

## Hamid Reza Baghaee

IEEE Member (Membership Number: 90300859),  
 Electrical Machines and Transformer Research Laboratory (EMTRL),  
 B1 Floor, Department of Electrical Engineering,  
 Amirkabir University of Technology (Tehran Polytechnic), Hafez Ave, Tehran 15914, Iran.  
 Tel: (+98) 21 64543536  
 Fax: (+98) 21 66406469  
 Home page: <http://ele.aut.ac.ir/hrbaghaee>  
 Email: [hrbaghaee@yahoo.com](mailto:hrbaghaee@yahoo.com) , [hrbaghaee@ieee.org](mailto:hrbaghaee@ieee.org)

### ❖ RESEARCH INTERESTS

	• <b>Application of Power Electronic in Power Systems</b>
	• <b>Distributed Generation and Renewable Energy Resources</b>
	• <b>Power Quality</b>
	• <b>Transient Analysis of Power Systems</b>
	• <b>Power System Operation, and Control</b>
	• <b>Electricity Market</b>
	• <b>Application of Artificial Intelligence to Power Systems</b>

### ❖ EDUCATION

	<p><b>Master of Science in Electrical Engineering</b>  <i>Department of Electrical Engineering,</i>  <i>Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran.</i>          Majoring in Power System Engineering.</p> <p>Thesis Title:  <b>"Fault Current Limiting in Distribution Systems including DG Units"</b>  <b>Supervisor:</b> <a href="#">Prof. Sayyed Mojtaba Mirsalim</a> <b>Advisor:</b> <a href="#">Prof. Gevorg B. Gharehpetian</a></p> <p>Majoring in Power.          GPA:16.29/20.00 (3.48/4)</p>	Sep 2006 – now
	<p><b>Bachelor of Science in Electrical Engineering (with honor)</b>  <i>Department of Electrical Engineering,</i>  <i>University of Kashan, Kashan, Iran.</i>          Majoring in Power System Engineering.</p> <p>Thesis Title:  <b>"Design and Prototyping Cuk converter for Power Factor Correction (PFC) and Harmonic Elimination in Distribution Systems to Improve Power Quality"</b>  <b>Supervisor:</b> <a href="#">Dr. Abbas Ketabi</a></p> <p>Majoring in Power.          GPA:16.88/20.00 (3.50/4)</p>	Sep 2002 – June 2006
	<p><b>National Diploma in Mathematics and Physics (with honor)</b>  <i>School of Mahmoodieh, Kashan, Iran.</i>          GPA: 19.38/20.00</p>	2001

❖ AWARDS AND ACHIEVEMENTS		
	<ul style="list-style-type: none"> <li>Honored as the second rank among the undergraduate students of Power Engineering, <i>Department of Electrical Engineering, University of Kashan.</i></li> </ul>	2006
	<ul style="list-style-type: none"> <li>Ranked 43<sup>rd</sup> in the nationwide entrance exam for M.Sc. degree in Electrical Engineering in 2006 among more than 15,000 students.</li> </ul>	2006
	<ul style="list-style-type: none"> <li>Member of <a href="#">Foundation of Iranians Elites</a></li> </ul>	Jul 2009
	<ul style="list-style-type: none"> <li>Member of <a href="#">Iranian Inventor Association</a></li> </ul>	Jul 2009
	<ul style="list-style-type: none"> <li>PATENT: "Hybrid Pump Storage Electrical Power Generation System"</li> </ul>	Jul 2009
❖ PUBLICATIONS AND PATENTS		
I. BOOKS		
1.	<ul style="list-style-type: none"> <li>Hamid Reza Baghaee, S.M. Mirsalim, G.B. Gharehpetian, "Recent Advances in Harmony Search Algorithm", Chapter Book (About application of Harmony Search Algorithm in Power Engineering especially in Muti-Level Inverters also in Optimal Multi-type Allocation of FACTS devices in Power System), (under Publication), Springer publication, 2009. (English)</li> </ul>	
2.	<ul style="list-style-type: none"> <li>Hamid Reza Baghaee, M. Jannati, M. Abedi, "Power System Operation and Control", (under modification for Publication). (Persian)</li> </ul>	
3.	<ul style="list-style-type: none"> <li>Hamid Reza Baghaee, M. Aliakbarlou, M. Mirsalim, "Electric Motor Drives: Modeling, Analysis and Control", (under modification for Publication). (Persian)</li> </ul>	
4.	<ul style="list-style-type: none"> <li>Hamid Reza Baghaee, A. Mazloom Zadeh, M. Mirsalim, "Intelligent Systems and Signal Processing in Power Engineering", (under translation). (Persian)</li> </ul>	
II. PATENTS		
1.	<ul style="list-style-type: none"> <li>PATENT: Hamid Reza Baghaee, Mojtaba Mashayekhi, "Hybrid Pump Storage Electrical Power Generation System", Registration Date: July 01 2009, Registration Number: 59838.</li> </ul>	
2.	<ul style="list-style-type: none"> <li>PATENT: Hamid Reza Baghaee, Ehsan Nasir, "Soft Start High Power Factor Drive of Three Phase Induction Motor with Close Loop Speed Control using SPWM ", (in the process of registration).</li> </ul>	
III. JOURNAL PAPERS		
✓ Accepted Journals		
1.	<ul style="list-style-type: none"> <li>A. Kashefi Kaviani, Hamid Reza Baghaee, G.H. Riahy, "Optimal Sizing of a Stand-alone Wind/PV Generation Unit using PSO", published in the <i>Journal of Simulation: International Transactions of the Society for Modeling and Simulation</i>, submitted on 25 July 2008, Revised on 13 October 2008, accepted on 20 November 2008, published on 10 December 2008.</li> </ul>	
2.	<ul style="list-style-type: none"> <li>A. Parizad, Hamid Reza Baghaee, H. Kiani, "Application of Harmony Search for Transmission Expansion Planning Considering Security Index and Uncertainty", to be published in the <i>CESSE'09 Conference Proceedings Journal Singapore</i>, submitted on 20 February 2009, accepted on 20 May 2009.</li> </ul>	

