



## Assoc. Prof. Dr. Reza Sirjani

Department of Electrical and Electronic Engineering, Faculty of Engineering,  
Eastern Mediterranean University (EMU),  
Famagusta, North Cyprus

### General Information

**Date and place of birth:** 18/12/1982 , Tehran , IRAN

**Nationality:** Iranian

**Family status:** Married with a child

**Tel:** +90 392 6302197 , **Mobile:** +90 5338880360

**Email:** reza.sirjani@emu.edu.tr , reza.sirjani@gmail.com

### Professional Preparation

Degree	Field of Study	University	Thesis Title	Supervisor(s)	Year
<b>B.Sc.</b>	Electrical Engineering (Power Systems)	Khajeh Nasir Toosi University of Technology  (Tehran, Iran)	Study and design of upgrading a two-circuit 132 kV transmission line to a single-circuit 230 kV (Saravan and Souran in Sistan)	Prof. Dr. Mohammade Tavakkoli Bina	<b>2006</b>
<b>M.Sc.</b>	Electrical Engineering (Power Systems)	Islamic Azad University, Tehran Science And Research Branch  (Tehran, Iran)	Transmission Network Planning in a Restructured Power System	Asst.Prof. Dr. Abolfazl Pirayesh Neghab  Asst.Prof. Dr. Babak Mozafari	<b>2008</b>
<b>Ph.D</b>	Electrical Engineering (Power Systems)	The National University of Malaysia (UKM)  ( Bangi, Slangor, Malaysia)	Optimal Placement and Sizing of Shunt Var Compensators in Power Systems Using Improved and Global Harmony Search Algorithms	Prof. Dr. Azah Mohamed  Assoc. Prof. Dr. Hussain Shareef	<b>2013</b>

## Professional Experiences

**2005-2009** Technical Unit , Transmission Lines Department , MOSHANIR Power Engineering Consultant (The Biggest Consultant Engineering Company in Iran)

- Being in several transmission lines projects in Iran as a technical consultant.
- Accompanying in 500kV transmission line project of Uzbekistan.
- Accompanying in the electrical network interconnecting project of UAE and Iran (HVDC).

## Academic Experiences

- 2018 – Present: **Assoc. Prof. Dr.**, *Eastern Mediterranean University (EMU), North Cyprus*
- 2017- 2018: **Asst. Prof. Dr.**, *Eastern Mediterranean University (EMU) , North Cyprus*
- 2014- 2017 : **Asst. Prof. Dr.**, *Cyprus International University (CIU) , North Cyprus*
- 2013– 2014 : **Asst.Prof.Dr.**, *Aryan Institute of Science and Technology, Babol, Iran.*
- 2013– 2014 : **Adjunct Asst.Prof.Dr.**, *Mazandaran University of Science & Technology (MUST) , Babol ,Iran.*
- 2008-2009: **Prat Time Lecturer**, *Hadaf institute of Higher education, Sary , Iran.*

## Selected Courses

<b>Course Name</b>	<b>University</b>	<b>No of Semesters</b>
Power System Harmonics ( <b>Post Graduates</b> )	<i>CIU</i>	<i>4</i>
Power System Protection and Control ( <b>Post Graduates</b> )	<i>CIU + EMU</i>	<i>5</i>
Electric Machinery Theory ( <b>Post Graduates</b> )	<i>Aryan Uni.</i>	<i>1</i>
Switching Transients in Power Systems ( <b>Post Graduates</b> )	<i>CIU</i>	<i>1</i>
Power System Analysis	<i>MUST Uni. + CIU +EMU</i>	<i>7</i>
Power Electronics	<i>CIU</i>	<i>4</i>
Power System Protection	<i>CIU</i>	<i>4</i>
Electrical Machinery / Electromechanical Energy Conversion	<i>MUST Uni.+ CIU + EMU</i>	<i>7</i>
Electromagnetic Theory (I)	<i>CIU</i>	<i>3</i>
High Voltage Techniques	<i>CIU + EMU</i>	<i>4</i>
Power Generation and Distribution	<i>EMU</i>	<i>2</i>
Advanced Mathematics for Engineering	<i>Aryan Uni.</i>	<i>1</i>

