



Alireza Shirani

Managing Director and Member of the Board

EDUCATION:

B.S. January 1988, Electrical (Power) Engineering, Sharif University of Technology, Tehran-IRAN

PROFESSIONAL EXPERIENCES:

- Managing Director and Member of the Board of Monenco Iran Consulting Engineers Since 2007

Achievements:

- Rank Monenco Iran as the only Iranian firm among 200 best consulting firms around the world (rank 124)
- Rank Monenco Iran as the sole consulting firm among 400 economical giants in the country
- The only Iranian consulting firm, with various consultancy projects in other countries; Oman, Bangladesh, Nigeria, Sought Africa, Iraq, Syria, and two branches in Oman and Nigeria
- Make the portfolio diversification in the company to support electric power, (power plant, transmission lines, substations, Dispatching), oil and gas (downstream, pipelines), Energy (master plans and energy efficiency), Mining

- Vice President of Research, Niroo Research Institute 1997-2007. (Associate Professor)

Achievements:

- Cofounder of Niroo Research Institute
- Recognized as the best researcher in the ministry of Energy 2002
- Recognized as the best practice developer for commercialization of research products, 2003

- Electric Power Research Center, Head of Electric Dept., 1994-1997

- Recognized as the best researcher and manager, through 1994 to 1997
- Recognized as one of the best ministry of energy employer, 1996

- Electric Power Research Center, Deputy Head of Electrical Dept., 1992-1994

- Electric Power Research Center, System Engineer, 1990-1992

- Energy Division, Ministry of Energy, System Engineer, 1988-1990

- Member of the Board Modje Niroo Co. Since 2007

- Member of the Board Gharb Niroo Consulting Engineers 2010 -2013

- Vice Head of Directorate of MATN International Co., 1995 -1997

SCIENTIFIC COOPERATION:

- Associate Professor in Niroo research institute

- Distinguished Referee of Inter National Power System Conference 2010

- IEJ Referee, since 2009

- Member of Cigre Study Committee C1, since 2006



- Member of Cigre Task Force 38.06.05, since 2002-2004
- Member of Cigre Task Force 38.06.01, 2000-2002
- Distinguished Member of Cigre, since 2000
- Member of Cigre Study Committee 38, 1998-2004
- Member of Technical Committee of Electrical Eng. Conference, since 1997
- Member of Technical Committee of International Power System Conference, since 1994
- Editorial Member of Bargh Journal of Electrical Science and Technology, since 1994
- Member of Electrical Devices Assessment and Accreditation Council, since 2004
- Member of Research Council of Energy Dept. of Iran Management and Planning Organization, since 2003

EXPERTISM FIELD:

A: Major:

- Power System Planning -Power System Restructuring
- High Voltage Engineering and Mainly Insulation Coordination

A: Minor:

- Artificial Intelligence
- Research Management
- Psychological Behavior

SKILLS:

- Power System Planning & Analysis Software, i.e. WASP, ATP, SABA

PUBLICATION:

A: Books:

1. **Elementary design of power Plants Vol. 1;** Monenco Iran consulting co. 2010; Has been selected as the best published book in the country 2010
2. **Elementary design of power Plants Vol. 2;** Monenco Iran consulting co. 2010; Has been selected as the best published book in the power industry 2011
3. **Comprehensive design of high voltage transmission line;** Monenco Iran consulting co. 2012, has been selected as the best written book in Iran power industry in 2012
4. **Electric power system restructuring;** Monenco Iran consulting co. 2013

B: ISI Journals:

- 1- A. M. RANJBAR, **A. R. SHIRANI**, A. F. FATHI; "A New Approach for Fault Location Problem on Power Lines", IEEE Power Delivery, No. 1, Jan. 1992, pp. 146-152.

