

# بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



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### A. Research Interests:

- ✍ *Power System Restructuring*
- ✍ *Electricity Markets*
- ✍ *Optimization in Power systems*

### B. Courses:

- ✍ *Power System Restructuring*
- ✍ *Advanced Power System Operations*
- ✍ *Electricity Markets*
- ✍ *Optimization in Power systems*

### C. Researches:

#### 📄 *Journal Published Papers:*

- [1] R. Allahdadi Mehrabadi, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "Generation expansion planning in multi electricity markets considering environmental impacts," *Journal of Cleaner Production*, vol. 243, 2020.
- [2] R. Allahdadi Mehrabadi, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "Regulatory-intervented sustainable generation expansion planning in multi-electricity markets," *Sustainable Cities and Society*, vol. 52, 2020.
- [3] M. Arabzadeh, H. Seifi, and M. K. Sheikh-El-Eslami, "A new mechanism for remedial action schemes design in a multi-area power system considering competitive participation of multiple electricity market players," *International Journal of Electrical Power and Energy Systems*, vol. 103, pp. 31-42, 2018.
- [4] A. Jalali, M. S. Sepasian, and M. K. Sheikh-El-Eslami, "Undisruptive load curtailment scheme to ensure voltage stability margin," *IET Generation, Transmission and Distribution*, vol. 13, pp. 1509-1519, 2019.
- [5] H. Jalili, M. K. Sheikh-El-Eslami, M. P. Moghaddam, and P. Siano, "Modeling of demand response programs based on market elasticity concept," *Journal of Ambient Intelligence and Humanized Computing*, vol. 10, pp. 2265-2276, 2019.
- [6] H. Jalili, M. K. Sheikh-El-Eslami, M. Parsa Moghaddam, and P. Siano, "Distributed energy resources' role on reducing reliability cost," *International Transactions on Electrical Energy Systems*, vol. 28, 2018.
- [7] H. Jalili, M. K. Sheikh-El-Eslami, M. Parsa Moghaddam, and P. Siano, "Modeling of retailer's behavior for participation in the capacity market," *International Transactions on Electrical Energy Systems*, vol. 29, 2019.
- [8] M. Jamshidi, H. Kebriaei, and M. K. Sheikh-El-Eslami, "An interval-based stochastic dominance approach for decision making in forward contracts of electricity market," *Energy*, vol. 158, pp. 383-395, 2018.
- [9] Z. Kaheh, R. Baradaran Kazemzadeh, and M. K. Sheikh-El-Eslami, "A trilevel programming model for flexiramp and reserve procurement in high penetration of wind farms and participation of a large industry and a DR aggregator," *International Transactions on Electrical Energy Systems*, vol. 29, 2019.
- [10] Z. Kaheh, R. B. Kazemzadeh, and M. K. Sheikh-El-Eslami, "Simultaneous consideration of the balancing market and day-ahead market in Stackelberg game for flexiramp procurement problem in the presence of the wind farms and a DR aggregator," *IET Generation, Transmission and Distribution*, vol. 13, pp. 4099-4113, 2019.

