



Shahid Beheshti University  
Tehran 1983969411, IRAN



# *Curriculum Vitae*

Vahid Vahidinasab, Ph.D.

29 August, 2018



Scopus





# Vahid Vahidinasab

*Ph.D., IEEE Senior Member*

*Birth Date: 11 September 1982*

*Gender: Male*

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CV last updated on: **Wednesday, August 29, 2018**






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# Vahid Vahidinasab

*Ph.D., IEEE Senior Member*

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## 1. Academic, Research and Administrative Positions

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- 2010-present** Assistant Professor, Department of Electrical Engineering, Shahid Beheshti University (SBU), Tehran, IRAN
- 2015-present** Founder and Director of SOHA Smart Energy Systems Laboratory, Department of Electrical Engineering, Shahid Beheshti University (SBU), Tehran, IRAN
- 2016-2018** Vice-President for Management and Resources Development, Niroo Research Institute (NRI), Tehran, IRAN
- 2014-2016** Director General for Research, Niroo Research Institute (NRI), Tehran, IRAN
- 2013-2014** Director of Education Affairs Office, Abbaspour School of Engineering, Shahid Beheshti University (SBU), Tehran, IRAN
- 2012-2013** Director of Education Affairs Office, Power and Water University of Technology (PWUT), Tehran, IRAN
- 2013-2014** Member of Selected Committee for Scientific Promotion, Department of Electrical Engineering, Shahid Beheshti University (SBU), Tehran, IRAN
- 2012-2013** Technical Consultant, Strategic Planning and Control Department, MAPNA Group, IRAN
- 2010-2012** Technical Consultant, Energy Research Center, Niroo Research Institute (NRI), IRAN
- 2004-2010** Research Assistant, Green Research Center, Department of Electrical Engineering, Iran University of Science and Technology (IUST), Tehran, IRAN
- 2006-2010** Research Assistant, Energy Research Center, Niroo Research Institute (NRI), IRAN
- 2004-2006** Research Assistant, Electricity Research Center, Niroo Research Institute (NRI), IRAN



## 2. Education

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- Ph.D.** Power Systems Engineering, **February 2010**  
Department of Electrical Engineering, Iran University of Science and Technology (IUST), Tehran, IRAN,  
Dissertation title: “**Optimal Bidding Strategy of Power Producers in Joint Energy and Spinning Reserve Markets**”  
Supervisor: Professor Shahram Jadid  
Committee members: Professor Nima Amjady, Professor Heydarali Shayanfar, Professor Mohsen Parsa-Moghadam, Professor Mohsen Kalantar, Mr. Eng. Ahad Kazemi
- M.Sc.** Power Systems Engineering, **October 2006**  
Department of Electrical Engineering,  
Dissertation title: “**Short Term Electricity Price Forecasting in Power Markets Using Artificial Neural Networks**”  
Supervisor: Mr. Eng. Ahad Kazemi, Advisor: Professor Shahram Jadid  
Iran University of Science and Technology (IUST), Tehran, IRAN
- B.Sc.** Power System Engineering, **September 2004**  
Department of Electrical Engineering, K. N. Toosi University of Technology (KNTU), Tehran, IRAN  
Supervisor: Mr. Eng. Homayoon Haeri

## 3. Awards and Honors

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- IEEE Senior member, 2017
- Supervision of the Acknowledged BSc Thesis in Electrical Engineering, Iranian Society of Smart Grids, 2015
- Supervision of the Best BSc Thesis in Electrical Engineering, Iranian Smart Home Festival, 2014
- Recipient of the Iranian Young Professors Prize, 2011
- Recipient of the Elites National Foundation Prize, 2010
- Scholarship for PhD program from the Ministry of Science, research and Technology, 2006
- First rank Student of MSc Degree in the Department of Electrical Engineering, Iran University of Science and Technology, 2006
- Distinguished Researcher, Department of Electrical Engineering, Iran University of Science and Technology, 2005
- Distinguished Student, Department of Electrical Engineering Iran University of Science and Technology, 2005
- Scholarship for MSc program from the Ministry of Science, research and Technology, 2004
- Scholarship for BSc program from the Ministry of Science, research and Technology, 2000
- Rank 329 among 350,000 participants of nationwide universities entrance exam, 2000.



#### 4. Research Interests

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I am enthusiastically interested in different research and technology aspects of “*Energy Systems Integration*” including the Integration of Storage and Renewable Energy Resources, PHEVs and IOT, Demand Response, Smart Grids/Microgrids/Nanogrids Design, Operation and Economics, Power Markets, Reliability Assessment (Adequacy and Security) of Power Components/Systems, and Application of Artificial Intelligence and Optimization Methods in Power System Studies (modeling, forecasting and optimization).