- 2- R. BILLINTON, **A. R. SHIRANI**, et al; “Methods to Consider Customer Interruption Costs in Power System Analysis”, *Electra Journal*, Cigre 2001.
- 3- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “A New Approach for Distribution State Estimation Based on Ant Colony Algorithm with regard to Distributed Generation” , *Journal of Intelligent and Fuzzy System*, No. 16, 2005, pp. 119-131.
- 4- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “A New Approach Based on Ant Algorithm for Volt/VAR Control in Distribution Network Considering Distributed Generation”, *Journal of Science and Technology, Transaction B: Engineering*, Vol. 29, and No. B4, 2005, pp. 387-398.
- 5- B. MOZAFARI, A. M. RANJBAR, T. AMRAEE, **A. R. SHIRANI**; “A Competitive Market Structure for Reactive Power Procurement”, *Iranian Journal of Science and Technology, Transaction B: Engineering*, Vol. 30, and No. B2, 2006, pp. 259-276.
- 6- B. MOZAFARI, A. M. RANJBAR, T. AMRAEE, M. MIRJAFARI, **A. R. SHIRANI**; “A Hybrid of Particle Swarm and Ant Colony Optimization Algorithms for Reactive Power Market Simulation”, *Journal of Intelligent & Fuzzy Systems*, 2006.
- 7- S. SOLEYMANI, A. M. RANJBAR, **A. R. SHIRANI**; “Strategic Bidding with regard to Demand Elasticity” , Accepted in Nov. 2006, *Iranian Journal of Science and Technology, Transaction B: Engineering*
- 8- S. SOLEYMANI, A. M. RANJBAR, **A. R. SHIRANI**; “ New Approach for Strategic Bidding of Genco’s in Energy and Spinning Reserve Market” , Accepted in Jan. 2007, *Energy Conversion and Management Journal*, Elsevier.
- 9- S. D. JALALI, N. MOSLEMI, **A. R. SHIRANI**; “Proposed Methods for Recording and Analyzing of Transmission Lines and Substations, Outages for Reliability Analyzing and Identifying the Unreliable Points of the Power System”, *Water and Energy*, Year 2009, Volume 19, Issue: 3

C: Other Journals and International Conferences:

- 1- **A. R. SHIRANI**, M. P. ARABANI; “Application of Alternative Transient Program for Insulation Coordination in Iranian 400 Lines”, 22nd EMPTP Meeting, Nov. 1992, Leuven, BELGUIM.
- 2- A. M. RANJBAR, **A. R. SHIRANI**, A. F. FATHI; “Series Capacitors Application in Iranian 400 kV Transmission System”, 7th International Power System Conference, Nov. 1992, Tehran, IRAN.
- 3- M. P. ARABANI, **A. R. SHIRANI**; “A Precise Model of Determination Power and Communication Lines Clearances”, 7th International Power System Conference, Nov. 1992, Tehran, IRAN.

- 4- A. M. RANJBAR, **A. R. SHIRANI**, A. F. FATHI; “A New Approach for Fault Location Problem on Power Lines” , IEEE Power Delivery, No. 1, Jan. 1992, pp. 146-152.
- 5- M. P. ARABANI, **A. R. SHIRANI**; “An Economical Model for Determination HV & UHV Transmission Lines Right of Way”, 11th International Symposium, Modeling, Identification and Control, Feb. 1992, Innsbruck, AUSTRIA.
- 6- M. HOJJAT, **A. R. SHIRANI**; “Simplification of Power System Network in Transient Analysis”, ISMM Conference, Sept. 1991, Trani, ITALY, pp. 146-152.
- 7- M. P. ARABANI, **A. R. SHIRANI**; “IRAN-TURKEY Interconnection via HVDC Transmission Line”, National Energy Conference, June 1992, Bucharest, ROMANIA.
- 8- S. M. TABATABAEE, **A. R. SHIRANI**, A. F. FATHI; “A New Approach for Transient Stability Studies in Series Capacitor Compensated System”, IASTED International Symposium on Circuit and Systems, July 1991, Zurich, SWITZERLAND. (Accepted but not presented)
- 9- M. P. ARABANI, **A. R. SHIRANI**; “Optimum Insulators for Switching Over Voltage”, IASTED International Symposium on Circuit and Systems, July 1991, Zurich, SWITZERLAND. (Accepted but not presented)
- 10- A. M. RANJBAR, A. F. FATHI, **A. R. SHIRANI**; “ Digital Distance Relay Based on Traveling Waves” , IASTED International Symposium on Circuit and Systems, July 1991, Zurich, SWITZERLAND. (Accepted but not presented)
- 11- M. P. ARABANI, **A. R. SHIRANI**; “A New Model for Insulator Strings in Polluted Area” , 10th IASTED International Conference, Feb. 1991, Innsbruck, AUSTRIA.
- 12- A. M. GHAZIZEADEH, **A. R. SHIRANI**; “A Precise Model for Determination of Transient and Steady State Transmission Line Impedance for Digital Distance Position”, 10th IASTED International Conference, Feb. 1991, Innsbruck, AUSTRIA.
- 13- M. P. ARABANI, **A. R. SHIRANI**; “Dangerous Effects of Transmission Lines Upgrading in City Regions”, 1st Electrical Conference, 1991, Babolsar, IRAN.
- 14- A. M. RANJBAR, **A. R. SHIRANI**; A. F. FATHI, “Modeling of Transformers in Transient Period”, 1st Electrical Conference, 1991, Babolsar, IRAN.
- 15- A. M. RANJBAR, **A. R. SHIRANI**; “Time Shift Effects on Energy Consumption in IRAN” , 1st Distribution Conference, 1992, Babolsar, IRAN.
- 16- A. M. RANJBAR, **A. R. SHIRANI**, A. F. FATHI; “Transmission Line Spotting by Computer”, Bargh Journal of Electrical Science and Technology, 1991, Tehran, IRAN.
- 17- A. M. RANJBAR, **A. R. SHIRANI**, A. F. FATHI; “Fault Location Problem on Series Compensated Transmission Lines”, Bargh Journal of Electrical Science and Technology, 1992, Tehran, IRAN.



