

RESUME

Mostafa Parniani

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Personal information:

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Field of Specialty:

Power system dynamics and control, Application of power electronics in power systems, Reactive power control, Renewable energies.

Education:

- 1990-1995 **Ph.D.**, Electrical Engineering, University of Toronto, Canada, GPA: 3.95/4.
Thesis Topic: Small-signal stability analysis and robust control design of Static VAR Compensators
Supervisor: Prof. M. R. Iravani
- 1987-1989 **M.Sc.**, Electrical Power Engineering, Sharif University of Technology, Tehran, Iran, GPA: 17.37/20 (First rank).
Thesis Topic: Dynamic stability analysis and application of Power System Stabilizer at Bandar-Abbas Power Station
Supervisor: Prof. A. M. Ranjbar
- 1983-1987 **B.Sc.**, Electrical Engineering- Power, Amirkabir University of Technology (Tehran Polytechnic), Iran, GPA: 18.08/20 (First rank).

Professional Activities:

Sharif University of Technology, Dept. of Electrical Engineering (1995-present)

- Associate chair of the dept. for graduate studies (2006-2010)
- Associate chair of the dept. for research affairs (2001-2003)
- Teaching several courses at graduate and undergraduate levels, including Power System Dynamics, Reactive Power Control, HVDC and Flexible AC Transmission Systems, Power System Analysis, Electrical Energy Conversion, Electrical Machines, and Linear Control Systems
- Supervised over 38 graduate students
- Responsible for several research and industrial projects

Rensselaer Polytechnic Institute (RPI), ECSE Dept., USA

- Visiting scholar (Sep. 2005- Aug. 2006)

University of Toronto, Dept. of Electrical Engineering (1991-1995)

- Lab and teaching assistant for the courses: Electromagnetic Energy Conversion, Computer Programming, Power Engineering

Niroo Research Institute, Power System Operation Group, Tehran (2001-2005)

- Consultant and supervisor of research and industrial projects

Ghods Niroo Consulting Engineers Co., Tehran (1989-1990)

- Specialist in turbine generators and excitation systems
- Design audit and technical bid evaluation for thermal power plants

Electric Power Research Center, Tehran (1988-1989)

- Design, tuning and field testing of Power System Stabilizer (PSS) for Bandar-Abbas generating station

Affiliations:

Senior Member of IEEE

Member of Slow Transients Task Force of IEEE Working Group on Modeling and Analysis of System Transients (1995-2000)

Member of National Committee for System Planning Studies (Since 2000)

Member of Research Committee of Tehran Regional Electric Company (2001-2005)

Member of Power Quality Committee of Tehran Regional Electric Company (2002-2005)

Technical Committee Member for Iranian Conference on Electrical Engineering (Since 2001)

Member of Tavanir Task Force for the Study of Iran Grid Blackouts (2003)

Awards:

1999 Power Engineering Society (PES) Working Group Award of the Institution of Electrical and Electronics Engineers (IEEE)

1990-1995 Scholarship of the Ministry of Culture and Higher Education for Ph.D. studies.

Industrial Projects:

- Investigating the effects of Bushehr Power Plant integration on static and dynamic behavior of Iranian interconnected grid, 2010
- Consultant to TAVANIR on dynamic studies section of the project “Extensive studies and enhancement of Iranian HV power system” by Siemens, 2007-2009
- Investigating the synchronization problems of Razi Petrochemical Plant generating station with the interconnected grid, 2003-2004 (supervisor, with NRI)
- Feasibility study of series capacitive compensation for increasing loadability of 230/400 kV lines of Iranian south-east grid, 2001-2003 (project head)
- Investigating SVC performance and flicker problems at Khoozestan Steel Plant, 2001-2003
- PSS design and field testing at Bistoon generating station, 2002-2003 (supervisor, with NRI)
- Power quality analysis at 63/20 kV substations of Tehran Regional Electric Company, 2001-2002 (supervisor, with Asak Tavan Co.)
- PSS design, tuning and field testing at Bandar-Abbas generating station, 1988-1989.

