal of Electrical and Computer Engineering*, vol. 8, no. 1, pp. 3-12, 2010 (in Persian).
- **A. Saffarian**, M. Sanaye-Pasand, A. P. Ghaleh, "Application of Combinational Adaptive Load Shedding Schemes to Improve Power System Voltage Stability - Part II: Simulation Results," *Iranian Journal of Electrical and Computer Engineering*, vol. 8, no. 1, pp. 13-21, 2010 (in Persian).

#### CONFERENCE PRESENTATIONS:

- S. Ranjbar, **A. Saffarian**, and S. G. Seifossadat, "Presenting a differential protection plan for two-circuit transmission lines based on incremental complex power", *The First Conference on Applied Research in Electrical Engineering*, Ahvaz, Iran, Jan. 2021 (in Persian).

- S. Bahrami, M. Jourabian, and **A. Saffarian**, "Design of WAMS system with considering network expansion planning and uncertainty of transformer taps - Case study: Iran power grid", 14th Conference on Protection and Automation in Power Systems, Amirkabir University of Technology, Tehran Iran, December 2017 (in Persian).
- M. Mohammadian, **A. Saffarian**, and E. Mashhour, "Determining the optimal parameters of frequency controller and investigating the effect of increasing the penetration of wind and photovoltaic distributed generation resources on the frequency stability of microgrids," 5th National Conference on Electrical and Mechatronics Engineering, Tehran, Iran, December 2019 (in Persian).
- F. Hashemi, S. G. Seifossadat, and **A. Saffarian**, "Detection of excitation disconnection fault in synchronous generators in the presence of STATCOM using analytical method", 5th National Conference on Electrical Engineering, Mechatronics and Heating Systems, Tehran, 2009 (in Persian).
- M. Kiani Deh Kiani, **A. Saffarian**, and M. Jourabian, "Fault detection in the winding of doubly-fed induction generators using measured data on the rotor side", The First Conference on Computer Science, Electrical Engineering, Communications and Information technology in the Islamic World, Mashhad, June 2019 (in Persian).
- S. Shahmoradi, and **A. Saffarian**, "Fault location in series of compensated transmission lines", 33rd International Power System Conference, Tehran, Nov. 2018 (in Persian).
- F. Forouzanfar, and **A. Saffarian**, "Optimal simultaneous placement of distributed generation and capacitors to reduce losses and improve voltage profiles in distribution system with fuzzy indefinite load", 3rd International Conference on Electrical Engineering, Computer Science, and Information Technology, Hamedan, Feb. 2019 (in Persian).
- F. Forouzanfar, and **A. Saffarian**, "Determining the location, type and optimal capacity of distributed generation and capacitors to improve voltage profiles and reduce losses using PSO algorithm", 3rd International Conference on Electrical Engineering, Computer Science, and Information Technology, Hamedan, Feb. 2019 (in Persian).
- A. Badavi Bani-Torof, **A. Saffarian**, and M. Saniei, "Presenting a Differential Protection Plan for Transmission Lines Based on Incremental Complex Power", 4th National Conference on Technology in Electrical and Computer Engineering, Payame Noor University of Tehran, Jan. 2019 (in Persian).
- A. Seraj, **A. Saffarian**, and S. G. Seifossadat, "A New Differential Protection Method for HVDC Transmission Lines Based on Distributed Transmission Line Model", 4th National Conference on Technology in Electrical and Computer Engineering, Payame Noor University, Tehran, Jan. 2019 (in Persian).
- P. Khooye, **A. Saffarian**, and S. G. Seifossadat, "Distinguishing inrush current from internal fault current of power transformers with the presence of fault current limiter at

the neutral point of the transformer", The Second National Conference on New Research in Electrical and Computer Engineering, Basir Institute of Higher Education, Oct. 2019 (in Persian).