- [11] Aryani, M., Ahmadian, M., Sheikh-El-Eslami, M.-K., "A two-stage robust investment model for a risk-averse price-maker power producer", *Energy*, vol. 143, pp. 980-994, 2018.
- [12] Jalili, H., Sheikh-El-Eslami, M.K., Parsa Moghaddam, M., "Reducing reliability cost in presence of renewables by demand side management resources, *International Transactions on Electrical Energy Systems*, vol. 27, no. 9, art. no. e2373, 2017.
- [13] Tahmasebifar, R., Sheikh-El-Eslami, M.K., Kheirollahi, R., "Point and interval forecasting of real-time and day-ahead electricity prices by a novel hybrid approach", *IET Generation, Transmission and Distribution*, vol. 11, no. 9, pp. 2173-2183, 2017. M. Shabanzadeh, M.-K.
- [14] Sheikh-El-Eslami, and M.-R. Haghifam, "An interactive cooperation model for neighboring virtual power plants," *Applied Energy*, vol. 200, pp. 273-289, 2017.
- [15] M. Shabanzadeh, M. K. Sheikh-El-Eslami, and M. R. Haghifam, "Risk-based medium-term trading strategy for a virtual power plant with first-order stochastic dominance constraints," *IET Generation, Transmission and Distribution*, vol. 11, pp. 520-529, 2017.
- [16] S. Rahmani-Dabbagh and M. K. Sheikh-El-Eslami, "A profit sharing scheme for distributed energy resources integrated into a virtual power plant," *Applied Energy*, vol. 184, pp. 313-328
- [17] M. Shafie-Khah, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Ex-ante evaluation and optimal mitigation of market power in electricity markets including renewable energy resources," *IET Generation, Transmission and Distribution*, vol. 10, pp. 1842-1852, 2016.
- [18] M. Shafie-khah, E. Heydarian-Forushani, M. E. H. Golshan, P. Siano, M. P. Moghaddam, M. K. Sheikh-El-Eslami, *et al.*, "Optimal trading of plug-in electric vehicle aggregation agents in a market environment for sustainability," *Applied Energy*, vol. 162, pp. 601-612, 2016.
- [19] M. Shabanzadeh, M. K. Sheikh-El-Eslami, and M. R. Haghifam, "A medium-term coalition-forming model of heterogeneous DERs for a commercial virtual power plant," *Applied Energy*, vol. 169, pp. 663-681, 2016.
- [20] N. Hajibandeh, M. K. Sheikh-El-Eslami, S. Aminnejad, and M. Shafie-Khah, "Resemblance measurement of electricity market behavior based on a data distribution model," *International Journal of Electrical Power and Energy Systems*, vol. 78, pp. 547-554, 2016.
- [21] S. R. Dabbagh and M. K. Sheikh-El-Eslami, "Risk Assessment of Virtual Power Plants Offering in Energy and Reserve Markets," *IEEE Transactions on Power Systems*, vol. 31, pp. 3572-3582, 2016.
- [22] M. I. Alizadeh, M. Parsa Moghaddam, N. Amjady, P. Siano, and M. K. Sheikh-El-Eslami, "Flexibility in future power systems with high renewable penetration: A review," *Renewable and Sustainable Energy Reviews*, vol. 57, pp. 1186-1193, 2016.
- [23] M. Shafie-Khah, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and J. P. S. Catalão, "Optimised performance of a plug-in electric vehicle aggregator in energy and reserve markets," *Energy Conversion and Management*, vol. 97, pp. 393-408, 2015.
- [24] M. Shafie-Khah, E. Heydarian-Forushani, M. E. H. Golshan, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and J. P. S. Catalão, "Strategic offering for a price-maker wind power producer in oligopoly markets considering demand response exchange," *IEEE Transactions on Industrial Informatics*, vol. 11, pp. 1542-1553, 2015.
- [25] M. Shabanzadeh, M. K. Sheikh-El-Eslami, and M. R. Haghifam, "The design of a risk-hedging tool for virtual power plants via robust optimization approach," *Applied Energy*, vol. 155, pp. 766-777, 2015.
- [26] A. Karimi, H. Seifi, and M. K. Sheikh-El-Eslami, "Market-based mechanism for multi-area power exchange management in a multiple electricity market," *IET Generation, Transmission and Distribution*, vol. 9, pp. 1662-1671, 2015.
- [27] H. Golpîra, M. K. Sheikh-El-Eslami, and H. Seifi, "Power System Stabilizer Services Pricing in an Electricity Market," *Electric Power Components and Systems*, vol. 43, pp. 2050-2058, 2015.
- [28] S. R. Dabbagh and M. K. Sheikh-El-Eslami, "Risk-based profit allocation to DERs integrated with a virtual power plant using cooperative Game theory," *Electric Power Systems Research*, vol. 121, pp. 368-378, 2015.
- [29] A. K. Varkani, H. Seifi, and M. K. Sheikh-El-Eslami, "Locational marginal pricing-based allocation of transmission capacity in multiple electricity markets," *IET Generation, Transmission and Distribution*, vol. 8, pp. 983-994, 2014.
- [30] Sheikhhi Fini, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "A dynamic model for distributed energy resource expansion planning considering multi-resource support schemes," *International Journal of Electrical Power and Energy Systems*, vol. 60, pp. 357-366, 2014.
- [31] M. Shafie-Khah, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and J. P. S. Catalão, "Fast and accurate solution for the SCUC problem in large-scale power systems using adapted binary programming and enhanced dual neural network," *Energy Conversion and Management*, vol. 78, pp. 477-485, 2014.
- [32] M. Roustaei, M. K. Sheikh-El-Eslami, and H. Seifi, "Transmission cost allocation based on the users' benefits," *International Journal of Electrical Power and Energy Systems*, vol. 61, pp. 547-552, 2014.
- [33] M. Peik-Herfeh, H. Seifi, and M. Kazem Sheikh-El-Eslami, "Two-stage approach for optimal