3.	<ul style="list-style-type: none"> <li>S. Jazebi, <b>Hamid Reza Baghaee</b>, G.B. Gharehpetian, "Online Control of UPFC using Differential Evolution Algorithm and Artificial Neural Networks to Improve Transient Stability Margins", <i>International Journal of Engineering of Intelligent Systems</i>, Submitted on 01 September 2008, accepted on 01 August 2009.</li> </ul>
4.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, M. Abedi, "Weighting Factor Selection for Contingency Ranking in Electric Power Systems using Fuzzy Logic based Analytical Hierarchy Process", <i>International Journal of Engineering of Intelligent Systems</i>, Submitted on 17 September 2008, accepted on 01 August 2009.</li> </ul>
5.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, M. Mirsalim, A. Kashefi Kaviani, G.B. Gharehpetian " Optimal Allocation of Multi-type FACTS Devices to Improve Security and Reduce the Losses and Fault Level using Multi-Objective Particle Swarm Optimization", <i>International Review of Electrical Engineering(IREE)</i>, Submitted on 5 October 2009, accepted on 20 October 2009.</li> </ul>
6.	<ul style="list-style-type: none"> <li>A.Karimi Varkani, H. Monsef, <b>Hamid Reza Baghaee</b>, " Strategy for Participation of Wind Power in Power Market Considering the uncertainty in production", <i>International Review of Electrical Engineering(IREE)</i> Submitted on 5 October 2009, accepted on 24 October 2009.</li> </ul>
✓ <b>Revised Journals</b>	
7.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, M. Abedi, "Weighting Factor Selection for Contingency Ranking in Electric Power Systems using Fuzzy Logic based Analytical Hierarchy Process", <i>International Journal of Modeling and Simulation</i>, Submitted on 9 October 2007, Revised on 14 March 2008.</li> </ul>
8.	<ul style="list-style-type: none"> <li>S. Jazebi, <b>Hamid Reza Baghaee</b>, G.B. Gharehpetian, "Online Control of UPFC using Differential Evolution Algorithm and Artificial Neural Networks to Improve Transient Stability Margins" <i>Simulation Modeling Practice and Theory (SIMPAT)</i>, Elsevier, Submitted on 25 December 2007, Revised on 20 March 2008.</li> </ul>
9.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, A. Kashefi Kaviani, M. Mirsalim, G.B. Gharehpetian "Security/Cost-based Optimal Allocation of Multi-type FACTS Devices using Multi-Objective Particle Swarm Optimization", <i>Journal of Simulation: International Transactions of the Society for Modeling and Simulation</i>, submitted on 28 May 2009, Revised on 13 September 2009.</li> </ul>
✓ <b>Submitted Journals</b>	
10.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, A.H. Ranjbar, K. Kianfar, H. Omranpour, M. Abedi, G.B. Gharehpetian "A Heuristic Method to Find Optimal Path for Building Z-Matrix of Power Systems ", <i>Journal of Tabriz University</i> Submitted on 28 November 2007.</li> </ul>
11.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S.M. Mirsalim, S. M. Ale-Emran, G.B. Gharehpetian, M. Abedi "Power Factor Improvement of DC/DC Converter of Micro-Turbine", <i>IET Science Measurement and Technology</i>, Submitted on 5 January 2008.</li> </ul>
12.	<ul style="list-style-type: none"> <li>M. Jannati, J. Moshtagh, <b>Hamid Reza Baghaee</b>, "Using EMTP-TACS in Teaching Modeling of Arcing Fault in Power Transmission Line to Senior Undergraduate Students", <i>European Transactions on Electrical Power (ETEP)</i>, Submitted on 5 July 2009.</li> </ul>
<b>IV. CONFERENCE PAPERS</b>	
➤ <b>Years 2002-2006 (During B.Sc.)</b>	
1.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, H. Karami Taheri, S.A. Taher, "Elimination of Inrush Current of Power Transformers using Controlled Switching Strategy", Published in the proceeding of in <i>8th ISCEE Conference</i>, Shahid Bahonar University of Kerman, Kerman Iran, Sep 2003.</li> </ul>
2.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, H. Karami Taheri, A. Parizad, S .A. Taher, "Effect of Inrush Current on Illegal Operation of Differential Relays in Power Transformers", Published in the proceeding of <i>8th ISCEE Conference</i>, Shahid Bahonar University of Kerman, Kerman Iran, Sep 2003.</li> </ul>