## Supervisions

Date	Student Name	Thesis Title
Feb. 2018- on going	AHMAD AL AHMAD (PhD)	Optimal Placement and sizing of Multi-type FACTS devices in Power systems
Feb. 2018- on going	KHALID ELHADI (Master)	DG and DSTATCOM allocation in the radial distribution systems considering the total harmonic distortion
Feb. 2018- on going	NUMAN KHAN (Master)	Optimal Allocation of Hybrid Solar/Wind Energy Systems for Power Quality Improvement
Completed on Jan. 2017	TAIWO BABATUNDE (Master)	Optimal Placement of DG for minimizing power loss, voltage deviation and harmonics in electrical distribution systems
Completed on Dec. 2016	JAMILU ABUBAKAR (Master)	Power loss reduction and Voltage improvement by Inclusion of Wind Turbine as DG in Power Networks
Completed on June 2016	APANPA BASHIR (Master)	Design of Passive Filters to Mitigate Power System Harmonics (CIU as case study)
Completed on June 2016	ASHIRO BELLO (Master)	Transmission Line Fault Location Using Travelling Waves
Completed on Jan. 2016	HENRY UGOCHUKWU UKWU (Master)	Optimization of Unit Commitment Using Improved Dynamic Programming
Completed on Jan. 2016	ZIAD HASSAN EL MOURAD (Master)	Modelling and Simulation of Northern Cyprus Transmission Network to Compute the Power Losses
Completed on June 2015	BOLAN NOBOSSE TAFEM (Master)	Voltage Stability Enhancement by Optimal Allocation of Reactive Power Compensators
Completed on Apr. 2015	CHINEDU FRANK OKWOSE (Master)	Islanding Detection for Renewable-based Distributed Generation

## PUBLICATIONS

### Publications in SCI / SSCI Journals:

- 1) Khan Saad S., Shareef Hussain, Wahyudie Addy, Khalid S.N. and Sirjani Reza, Analysis of the Impacts of Ambient Conditions on the Performance of Proton Exchange Membrane Fuel Cell Using Various Models , *Energy & Environment* , Accepted for publication in August 2018.
- 2) Sirjani Reza, Optimal Placement and Sizing of PV-STATCOM in Power Systems Using Empirical Data and Adaptive Particle Swarm Optimization, *Sustainability* 10(3), 727, March 2018.
- 3) Sirjani Reza, Rezaee Jordehi A. , Optimal Placement and Sizing of Distribution Static Compensator (D-STATCOM) in Electric Distribution Networks: A Review, *Renewable & Sustainable Energy Reviews* , *Renewable and Sustainable Energy Reviews*, Volume 77, Pages 688-694 , September 2017
- 4) Sirjani Reza, Optimal Capacitor Placement in Wind Farms by Considering Harmonics Using Discrete Lightning Search Algorithm, *Sustainability* 9(9), 1669, Sep 2017.
- 5) Sirjani Reza, Hussain Shareef , Parameter Extraction of Solar Cell Models Using the Lightning Search Algorithm in Different Weather Conditions, *Journal of Solar Energy Engineering: Including Wind Energy and Building Energy Conservation-ASME Transaction* 138 (4), Pages 1-11, August 2016