- S. Afrasiabi, A. Saffarian, and E. Mashhour, "Detection of measurement errors using dynamic state estimation in wind turbines including PMSG using UKF", 5th Iranian Wind Energy Conference, Iranian Wind Energy Scientific Association, Oct. 2019 (in Persian).
- M. Hajavi, A. Saffarian, and M. Jourabian, "Improving the performance of the third zone of distance relays using phasor measurement units", 4th National Conference on Electricity Consumption Optimization, Shahid Chamran University of Ahvaz, March 2018 (in Persian).
- M. Hajavi, **A. Saffarian**, and M. Jourabian, "Optimal placement of phasor measurement units (PMUs) with the aim of fault observability in the transmission network", The First International Conference on Electrical Engineering, Computer Science, and Information Technology, July 2017 (in Persian).
- Q. Seljugh, **A. Saffarian**, and S. G. Seifossadat, "Fault Location in a Double-Circuit Transmission Line with Series Compensator using Travelling Waves and Wavelet Transform", International Conference on Basic Research in Electrical Engineering, Allameh Tabatabaei University, July 2017 (in Persian).
- F. Derisavi, **A. Saffarian**, M. Razaz, and A. M. Mahmoudi, "Compensation of current transformer saturation for transformer differential relays", The First Annual Congress of the Iranian Society of Engineers, Kharazmi International Educational and Research Institute, September 2017 (in Persian).
- A. Goodarzi, **A. Saffarian**, and S. S. Mortazavi, "Optimization of combinational voltage-frequency load-shedding relays to improve the power system stability", The First International Conference on Electrical Engineering, Ardebil, March 2017 (in Persian).
- H. Kordzanganeh, **A. Saffarian**, M. Saniei, and S. G. Seifossadat, "Comparative design of protection coordination of high-directional current relays in the distribution network with the presence of distributed generation sources taking into account the change in network arrangement", 3rd International Conference on Recent Innovations in Electrical Engineering and Computer, September 2016 (in Persian).
- F. Montafaj, S.G. Seifossadat, and **A. Saffarian**, "Comparative Distance Protection of High Voltage Transmission Lines Based on Voltage Drop Equation", Second National Conference on New Research in Electrical Engineering, March 2017 (in Persian).
- M. Ghalami, M. Jourabian, **A. Saffarian**, and A. A. Farrokhi-rad, "Improving the performance of capacitive voltage transformers using active filters", 4th International Conference on Electrical and Computer Engineering, December 2016 (in Persian).



- M. Amiri, **A. Saffarian**, and M. Saniei, "Under-voltage Load-shedding in Power System containing Wind Turbines Connected to Doubly-fed Induction Generators using Voltage Tracking Sensitivity Analysis and Fast Voltage Stability Index", 4th International Conference on Electrical and Computer Engineering, December 2016 (in Persian).
- H. Mousavi, M. Jourabian, and **A. Saffarian**, "Fault Detection, Detection and Location in Smart Grids using the Frequency and Voltage Signal Changes Feature", 4th International Conference on Electrical and Computer Engineering, December 2016 (in Persian).
- M. Heidarizadeh, S. G. Seifossadat, and **A. Saffarian**, "Identification, Classification and Location of Fault in Series Compensated Double Circuit Transmission Lines using Distributed Line Parameters", 11th International Conference on Systems Protection and Automation in Power Systems, Iran University of Science and Industry, December 2016 (in Persian).
- M. Payami, **A. Saffarian**, and M. Saniei, "Comparison of the performance of a thyristor-controlled phase shifter and a superconducting magnetic energy storage in load-frequency control", International Conference on Vision 2020 and Technological Developements in Electrical Engineering, Computer and Information Technology, Oct. 2016 (in Persian).
- **A. Saffarian**, and S. Hesabi, "Inrush Current Restrained Differential Protection of Power Transformer based on the Second Harmonic Indices and Phase Angle Difference using the Fuzzy Logic Method", 31st International Power System Conference, November 2016 (in Persian).
- F. Forouzanfar, and **A. Saffarian**, "Modeling and simulation of electric arc furnace and improving the power quality of the network with electric arc furnace using harmonic filter", Second National Conference on Technology, Energy and Data on Electrical and Computer Engineering, June 2016 (in Persian).
- H. Mohammadzadeh-Shoorabeh, and **A. Saffarian**, "Presenting an Adaptive Centralized Combinational Load-shedding Scheme for Self-Healing of the Power System", 2nd International Conference and 3rd National Conference on New Technologies Application in Engineering, March 2016 (in Persian).
- A. Esfandiarpour-Deilami, and **A. Saffarian**, "Adaptive setting of the distance relay for protection of parallel transmission lines with UPFC and connected to a wind farm", 10th Power Systems Protection and Control Conference, December 2015 (in Persian).
- S. Mahmoudi-Koochi, and **A. Saffarian**, "Review of the calculations of phase and ground overcurrent relays with practical solutions to deal with the phenomenon of sympathetic tripping of MV feeders in Ahvaz power distribution network", 4th Sired Regional Conference, December 2015 (in Persian).