dispatch of distributed energy resources in distribution networks considering virtual power plant concept," *International Transactions on Electrical Energy Systems*, vol. 24, pp. 43-63, 2014.

- [34] E. Heydarian-Forushani, M. P. Moghaddam, M. K. Sheikh-El-Eslami, M. Shafie-Khah, and J. P. S. Catalão, "A stochastic framework for the grid integration of wind power using flexible load approach," *Energy Conversion and Management*, vol. 88, pp. 985-998, 2014.
- [35] E. Heydarian-Forushani, M. P. Moghaddam, M. K. Sheikh-El-Eslami, M. Shafie-Khah, and J. P. S. Catalão, "Risk-constrained offering strategy of wind power producers considering intraday demand response exchange," *IEEE Transactions on Sustainable Energy*, vol. 5, pp. 1036-1047, 2014.
- [36] E. Heydarian-Forushani, M. P. Moghaddam, M. K. Sheikh-El-Eslami, M. Shafie-khah, and J. P. S. Catalao, "Risk-Constrained Offering Strategy of Wind Power Producers Considering Intraday Demand Response Exchange," *IEEE Transactions on Sustainable Energy*, 2014.
- [37] A. Ghaderi, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "Energy efficiency resource modeling in generation expansion planning," *Energy*, vol. 68, pp. 529-537, 2014.
- [38] S. R. Dabbagh and M. K. Sheikh-El-Eslami, "Risk-based profit allocation to DERs integrated with a virtual power plant using cooperative Game theory," *Electric Power Systems Research*, 2014.
- [39] M. Shivaie, M. S. Sepasian, and M. K. Sheikh-El-Eslami, "Multi-objective transmission expansion planning based on reliability and market considering phase shifter transformers by fuzzy-genetic algorithm," *International Transactions on Electrical Energy Systems*, vol. 23, pp. 1468-1489, 2013.
- [40] A. Sheikhi Fini, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "An investigation on the impacts of regulatory support schemes on distributed energy resource expansion planning," *Renewable Energy*, vol. 53, pp. 339-349, 2013.
- [41] M. Shafie-khah, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "Development of a virtual power market model to investigate strategic and collusive behavior of market players," *Energy Policy*, vol. 61, pp. 717-728, 2013.
- [42] E. Riahi Samani, H. Seifi, and M. K. Sheikh-El-Eslami, "A framework for PSS pricing as an ancillary service in a competitive electricity market," *International Journal of Electrical Power and Energy Systems*, vol. 46, pp. 221-227, 2013.
- [43] M. Peik-Herfeh, H. Seifi, and M. K. Sheikh-El-Eslami, "Decision making of a virtual power plant under uncertainties for bidding in a day-ahead market using point estimate method," *International Journal of Electrical Power and Energy Systems*, vol. 44, pp. 88-98, 2013.
- [44] F. Lotfifard, H. Seifi, and M. K. Sheikh-El-Eslami, "An economic-based special protection system in a restructured environment," *Electric Power Components and Systems*, vol. 41, pp. 1536-1554, 2013.
- [45] M. A. Latify, H. Seifi, H. R. Mashhadi, and M. K. Sheikh-El-Eslami, "Cobweb theory-based generation maintenance coordination in restructured power systems," *IET Generation, Transmission and Distribution*, vol. 7, pp. 1253-1262, 2013.
- [46] H. R. Arasteh, M. Parsa Moghaddam, M. K. Sheikh-El-Eslami, and A. Abdollahi, "Integrating commercial demand response resources with unit commitment," *International Journal of Electrical Power and Energy Systems*, vol. 51, pp. 153-161, 2013.
- [47] M. Shafie-khah, M. Parsa Moghaddam, M. K. Sheikh-El-Eslami, and M. Rahmani-Andebili, "Modeling of interactions between market regulations and behavior of plug-in electric vehicle aggregators in a virtual power market environment," *Energy*, vol. 40, pp. 139-150, 2012.
- [48] S. S. Mohtavipour, M. R. Haghifam, and M. K. Sheikh-El-Eslami, "Emergence of capacity withholding: an agent-based simulation of a double price cap electricity market," *IET Generation, Transmission and Distribution*, vol. 6, pp. 69-78, 2012.
- [49] E. Alishahi, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "A system dynamics approach for investigating impacts of incentive mechanisms on wind power investment," *Renewable Energy*, vol. 37, pp. 310-317, 2012.
- [50] A. Abdollahi, M. Parsa Moghaddam, M. Rashidinejad, and M. K. Sheikh-El-Eslami, "Investigation of economic and environmental-driven demand response measures incorporating UC," *IEEE Transactions on Smart Grid*, vol. 3, pp. 12-25, 2012.
- [51] K. Zare, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Risk-based electricity procurement for large consumers," *IEEE Transactions on Power Systems*, vol. 26, pp. 1826-1835, 2011.
- [52] M. Yazdani Damavandi, I. Kiaei, M. K. Sheikh-El-Eslami, and H. Seifi, "New approach to gas network modeling in unit commitment," *Energy*, vol. 36, pp. 6243-6250, 2011.
- [53] M. Shivaie, M. S. Sepasian, and M. K. Sheikh-El-Eslami, "Multi-Objective transmission expansion planning using Fuzzy-Genetic Algorithm," *Iranian Journal of Science and Technology, Transaction B: Engineering*, vol. 35, pp. 141-159, 2011.
- [54] M. Shafie-Khah, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "Unified solution of a non-convex SCUC problem using combination of modified Branch-and-Bound method with Quadratic Programming," *Energy Conversion and Management*, vol. 52, pp. 3425-3432, 2011.
- [55] M. Shafie-Khah, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Price forecasting of day-