### **Publications in SCI-Expanded Journals:**

- 1) Ashiro Bello , Sirjani Reza, A Comparative Study of Different Traveling Wave Fault Location Techniques, *Measurement* (UNDE REVIEW)
- 2) Sirjani Reza, Chinedu Frank Okwose, Combining two techniques to develop a novel islanding detection method for distributed generation units, *Measurement*, Volume 81, Pages 66-79 , Mar 2016
- 3) Sirjani, Reza; Bade, Melkamu Gamene , A global harmony search algorithm for finding optimal capacitor location and size in distribution networks, *Journal of Central South University*, Volume: 22 Issue: 5 Pages: 1748-1761 Published: MAY 2015
- 4) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Comparative study of effectiveness of different Var compensation devices in large-scale power networks, *Journal of Central South University* , Volume: 20 Issue: 3 Pages: 715-723 Published: MAR 2013
- 5) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Optimal allocation of shunt Var compensators in power systems using a novel global harmony search algorithm, *International Journal of Electrical Power & Energy Systems* , Volume: 43 Issue: 1 Pages: 562-572 Published: DEC 2012
- 6) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Optimal Placement and Sizing of Static Synchronous Compensators in Power Systems Using Improved Harmony Search Algorithm, *International Review of Electrical Engineering-IREE*, Volume: 7 Issue: 2 Pages: 4183-4193 Part: B Published: MAR-APR 2012
- 7) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Optimal Placement and Sizing of Shunt FACTS Devices in Power Systems Using Heuristic Optimization Techniques: a Comprehensive Survey, *Electrical Review (PRZEGLAD ELEKTROTECHNICZNY)* , Volume: 88 Issue: 10B Pages: 335-341 Published: 2012
- 8) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain , Heuristic Optimization Techniques to Determine Optimal Capacitor Placement and Sizing in Radial Distribution Networks: A Comprehensive Review , *Electrical Review (PRZEGLAD ELEKTROTECHNICZNY)* , Volume: 88 Issue: 7A Pages: 1-7 Published: 2012
- 9) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Optimal Capacitor Placement in Three-Phase Distribution Systems Using Improved Harmony Search Algorithm, *International Review of Electrical Engineering-IREE*, Volume: 6 Issue: 4 Pages: 1783-1793 Part: B Published: JUL-AUG 2011
- 10) Sirjani, Reza; Mohamed, Azah; Shareef, Hussain, Optimal placement and sizing of Static Var Compensators in power systems using Improved Harmony Search Algorithm, *Electrical Review (PRZEGLAD ELEKTROTECHNICZNY)*, Volume: 87 Issue: 7 Pages: 214-218 Published: 2011

### **Book / Book Chapters:**

- 1) **R.Sirjani** , “ Chapter 13 : Optimal Placement and Sizing of STATCOMs in Power Systems Using Heuristic Optimization Techniques“, a Book Chapter in “Static Compensators (STATCOMs) in Power Systems”, *Springer*, 2015, pp 437-476. ([https://link.springer.com/chapter/10.1007/978-981-287-281-4\\_13](https://link.springer.com/chapter/10.1007/978-981-287-281-4_13))

- 2) **R.Sirjani**, A.Mohamed , H.Shareef, “Optimal Capacitor Placement in Radial Distribution Networks”, Lambert Academic Publishing , Berlin , Germany. (ISBN: 978-3-659-31074-4), December 2012 : 1-133.
- 3) **R.Sirjani**, A.Mohamed , H.Shareef, “ Optimal Placement of Var Compensators in Transmission Networks” , Lambert Academic Publishing , Berlin , Germany. (ISBN: 978-3-659-31743-9), January 2013: 1-125.

### **Publications in International Journals:**

- 1) R.Sirjani, Software Tool for Optimal Placement and Sizing of Shunt Var Compensators in Power Systems, *Journal of Basic and Applied Research (Jbaar)* , 2 (2), 65-73, April 2016
- 2) Ch.F.Okwose , R.Sirjani , 'A Novel Method for Islanding Detection of Distributed Generation Units ', *GAU Journal of Social & Applied Sciences*, Vol. 7 , Issue 11, 195-201.(ISSN 1305-9130) , 2015
- 3) R.Sirjani, B.Hassanpour , “A New Ant Colony-Based Method for Optimal Capacitor Placement and Sizing in Distribution Systems”, *Research Journal of Engineering, Technology and Applied Sciences*, 4(8): 888-891, 2012 (Scopus)
- 4) M.Farhoodnea, H.Zayandehroodi, M.Eslami, R.Sirjani, M.M.jafari and A.Forozia, “Power System Voltage Stability and Control- A Review”, *Research Journal of Engineering, Technology and Applied Sciences*, 4(9): 1110-1116, 2012. (Scopus)
- 5) R.Sirjani, B.Hassanpour , “Technical and Economic Assessment of Upgrading a Double-circuit 63kV to a Single-circuit 230kV Transmission Line in Iran ”, *Australian Journal of Basic and Applied Sciences*, 5(12): 2090-2097, December 2011. (Scopus)
- 6) R.Sirjani, A.Mohamed , H.Shareef, “ Optimal Capacitor Placement in a Distribution Network with Nonlinear Loads Using Harmony Search Algorithm”, *Australian Journal of Basic and Applied Sciences*, 5(6) , June 2011 , pp. 461-474. (Scopus)
- 7) R.Sirjani, A.Mohamed, H.Shareef, “Optimal Capacitor Placement in a Radial Distribution System Using Harmony Search Algorithm”, *Journal of Applied Sciences*, Vol.10, No.23, September 2010,pp. 2996-3006. (Scopus)