## 5. Research Experiences & Project Management

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- 2014-present      Project manager of the following practical research project:
- An Environmental Techno-Economic Assessment of Microgrids, National Elites Foundation
  - Scenario Development of Lines and Substations Maneuver in Qazvin Electric Distribution Network by Considering Reliability and Load Uncertainty, Qazvin Electric Power Distribution Company, Under Contract,
- 2012-2013      Technical Consultant for MAPNA Group in doing businesses at smart grids and distributed generation manufacturing.
- MAPNA Group is an Iranian enterprise, which operates in the area of construction and development of thermal power plants under EPC scheme, independent power plants (IPP), oil and gas as well as rail traction projects.
- 2010-2014      Technical Consultant for Energy Research Center, Niroo Research Institute (NRI) in unit commitment of generation companies as well as price forecasting issues and in the following practical research projects for two realistic case studies:
- NRI is the only Electric Power Research Institute of IRAN Ministry of Energy with the yearly budget of \$ 60M which is responsible for managing the research and technology of Iranian power industry. NRI's research covers different aspects of electric power including generation, delivery, renewables integration, electricity markets and grid modernization.
- Software Design and Development for Optimal Bidding Strategy of Tehran Regional Electric Company in Iran Electricity Market
  - Software Design and Development for Optimal Bidding Strategy of Gilan Regional Electric Company in Iran Electricity Market
- 2004-2010      Research Assistant, Department of Electrical Engineering, Iran University of Science and Technology (IUST) in the following practical research project:
- Energy Management for Energy Intensive Industries of Iran
- 2006-2010      Research Assistant, Energy Research Center, Niroo Research Institute (NRI) in the application of neural networks in time series prediction and in the following practical research project:
- Software Design and Development for Electric Price Forecasting of the Azarbaijan Regional Electric Company



- 2004-2006      Research Assistant, Electricity Research Center, Niroo Research Institute (NRI) in the application of neural networks and fuzzy systems in time series prediction and in the following practical research projects:
- Software Design and Development for Electric Load Forecasting of the Iran Grid Management Company (IGMC)
  - Software Design and Development for Electric Load Forecasting of the Khoozestan Regional Electric Company
  - Software Design and Development for Electric Load Forecasting of the Bakhtar Regional Electric Company



## 6. Publications

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### 6.1. Summary of Scientific Publications

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Journal papers: 39  
Conference papers: 42

### 6.2. Citation

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624 (h-index: 12 & i10-index: 15) in *Google Scholar*   
450 (h-index: 11) in *Scopus* 

### 6.3. Peer Reviewed Journal Papers

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- 1) S. A. Alavi, K. Mehran, Y. Hao, A. Rahimian, H. Mirsaiedi, **V. Vahidinasab**, "A Distributed Event-Triggered Control Strategy for DC Microgrids Based on Publish-Subscribe Model Over Industrial Wireless Sensor Networks," *IEEE Transactions on Smart Grid*, Accepted June 2018, DOI: #.
- 2) S. Moradi, **V. Vahidinasab**, M. Kia, P. Dehghanian, "A Mathematical Framework for Reliability-Centered Maintenance in Microgrids," *International Transactions on Electrical Energy Systems*, Accepted June 2018, DOI: 10.1002/etep.2691.
- 3) R. Sharifi, A. Anvari-Moghaddam, S. H. Fathi, J. M. Guerrero, **V. Vahidinasab**, "An Optimal Market-Oriented Demand Response Model for Price-Responsive Residential Consumers," *Energy Efficiency*, Vol. XX, July 2018, DOI: 10.1007/s12053-018-9713-x.
- 4) H. Sohrabi-Vafa, **V. Vahidinasab**, "Wind Power Forecasting by a New Hybrid Forecast Engine Composed of GA/EPSo-Based Mutual Information and Group Method of Data Handling (GMDH)," *Computational Intelligence in Electrical Engineering*, Accepted, July 10, 2018, pp. #, DOI: 10.22108/isee.2018.89972.0 (In Persian).
- 5) H. R. Arasteh, **V. Vahidinasab**, M. S. Sepasian, J. Aghaei, "Stochastic System of Systems Architecture for Adaptive Expansion of Smart Distribution Grids," *IEEE Transactions on Industrial Informatics*, 2018, DOI: 10.1109/TII.2018.2808268.
- 6) A. Abessi, A. Zakariazadeh, **V. Vahidinasab**, M. S. Ghazizadeh, K. Mehran, "End-User Participation in a Collaborative Distributed Voltage Control and Demand Response Program," *IET Generation, Transmission & Distribution*, 2018, Accepted for Publication.
- 7) A. Nikoobakht, J. Aghaei, T. Niknam, **V. Vahidinasab**, H. Farahmand, M. Korpas, "Toward Robust OPF Solution Strategy for the Future AC/DC Grids: Case of VSC-HVDC Connected Offshore Wind Farms," *IET Renewable Power Generation*, 2018, DOI: 10.1049/iet-rpg.2017.0575.
- 8) A. Bagheri, **V. Vahidinasab**, K. Mehran, "A Novel Multiobjective Generation and Transmission Investment Framework for Implementing 100% Renewable Energy Sources," *IET Generation, Transmission & Distribution*, Vol. 12 (2), 2018, pp. 455-465, DOI: 10.1049/iet-gtd.2017.0976.