- 18- **A. R. SHIRANI**; “Application of Power System Impulse for Its Simplification in Transient Analysis”, EAST 93, June 17-18, Lisbon, PORTUGAL.
- 19- **A. R. SHIRANI**; “Neural Network Application in Voltage Harmonics Prediction”, 8th International Power System Conference, Nov. 1993, Tehran, IRAN.
- 20- M. P. ARABANI, **A. R. SHIRANI**; “Application of Neural Network in ESDD Calculation”, Cigre, 1994, Paris, FRANCE.
- 21- A. M. RANJBAR, A. F. FATHI, **A. R. SHIRANI**; “A New Approach for Fault Location Problem on Series Compensated Transmission Lines”, PSC Conference, 1995, St. Petersburg, RUSSIA.
- 22- **A. R. SHIRANI**; “Non Linear Elements Modeling in Power System Transient Studies”, Bargh Journal of Electrical Science and Technology, No. 13, 1995, Tehran, IRAN.
- 23- J. MOSHTAGH, A. M. RANJBAR, **A. R. SHIRANI**; “Inrush Current Detection by Use of ANN”, Bargh Journal of Electrical Science and Technology, No. 14, 1996, Tehran, IRAN.
- 24- **A. R. SHIRANI**; “Necessity of Attention to Harmonic Pollution in IRAN Power System Network”, Bargh Journal of Electrical Science and Technology, No. 18, 1996, Tehran, IRAN.
- 25- **A. R. SHIRANI**, M.R. ROKNI; “Fault Diagnosis in Turbo Generators”, Power Plant Operational Conference, 1996, Bandar Abbas, IRAN.
- 26- **A. R. SHIRANI**, M. P. ARABANI; “Comparison of Series Compensation and Bundling in EHV Transmission Lines”, Cigre, 1998, Paris, FRANCE.
- 27- M. MALLAKI, **A. R. SHIRANI**, M. P. ARABANI; “Privatization of IRAN Power System Industry Trend and Results”, Cigre, 1998, Paris, FRANCE.
- 28- **A. R. SHIRANI**; “An International Survey of Electrical Energy Interruption Cost in Industrial, Commercial and Residential Sectors” , Bargh Journal of Electrical Science and Technology, Vol. 13, No. 1, Serial No. 29, June 2000, Tehran, IRAN.
- 29- M. P. ARABANI, **A. R. SHIRANI**, M. HOJJAT; “Insulation Failures in Iranian EHV Lines Located in Polluted Area”, Cigre, 2000, Paris, FRANCE.
- 30- M. R. G. SHIRAZI, **A. R. SHIRANI**; “Computerized Program to Evaluate Reclosure’s Dead Time and Its Optional Compensation” , 15th International Power System Conference, Nov. 6-8, 2000, Tehran, IRAN.
- 31- **A. R. SHIRANI**; “The Role of the Research in the Evaluation of Electric Power Systems in Developing Nations, the Example of IRAN”, Market Trends Digest, Newton-Evans-Research Co., Vol.17, USA.