➤ Years 2006-Now (During M.Sc.)	
✓ <b>Published</b>	
3.	<ul style="list-style-type: none"> <li>A. Kashefi Kaviani, <b>Hamid Reza Baghaee</b>, G. H. Riahy "Optimal Sizing of Hybrid Wind Solar Generation Units using Particle Swarm Optimization", Published in the proceeding of <i>22nd Power System Conference (PSC)</i>, Tehran Iran, 2007.</li> </ul>
4.	<ul style="list-style-type: none"> <li>M. Jannati, B. Vahidi, S.H.Hosseinian, <b>Hamid Reza Baghaee</b>, "Novel and efficient Adaptive Single Phase Auto-reclosing approach for HV Transmission Lines" Published in the proceeding of <i>2nd Power System Protection and Control Conference (PSPC)</i>, Amirkabir University of Technology, Tehran Iran, January, 2008.</li> </ul>
5.	<ul style="list-style-type: none"> <li>S. M. Ale-Emran, <b>Hamid Reza Baghaee</b>, G. B. Gharehpetian, M. Abedi, "Power Quality Aspect of Interconnected DG Using UPQC in Unbalanced Distribution System", Published in the proceeding of <i>International Conference on Renewable Energy and Power Quality, (ICREPQ'08)</i> Santander Spain, March, 2008.</li> </ul>
6.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. M. Mirsalim, S.M.Ale-Emran, M. Abedi, G. B. Gharehpetian, "Grid Connection for a Micro-turbine System with Genetic Algorithm Optimized Power Factor Correction", Published in the proceeding of <i>International Conference on Renewable Energy and Power Quality, (ICREPQ'08)</i> Santander Spain, March, 2008.</li> </ul>
7.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. Jazebi, B. Vahidi, S.H. Hosseinian, M. Jannati "Optimal Multi-type FACTS Allocation using Genetic Algorithm to Improve Power System Security" Published in the proceeding of <i>12th IEEE International Middle-East Power Systems Conference (MEPCON)</i>, March 2008.</li> </ul>
8.	<ul style="list-style-type: none"> <li>M.Jannati, <b>Hamid Reza Baghaee</b>, J. Moshtagh, E. Nasr, "A novel approach for online fault detection in HVDC converters" Published in the proceeding of <i>12th IEEE International Middle-East Power Systems Conference (MEPCON)</i>, March 2008.</li> </ul>
9.	<ul style="list-style-type: none"> <li>M. Jannati, B. Vahidi, S.H.Hosseinian, <b>Hamid Reza Baghaee</b>, "A New Adaptive Single Phase Auto-reclosure Scheme for HV Transmission Lines" Published in the proceeding of <i>12th IEEE International Middle-East Power Systems Conference (MEPCON)</i>, March 2008.</li> </ul>
10.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. Jazebi, G. B. Gharehpetian "A Novel Approach for Allocation of FACTS Devices to Improve Power System Security based on Differential Evolution Algorithm", Published in the proceeding of <i>16th Iranian Conference of Electrical Engineering (ICEE)</i>, May 2008, Tehran, Iran.</li> </ul>
11.	<ul style="list-style-type: none"> <li>M. Jannati, <b>Hamid Reza Baghaee</b>, B. Vahidi "Online Fault Detection in HVDC Systems using ANNs", Published in the proceeding of <i>16th Iranian Conference of Electrical Engineering (ICEE)</i>, May 2008, Tehran, Iran.</li> </ul>
12.	<ul style="list-style-type: none"> <li>V. Gohari Sadr, M.R. Asadi, <b>Hamid Reza Baghaee</b>, "UPFC Controller Design for Power System Stabilization with Particle-swarm Optimization Algorithm", Published in the proceeding of <i>IEEE PES Transmission and Distribution Conference and Exposition</i>, Bogotá, Colombia, August 13-15th, 2008.</li> </ul>
13.	<ul style="list-style-type: none"> <li>H. Lesani, S. Jazebi, <b>Hamid Reza Baghaee</b>, "Design of PI Controller for UPFC by using Bacteria Foraging Optimization Algorithm to Enhance Power System Transient Stability", Published in the proceeding of <i>3rd International Conference on Electrical and Control Technologies (ECT)</i>, Lithuania Kaunas, 8-9 May 2008.</li> </ul>
14.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, M. Jannati , B. Vahidi, S. H. Hosseinian, H. Rastegar, "Improvement of Voltage Stability and Reduce Power System Losses by Optimal GA-based Allocation of Multi-type FACTS Devices", Published in the proceeding of <i>11th IEEE International Conference on Optimization of Electrical and Electronic Equipment (OPTIM08)</i>, Brasov-Romania, May 2008.</li> </ul>