- 9) A. Nikoobakht, J. Aghaei, M. Mardaneh, T. Niknam, **V. Vahidinasab**, "Moving Beyond the Optimal Transmission Switching: Stochastic Linearized SCUC for the Integration of Wind Power Generation and Equipment Failures Uncertainties," *IET Generation, Transmission & Distribution*, 2017, DOI: 10.1049/iet-gtd.2017.0617.
- 10) S. Pirouzi, J. Aghaei, **V. Vahidinasab**, T. Niknam, A. Khodaei, "Robust linear architecture for active/reactive power scheduling of EV integrated smart distribution networks," *Electric Power Systems Research*, Vol. 155, Feb. 2018, pp. 8-20.
- 11) R. Sharifi, A. Anvari-Moghaddam, S. H. Fathi, J. M. Guerrero, **V. Vahidinasab**, "Dynamic pricing: An Efficient Solution for True Demand Response Enabling," *Journal of Renewable and Sustainable Energy*, Vol. 9, Oct. 2017, DOI: 10.1063/1.5009106.
- 12) S. Pirouzi, J. Aghaei, T. Niknam, M. Shafie-Khah, **V. Vahidinasab**, J. P. S. Catalão, "Two Alternative Robust Optimization Models for Flexible Power Management of Electric Vehicles in Distribution Networks," *Energy*, Vol. 141, 2017, pp. 635-651., DOI: 10.1016/j.energy.2017.09.109.
- 13) R. Sharifi, A. Anvari-Moghaddam, S. H. Fathi, J. M. Guerrero, **V. Vahidinasab**, "An Economic Demand Response Model in Liberalized Electricity Markets with Respect to Flexibility of Consumers," *IET Generation, Transmission & Distribution*, Vol. 11 (17), 2017, pp. 4291-4298, DOI: 10.1049/iet-gtd.2017.0412.
- 14) H. R. Arasteh, M. S. Sepasian, **V. Vahidinasab**, P. Siano, "SoS-Based Multiobjective Distribution System Expansion Planning," *Electric Power Systems Research*, Vol. 141, 2017, pp. 392-406.
- 15) R. Sharifi, S. H. Fathi, **V. Vahidinasab**, "A Review on Demand-Side Tools in Electricity Market," *Renewable and Sustainable Energy Reviews*, Vol. 72, 2017, pp. 565-572.
- 16) A. Abessi, **V. Vahidinasab**, M. S. Ghazizadeh, "Centralized Support Distributed Voltage Control by using End-Users as Reactive Power Support," *IEEE Transactions on Smart Grid*, Vol. 7, No. 1, Jan. 2016, pp. 178-188.
- 17) H. R. Arasteh, M. S. Sepasian, **V. Vahidinasab**, "The Incorporation of Distribution System Reconfiguration and Expansion Planning Problems Considering the Role of Demand Response Resources," *Electrical Systems and Signals*, Vol. 3, April 2015, pp. 23-36.
- 18) R. Sharifi, S. H. Fathi, **V. Vahidinasab**, "Customer Baseline Load Models for Residential Sector in a Smart-Grid Environment," *Energy Reports*, Vol. 2, Nov. 2016, pp. 74-81.
- 19) N. Olfatinejad, M. Ahmadian, **V. Vahidinasab**, "A Comprehensive AC Load Flow Based framework for Concurrent Planning of Transmission Networks Expansion and Reactive Power Resources: an MILP Formulation," *The Modares Journal of Electrical Engineering*, Vol. 14, 2016, pp. 53-62.
- 20) H. Arasteh, M. S. Sepasian, **V. Vahidinasab**, "An aggregated model for coordinated planning and reconfiguration of electric distribution network," *Energy*, Vol. 94, Jan. 2016, pp. 786-798.