ahead electricity markets using a hybrid forecast method," *Energy Conversion and Management*, vol. 52, pp. 2165-2169, 2011.

- [56] A. Moradkhani, M. Simab, E. Alishahi, and M. K. Sheikh-El-Eslami, "Optimum allocation of distributed generations based on efficiency scores using data envelopment analysis," *International Review on Modelling and Simulations*, vol. 4, pp. 164-170, 2011.
- [57] Hatami, H. Seifi, and M. K. Sheikh-El-Eslami, "A stochastic-based decision-making framework for an electricity retailer: Time-of-use pricing and electricity portfolio optimization," *IEEE Transactions on Power Systems*, vol. 26, pp. 1808-1816, 2011.
- [58] M. Hajati, H. Seifi, and M. K. Sheikh-El-Eslami, "Optimal retailer bidding in a DA market - a new method considering risk and demand elasticity," *Energy*, vol. 36, pp. 1332-1339, 2011.
- [59] E. Alishahi, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "An investigation on the impacts of regulatory interventions on wind power expansion in generation planning," *Energy Policy*, vol. 39, pp. 4614-4623, 2011.
- [60] K. Zare, M. P. Moghaddam, and M. K. Sheikh El Eslami, "Electricity procurement for large consumers based on Information Gap Decision Theory," *Energy Policy*, vol. 38, pp. 234-242, 2010.
- [61] K. Zare, M. P. Moghaddam, and M. K. Sheikh El Eslami, "Demand bidding construction for a large consumer through a hybrid IGDT-probability methodology," *Energy*, vol. 35, pp. 2999-3007, 2010.
- [62] E. Shayesteh, M. P. Moghaddam, A. Yousefi, M. R. Haghifam, and M. K. Sheik-El-Eslami, "A demand side approach for congestion management in competitive environment," *European Transactions on Electrical Power*, vol. 20, pp. 470-490, 2010.
- [63] E. R. Samani, H. Seifi, and M. K. Sheikh-El-Eslami, "Economic valuation of small signal stability as an ancillary service in a competitive electricity market," *International Review of Electrical Engineering*, vol. 5, pp. 608-613, 2010.
- [64] N. Mahmoudi-Kohan, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "An annual framework for clustering-based pricing for an electricity retailer," *Electric Power Systems Research*, vol. 80, pp. 1042-1048, 2010.
- [65] N. Mahmoudi-Kohan, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and E. Shayesteh, "A three-stage strategy for optimal price offering by a retailer based on clustering techniques," *International Journal of Electrical Power and Energy Systems*, vol. 32, pp. 1135-1142, 2010.
- [66] T. Barforoushi, M. P. Moghaddam, M. H. Javidi, and M. K. Sheikh-El-Eslami, "Evaluation of regulatory impacts on dynamic behavior of investments in electricity markets: A new hybrid DP/GAME framework," *IEEE Transactions on Power Systems*, vol. 25, pp. 1978-1986, 2010.
- [67] A.R. Hatami, H. Seifi, and M. K. Sheikh-El-Eslami, "Optimal selling price and energy procurement strategies for a retailer in an electricity market," *Electric Power Systems Research*, vol. 79, pp. 246-254, 2009.
- [68] R. Hatami, H. Seifi, and M. K. Sheikh-El-Eslami, "Hedging risks with interruptible load programs for a load serving entity," *Decision Support Systems*, vol. 48, pp. 150-157, 2009.
- [69] M. S. Ghazizadeh, M. K. Sheikh-el-eslami, and H. Seifi, "Electricity restructuring [Business Scene]," *IEEE Power and Energy Magazine*, vol. 5, pp. 16-20, 2007.
- [70] M. P. Moghaddam, M. K. Sheikh-El-Eslami, and S. Jadid, "Power market long-term stability: A hybrid MADM/GA comprehensive framework," *IEEE Transactions on Power Systems*, vol. 20, pp. 2107-2116, 2005.