15.	<ul style="list-style-type: none"> <li>M. Jannati, B. Vahidi, S. H. Hosseini, <b>Hamid Reza Baghaee</b>, "A Novel Approach for Optimizing Dead Time of Extra High Voltage Transmission Lines", Published in the proceeding of <i>11th IEEE International Conference on Optimization of Electrical and Electronic Equipment (OPTIM08)</i>, Brasov-Romania, May 2008.</li> </ul>
16.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. M. Mirsalim, G. B. Gharehpetian "Power Control Strategy of Parallel Inverter Interfaced DG Units", Published in the proceeding of <i>13th IEEE International Power Electronics and Motion Control Conference (EPE-PEMC)</i>, Poznan-Poland, September 2008.</li> </ul>
17.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. M. Mirsalim, G. B. Gharehpetian "Effects of the Types of Distributed Generation Units and Their Interconnections on the Fault Current Level of Networks", Published in the proceeding of in <i>13th IEEE International Power Electronics and Motion Control Conference (EPE-PEMC)</i>, Poznan-Poland, September 2008.</li> </ul>
18.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian "Fault Current Limiting in Distribution System with Penetration of DG Units using A New Dual Functional Series Compensator", Published in the proceeding of <i>13th IEEE International Power Electronics and Motion Control Conference (EPE-PEMC)</i>, Poznan-Poland, September 2008.</li> </ul>
19.	<ul style="list-style-type: none"> <li>B. Vahidi, S. Jazebi, <b>Hamid Reza Baghaee</b>, M. Tahan, M. R. Asadi, "Power System Stabilization Improvement by Using PSO-based UPFC" Published in the proceeding of <i>IEEE Power India Conference (POWERCON)</i>, New Delhi-India October 2008.</li> </ul>
20.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, B. Vahidi, S. Jazebi, G.B. Gharehpetian, A. Kashefi, "Optimal Multi-type FACTS Allocation using Differential Evolution Algorithm to Improve Power System Security" Published in the proceeding of <i>IEEE Power India Conference (POWERCON)</i>, New Delhi-India, October 2008.</li> </ul>
21.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, M. J. Sanjari, G. B. Gharehpetian, M. Mirsalim, " Fault Current Limiting in Distribution Systems with Distributed Generation Units by a New Dual Functional Series Compensator ", Published in the proceeding of The <i>2nd IEEE International Power &amp; Energy Conference (PeCon)</i>, Johor Bahru, Malaysia December 2008.</li> </ul>
22.	<ul style="list-style-type: none"> <li>B. Majidi, <b>Hamid Reza Baghaee</b>, G. B. Gharehpetian, M. Mirsalim, J. Milimonfared, "Harmonic Optimization in Multi-Level Inverters using Harmony Search Algorithm", Published in the proceeding of The <i>2nd IEEE International Power &amp; Energy Conference (PeCon)</i>, Johor Bahru, Malaysia December 2008.</li> </ul>
23.	<ul style="list-style-type: none"> <li>S. Jazebi, <b>Hamid Reza Baghaee</b>, G.B. Gharehpetian, "Design of Online UPFC Controller using Differential Evolution Algorithm and Artificial Neural Networks", Published in the proceeding of <i>23rd Power System Conference (PSC)</i>, Tehran Iran, 2008.</li> </ul>
24.	<ul style="list-style-type: none"> <li>M. J. Sanjari, <b>Hamid Reza Baghaee</b>, G. B. Gharehpetian, M. Mirsalim, "Fault Current Limiting in Transmission Systems by Sliding Mode Control of SSSC", Published in the proceeding of <i>3rd Power System Protection and Control Conference (PSPC)</i>, Iran University of Science and Technology (IUST), Tehran Iran, January, 2009.</li> </ul>
25.	<ul style="list-style-type: none"> <li>A. Parizad, A. Kazemi, <b>Hamid Reza Baghaee</b>, " On the Use of Harmony Search Algorithm in Optimal Placement of FACTS Devices to Improve Power System ", Published in the proceeding of IEEE Region 8 Conference EUROCON, Saint-Petersburg, Russia, May 2009.</li> </ul>
26.	<ul style="list-style-type: none"> <li><b>Hamid Reza Baghaee</b>, S. M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian "Fault Current Limiting in Distribution Systems Having DG Units by Sliding Mode Control of DVR", Published in the proceeding of <i>17th Iranian Conference of Electrical Engineering (ICEE)</i>, Iran University of Science and Technology (IUST), Tehran, Iran, May 2009.</li> </ul>
27.	<ul style="list-style-type: none"> <li>M. J. Sanjari, <b>Hamid Reza Baghaee</b>, G. B. Gharehpetian , S. M. Mirsalim, "Analysis of Combined Operation of Series Compensator and Fault Current Limiter in Transmission Systems", Published in the</li> </ul>