- 32- M. MALLAKI, **A. R. SHIRANI**, H. SIAHKALI; “New Approach for Determination of Energy and Connection Cost at the Power Grid Nodes”, IEEE, Summer Meeting, 2001, Vancouver, CANADA.
- 33- M. R. G. SHIRAZI, **A. R. SHIRANI**; “Analysis of Transient Over-Voltages due to Ferro Resonance in Power Transformers of Bushehr”, 16th International Power System Conference, Oct. 2000, Tehran, IRAN.
- 34- **A. R. SHIRANI**; “Iranian Power System Black out in 20th July 2001” , Bargh Journal of Electrical Science and Technology, Vol. 14, No. 2, Serial No. 30, Sept. 2001, Tehran, IRAN.
- 35- **A. R. SHIRANI**; “Electric Power Industry Restructuring”, 1st Iranian Seminar in Armenia, Nov. 2001, Yervan, ARMENIA.
- 36- M. P. ARABANI, **A. R. SHIRANI**; “The Behavior of Traditional Insulators in Polluted Area in IRAN”, INSUCON 2002, June 2002, Berlin, GERMANY. (Accepted but not presented)
- 37- M. P. ARABANI, **A. R. SHIRANI**, M, JANNATIAN; “ An Optimum 4 Circuit (2×230+2×63) kV T.L. in Tehran Urban Area with Minimum Environmental Impact” , Cigre, 2002, Paris, FRANCE.
- 38- **A. R. SHIRANI**, H, SIAHKALI; “Traceable Flow Method in Determination of Congestion Cost Assignment in Open Access Power System Network”, IEEE/PES Transmission and Distribution Conference, 2002, Yokohama, JAPAN.
- 39- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “Optimization with Ant Colony Algorithm”, Bargh Journal of Electrical Science and Technology, No. 36, 2003, Tehran, IRAN.
- 40- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “Volt/VAR Control in Distribution Networks with Distributed Generation”, IFAC Symposium on Power Plant and Power System Control, 2003, Seoul, KOREA.
- 41- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “Impact of Distributed Generation on Volt/VAR Control in Distribution Networks”, IEEE Power Tech., 2003, ITALY.
- 42- B. MOZAFARI, A. M. RANJBAR, **A. R. SHIRANI**, A. BARKESCH; “A Comprehensive Method for Available Transfer Capability Calculation in A Deregulated Power System”, IEEE International Conference on Electric Utility Deregulation, Restructuring and Power Technologies, April 2004, Hong Kong.
- 43- **A. R. SHIRANI**; “Iranian Power System Black out on 31st August, 2003” , Cigre, Large Disturbances Work Shop Sept. 2004, Paris, FRANCE.
- 44- **A. R. SHIRANI**, R. AMROLLAHI; “World Power System Black out in 2003” , Bargh Journal of Electrical Science and Technology, No. 40, 2004, Tehran, IRAN.

- 45- H. ARABIAN, A. M. RANJBAR, **A. R. SHIRANI**, H. SIAHKALI; “Special Protection Schemes (SPS) for Improvement of Power System Stability” , Bargh Journal of Electrical Science and Technology, No.39, 2004, Tehran, IRAN.
- 46- J. FAIZ, I. TABATABAEI ARDAKANI, E. SHARIFI QAZVINI, **A. R. SHIRANI**; “Modeling and Dynamic Simulation of Induction Machine Under Mixed Eccentricity Condition Using Winding Function”, Cigre, 2004, Paris, FRANCE.
- 47- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**, A. OSTADI; “A New Evolutionary Method Based on Ant Colony Algorithm for Daily Volt/VAR Control in Distributed Generation Networks with regard to DG” , IEEE Transactions on Power Systems, 2005.
- 48- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**; “An Approach for Volt/VAR Control in Distribution System with Distributed Generation”, Scientica Iranica International Journal of Science and Technology, 2005.
- 49- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**, B. MOZAFARI, A. OSTADI; “ Optimal Operation of Distribution System with regard to Distributed Generation: A Comparison of Evolutionary Methods” , IEEE Industry Applications Society (IAS) 2005, Hong Kong.
- 50- B. MOZAFARI, A. M. RANJBAR, **A. R. SHIRANI**, A. MOZAFARI; “Reactive Power Management in A Deregulated Power System with Considering Voltage Stability: Particle Swarm Optimization Approach”, 18th International Conference on Electricity Distribution, 2005, Turin, ITALY.
- 51- B. MOZAFARI, A. M. RANJBAR, T. AMRAEE, **A. R. SHIRANI**, A. MOZAFARI; “An Interruptible Load Management Method with Considering Voltage Stability in A Restructured Power System: An OPF Approach”, 18th International Conference on Electricity Distribution, 2005, Turin, ITALY.
- 52- T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**, A. OSTADI; “ A New Approach Based on Ant Colony Algorithm to Distribution Management System with regard to Dispersed Generation” , 18th International Conference on Electricity Distribution, 2005, Turin, ITALY.
- 53- **A. R. SHIRANI**, R. AMROLLAHI; “World Power System Blackout in 2003” , Bargh Journal of Electrical Science and Technology, No. 40, 2004.
- 54- B. MOZAFARI, A. M. RANJBAR, **A. R. SHIRANI**; “A Method for Reactive Power Management in A Deregulated Power System Considering Voltage Stability Margin”, ICEE2004, Zanjan, IRAN.
- 55- B. MOZAFARI, T. AMRAEI, A. M. RANJBAR, **A. R. SHIRANI**, A. OSTADI; “Interruptible Load Management Method by Considering Voltage Stability in A Restructured Power System: An OPF Approach” ,