- F. Andid, and **A. Saffarian**, "A New Algorithm for Distance Protection of Parallel Double-Circuit Transmission Lines against Ungrounded Inter-circuit Faults", International Conference in New Research of Electrical Engineering and Computer Science, September 2015 (in Persian).
- **A. Saffarian**, and M. Payami, "Automatic generation control in a two-area network with thyristor-controlled phase shifter and superconducting magnetic energy storage", National Conference on Technology, Energy and Data on Electrical and Computer Engineering, Institute of Higher Education Water and Electricity Industry, June 2015 (in Persian).
- M. Rabiee, and **A. Saffarian**, "An Optimal Decentralized Combinational Load-shedding Scheme using Voltage Stability L-Index for Self-healing of the Power System", 7th Electrical Power Generation Conference, Hormozgan Power Generation Management Company, Feb. 2015 (in Persian).
- S. M. Mousavifard, S. S. Mortazavi, and **A. Saffarian**, " Designing an intelligent fault current limiter using wavelet transform and neural networks", Second National Conference on Applied Research in Electrical, Mechanical and Mechatronics Engineering, University of Tehran, Feb. 2015 (in Persian).
- A. Torabi-Farsani, M. Razaz, S. G. Seifalsadat, and **A. Saffarian**, "Protection of short transmission lines using a fuzzy-logic-based differential relay", 29th International Power System Conference, Niroo Research Institute, Tehran, Nov. 2014 (in Persian).
- M. Ganjali, and **A. Saffarian**, " Performance Investigation of a Dynamic Voltage Restorer (DVR) in Presence of DGs for Voltage Sag Mitigation using a Neuro-Fuzzy Method", 6th Iranian Conference on Electrical and Electronics Engineering, Islamic Azad University of Gonabad, Aug. 2014 (in Persian).
- M. R. Motamedi, **A. Saffarian**, and M. Jourabian, "Reducing Power Losses and Elimination of Hot Spots for an Electric Arc Furnace Transformer in Khouzestan Steel Company", 6th Iranian Conference on Electrical and Electronics Engineering, Islamic Azad University of Gonabad, Aug. 2014 (in Persian).
- M. R. Motamedi, M. Jourabian, and **A. Saffarian**, "Suppression of Overvoltages Due to Medium Voltage Network and Earthing Transformer Resonance Following Removal of a Single Line to Ground Fault", 6th Iranian Conference on Electrical and Electronics Engineering, Islamic Azad University of Gonabad, Aug. 2014 (in Persian).
- A. Sefidgar-Dezfuli, **A. Saffarian**, and M. Saniei, "Power Scheduling of Distributed and Clean Energy Resources for Optimal and Stable Operation of a Microgrid", The Second National Conference on New and Clean Energy, Shahid Mofteh University of Hamadan, Dec. 2013 (in Persian).

- E. Shayani, **A. Saffarian**, and F. Razavi, "New Method for Setting and Coordination of Distance Relays Protection Zones in Presence of UPFC", 28th International Power System Conference, Niroo Research Institute, Tehran, Nov. 2013 (in Persian).
- E. Shayani, **A. Saffarian**, and M. Jourabian, "Setting and Coordination of Distance Relays in Presence of UPFC", First National Conference on Electrical and Computer in South Iran, Islamic Azad University, Khormuj Branch, May 2013 (in Persian).
- G. Derakhshandeh, **A. Saffarian**, H. Harounabadi, and H. Karimi, "Improvement of operation of D-STATCOM based on Fuzzy logic for Power Quality Improvement of Distribution Networks", The First National Conference on Electricity and Computer in South Iran, Islamic Azad University, Khormuj Branch, May 2013 (in Persian).
- **A. Saffarian**, H. Golzar and M. M. Shafiei, "Propagation manner of voltage sags in industrial networks and methods of mitigating their effects", 27th International Power System Conference, Niroo Research Institute, Tehran, Nov. 2012 (in Persian).
- **A. Saffarian**, and M. Sanaye-Pasand, "Fast detector of symmetrical fault during power swing based on the variation of active power," The International Conference on Electrical Engineering, Okinawa, Japan, July 6-10, 2008
- **A. Saffarian**, M. Sanaye-Pasand, and H. Asadi, "Performance investigation of new combinational load shedding schemes," Joint Int. Conf. Power System Technology and IEEE Power India Conf., New Delhi, India, Oct. 12–15, 2008.
- **A. Saffarian**, B. Moradzadeh, M. Sanaye-Pasand, and S.H. Hosseinian, "On-line prediction of closest loadability margins using neural networks," 2007 IEEE Tencon Conf., Taipei, Oct. 30 -Nov. 2, 2007.
- **A. Saffarian**, and S. H. Hosseinian, "Presenting a New Method for Estimating the Location, Size and Type of Harmonic Loads in the Power Grid", 21st International Power System Conference, Niroo Research Institute, Tehran, Nov. 2006 (in Persian).
- **A. Saffarian**, S. Montaser-Koohsari, and V. Majedi-Asl, "Quantitative Study of Factors Affecting the Zero Sequence Impedance of Ground Cables in an Industrial Complex", 21st International Power System Conference, Niroo Research Institute, Tehran, Nov. 2006 (in Persian).