Publications:

A- Journal Papers:

1. Mohsen Rahimi, Mostafa Parniani, “Efficient Control Scheme of Wind Turbines with Doubly-Fed Induction Generators for Low Voltage Ride-Through Capability Enhancement”, IET Renewable Power Generation, May 2010, Vol. 4, Iss. 3, pp. 242-252.
2. Mohsen Rahimi, Mostafa Parniani, “Coordinated Control Approaches for Low Voltage Ride-Through Enhancement in Wind Turbines with Doubly Fed Induction Generators”, IEEE Trans. on Energy Conversion, Vol. 25, No. 3, Sep. 2010, pp. 873-883.
3. Mohsen Rahimi, Mostafa Parniani, “Dynamic behavior analysis of doubly-fed induction generator wind turbines – The influence of rotor and speed controller parameters”, Int. Journal of Electrical Power and Energy Systems, Vol. 32, Issue 5, June 2010, pp. 464-477.
4. Mohsen Rahimi, Mostafa Parniani, “Grid-Fault Ride-Through Analysis and Control of Wind Turbines with Doubly Fed Induction Generators”, Electric Power Systems Research, Vol. 80, Issue 2, Feb. 2010, pp. 184–195.
5. Mohsen Rahimi, Mostafa Parniani, “Transient Performance Improvement of Wind Turbines with Doubly-Fed Induction Generators using Nonlinear Control Strategy”, IEEE Trans. on Energy Conversion, Vol. 25, No. 2, June 2010, pp. 514-525.
6. Mostafa Parniani, Maziar Vanouni, “A Fast Local Index for Online Estimation of Closeness to Loadability Limit”, IEEE Trans. on Power Systems, Vol. 25, No.1, Feb. 2010, pp. 584-585.
7. M. Zamani, M. Karimi-Ghartemani, N. Sadati, M. Parniani, “Design of a Fractional Order PID Controller for an AVR Using Particle Swarm Optimization,” Control Engineering Practice, Vol. 17, Issue 12, Dec. 2009, pp. 1380-1387.

8. Mohsen Rahimi, Mostafa Parniani, "Dynamic Behavior and Transient Stability Analysis of Fixed Speed Wind Turbines," *Renewable Energy*, Vol. 34, Issue 12, Dec. 2009, pp. 2613-2624.
9. Shahram Kazemi, Mostafa Parniani, and Mohammad Rasouli, "Effects of Excitation Control Systems on Parallel Operation of DGs with the Main Grid," *Journal of Iranian Association of Electrical and Electronics Engineers*, Vol. 4, No. 1, Spring 2007, pp 27-34.
10. A. Esfandiari, M. Parniani, Ali Emadi, H. Mokhtari, "Application of the unified power quality conditioner for mitigating electric arc furnace disturbances", *International Journal of Power and Energy Systems*, Vol. 28, No. 4, 2008.
11. M. Parniani, G. Zafarabadi, M. Rasouli and P. Ansarimehr, "Analysis of electromechanical oscillations and extended phase compensation design of Power System Stabilizer for Bisotoun Power Plant", *Iranian Journal of Electrical and Computer Engineering*, Vol. 6, No. 1, Winter 2007.
12. H. Samet, M. Parniani, "Predictive method for improving SVC speed in electric arc furnace compensation", *IEEE Trans. on Power Delivery*, Vol. 22, No. 1, Jan. 2007.
13. A. Esfandiari, M. Parniani, H. Mokhtari, A. Yazdian-Varjani, "Power quality improvement of an electric arc furnace using a new universal compensating system", *Journal of Power Electronics*, Korean Institute of Power Electronics, July 2006.
14. H. Mokhtari, A. Zebardast, M. Parniani, "Analysis of a TSC failure in a steel mill industry", *Electrical Power Quality and Utilization*, Vol. 2, No. 1, 2006.
15. A. Esfandiari, M. Parniani, H. Mokhtari, "Power quality improvement of an electric arc furnace using passive and shunt active filters", *International Journal of Electrical Engineering*, Vol. 13, No. 2, pp. 129-136 , 2006.
16. M. Parniani, Sh. Filizadeh, "A modular modeling method for dynamic stability studies of power systems including FACTS devices, " *Scientia Iranica*, Vol.7, No.3, Oct. 2000, pp.219-225.
17. M. Parniani, M.R. Iravani, "Optimal robust control design of Static VAR Compensators", *IEE Proc. Gener. Transm. Distrib.*, Vol.145, No.3, May 1998.
18. M. Parniani, M.R. Iravani, "Voltage control stability and dynamic interaction phenomena of Static VAR Compensators", *IEEE Trans. on Power Systems*, Vol.10, No.3, Aug. 1995.
19. M. Parniani, M. R. Iravani, "Computer analysis of small signal stability of power systems including network dynamics", *IEE Proc. Gener., Transm. Distrib.*, Vol.142, No.6, Nov.1995.
20. M. Parniani, H. Lesani, "Application of Power System Stabilizer at Bandar-Abbas Power Station", *IEEE Trans. on Power Systems*, Vol.9, No.3, Aug. 1994.
21. Slow Transients Task Force of IEEE Working Group on Modeling and Analysis of System Transients (M. Parniani a Task Force member), "Modeling and analysis guidelines for slow transients: Part III- The study of ferroresonance," *IEEE Trans. on Power Delivery*, Vol.15, No.1, Jan.2000.
22. Slow Transients Task Force of IEEE Working Group on Modeling and Analysis of System Transients (M. Parniani a Task Force member), "Modeling and analysis guidelines for slow transients: Part II- Controller interactions, harmonic interactions," *IEEE Trans. on Power Delivery*, Vol.11, No.3, July 1996.