#### Conference Published Papers:

- [1] H. M. Kazemi, S. G. Liasi, and M. Sheikh-El-Eslami, "Generation Expansion Planning Considering Investment Dynamic of Market Participants Using Multi-agent System," in *Proceedings - 2018 Smart Grid Conference, SGC 2018*, 2018.
- [2] Shabanzadeh, M., Sheikh-El-Eslami, M.-K., Haghifam, M.R. Modeling the cooperation between neighboring VPPs: Cross-regional bilateral transactions," in *4th Iranian Conference on Renewable Energy and Distributed Generation, ICREDG 2016*, art. no. 7875909, pp. 133-142, 2017.
- [3] S. R. Dabbagh, M. K. Sheikh-El-Eslami, and A. Borghetti, "Optimal operation of vehicle-to-grid and grid-to-vehicle systems integrated with renewables," in *19th Power Systems Computation Conference, PSCC 2016*, 2016.
- [4] S. Fini, S. Bahramara, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Modelling multi-resource regulatory incentives in expansion planning problem," in *Proceedings of the 2015 IEEE Innovative Smart Grid Technologies - Asia, ISGT ASIA 2015*, 2016.
- [5] S. R. Dabbagh and M. K. Sheikh-El-Eslami, "Participation of demand response resources through virtual power plant: A decision framework under uncertainty," in *2015 IEEE 15th International Conference on Environment and Electrical Engineering, IEEEIC 2015 - Conference Proceedings*, 2015, pp. 2045-2049.
- [6] E. Heydarian-Forushani, M. P. Moghaddam, M. K. Sheikh-El-eslami, M. Shafie-Khah, and J. P. S. Catalão, "Investigating the effects of flexible load in the grid integration of wind power," in *Proceedings of the IEEE Power Engineering Society Transmission and Distribution*