#### **RESEARCH PROJECTS:**

- Longitudinal differential protection of double-circuit transmission lines and three-terminal transmission lines using incremental complex power method (in support of an MSc dissertation), Khuzestan Regional Electric Company, Role: Manager, Project status: Completed on Nov. 2020.

- Designing and feasibility study of a system for locating various types of faults in Khuzestan electricity network using wide-area monitoring system and neural networks (in support of an MSc dissertation), Khuzestan Regional Electric Company, Role: Second manager, Project status: In Progress, Dec. 2019 - present.
- Investigating the causes of sympathetic tripping of adjacent MV feeders in distribution networks and providing a solution to the problem, Khuzestan Power Distribution Company, Role: Manager, Project status: 100% progress.
- Feasibility study of using the capabilities of phasor measurement units (PMUs) to improve the operation of distance relays in transmission lines of the Khuzestan power network, Khuzestan Regional Electric Company, Role: Manager, Project status: Completed on June 2019.
- Improving the performance of capacitive voltage transformers using active filters (in support of an MSc dissertation), Khuzestan Regional Electric Company, Role: Consultant, Project status: Completed on Jan. 2017.
- Providing expert and consulting services for designing, manufacturing and performing the necessary tests for the production of indoor units of chillers assigned by the company, Toochal Electric Company, Role: Partner, Project status: Completed on Sept. 2020.
- Improving the power quality of distribution networks using dynamic voltage restorer (DVR) based on an adaptive fuzzy-neural control system (in support of an MSc dissertation), Ilam Gas Refining Company, Role: Manager, Project status: Completed on Sept. 2015.
- Enhancing D-STATCOM performance based on fuzzy-logic to improve power quality in distribution networks (in support of an MSc dissertation), Parsian Gas Refining Company, Role: Manager, Project status: Completed on Nov. 2013.
- Optimal setting and coordination of distance and over-current relays in the presence of FACTS devices (in support of an MSc dissertation), National Iranian South Oil Company, Role: Manager, Project status: Completed on Aug. 2013.
- Investigating the causes of improper performance of relays of Maroon Petrochemical Network due to short circuit and subsequent instability of generators of Fajr Petrochemical Company, Maroon Petrochemical Company, Role: Partner, Project status: Completed on Sept. 2012.
- Investigating the causes of voltage instability of Fajr Petrochemical Power Grid and sub-networks, Fajr Petrochemical Company, Role: Partner, Project status: Completed on Aug. 2012.

## **PROFESSIONAL MEMBERSHIPS AND EXECUTIVE ACTIVITIES:**

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- Iranian Society of Engineering Education (ISEE), Dec. 2020-present
- Managing Editor of [Journal of Applied Research in Electrical Engineering \(JAREE\)](#), Sept. 27, 2017 - present
- Scientific Secretary of [The First Conference on Applied Research in Electrical Engineering \(ICAREE\)](#), 2020
- Representative of the Electrical Department in the Industry Relations Working Group of the Faculty of Engineering, Feb. 7, 2017 - present
- Member of Scientific Committee of the Fourth National Conference on Electricity Consumption Optimization, 2017
- Deputy of head of the Electrical Engineering Department, Jan. 22, 2013 - Jan. 23, 2015

## **LANGUAGES:**

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Persian (native)

English (good)