	proceeding of <i>17th Iranian Conference of Electrical Engineering (ICEE)</i> , Iran University of Science and Technology (IUST), Tehran, Iran, May 2009.
28.	• A. Parizad, <b>Hamid Reza Baghaee</b> , B. Kiani, "Application of Harmony Search for Transmission Expansion Planning Considering Security Index and Uncertainty", to be Published in the proceeding of International Conference on Computer, Electrical, and Systems Science, and Engineering (CESSE'09), Summer Meeting in Singapore; Singapore, August 2009.
29.	A. Parizad, <b>Hamid Reza Baghaee</b> , A. Tavakoli, S. Jamali, "Optimization of Arc Models Parameters Using Genetic Algorithm", to be Published in the proceeding of International Conference on Electric Power and Energy Conversion Systems (EPECS'09), Sharjah, UAE, Nov 10-12, 2009.
30.	• A. Parizad, <b>Hamid Reza Baghaee</b> , S. Dehghan, B. Kiani, "Application of Harmony Search for Transmission Expansion Planning Considering Security Index and Uncertainty", to be Published in the proceeding of International Conference on Electric Power and Energy Conversion Systems (EPECS'09), Sharjah, UAE, Nov 10-12, 2009.
✓ <b>Accepted</b>	
31.	• <b>Hamid Reza Baghaee</b> , S. Jazebi, G. B. Gharehpetian "Improvement of Power System Security by the Optimal Allocation of FACTS Devices using DEA" Accepted in <i>IEEE 3rd International Conference on Electric Utility Deregulation and restructuring and Power Technologies (DRPT)</i> , NANJING, China, April 6-9, 2008.
32.	• <b>Hamid Reza Baghaee</b> , J. Sanjari, S. M. Mirsalim, G. B. Gharehpetian, "Application of FDG in Fault Current Limitation in Distribution Systems Including DG units", Accepted in <i>IEEE 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEDAM08)</i> , Ischia-Italy, June 2008.
33.	• <b>Hamid Reza Baghaee</b> , S. Golestan, S. M. Mirsalim, G.B. Gharehpetian, "Power Control Strategy of Grid Connected Parallel Inverter Interfaced Micro-Turbines in Harmonic Polluted Grid", Accepted in <i>IEEE 19th International Symposium on Power Electronics, Electrical Drives, Automation and Motion June (SPEDAM08)</i> , Ischia-Italy, 2008.
34.	• <b>Hamid Reza Baghaee</b> , M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian, "Fault Current Limiting Using A Dual-Function SSSC", Accepted in <i>IEEE 43rd International Universities Power Engineering Conference (UPEC08)</i> , Padova-Italy, September 2008.
35.	• <b>Hamid Reza Baghaee</b> , M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian, "A New Control Scheme for a Dual-Functional TCSC to Limit the Fault Currents", Accepted in <i>IEEE 43rd International Universities Power Engineering Conference (UPEC08)</i> , Padova-Italy, September 2008.
36.	• <b>Hamid Reza Baghaee</b> , M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian, "Fault Current Limiting in Transmission system with Penetration of DG units", Accepted in <i>IEEE 43rd International Universities Power Engineering Conference (UPEC08)</i> , Padova-Italy, September 2008
37.	• <b>Hamid Reza Baghaee</b> , M. Mirsalim, G. B. Gharehpetian, "Fault Current Limitation in a Distribution Network using Multi-Level Converter based DVR", Accepted in <i>IEEE 43rd International Universities Power Engineering Conference (UPEC08)</i> , Padova-Italy, September 2008.
38.	• <b>Hamid Reza Baghaee</b> , M. Mirsalim, M. J. Sanjari, G. B. Gharehpetian, "Fault Current Limiting in Distribution System with Penetration of DG Units using A New Dual Functional Series Compensator", Accepted in <i>IEEE 43rd International Universities Power Engineering Conference (UPEC08)</i> , Padova-Italy, September 2008.
39.	• S. Jazebi, <b>Hamid Reza Baghaee</b> , G.B. Gharehpetian, "Online PI Controller Design for UPFC using Differential Evolution and Artificial Neural Networks to improve power system stability" Accepted in <i>IEEE Power India Conference (POWERCON)</i> , New Delhi-India, October 2008.

40.	• A. Kashefi Kaviani, <b>Hamid Reza Baghaee</b> , G. H. Riahy "Application of PSO in Optimal Sizing of a Stand-alone Wind/PV Generation Unit", Accepted in <i>International Conference on CLEAN ELECTRICAL POWER (ICCEP) Renewable Energy Resources Impact</i> , Capri Italy, June 2009.	
41.	• M. J. Sanjari, <b>Hamid Reza Baghaee</b> , G. B. Gharehpetian , S. M. Mirsalim, "Use of Fuzzy Logic Controller in TCSC for Fault Current Limiting in Transmission Systems ", Published in the proceeding of <i>17th Iranian Conference of Electrical Engineering (ICEE)</i> , Iran University of Science and Technology (IUST), Tehran, Iran, May 2009.	
<b>V. TECHNICAL REPORTS</b>		
1.	• <b>Hamid Reza Baghaee</b> , H. Seifi, M. K. Sheikhol-Eslam and M.S. Sepasian, "Technical and Economical Aspects in the Application of Three Terminal Transmission Lines in Iran Transmission System ", <a href="#">Iran Power System Engineering Research Center (IPSERC)</a> , August 2009 (in Persian, Document # T-82-849).	August 2009
2.	• <b>Hamid Reza Baghaee</b> , A. Kashefi, "Estimation Effect of Power Losses in Load Interruptions", Regional electric power companies of Khuzestan, January 2009 (in Persian).	January 2009
<b>VI. WORKSHOPS</b>		
3.	• Workshop on "Application of Computational Intelligence in Power Systems", Presented in the 1st Summer Festival of Iran university of Science and Technology, Iran University of Science and Technology (IUST), July 2008, Tehran.	July 2008
4.	• Workshop on "Power World Simulator for Real Time Simulation of Power Systems", Presented in 7th Power System Conference, Power and Water Institute of Technology (PWIT), fall 2006, Tehran.	October 2006
<b>VII. SELECTED SOFTWARES</b>		
1.	<b>Developing Advanced Multi-Objective Particle Swarm Optimization (MOPSO) Software.</b>	
2.	<b>Developing a Software on Designing and Calculations of Electromagnetics and Transformers</b>	
3.	<b>Developing a Load Flow Software, based on Radial Basis Neural Networks.</b>	
4.	<b>Developing Advanced Optimization Software based on Bacteria Foraging Algorithm and Harmony Search Algorithm.</b>	
<b>❖ RESEARCH ASSISTANT, RESEARCH EXPERIENCES AND ACCOMPLISHED PROJECTS</b>		
<b>✓ RESEARCH ASSISTANT</b>		
	• Research Assistant in <a href="#">Electrical Machines and Transformer Research Laboratory (EMTRL)</a> , Department of Electrical Engineering, Amirkabir University of Technology. Founder and Director: Prof. Mirsalim.	Fall 2008 - Now
<b>✓ FUNDED RESEARCH EXPERIENCES</b>		
	• <b>Estimation Effect of Power Losses in Load Interruptions,</b> <i>Regional Electric Power Companies of Khuzestan</i>	Spring 2008 - Winter 2009