### **Selected Conference Papers**

- 1) H.U.,Ukwu, R.Sirjani, Unit commitment in a power generation system using a modified improved-dynamic programming, HONET-ICT 2016, 103-107, TRNC, October 2016. (Indexed in IEEE Xplorer)
- 2) R.Sirjani, M.Kusaf, Optimal design of passive harmonic filters using Bee Colony Optimization, HONET-ICT 2016, 88-92, TRNC, Presented in October 2016. (Indexed in IEEE Xplorer)
- 3) R.Sirjani, E.C.,Okonkwo, A new wind power model using the lightning search algorithm, HONET-ICT, 2016, 93-97, TRNC, Presented in October 2016. (Indexed in IEEE Xplorer)

- 4) R.Sirjani, N.T. Bolan, An Improved Cuckoo Search Algorithm for Voltage Stability Enhancement in Power Transmission Networks, 18Th International Conference on Electrical Engineering: Theory and Application (ICEETA 2016), Rome, Italy, Presented in May 2016.
- 5) R.Sirjani, A.Mohamed , H.Shareef, “ A Hybrid BCO/HS Algorithm for Optimal Placement and Sizing of Static Var Compensators in Power Systems ”, 11th WSEAS/IASME International Conference on Electric Power Systems, High Voltages, Electric Machines (POWER '11), Presented in October 2011, Penang, Malaysia.
- 6) R.Sirjani, A.Mohamed, H.Shareef, “An Improved Harmony Search Algorithm for Optimal Capacitor Placement in Radial Distribution Systems” ,The 5th International Power Engineering and Optimization Conference (PEOCO2011), Presented in June 2011, Shah Alam , Malaysia. (Indexed in IEEE Xplorer)
- 7) Tabari, N.M.; Hassanpour, B.; Daneshi, H.; Sirjani, R.; A new fuzzy based approach for thermal units maintenance scheduling ; 45th International Universities Power Engineering Conference (UPEC2010),Cardiff, UK ,(Indexed in IEEE Xplorer)
- 8) Tabari, N.M.; Pirmoradian, M.; Hassanpour, B.; Daneshi, H.; Sirjani, R.; Generation maintenance scheduling in a deregulated power system and fluctuated market;45th International Universities Power Engineering Conference (UPEC2010),Cardiff, UK ( Indexed in IEEE Xplorer)
- 9) Tabari, N.M.; Pirmoradian, M.; Hassanpour, B.; Daneshi, H.; Sirjani, R.; Maintenance scheduling in a competitive environment from the GenCos' point of view, 45th International Universities Power Eng. Conference (UPEC2010) , Cardiff, UK ( Indexed in IEEE Xplorer)
- 10) Khaki, B.; Asgari, M.H.; Sirjani, R.; Mozdawar, A. .Contribution of DFIG wind turbines to system frequency control ,IEEE International Conference on Sustainable Power Generation and Supply,. SUPERGEN '09, Portugal, April 2009. (Indexed in IEEE Xplorer)
- 11) R.Sirjani, B.Khaki, A.Pirayesh Neghab, A.Mehrtash ,A.Parastar, “a New Method for Increasing Competition in Transmission Network Planning”, IEEE International Conference on Sustainable Energy Technologies (ICSET2008), Presented in November 2008, Singapore. ( Indexed in IEEE Xplorer)
- 12) B.Khaki, B.Mozaffari, A.Mehrtash ,R.Sirjani,A.Parastar, “ Optimal Controller Design of SVC for system stability improvement”, IEEE International Conference on Sustainable Energy Technologies (ICSET2008), Presented in November 2008, Singapore. ( Indexed in IEEE Xplorer)
- 13) A.Parastar , A.Pirayesh B.Mozaffari, B.Khaki, R.Sirjani, A.Mehrtash, “ a New Method for Power Loss Allocation by Modified Y-Bus Matrix”, IEEE International Conference on Sustainable Energy Technologies (ICSET2008), Presented in November 2008, Singapore. ( Indexed in IEEE Xplorer)