- 21) M. Shivaie, M. T. Ameli, M. S. Sepasian, P. D. Weinsier, **V. Vahidinasab**, "A Multistage Framework for Reliability-Based Distribution Expansion Planning Considering Distributed Generations by a Self-Adaptive Global-Based Harmony Search Algorithm," *Reliability Engineering and System Safety*, Vol. 139, Jul. 2015, pp. 68-81.
- 22) A. Abessi, **V. Vahidinasab**, M. S. Ghazizadeh, "Distributed Reactive Power Control by Considering End-consumers," *Journal of Energy Engineering and Management*, Vol. 7, No. 1, Jan. 2015, pp. 14-23 (In Persian).
- 23) H. R. Arasteh, M. S. Sepasian, **V. Vahidinasab**, "Toward a Smart Distribution System Expansion Planning by Considering Demand Response Resources," *Journal of Operation and Automation in Power Engineering*, Vol. 3, No. 2, Autumn 2015, pp. 116-130.
- 24) B. Rezaei, M. S. Ghazizadeh, **V. Vahidinasab**, "Determination of Private DG Energy Sourced Electricity Purchasing Price by Discos with Considering the Capacitor Placement and ENS Costs," *Iranian Journal of Electrical and Computer Engineering*, Vol. 46, No.3, Fall 2016, pp. 227-235 (In Persian).
- 25) E. Hosseini, M. S. Sepasian, H. R. Arasteh, **V. Vahidinasab**, "Coordinated Framework for Reconfiguration and Direct Load Control to Meet the Challenges of Distribution Systems Operation," *Iranian Journal of Electrical and Computer Engineering*, Vol. 14, No. 3, Fall 2016, pp. 179-189 (In Persian).
- 26) A. Abessi, **V. Vahidinasab**, M. S. Ghazizadeh, "Analysis of the Impact of Constant Voltage DGs on Distributed Voltage Control of Smart Grids by Using End-Consumers," *Tabriz Journal of Electrical Engineering*, Vol. 46, No.1, Spring 2016, pp. 267-275 (In Persian).
- 27) **V. Vahidinasab**, R. Khademzadeh, "Modified CSS Approach for Environmental/Economic load dispatch: A multiobjective approach," *Iranian Journal of Energy*, Vol. 18, No. 1, Oct. 2015 (In Persian).
- 28) Y. Parzivand, **V. Vahidinasab**, "Reliability-Based Coordination of the Wind and Pumped-Storage Units in an Electricity Market," *Iranian Journal of Energy*, Vol. 17, Oct. 2014 (In Persian).
- 29) Y. Parzivand, **V. Vahidinasab**, "A Novel Robust Optimization Based Offering Strategy for Wind and Pumped-Storage Units," *Iranian Electric Industry Journal of Quality Productivity*, Vol. 3, Sep. 2014, pp. 27-37 (In Persian).
- 30) **V. Vahidinasab**, "Optimal Distributed Energy Resources Planning in a Competitive Electricity Markets: Multiobjective Optimization and Probabilistic Design," *Renewable Energy*, Vol. 66, Jun. 2014, pp. 354-363.
- 31) B. Jeddi, P. Ramezanzpour, **V. Vahidinasab**, "Dynamic Approach for Distribution Networks Expansion Planning Considering Distributed Generations Using a Synthetic Harmony Search Algorithm," *Iranian Electric Industry Journal of Quality Productivity*, Vol. 2, Mar. 2014, pp. 41-48 (In Persian).



- 32) B. Jeddi, **V. Vahidinasab**, "A Modified Harmony Search Method for Environmental/Economic Load Dispatch of Real-World Power Systems," *Energy Conversion and Management*, Vol. 78, Feb. 2014, pp. 661-675.
- 33) N. Amjady, **V. Vahidinasab**, "Security-Constrained Self-Scheduling of Generation Companies in Day-Ahead Electricity Markets Considering Financial Risk," *Energy Conversion and Management*, Vol. 65, Jan. 2013, pp. 164-172.
- 34) **V. Vahidinasab**, S. Jadid, "Stochastic Multiobjective Self-Scheduling of a Power Producer in Joint Energy and Reserves Markets," *Electric Power Systems Research*, Vol. 80, No. 7, Jul. 2010, pp. 760-769.
- 35) **V. Vahidinasab**, S. Jadid, "Joint Economic and Emission Dispatch in Energy Markets: A Multiobjective Mathematical Programming Approach," *Energy*, Vol. 35, No. 3, Mar. 2010, pp. 1497-1504.
- 36) **V. Vahidinasab**, S. Jadid, "Normal Boundary Intersection Method for Suppliers' Strategic Bidding in Electricity Markets: An Environmental/Economic Approach," *Energy Conversion and Management*, Vol. 51, No. 6, Jun. 2010, pp. 1111-1119.
- 37) **V. Vahidinasab**, S. Jadid, "Bayesian Neural Network Model to Predict Day-Ahead Electricity Prices," *International Transactions on Electrical Energy Systems*, Vol. 20, No. 2, Mar. 2010, pp. 231-246.
- 38) **V. Vahidinasab**, S. Jadid, "Multiobjective Environmental/Techno-Economic Approach for Strategic Bidding in Energy Markets," *Applied Energy*, Vol. 86, No. 4, Apr. 2009, pp. 496-504.
- 39) **V. Vahidinasab**, S. Jadid, A. Kazemi, "Day-Ahead Price Forecasting in Restructured Power Systems Using Artificial Neural Network," *Electric Power Systems Research*, Vol. 78, No. 8, Aug. 2008, pp. 1332-1342.

#### **6.4. Under Review Manuscripts**

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### 6.5. Selected Conference Papers

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*Author of 42 peer-reviewed papers in national/international conferences including:*

N. Zarei, **V. Vahidinasab**, A. Estebarsari, Energy Management Strategy of Microgrids based on Benders Decomposition Method, IEEE 18th International Conference on Environment and Electrical Engineering and 2nd Industrial and Commercial Power Systems Europe, Italy, 2018 (Accepted).