23. Slow Transients Task Force of IEEE Working Group on Modeling and Analysis of System Transients (M. Parniani a Task Force member), "Modeling and analysis guidelines for slow transients: Part I- Torsional oscillations, transient torques, turbine blade vibrations, fast bus transfer," IEEE Trans. on Power Delivery, Vol.10, No.4, Oct. 1995.
24. M. Parniani, R. Bagheri, "Dynamic modeling of diesel-generator and design and implementation of its speed control system", International Journal of Engineering Science, Iran University of Science and Technology, Vol. 19, No. 10-A, 2008, pp. 63-72 (Farsi edition).
25. M. Parniani, M. Rashidi, "Study of TCSC performance at subsynchronous frequencies and its impact on SSR damping", Sharif Research Journal, No. 25, 2004 (in Farsi).
26. M. Parniani, R. Bagheri, "A new method in design and implementation of electronic synchronizer for fast paralleling of diesel generators based on phase locked loops", Iranian Journal of Electrical and Computer Engineering, Yr.1, No. 2, 2004 (in Farsi).
27. Sh. Kazemi, M. Parniani, H. Mokhtari, "Distributed generation resources in electric networks", Electric Industry magazine (San-a-te Bargh, in Farsi), No. 101, Oct. 2004.
28. M. Parniani, H. Eskandari, "Overview of direct current transmission systems based on voltage source inverters", Bargh Scientific Journal, No. 35, Fall 2002 (in Farsi).
29. M. Parniani, S. Mohagheghi, "Deregulation and restructuring of power systems," Barghe Sharif, No.11, Spring 2001 (in Farsi).
30. FACTS Committee of TAVANIR (M. Parniani et. al.), "Flexible AC transmission systems and their application in Interconnected electric grid of Iran", Bargh Scientific Journal, Yr.13, No.1, Spr. 2000, pp. 76-93 (in Farsi).
31. M. Parniani, A. Naderian Jahromi, "Evaluation of electromagnetic forces due to symmetrical and unsymmetrical short circuits on isolated phase buses," Bargh Scientific Journal, No. 27, Summer 1999(in Farsi).
32. H. Lesani, M. Parniani, "Stabilizer tuning at Bandar-Abbas Power Station," Bargh Scientific Journal, No.5, 1990, pp. 46-53 (in Farsi).

B- Conference Papers:

1. S. Tohidi, A. Rabiee, and M. Parniani, "Influence of model simplifications and parameters on dynamic performance of grid connected fixed speed wind turbines", International Conference on Electrical Machines (ICEM), Sep. 2010, Rome, Italy.
2. S. Tohidi, M. Parniani, B. Mohammadi-Ivatloo, A. Rabiee, "Small-signal analysis of a grid connected wind turbine with DFIG", IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), May 2010, Calgary, Canada.
3. B. Mohammadi-Ivatloo, M. Shiroei, M. Parniani, "Estimation of reduced order equivalent synchronous generator model based on phasor measurements", IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), May 2010, Calgary, Canada.
4. A. Rabiee, M. Parniani, "Optimal reactive power dispatch using the concept of dynamic VAr source value", IEEE PES General Meeting 2009, Calgary, Canada.