## **Languages**

- **English:** Fluent (TOEFL + GRE)
- **Turkish:** Elementary
- **Arabic:** Elementary
- **Bahasa Malayu:** Elementary
- **Persian :** Native

## **Trainings and Workshops**

- The LATEX workshop, IEEE Student Branch, 10 July 2012.
- Research Tools workshop, IEEE Student Branch, 17 July 2012.
- RET Screen workshop, Assessment of renewable energy projects, 14 August 2012.
- Hybrid PV systems optimization workshop, 13 August 2012.
- Standalone PV systems Engineering Course, 2-3 July 2012.
- Homer Renewable Energy Software workshop, 7-8 May 2012.

## **Honors and Distinctions**

- 2008** Ranked 2<sup>nd</sup> among graduated Master students in Tehran Science and Research Branch of Islamic Azad University.
- 2006** Ranked 6<sup>th</sup> among more than 25,000 Iranian Electrical Engineers, Higher Education University Entrance Exam for Azad University.
- 2001** Ranked 688<sup>th</sup> among more than 300,000 Students in Iranian National University Entrance Exam (KONKOUR).

## **Memberships**

- January 2011 to Present** Member of IEEE and Power System Society (PES)
- April 2012 to April 2013** Committee Member of IEEE UKM Student Branch

## **References**

### **Prof. Dr. Hasan Demirel**

Chairman of Department of Electrical and Electronic Eng.,  
Eastern Mediterranean University,  
Famagusta, North Cyprus, Mersin 10, TURKEY  
Tel: +90 392 630 1300  
Email: [hasan.demirel@emu.edu.tr](mailto:hasan.demirel@emu.edu.tr)

### **Prof Dr.Azah Bt Mohamed**

Department of Electrical, Electronics and Systems Engineering  
Faculty of Engineering, Universiti Kebangsaan Malaysia  
43600 UKM Bangi, Selangor Darul Ehsan, Malaysia  
Tel: +603-8921 6006  
Email: [azah\\_mohamed@ukm.edu.my](mailto:azah_mohamed@ukm.edu.my), [profazah@gmail.com](mailto:profazah@gmail.com)

**Assoc.Prof.Dr.Hussain Shareef**  
Department of Electrical Engineering,  
United Arab Emirates University,  
P.O. Box 15551, Al-Ain, UAE  
e-mail: [shareef@uaeu.ac.ae](mailto:shareef@uaeu.ac.ae)

**Prof. Dr.Mohammade Tavakoli Bina**  
KNTToosi University of Technology Faculty of Electrical Engineering  
P.O. Box : 16315-1355 Tehran-Iran  
Phone No. : +98 21 88462174-7  
Fax No. : +98 21 88462066  
Email : [tavakoli@kntu.ac.ir](mailto:tavakoli@kntu.ac.ir)

**Asst.Prof. Dr. Abolfazl Pirayesh Neghab**  
Assistant Professor  
Shahid Beheshti University, Electrical and Computer Engineering Department  
E-mail: [a\\_pirayesh@sbu.ac.ir](mailto:a_pirayesh@sbu.ac.ir), [ab\\_pirayesh@yahoo.com](mailto:ab_pirayesh@yahoo.com)  
Phone No. : +98 21 29904189, +98 9124931822