R. Sharifi, S. Mohajeryami, S. H. Fathi, **V. Vahidinasab**, A predictive index based on discrete wavelet transform to improve the calculated customer baseline load (CBL) in demand response program, 2018 IEEE CPE-POWERENG, Doha, Qatar, Apr. 2018 (Accepted).

R. Sharifi, A. Anvari-Moghaddam, S. H. Fathi, J. Guerrero, **V. Vahidinasab**, An Economic Customer-Oriented Demand Response Model in Electricity Markets, 2018 IEEE International Conference on Industrial Technology (ICIT 2018), Lyon, France, Feb. 2018.

N. Zarei, **V. Vahidinasab**, An MILP Formulation for Centralized Energy Management Strategy of Microgrids, Smart Grid Conference 2016, Kerman, Dec. 2016.

A. Bagheri, **V. Vahidinasab**, Three-Phase OPF in Distribution Networks with High Penetration of DERs, Smart Grid Conference 2015, Tehran, Dec. 2015.

S. A. Ahmadi, H. Karami, **V. Vahidinasab**, G. B. Gharehpetian, Application of Biogeography Based Optimization Algorithm in Voltage Profile Improvement of Distribution Network by using DSTATCOM Considering Cable Aging Constraint, International Conference on Renewable Energies and Power Quality (ICREPQ'16), Madrid, 2016.

H. Karami, S. A. Ahmadi, G. B. Gharehpetian, **V. Vahidinasab**, Loadability Improvement in Distribution Network using DG Units by Application of Biogeography Based Optimization Algorithm Considering Cable Aging Constraint, International Conference on Renewable Energies and Power Quality (ICREPQ'16), Madrid, 2016.

H. Nezamabadi, **V. Vahidinasab**, Two Stage Decision Making of Technical Virtual Power Plants in Electricity Market Via Nash-SFE Equilibrium, 3rd International Istanbul Smart Grid Congress and Fair, Apr. 2015.

M. Tabarzadi, **V. Vahidinasab**, A Comprehensive Expansion Planning Model for Smart Electric Distribution Networks, 3rd International Istanbul Smart Grid Congress and Fair, Apr. 2015.

B. Jeddi, **V. Vahidinasab**, Optimal Operation Strategy of Distributed Generators in a Microgrid Including Energy Storage Devices, Smart Grid Conference 2013, Tehran, Dec. 2013.



**V. Vahidinasab** and S. Jadid, "On the Stochastic Self-Scheduling of a Power Producer in Simultaneous/Aggregated Energy and Reserves Markets," *Proceedings of Australasian Universities Power Engineering Conference, AUPEC'09*, Adelaide, Australia, Sep. 2009.

**V. Vahidinasab** and S. Jadid, "Normal Boundary Intersection Method for Multiobjective Environmental/Economic Load Dispatch," *Proceedings of North American Power Symposium, NAPS'08*, Calgary, Canada, Sep. 2008.

**V. Vahidinasab** and S. Jadid, "ANN Based Day-Ahead Peak Load Forecasting," *Proceedings of International Conference on Power Systems, ICPS'07*, Bangalore, India, Dec. 2007.

**V. Vahidinasab** and S. Jadid, "Bayesian Neural Networks for Electricity Price Forecasting in the Electricity Markets," *Proceedings of Australasian Universities Power Engineering Conference, AUPEC'07*, Perth, Australia, Dec. 2007.

B. Kiani, S. Jadid, R. Fekri, and **V. Vahidinasab**, "Examining the Impact of Deregulation on Generation Capacity Growth in Economies in Transition by System Dynamics Modeling," *Proceedings of IEEE International Symposium on Industrial Electronics, ISIE'06*, Montreal, Canada, Jul. 2006.



## 7. Teaching Experiences

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### ❖ **Shahid Beheshti University (SBU)**

**2010-present**

#### Graduate courses:

- **Power Systems Reliability**
- **Power Systems Optimization**
- **Optimization Methods (Mathematical Approaches including Linear, Non-Linear, Multiobjective Approaches, Decomposition and Stochastic Optimization)**
- **Research Methodology**
- **Power Systems Short Circuit**

#### Undergraduate courses

- **Power Systems Analysis I**
- **Power Systems Analysis II**
- **Electrical Measurement Lab**

### ❖ **Iran University of Science and Technology (IUST)**

**2005-2009**

#### **- Instructor**

- **Introduction to Electrical Engineering I**

#### **- Instructor (Teaching Associate),**

- **Restructured Power Systems**

Responsible for developed course materials and teaching the fundamentals of linear/non-linear optimization as well as security-constrained optimal power flow and unit commitment,