5. M. Parniani, M. Vanouni, "A new index for online voltage stability analysis using scalar local measurements", The Third International Conference on Electric Utility Deregulation and Restructuring and Power Technologies (DRPT), April 2008, Nanjing, China.
6. M. Parniani, M. Vanouni, "A novel fast method of thevenin equivalent estimation for online voltage stability analysis", IEEE DRPT Conference, April 2008, Nanjing, China.
7. M. Karimi-Ghartemani, M. Zamani, N. Sadati, M. Parniani, "An optimal fractional order controller for an AVR system using particle swarm optimization algorithm", Large Engineering Systems Conference on Power Engineering (LESCOPE), Montreal, October 10-12, 2007.
8. M. Parniani, J.H. Chow, L. Vanfretti, B. Bhargava, A. Salazar, "Voltage stability analysis of a multiple-infeed load center using phasor measurement data", IEEE Power Systems Conference and Expo 2006, Atlanta, USA.
9. M. Honarvar Nazari, M. Parniani, "Determining and optimizing power loss reduction in distribution feeders due to distributed generation", IEEE Power Systems Conference and Expo 2006, Atlanta, USA.
10. Gh. Zafarabadi, M. Parniani, M. Rasouli, P. Ansarimehr, "Extended phase compensation design of Power System Stabilizer for Bisotoun Power Plant," IFAC 2006 Symposium on Power Plants and Power Systems Control, Kananaskis, Calgary, Canada, June 25-28, 2006.
11. M. Parniani, A. Nasri, "SCADA-based under-frequency load shedding integrated with rate of frequency decline", IEEE/PES General Meeting, June 2006, Montreal, Canada.
12. L. Vanfretti, M. Parniani, J.H. Chow, B. Bhargava, and A. Salazar, "Phasor measurement based voltage stability analysis of power transfer paths", poster presentation at IEEE/PES General Meeting, June 2006, Montreal, Canada.
13. M. Parniani, P. Maghuli, "Allocation of reactive power to bilateral transactions using energy transaction factors", 21st International Power System Conference, Nov. 2006, Tehran, Iran.
14. Salman Mohagheghi, Giorgos K. Stefopoulos and Mostafa Parniani, "Reactive compensation techniques for increasing the loadability of long primary distribution lines", Proceedings of the 37th North American Power Symposium (NAPS), Ames, USA, October 2005, pp 233-237.
15. A. Hasanzadeh, M. Parniani, S.M.R. Sadriyeh, "A comparative study on current control methods for load balancing and power factor correction using STATCOM", IEEE PowerTech 2005, St. Petersburg, Russia.
16. Mostafa Parniani, Masoud Hasani, "Method of combined static and dynamic analysis of voltage collapse in voltage stability assessment", IEEE/PES T&D Conference & Exhibition 2005: Asia Pacific, August 2005, Dalian, China.
17. A. Esfandiari, M. Parniani, H. Mokhtari, "A new control strategy of shunt active filters for power quality improvement of highly and randomly varying loads", Proceedings of the IEEE International Symposium on Industrial Electronics, May 2004, Ajaccio, France, Vol. 2, pp 1297-302.
18. A. Esfandiari, M. Parniani, H. Mokhtari, "Shunt active filter control based on instantaneous power theory on a rotating reference frame in 3-phase systems", European Power Electronics - 11th International Conference on Power Electronics and Motion Control (EPE-PEMC 04), Sep. 2004, Riga, Latvia, Proceedings Vol. 6, 366-71.