	<b>Fault Current limiting methods for Transmission System of Iran (Funded Research project)</b>  <i>Iran Power System Engineering Research Center (IPSERC), Tarbiat Modares University of Tehran, (Supervised by Prof. Seifi and Prof. Sheikh-El-Eslam).</i>	Summer 2009
<b>✓ RESEARCH EXPERIENCES AND ACCOMPLISHED PROJECTS</b>		
	<ul style="list-style-type: none"> <li>• <b>Fault Current Limiting in Distributed Systems Including Distributed Generation</b>,  <i>My M.Sc. Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Professor Mirsalim and Dr Gharehpetian).</i></li> </ul> <p>Resulted in 13 international papers and one journal paper (ICREPO'08, EPE and PeCon, PSPC, ICEE, Journal of Simulation).</p>	Fall 2007- Summer 2009
	<ul style="list-style-type: none"> <li>• <b>“Design and Prototyping Cuk converter for Power Factor Correction (PFC) and Harmonic Elimination in Distribution Systems to Improve Power Quality”</b>  <i>My B.Sc. Project, Electrical Engineering Department, University of Kashan, (Supervised by Dr. Ketabi).</i></li> </ul>	Summer 2005-Summer 2009
	<ul style="list-style-type: none"> <li>• <b>Effects of Inrush Current of Power Transformers in Power System</b>  <i>Power System Analysis Lab., Electrical Engineering Department, University of Kashan, (Supervised by Dr. Taher),</i></li> </ul> <p>Resulted in 2 national conference papers (ISCEE 2005).</p>	Winter 2004 - Fall 2006
	<ul style="list-style-type: none"> <li>• <b>Contingency Ranking in Electric Power Systems,</b>  <i>Power System Analysis and Operation Lab., Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Abedi),</i></li> </ul> <p>Resulted in 1 international journal paper (International Journal of Modeling and Simulation).</p>	Spring and Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Application of Heuristic Approaches to Find the Optimal Path for Building Z-Matrix of Large Interconnected Power Systems,</b>  <i>Power System Analysis and Operation Lab., Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Abedi),</i></li> </ul> <p>Resulted in 2 national and international journal paper (Journal of Tabriz University, IEEE Trans. On Power Sys.).</p>	Spring and Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Analysis of Synchronous Machine under the Unsymmetrical Faults,</b>  <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Monfared).</i></li> </ul>	Fall 2006
	<ul style="list-style-type: none"> <li>• <b>Fuzzy Speed and Position Controller for a DC Motor,</b>  <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Rastegar).</i></li> </ul>	Fall 2006
	<ul style="list-style-type: none"> <li>• <b>Fuzzy Control of Wind Generation Station,</b>  <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Rastegar).</i></li> </ul>	Fall 2006
	<ul style="list-style-type: none"> <li>• <b>Design of Fuzzy Logic Based Power System Stabilizer,</b>  <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Rastegar).</i></li> </ul>	Fall 2006
	<ul style="list-style-type: none"> <li>• <b>Online Control of UPFC using Artificial Neural Networks to Improve Transient Stability Margins,</b>  <i>FACTS Lab, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Gharehpetian).</i></li> </ul> <p>Resulted in 1 international journal paper (Elsevier SIMPAT, IJEIS ).</p>	Spring and Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Economic Design of a Hybrid Wind-Solar Power Plant According to Reliability Indices, Using Intelligent Algorithm</b>  <i>Renewable Energy Lab., Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Riahy).</i></li> </ul> <p>Resulted in 1 national conference paper and one ISI journal paper (PSC-2007, ICCEP2008,</p>	Summer 2007

	Journal of Simulation).	
	<ul style="list-style-type: none"> <li>• <b>Pricing of Power losses and Congestion Management based on Static Security Assessment and Voltage Stability</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Hosseinian),</i></li> </ul> <p>Resulted in 1 international journal paper (International Journal of Emerging Electric Power Systems (IJEPS)).</p>	Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Pricing Methods and Loss Allocation in Deregulated Power Systems</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Hosseinian).</i></li> </ul> <p>Resulted in 1 Journal and 1 conference papers (DRPT and IEEE Transaction).</p>	Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Short Term Load Forecasting using ANNs</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology.</i></li> </ul>	Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Identification and Parameter Estimation for Synchronous Machine,</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Rastegar).</i></li> </ul>	Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Improvement of Power System Security and Voltage Stability by Optimal Allocation FACTS Devices Using heuristic Algorithms"</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Vahidi).</i></li> </ul> <p>Resulted in 2 international conference papers (MEPCON08, OPTIM08)</p>	Summer 2007
	<ul style="list-style-type: none"> <li>• <b>Online Adaptive Single Phase Autoreclosure Schemes for HV Transmission Lines</b> <i>High Voltage Lab, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Vahidi).</i></li> </ul> <p>Resulted in 3 national and international conference and journal paper (PSPC08, MEPCON08, and OPTIM08).</p>	Summer 2007-Fall 2007
	<ul style="list-style-type: none"> <li>• <b>Online Fault Detection in HVDC Converters</b> <i>High Voltage Lab, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Dr. Vahidi and Dr. Moshtagh).</i></li> </ul> <p>Resulted in 2 national and international conference papers (MEPCON08 and ICEE08).</p>	Fall 2007
	<ul style="list-style-type: none"> <li>• <b>Load Flow Analysis Using Dynamic RBF-Neural Networks,</b> <i>Research Project., Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Mirsalim).</i></li> </ul> <p>Resulted in 1 international journal paper (DRPT).</p>	Spring 2008-Fall 2008
	<ul style="list-style-type: none"> <li>• <b>Optimal Allocation of Multi-Type FACTS Devices for Enhancement of Power System Security Using heuristic Algorithms"</b> <i>FACTS Lab, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Gharehpetian).</i></li> </ul> <p>Resulted in 5 national and international conference and journal paper (ICEE, DRPT, POWERCON, EUROCON, IEEE Transaction).</p>	Spring 2007-Fall 2008
	<ul style="list-style-type: none"> <li>• <b>PID Controller Design for Power System Stabilization</b> <i>Research Project, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Vahidi).</i></li> </ul> <p>Resulted in 3 international conference papers (T&amp;D08, ECT, and POWERCON08).</p>	Summer 2007-Fall 2008
	<ul style="list-style-type: none"> <li>• <b>Power Quality Aspects in the Interconnection of DG units to the Grid</b> <i>EMTRL and FACTS Lab, Electrical Engineering Department, Amirkabir University of Technology, (Supervised by Prof. Mirsalim and Prof. Gharehpetian).</i></li> </ul> <p>Resulted in 14 international conference and journal paper (ICREPO08, Speedam, UPEC08, EPE08, PeCon08 and OPTIM08).</p>	Fall 2007-Now
	<ul style="list-style-type: none"> <li>• <b>Application of Harmony Search for Transmission Expansion Planning Considering Security Index and Uncertainty</b> <i>Iran University of Science and Technology (IUST), (Supervised by Prof. Kiani).</i></li> </ul>	Spring 2009