#### **- Teaching Associate, Iran University of Science and Technology (IUST)**

- **Power Systems Analysis (1 semester)**

#### **- Laboratory Instructor, Iran University of Science and Technology (IUST)**

- **Introduction to Electrical Engineering Lab (2 semesters)**



## 8. Supervision

### 8.1. Summary of supervisions

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➤ <b>Number of Thesis Supervision:</b>	<b>72</b>
<i>Number of PhD Students:</i>	8
<i>Number of MSc Students:</i>	38
<i>Number of BSc Students:</i>	26

### 8.2. Ph.D. Students

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➤ **8 Ph.D. students (including 2 Alumni and 6 Ongoing Students)**

The most of the thesis subjects concentrated on different aspects of energy systems integration including integration of renewables, storages, PHEVs and IOT into the electric power systems as well as operation, planning and economics of smart grids/microgrids/nanogrids.

#### *Alumni*

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1. Hamidreza Arasteh ([S](#), [R](#)), 2012 to 2016 (Co-Supervisor)

*Thesis Title: Active Distribution Systems Expansion Planning Incorporating Distributed Energy Resources*

2. Reza Sharifi ([R](#)), 2012 to 2018 (Advisor)

*Thesis Title: Optimal Bidding Strategy of Retail Companies by Considering Demand Response Programs*

#### *Ongoing*

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1. Mahdi Habibi, 2017 to present (Supervisor)
2. Peyman Mousavi, 2017 to present (Supervisor)
3. Habibollah Raoufi, 2015 to present (Supervisor)
4. Maryam Borhani Dizaji, 2015 to present (Supervisor)
5. Hossein Nezamabadi, 2014 to present (Supervisor)
6. Sayed Mohsen Hashemi, 2013 to present (Supervisor)





### 8.3. Thesis-based Master (MSc) Students

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➤ **38 MSc students (including 27 Alumni and 11 Ongoing Students)**

The most of the thesis subjects concentrated on different aspects of energy systems integration including integration of renewables, storages, PHEVs and IOT into the electric power systems as well as operation, planning and economics of smart grids/microgrids/nanogrids.

#### *Alumni*

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1. Emad Mirzaei, September 2015 to 2018 (Supervisor)  
*Thesis Title: Design and Development of Smart Home Energy Management Application Using Standard Protocols*
2. Chenoor Ardalan, September 2015 to 2018 (Supervisor)  
*Thesis Title: Reliability-Centered Architecture of Hybrid (AC/DC) Smart Homes*
3. Maryam Farahani, September 2015 to 2018 (Supervisor)  
*Thesis Title: Optimal Day-ahead Scheduling of a Rural Micro-grid with Islanding Condition*
4. Seyed Alireza Ahmadi, September 2015 to 2017 (Supervisor)  
*Thesis Title: Design and Development of a stochastic multiobjective framework for secure reconfiguration of smart distribution networks*
5. Niloofer Zarei, September 2014 to 2017(Supervisor)  
*Thesis Title: Microgrids Energy Management Strategy: Connected vs. Islanded*
6. Salar Moradi, September 2014 to 2017 (Supervisor)  
*Thesis Title: A Mathematical Model for RCM-based Asset Management of Microgrids*
7. Saeed Bahrami, September 2013 to September 2016 (Co-Supervisor) (Supervisor)  
*Thesis Title: Design and Implementation of AC-DC Converters for Reactive Power Control of Smart Grids by Using Home Appliances*
8. Saaed Jalilian, September 2013 to September 2016 (Co-Supervisor)  
*Thesis Title: Design and Implementation of AC-DC Converters for Reactive Power Control of Smart Grids by Using Plug-in Hybrid Electrical Vehicles (PHEVs)*
9. Alireza Sheikh-Kabir, September 2013 to September 2016 (Co-Supervisor)  
*Thesis Title: Power Systems Topology Analysis and State Estimation Using the Concurrent Data of Conventional Measurements Units and PMUs*