19. A. Rajabi-Ghahnavie, M. Parniani, M. Fotuhi-Firuzabad, "Investigating the effects of reactive power on islanding detection", Proceedings of the IEEE/PES International Conference on Power System Technology - POWERCON 2004, Singapore, pp 1067-1071.
20. A. Esfandiari, M. Parniani, H. Mokhtari, "Mitigation of electric arc furnace disturbances using the Unified Power Quality Conditioner", Proceedings of 30th IEEE Industrial Electronics Conference – IECON 2004, Busan, Korea, Vol. 2, p 1469-1474.
21. A. Rajabi-Ghahnavie, M. Fotuhi-Firuzabad, M. Parniani, "Impact of Distributed Generation Resources on Customer Interruption Cost", Proceedings of the IEEE/PES International Conference on Power System Technology - POWERCON 2004, Singapore, Vol. 1, p 856-61.
22. A. Esfandiari, M. Parniani, H. Mokhtari, "Power quality improvement in three phase four-wire systems using shunt active filters", Proceedings of 9th IEEE International Power Electronics Congress – CIEP 2004, Celaya, Mexico, pp. 193-197.
23. M. Parniani, P. Maghuli, "Generators reactive power support to active loads in a pool model market", 19th International Power System Conference, Nov. 2004, Tehran, Iran.
24. A. Esfandiari, M. Parniani, "Electric arc furnace power quality improvement using shunt active filter and series inductor", Proceedings of IEEE TENCON 2004, Thailand, pp. D105-D108.
25. M. Parniani, H. Mokhtari, M. Hejri, "Effects of dynamic reactive compensation in arc furnace operation characteristics and its economic benefits", IEEE/PES Transmission and Distribution Conference, Oct. 2002, Yokohama, Japan.
26. M. Parniani, Sh. Filizadeh, "Thyristor-Controlled Series Capacitor control strategies for enhancement of power system steady state and dynamic behavior," Universities Power Engineering Conference, Sep. 2001, Swansea, UK.
27. H. Samet, M. Parniani, "A study on reactive power measurement methods", 18th Iranian Conference on Electrical Engineering, May 2010, Isfahan University of Technology, Isfahan, Iran (in Farsi).
28. B. Mohammadi-Ivatloo, A. Rabiee, M. Parniani, S. Tohidi, "Power system stabilization using PSS with synchronized wide area measurements", 24th International Power System Conference, Nov. 2009, Tehran, Iran (In Farsi).
29. M. Parniani, E. Davoodi, "The effect of hierarchical voltage control on reducing voltage variations due to the network load changes", 24th International Power System Conference, Nov. 2009, Tehran, Iran (In Farsi).
30. B. Mohammadi Ivatloo, H. Mokhtari, M. Parniani, A. Salehi, "Optimal placement of phasor measurement units for observability of Iranian interconnected grid", 23rd International Power System Conference, Nov. 2008, Tehran, Iran (In Farsi).
31. Z. Madihi, H. Berahmandpour, M. Parniani, "An extended algorithm for reactive power cost allocation considering the effect of active power loads on the network reactive power loss", 15th Iranian Conference on Electrical Engineering, May 2007, ITRC, Tehran, Iran (in Farsi).
32. M. Parniani, A. Nasri, "A new adaptive load shedding algorithm using generator output powers", 15th Iranian Conference on Electrical Engineering, May 2007, ITRC, Tehran, Iran (in Farsi).

33. M. Honarvar Nazari, M. Parniani, "Calculating and evaluating the effect of distributed generation (DG) on distribution feeder capacity and optimizing DG parameters," 14th Iranian Conference on Electrical Engineering, May 2006, Amirkabir University of Technology, Tehran, Iran (in Farsi).
34. A. Nasri, M. Parniani, S.M. Rezaeian, "Under frequency load shedding using rate of frequency decline index", 20th International Power System Conference, Nov. 2005, Tehran, Iran (In Farsi).
35. S.H.R. Adeli, M. Parniani, "Identification of coherent machines using energy method," 12th Iranian Conference on Electrical Engineering, May 2004, Ferdowsi University, Mashhad, Iran (in Farsi).
36. M. Parniani, P. Maghuli, "Reactive power allocation to bilateral power transfer transactions", 19th International Power System Conference, Nov. 2004, Tehran, Iran (in Farsi).
37. M. Rashidi, M. Parniani, "An algorithm for distance protection of series-capacitor compensated transmission lines", 19th International Power System Conference, Nov. 2004, Tehran, Iran (in Farsi).
38. H. Samet, M. Parniani, "A new method for improvement of TSC and TCR performance in compensating electric arc furnaces", 11th Iranian Conf. on Electrical Eng., May 2003, Shiraz University, Proc. Vol. Power, pp. 9-17 (in Farsi).
39. M. Parniani, A. Rajabi, "Underfrequency load shedding in electric systems", System Blackout Seminar, Institute of Power and Water Industry, Aug. 2003, www.blackout.ir, (in Farsi).
40. M. Parniani, H. Mokhtari, M. Hejri, "Impact of static VAR Compensators on operating characteristics of arc furnaces and their optimal operation", 10th Iranian Conference on Electrical Engineering, May 2002, Tabriz University, Iran (in Farsi).
41. A. Safdari, M. Parniani, "Identification of coherent machines in power systems using weak coupling concept," 8th Iranian Conference on Electrical Engineering, May 2000, Isfahan University of Technology, Iran (in Farsi).
42. M. Haeri, M. Parniani, S. Akbarpoor, "Power System stabilizer design by multi-model adaptive control", 13th International Power System Conference, Nov. 1998, Tehran, Iran (in Farsi).
43. M. Parniani, Sh. Filizadeh, "Application of Thyristor-Controlled Series Capacitor for power system stability and control," 13th International Power System Conference, Nov. 1998, Tehran, Iran (in Farsi).
44. M. Parniani, A. Naderian Jahromi, "Calculation of electromagnetic forces due to three phase short circuit on isolated-phase bus of generators," 13th International Power System Conference, Nov. 1998, Tehran, Iran (in Farsi).
45. M. Parniani, M.R. Iravani, " μ -Optimal robust control design for Static VAR Compensators", 5th Iranian Conference on Electrical Engineering, May 1997, Sharif University of Technology, Tehran, Iran (in Farsi).