	Resulted in 2 international conference and journal paper (WASET).	
<b>❖ TEACHING ASSISTANT AND TEACHING EXPERIENCES</b>		
<b>✓ TEACHING ASSISTANT</b>		
1.	<ul style="list-style-type: none"> <li>• <b>Electrical Machinery II</b>, <i>Undergraduate Course, with Prof. Mirsalim, Department of Electrical Engineering, Amirkabir University of Technology.</i></li> </ul>	Fall 2009
2.	<ul style="list-style-type: none"> <li>• <b>Electrical Circuit II</b>, <i>Undergraduate Course, with Prof. Abedi. Department of Electrical Engineering, International Division of Amirkabir University of Technology. With Collaboration of Birmingham University.</i></li> </ul>	Spring 2009
3.	<ul style="list-style-type: none"> <li>• <b>Electrical Machinery I</b>, <i>Undergraduate Course, with Prof. Mirsalim, Department of Electrical Engineering, Amirkabir University of Technology.</i></li> </ul>	Spring 2009
4.	<ul style="list-style-type: none"> <li>• <b>Electrical Circuit I</b>, <i>Undergraduate Course, with Prof. Abedi. Department of Electrical Engineering, International Division of Amirkabir University of Technology. With Collaboration of Birmingham University.</i></li> </ul>	Fall 2008
5.	<ul style="list-style-type: none"> <li>• <b>Electrical Machinery II</b>, <i>Undergraduate Course, with Prof. Mirsalim, Department of Electrical Engineering, Amirkabir University of Technology.</i></li> </ul>	Fall 2008
6.	<ul style="list-style-type: none"> <li>• <b>Power System Analysis I</b>, <i>Undergraduate Course, with Prof. Abedi. Department of Electrical Engineering, Amirkabir University of Technology.</i></li> </ul>	Spring 2008
7.	<ul style="list-style-type: none"> <li>• <b>Power System Analysis I</b>, <i>Undergraduate Course, with Dr. Taher. Department of Electrical Engineering, University of Kashan.</i></li> </ul>	Spring 2006
8.	<ul style="list-style-type: none"> <li>• <b>Electrical Circuit I</b>, <i>Undergraduate Course, with Dr. Taher. Department of Electrical Engineering, University of Kashan.</i></li> </ul>	Fall 2004
9.	<ul style="list-style-type: none"> <li>• <b>Electrical Circuit II</b>, <i>Undergraduate Course, with Dr. Taher. Department of Electrical Engineering, University of Kashan.</i></li> </ul>	Fall 2004- Spring 2005
10.	<ul style="list-style-type: none"> <li>• <b>Teaching Assistant of Differential Equations</b>, <i>Undergraduate Course, with Dr. Yasamian. Mathematics Department, University of Kashan.</i></li> </ul>	spring 2004, Fall 2004
11.	<ul style="list-style-type: none"> <li>• <b>Teaching Assistant of Calculus I, II</b>, <i>Undergraduate Course, with Dr. Yasamian. Mathematics Department, University of Kashan.</i></li> </ul>	spring 2003
<b>✓ TEACHING EXPERIENCES</b>		
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Feiz Institute of Higher Education (Kashan) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> <li>▪ <i>Power System Analysis II</i></li> <li>▪ <i>Design of Switching Power Supplies</i></li> <li>▪ <i>Fundamentals Electrical Machines</i></li> <li>▪ <i>DC Machines</i></li> </ul> </li> </ul>	Spring 2009
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Feiz Institute of Higher Education (Kashan) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Electrical Machines III</i></li> <li>▪ <i>Electrical Circuit II</i></li> </ul> </li> </ul>	Fall 2008
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Azad University-Borujerd Branch (Borujerd) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> <li>▪ <i>Power System Analysis II</i></li> </ul> </li> </ul>	Fall 2008