10. Saeed Rostami, September 2013 to September 2016 (Supervisor)  
*Thesis Title: Microgrids Optimal Strategy in the Retail Markets*
11. Mahsa Babagheibi, September 2014 to September 2016 (Supervisor)  
*Thesis Title: Optimal Interconnection of Rural Isolated Microgrids Considering Reliability and Voltage Indices*
12. Sayed Loghman Heidari, September 2013 to August 2016 (Co-Supervisor)  
*Thesis Title: Visualization and Situational Awareness Using Phasor Measurement Units*
13. Hossein Rafiee, September 2013 to August 2016 (Co-Supervisor)  
*Thesis Title: On the Tracking of Power Systems State Variables Using PMUs*
14. Abed Bagheri, 2013 to 2016 (Supervisor)  
*Thesis Title: Optimal Operation of Smart Electric Power Distribution Networks with Fully Penetration of Distributed Energy Resources*
15. Mahdi Tabarzadi, 2012 to 2015 (Supervisor)  
*Thesis Title: Multiobjective planning of smart distribution networks*
16. Mohammad Mohammadbeygi-Fard, 2012 to 2015 (Supervisor)  
*Thesis Title: Expansion planning of smart distribution systems: a decomposition approach*
17. Hamidreza Sheikhzadeh Bahabadi, 2012 to 2015 (Supervisor)  
*Thesis Title: Stochastic distribution expansion planning: a robust optimization approach*
18. Bahram Eslami, 2012 to 2015 (Co-Supervisor)  
*Thesis Title: Robust generation expansion planning*
19. Mahdi Rostami-Fajr, 2012 to 2015 (Co-Supervisor)  
*Thesis Title: Coordinated generation and transmission expansion planning*
20. Nader Olfatinejad, 2012 to 2015 (Co-Supervisor)  
*Thesis Title: Robust transmission network expansion planning*
21. Behnam Rezaei, 2012 to 2015 (Advisor)  
*Thesis Title: Determination of optimal electricity purchase price from private distributed generation units with considering the installation of capacitor process*
22. Farshid Sedaghati, 2011 to 2014 (Supervisor)  
*Thesis Title: Optimal V2G management as a demand response program*
23. Ahad Abessi, 2011 to 2014 (Supervisor)



*Thesis Title: Distributed voltage control of smart grids by using end-users as reactive power support*

24. Babak Jeddi, 2012 to 2013 (Advisor)

*Thesis Title: Dynamic reliability-based DG planning in a real-world distribution system*

25. Yousef Parzivand, 2011 to 2013 (Supervisor)

*Thesis Title: Coordinated operation of the wind and pumped-storage hydro units*

26. Rashid Khademzadeh, 2011 to 2013 (Co-Supervisor)

*Thesis Title: Self-healing in smart electrical grids*

27. Komeil Ramezani-Paji, 2010-2012 (Advisor)

*Thesis Title: Optimal designing of load management contracts*

### ***Ongoing***

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1. Ali Soleymani, 2017 to present (Supervisor)
2. Maryam Hamidi, 2017 to present (Supervisor)
3. Alireza Aliakbari, 2017 to present (Supervisor)
4. Afshin Heshmati, 2017 to present (Co-Supervisor)
5. Mohammad Nasimifar, 2017 to present (Co-Supervisor)
6. Hossein Heidari, 2017 to present (Co-Supervisor)
7. Arman Armiun, 2016 to present (Supervisor)
8. Amir Saman Godazi Langroodi, 2016 to present (Supervisor)
9. Sahar Zarei, 2016 to present (Supervisor)
10. Farzaneh Azadmehr, 2015 to present (Co-Supervisor)
11. Mojtaba Attar Bejestani, 2015 to present (Co-Supervisor)



#### 8.4. Thesis-based Undergraduate (BSc) Students

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➤ **26 BSc students (including 26 Alumni and 0 Ongoing Students)**

The most of the thesis subjects concentrated on different aspects of energy systems integration including integration of renewables, storages, PHEVs and IOT into the electric power systems as well as operation, planning and economics of smart grids/microgrids/nanogrids.

##### *Alumni*

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1. Sepideh Norouzi, Undergraduate Research Student, 2018
2. Saeed Ghorbani, Undergraduate Research Student, 2016 to 2017
3. Hamed Taghipour, Undergraduate Research Student, 2015 to 2016
4. Mohammadreza Sheikhha, Undergraduate Research Student, 2014 to 2016
5. Behnam Takallu, Undergraduate Research Student, 2014 to 2016
6. Farshid Pourghorban, Undergraduate Research Student, 2014 to 2015
7. Sediqe Kolaei, Undergraduate Research Student, 2014 to 2015
8. Behrad Chatrchi, Undergraduate Research Student, 2013 to 2014
9. Mehrangiz Ramezan, Undergraduate Research Student, 2013 to 2014
10. Alireza Hosseini, Undergraduate Research Student, 2013 to 2014
11. Seyed Mohammad Miresmaeili Undergraduate Research Student, 2013 to 2014
12. Keyvan Khatibi, Undergraduate Research Student, 2014 to 2015
13. Ali Ramezani, Undergraduate Research Student, 2013 to 2014
14. Keyvan Khatibi, Undergraduate Research Student, 2013 to 2014
15. Farahnaz Asadzadeh Zanjani, Undergraduate Research Student, 2013 to 2014
16. Hesam Soroushzad, Undergraduate Research Student, 2013 to 2014
17. Mohammad Afkar, Undergraduate Research Student, 2012 to 2014
18. Seyed Milad Ghoreishi, Undergraduate Research Student, 2012 to 2013
19. Mahdi Golmohammadi, Undergraduate Research Student, 2012 to 2013
20. Alireza Pourbayati, Undergraduate Research Student, 2012 to 2013