C. Technical reports

1. M. Parniani, M. Rashidi "Feasibility study of series compensation for increasing loadability of 230/400 kV lines of Iranian south-east grid, Phase 1, Vol. 1-Fundamentals of series compensation", Tavanir project 275-76-1013, 2001 (in Farsi).
2. M. Parniani, M. Rashidi " Feasibility study of series compensation for increasing loadability of 230/400kV lines of Iranian south-east grid, Phase 1, Vol.2- Iran Interconnected Grid data for years 2004 and 2009," Tavanir project 275-76-1013, 2002 (in Farsi).
3. M. Parniani, M. Rashidi " Feasibility study of series compensation for increasing loadability of 230/400 kV lines of Iranian south-east grid, Phase 2- Power flow and transient stability analysis of the network and proposal for series compensation", Tavanir project 275-76-1013, 2002 (in Farsi).
4. M. Parniani, M. Rashidi "Feasibility study of series compensation for increasing loadability of 230/400 kV lines of Iranian south-east grid, Final report- Study of subsynchronous resonance and overall conclusions", Tavanir project 275-76-1013, 2005 (in Farsi).
5. M.R. Zolghadri, M. Parniani, H. Mokhtari, H. Samet, M. Hejri, "Investigating SVC performance and flicker problems at distribution network of electric arc furnaces of Khoozestan Steel Plant", Report 1 and its amendment, Contract 791053, Sharif University of Tech., Winter 2002 (in Farsi).
6. M. Parniani, H. Samet, "Investigating SVC performance and flicker problems at distribution network of electric arc furnaces of Khoozestan Steel Plant", Report 2, "New methods of reactive power compensation and flicker mitigation using static compensators", Contract 791053, Sharif University of Tech., Winter 2002 (in Farsi).
7. M. Parniani, H. Mokhtari, Sh. Kaboli, Zebardast, "Investigating SVC performance and flicker problems at distribution network of electric arc furnaces of Khoozestan Steel Plant", Final report, "SVC system fault detection and remedy suggestion", Contract 791053, Sharif University of Tech., Spring 2003 (in Farsi).
8. M. Parniani, A. Nasri, "Load shedding scheme to preserve overall stability of power system", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 2004 (in Farsi).
9. M. Parniani, S. Mohagheghi, A. Hasanzadeh, "Compensation methods for unbalance due to high speed railways operation", Research proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 2003 (in Farsi).
10. M. Parniani, S. Mohagheghi, "Series capacitor application in distribution systems- analysis of problems and remedies", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 2002 (in Farsi).
11. M. Parniani, K. Afshar, "Study of voltage stability analysis and improvement methods in large electric networks, Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 2001 (in Farsi).
12. M. Parniani, M.M. Mansouri, S.M.H. Alavi, "STATCOM design for voltage and reactive power control", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 2000, pp. 25-35 (in Farsi).
13. M. Parniani, A. Safdari, "Identification and aggregation of coherent machines in power system dynamic model", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 1999, pp. 19-29 (in Farsi).

14. A. Shirali, Sh. Filizadeh, M. Parniani, "Thyristor- Controlled Series Capacitor", Sec. 4 of Flexible AC Transmission Systems, Center for Innovative Electrotechnologies, Ministry of Energy, Iran, 1999 (in Farsi).
15. H. Asmar, M. Parniani, "Solid-State Series Compensator", Sec. 11 of Flexible AC Transmission Systems, Center for Innovative Electrotechnologies, Ministry of Energy, Iran , 1999 (in Farsi).
16. M. Parniani, M. Haeri, S. Akbarpoor, "PSS design with multi-model adaptive control method", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 1998, pp. 45-54 (in Farsi).
17. M. Parniani, A.N. Jahromi, "Computation of short circuit electromagnetic forces on isolated- phase bus of generators", Research Proc. of Elec. Eng. Dept., Sharif Univ. of Tech., 1998, pp. 33-43 (in Farsi).

D. Tutorials

1. H. Mokhtari, M. Parniani, M.R. Zolghadri, *An introduction to electric power quality*, Sharif University of Technology, 2003 (in Farsi).
2. M. Parniani, A. Rajabi, *Underfrequency load shedding in power grids*, Sharif University of Technology, 2003 (in Farsi).