- 56- 19th International Power System Conference, Nov. 2004. 56-T. NIKNAM, A. M. RANJBAR, **A. R. SHIRANI**, A. OSTADI; “ A New Approach Based on Ant Colony Algorithm to Optimal Operation Management of Distribution Networks with regard to Dispersed Generation” , 19th International Power System Conference, Nov. 2004.
- 57- S. SOLEYMANI, A. M. RANJBAR, **A. R. SHIRANI**; “Nash Equilibrium Point Computation in Electricity Market” , Bargh Journal of electrical Science and Technology, No. 41, 2005, Tehran, IRAN.
- 58- M. MIRJAFARI, M. MIRZAGOL, S. AMINI VALASHANI, A. M. RANJBAR, **A. R. SHIRANI**; “Electromagnetic Design of Disk Machines Used in Micro turbines”, 19th International Power System Conference, November 2004, Tehran, IRAN.
- 59- T. NIKNAM, A.M. RANJBAR, **A. R. SHIRANI**, B. MOZAFARI, A. OSTADI; “ Optimal Operation of Distribution System with regard to Distributed Generation: A Comparison of Evolutionary Methods” , IEEE, 2005.
- 60- T. NIKNAM, A.M. RANJBAR, **A.R. SHIRANI**, A. OSTADI; “A New Approach Based on Ant Colony Algorithm To Distribution Management System with Regard To Dispersed Generation” , Cired 2005, ITALY.
- 61- B. MOZAFARI, A.M. RANJBAR, **A. R. SHIRANI**, A. MOZAFARI; “Reactive Power Management in A Deregulated Power System with Considering Voltage Stability: Particle Swarm Optimization Approach”, Cired 2005, ITALY.
- 62- T. AMRAEE, B. MOZAFARI, A. M. RANJBAR, **A. R. SHIRANI**, A. MOZAFARI; “ An Interruptible Load Management Method with Considering Voltage Stability in A structured Power System: An OPF Approach” , Cired 2005, ITALY.
- 63- H. HAMIDI, A. M. RANJBAR, **A. R. SHIRANI**; “Reactive Power Market Model from the View Point of Voltage Instability”, Bargh Journal of Electrical Science and Technology, No. 46, 2006.
- 64- B. MOZAFARI, T. AMRAEE, A. M. RANJBAR, **A. R. SHIRANI**; “An Optimal Management of Load curtailment in Restructured Power Systems To Avoid Voltage Instability”, Bargh Journal of Electrical Science and Technology, No. 46, 2006.
- 65- S. SOLEYMANI, A. M. RANJBAR, **A. R. SHIRANI**, M. MARAMI; “Application of Simulated Annealing Method in Strategic Bidding of Genco’s” , 21st International Power System Conference, Nov. 2006, Tehran-IRAN.
- 66- A. EHSANI, A. M. RANJBAR, **A. R. SHIRANI**, M. FOTUHI-FIROUZABADI; “A Proposed Method for Reliable Scheduling in Deregulated Power Systems”, 21st International Power System Conference, Nov.2006.
- 67- M. P. ARABANI, S. KAMALINIA, **A. R. SHIRANI**; “Development of Dispersed Generation with Global Trend”, Cigre, 2006, Paris, France.



68- S. SOLEYMANI, A. M. RANJBAR, **A. R. SHIRANI**; “ A New Structure for Electricity Market Scheduling” , IEEE-PEDES 2006, 12-15 Dec 2006, New Delhi, INDIA. 10.22.2007