21. Ma'sumeh Moghimi Esfandabad, Undergraduate Research Student, 2012 to 2013
22. Behnaz Safari, Undergraduate Research Student, 2012 to 2013.
23. Mahnaz Ebrahimi Davabsari, Undergraduate Research Student, 2012 to 2012
24. Hossein Rezaei Farsheh, Undergraduate Research Student, 2012 to 2012
25. Mahdi Tabarzadi, Undergraduate Research Student, 2012 to 2012
26. Mohammad Movahedi Monfared, Undergraduate Research Student, 2011 to 2012

*Ongoing*

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## 9. Services

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- *Reviewer of the following International ISI Journals:*
  - IEEE Transactions on Power Systems (IEEE-TPWRS)
  - IEEE Transactions on Sustainable Energy (IEEE-TSTE)
  - IEEE Transactions on Industrial Informatics (IEEE-TII)
  - IEEE Systems Journal (IEEE-SJ)
  - IET Generation, Transmission, and Distribution (IET-GTD)
  - IET Renewable Power Generation (IET-RPG)
  - Electric Power Systems research (ELSEVIER)
  - Energy (ELSEVIER)
  - International Transactions on Electrical Energy Systems (John Wiley & Sons)
  - International Journal of Electrical Power and Energy System (ELSEVIER)
  - Applied Soft Computing (ELSEVIER)
  - Energy Conversion & Management (ELSEVIER)
  - Sustainable Energy Technologies and Assessments (ELSEVIER)
  - Hydrogen Energy (ELSEVIER)
  - Machine Learning Journal (Springer)
  - Cogent Engineering (Taylor & Francis Group)
  - Iranian Journal of Science & Technology, Transaction of Electrical Engineering
  - Tabriz Journal of Electrical Engineering
  - Iranian Journal of Energy
  
- *Giving lectures in high schools to motivate students toward higher education.*



## 10. Honorary and Professional Committee Memberships

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### ➤ Membership

- Senior Member of Institute of Electrical and Electronic Engineers (IEEE)
- Member of Iranian Society of Smart Grids (ISOSG)
- Committee Member, Steering Committee for Power Systems Operation Studies, Niroo Research Institute (NRI)
- Committee Member, Steering Committee for Roadmap Development of Iran Power Grid Reliability, Niroo Research Institute (NRI)
- Head of Research and Education Committee of Iranian Society of Smart Grids (ISOSG)
- Member of Elites National Foundation
- Member of Iran Energy Association (IEA)

### ➤ Organizer

- Track Chair, The 4th Iranian Conference on Smart Grids, Niroo Research Institute (NRI), Tehran, Iran, Dec. 2014.
- Publicity Chair, The 4th Conference on Thermal Power Plants (Gas, Combined Cycle, Steam), 2012.

### ➤ Conferences Activities

- Member of Technical Program Committee, [2nd International Conference on Smart Energy Systems and Technology SEST-2019](#), Porto, Portugal, Sep. 2019.
- Member of Steering and Technical Program Committee, [8th Iranian Conference on Smart Grids](#), University of Kurdistan, Kurdistan, Sanandaj, Iran, Dec. 2018.
- Member of Technical Program Committee, [First National Conference on Resilience of Electricity Networks](#), University of Mazandaran, Babolsar, Iran, Dec. 2018.
- Member of Steering and Technical Program Committee, 7th Iranian Conference on Smart Grids, Shahid Rajaei Teacher Training University, Tehran, Iran, Dec. 2017.
- Member of Technical Program Committee, 5th International Reliability and Safety Engineering Conference, University of Shiraz, Shiraz, Iran, May. 2018.
- Member of Steering and Technical Program Committee, 6th Iranian Conference on Smart Grids, Kerman University of Advanced Technology, Kerman, Iran, Dec. 2016.
- Member of Steering and Technical Program Committee, 5th Iranian Conference on Smart Grids, Iran University of Science and Technology, Tehran, Iran, Dec. 2015.
- Member of Technical Program Committee, 4th Iranian Conference on Smart Grids, Niroo Research Institute (NRI), Tehran, Iran, Dec. 2014.
- Member of Technical Program Committee, 22nd Iranian Conference on Electrical Engineering (ICEE 2014), Shahid Beheshti University, Tehran, Iran, May 2014.



- Member of Technical Program Committee, 3rd Iranian Conference on Smart Grids, Shahid Beheshti University, Tehran, Iran, Dec. 2013.
- Member of Technical Program Committee, 3rd Conference on Thermal Power Plants (Gas, Combined Cycle, Steam), Abbaspour University of Technology, Tehran, Iran, Dec. 2012.
- Member of Technical Program Committee, 2nd Iranian Conference on Smart Grids, Iran University of Science and Technology, Tehran, Iran, Dec. 2012.



## 11. Software Experiences

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### *Technical Software*

- The General Algebraic Modeling System (GAMS) programming
- MATLAB
- DiGSILENT Power Factory
- Power World Simulator

### *General Software*

- Microsoft Office
  - EndNote
  - EdrawMax
  - Prezi
  - Adobe Illustrator
  - Adobe Photoshop
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