CV-Hadi Rohani

Contact Information

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Summary of Qualifications

Intelligent systems and smart grid, Decentralized optimization and control, Industry 4.0, Distributed Automation, Machine Learning, Software and embedded systems programming.

Education

- M.Sc. in Electrical & Computer Engineering, GPA: A
  University of Alberta, Edmonton, Canada 2016 - 2019

Work Experiences

Researcher at Sustainable Computing Lithuim-Air Battery Modeling for Electric Vehicles Sept. 2015-present

R&D on Power Electronics:

- **"Six-Pulse Three-Phase Inverter"** Apr.—June 2012
  Advisor: Dr. Ghanbari
- Working with **Working with the modular "MC3PHAS" Switching Control Module for Three-phase Inverter** Apr.—June 2012

Awards

Academic Awards

- Exempt from M.S. University Entrance Exam as an exceptional talent student (Given only to the Top 10%), Shiraz University Sept. 2013
- Admission for M.S. Study at the School of Electrical Engineering, Iran University of Science & Technology, Tehran, Iran Sept. 2013
- Alumni Association Best Student Award (1^{st} Place Among Students of Power and Control Engineering Dept.) July 2013
- Achieved 2^{nd} rank of GPA Among Electrical & Power B.S. Students Sept. 2013
- Achieved 2^{nd} rank of GPA Among Electrical & Power M.S. Students Dec. 2014

Working with micro-controllers (AVR, ARM-7) Apr.-Sept. 2010

Research Experiences

Research Assistant

- **Modeling and Simulation of a Saturated Transformer under Over Loaded Conditions** Sep–Nov 2012
  Advisor: Dr. Allah Bakhshi
- **Technical Report and Research on High Power Equipments and Insulators, Regulations and Security Alerts for High Power Laboratory** Sep–Nov 2012
  Advisor: Dr. Allah Bakhshi
  Granter: Department of Power & Control Engineering, Shiraz University
- **Optimum Siting and Placement of Transmission Line Towers Using PLS–CADD** Sept 2012

Advisor: Dr. Mohammadi

- **Simulation of PT and CT Protection Transformers Taking Into Account the Saturation Model Using PSCAD/EMTDC** Aug 2013
  Advisor: Dr. Samet
- **Lightnings Transient Analysis on Wind Turbine Towers EMTP Type Simulation** Jul – Aug 2014
  Advisor: Dr. Mohammadi
- **"Small Signal Modeling and Simulation of a Complete Synchronous Machine Generator"** Jul – Aug 2014
  Advisor: Dr. Raoofat
- **Power Quality Events Classification in Power Systems** Jul – Aug 2014
  Advisor: Dr. Farjah
- **Probabilistic Load Flow Using Wavelet Density Estimations**
  Advisor: Dr. Mohammadi Oct 2014 – Present
- **Backward/Forward Probabilistic Load Flow in Distribution Networks Using Non-parametric Techniques**
  Advisor: Dr. Mohammadi Oct 2014 – Present

English Proficiency

TOEFL-iBT Oct. 18 2014
Total Score: **98**
Reading: 23 Listening: 27 Speaking: 24 Writing: 24

GRE Dec. 20 2014
Verbal Reasoning: 149 (41%)
Quantitative Reasoning: 159 (74 %)
Analytical Writing: 3.5 (38%)

Teaching Experiences

1. "Electrical Machinery II Laboratory", **Lab Instructor** Spring 2014
2. "Electrical Machinery I Laboratory", **Lab Instructor** Fall 2013, Spring 2014
3. "Power Systems Analysis II", **Teaching Assistant** Fall 2013
4. "Electric Machines II", **Teaching Assistant** Spring 2013
5. "Power Systems Analysis I", **Teaching Assistant** Spring 2013
6. "Engineering Mathematics", **Teaching Assistant** Spring 2012

Presentations

1. "Introduction to DigSILENT Power Factory", **Workshop Presenter** Spring 2013
2. "Advanced Applications of MATLAB", **Workshop Presenter** Spring 2014
3. "Introduction to MATLAB", **Workshop Presenter** Winter 2014
4. "Special Machines", **Course Presentation** Spring 2013

5. "Power Plant and Electrical Sources", **Course Presentation** Spring 2013

6. "Power Systems Networks, Conventional, Modern, and Future", **Chalk-Talk Presentation** Fall 2014

PROFESSIONAL MEMBERSHIP
- *IEEE* Student Member — Jan. 2012 - Present
- *NSSOEE* Special Member, Member Number: 901027 — 2011 & 2012

COMPUTER SKILLS

Programming Languages: C^{++}, Python, HTML

Computer Software: MATLAB & Simulink, MATPOWER, PSAT, SimPowerSystem, GUI, MATLAB Runtime Compiler, DigSILENT, PSCAD/EMTDC, PLS-CADD, Advanced EMTP-RV, GAMS, Proteus, CodeVision(AVR), Neplan, Multisim, Pspice, Ecotect