	<ul style="list-style-type: none"> <li>▪ <i>Technical Language</i></li> </ul>	
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Azad University-Abhar Branch (Abhar) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> <li>▪ <i>Industrial Electronic Lab</i></li> </ul> </li> </ul>	Fall 2008
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Azad University-Abhar Branch (Abhar) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> <li>▪ <i>Electrical Machines I</i></li> </ul> </li> </ul>	Summer 2008
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Feiz Institute of Higher Education (Kashan) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> </ul> </li> </ul>	Spring 2008
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Azad University - Borujerd Branch (Borujerd) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Industrial Electronic</i></li> <li>▪ <i>Special Electrical Machines</i></li> <li>▪ <i>Distribution Systems</i></li> <li>▪ <i>Electrical Machines Lab</i></li> </ul> </li> </ul>	Spring 2008
	<ul style="list-style-type: none"> <li>• <b>Cooperation with Feiz Institute of Higher Education (Kashan) in:</b> <ul style="list-style-type: none"> <li>▪ <i>Electromagnetic</i></li> <li>▪ <i>Electrical Machines I, II</i></li> </ul> </li> </ul>	Spring 2007
	<ul style="list-style-type: none"> <li>• <b>Instructor of Power System Analysis Lab,</b> <i>Undergraduate Course, with Dr. Taher.</i> <i>Department of Electrical Engineering, University of Kashan.</i></li> </ul>	September 2005-June 2006
<b>❖ WORK EXPERIENCES</b>		
	<ul style="list-style-type: none"> <li>• Cooperation in the project "Estimation Effect of Power Losses in Load Interruptions", Regional electric power companies of Khuzestan</li> </ul>	2008
	<ul style="list-style-type: none"> <li>• Part-time Consulting engineer at <a href="#">Iran Grid Management Co (IGMC)</a>. IGMC is the system operator and power pool operator responsible for preservation and development of national assets in power industry.</li> </ul>	2006
	<ul style="list-style-type: none"> <li>• Full time engineer at <a href="#">Iran Power System Engineering Research Center (IPSERC)</a> I am working as a senior member of a group working on Fault Current limiting methods for Transmission System of Iran and Iran transmission system upgrading.</li> </ul>	2008-now
<b>❖ COMPUTER SKILLS</b>		
	<b>Engineering Software:</b> MATLAB and Simulink (Control Systems, Power System Block Set, Fuzzy, Neural Network, Wavelets, Curve Fitting, Genetic Algorithm and Direct Search, Optimization Toolbox), OrCAD/PSpice, Proteus, PSCAD/EMTDC, EMTP, ETAP, Power World, Neplan, DIgSILENT, Power-Tech DSAtools.	
	<b>Programming Language:</b> MATLAB programming language, C/C++, Visual C.	
	<b>General Software:</b> Word, Excel, FrontPage, PowerPoint, Visio.	
	<b>Operating System:</b> Windows 98/2000/XP.	
<b>❖ PROFESSIONAL AFFILIATIONS AND ACTIVITIES</b>		
	• The Institute of Electrical and Electronics Engineering, Iran (IIEEE), November 2007-Present.	
	• Member of <a href="#">Foundation of Iranians Elites</a>	
	• Member of <a href="#">Iranian Inventor Association</a>	
	• Reviewer for International Journal of Engineering Intelligent Systems, Sep 2008 - Present	
	• Reviewer for Journal of Computational and Applied Mathematics, Sep 2008 - Present	
	• Reviewer for Iranian Conference on Electrical Engineering (ICEE 2009)	
	• Reviewer for International Conference on Renewable Energy and Power Quality (ICREPO 2008)	
	• Reviewer for Power System Conference (PSC 2008)	

<b>❖ ENGLISH LANGUAGE PROFICIENCY</b>	
	TOEFL: 82 (Reading=20, Listening=24, Speaking=20, and Writing=18).
	GRE: Quantitative=760, Verbal=310, Analytical writing=3.0.
<b>❖ REFERENCES</b>	
	<p><b><u><a href="#">Prof. Sayyed Mojtaba Mirsalim</a></u></b>,  Editor-in-Chief of the electrical section of Amirkabir Journal, <i>Senior Member</i>, IEEE  Department of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.  Email: <a href="mailto:mirsalim@aut.ac.ir">mirsalim@aut.ac.ir</a></p>
	<p><b><u><a href="#">Prof. Gevorg B. Gharehpetian</a></u></b>,  Editor-in-Chief of the Journal of IAEEE, Head of Iran Grid Secure Operation Research Center, Senior Member of IEEE, Senior Member of IAEEE, Member of CIGRE  Department of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.  Email: <a href="mailto:grptian@aut.ac.ir">grptian@aut.ac.ir</a></p>
	<p><b><u><a href="#">Prof. Mehrdad Abedi</a></u></b>,  Head of Graduate Students Office, <i>Member</i> of CIGRE and IAEEE  Department of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.  Email: <a href="mailto:abedi@aut.ac.ir">abedi@aut.ac.ir</a></p>
	<p><b><u><a href="#">Dr. Sayyed Hossein Hosseinian</a></u></b>,  Associate Professor and Head of Power Group,  Department of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran.  Email: <a href="mailto:hosseinian@aut.ac.ir">hosseinian@aut.ac.ir</a></p>
	<p><b><u><a href="#">Dr. Abbas Ketabi</a></u></b>,  Assistant Professor and Dean of Faculty of Engineering, Member of IEEE  Department of Electrical Engineering, University of Kashan, Kashan, Iran.  Email: <a href="mailto:aketabi@kashanu.ac.ir">aketabi@kashanu.ac.ir</a></p>
	<p><b><u><a href="#">Dr. Sayyed Abbas Taher</a></u></b>,  Assistant Professor and Head of Department, Member of IEEE  Department of Electrical Engineering, University of Kashan, Kashan, Iran.  Email: <a href="mailto:sataher@kashanu.ac.ir">sataher@kashanu.ac.ir</a></p>