- Conference, 2014.
- [7] M. Shafie-Khah, J. P. S. Catalao, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "A new model to improve the behavior of PIEVs aggregator considering the customers' motivation," in *2013 IEEE Grenoble Conference PowerTech, POWERTECH 2013*, 2013.
  - [8] E. Heydarian-Forushani, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "A comprehensive load reduction demand response program for spinning reserve provision," in *2013 21st Iranian Conference on Electrical Engineering, ICEE 2013*, 2013.
  - [9] H. R. Arasteh, M. Parsa Moghaddam, and M. K. Sheikh-el-Eslami, "Bidding strategy in demand response exchange market," in *2012 2nd Iranian Conference on Smart Grids, ICSG 2012*, 2012.
  - [10] H. R. Arasteh, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Bidding strategy in demand response exchange market," in *2012 Proceedings of 17th Conference on Electrical Power Distribution, EPDC 2012*, 2012.
  - [11] E. Alishahi, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "A system dynamics approach for evaluating the optimum value of reliability-based incentive mechanism for wind generation in GEP," in *IEEE Power and Energy Society General Meeting*, 2012.
  - [12] M. Peikherfeh, H. Seifi, and M. K. Sheikh-El-Eslami, "Active management of distribution networks in presence of distributed generations," in *3rd International Conference on Clean Electrical Power: Renewable Energy Resources Impact, ICCEP 2011*, 2011, pp. 725-729.
  - [13] M. Peikherfeh, H. Seifi, and M. K. Sheikh-El-Eslami, "Optimal dispatch of distributed energy resources included in a virtual power plant for participating in a day-ahead market," in *3rd International Conference on Clean Electrical Power: Renewable Energy Resources Impact, ICCEP 2011*, 2011, pp. 204-210.
  - [14] A.A. Khatibzadeh, G. A. Khanbeigi, M. M. Bamdadian, H. Naderi, and M. K. Sheikh-El-Eslami, "An improved Tabu search algorithm and PSO for unit commitment problem solving," in *2011 19th Iranian Conference on Electrical Engineering, ICEE 2011*, 2011.
  - [15] T. Ghanbarzadeh, P. T. Baboli, M. Rostami, M. P. Moghaddam, and M. K. Sheikh-El-Eslami, "Wind farm power management by high penetration of PHEV," in *IEEE Power and Energy Society General Meeting*, 2011.
  - [16] M. Peikherfeh, M. K. Sheikh-El-Eslami, H. Seifi, and A. Namdari, "Economic effect of demand response programs on coupled active/reactive market prices in deregulated electricity markets," in *2010 7th International Conference on the European Energy Market, EEM 2010*, 2010.
  - [17] M. Peikherfeh, H. Seifi, and M. K. Sheikh-El-Eslami, "Optimal decision making for virtual power plant operation," in *2010 9th International Power and Energy Conference, IPEC 2010*, 2010, pp. 625-629.
  - [18] J. Mohammadi, H. Ghasemi, J. Saebi, and M. K. Sheikh-El-Eslami, "Using responsive loads as a tool for congestion management and system loss reduction," in *2010 IEEE International Energy Conference and Exhibition, EnergyCon 2010*, 2010, pp. 797-801.
  - [19] E. Shayesteh, A. Yousefi, M. Parsa Moghaddam, and M. K. Sheikh-El-Eslami, "ATC enhancement using emergency demand response program," in *2009 IEEE/PES Power Systems Conference and Exposition, PSCE 2009*, 2009.
  - [20] E. Shayesteh, M. Parsa Moghaddam, M. R. Haghifam, and M. K. Sheikh-El-Eslami, "Security-based congestion management by means of demand response programs," in *2009 IEEE Bucharest PowerTech: Innovative Ideas Toward the Electrical Grid of the Future*, 2009.
  - [21] N. Mahmoudi-Kohan, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and S. M. Bidaki, "Improving WFA K-means technique for demand response programs applications," in *2009 IEEE Power and Energy Society General Meeting, PES '09*, 2009.
  - [22] E. Shayesteh, M. P. Moghaddam, S. Taherynejhad, and M. K. Sheikh-El-Eslami, "Congestion Management using Demand Response programs in power market," in *IEEE Power and Energy Society 2008 General Meeting: Conversion and Delivery of Electrical Energy in the 21st Century, PES*, 2008.
  - [23] M. B. Rad, M. P. Moghadam, M. K. Sheikh-El-Eslami, and T. Barforoushi, "Long term energy efficiency trading as an approach for the competition improvement in the electricity markets," in *Transmission and Distribution Exposition Conference: 2008 IEEE PES Powering Toward the Future, PIMS 2008*, 2008.
  - [24] M. B. Rad, M. P. Moghadam, and M. K. Sheikh-El-Eslami, "Long term market power mitigation using strategic conservation programs in restructured electricity industry," in *2008 IEEE Electrical Power and Energy Conference - Energy Innovation*, 2008.
  - [25] M. B. Rad, M. P. Moghadam, and M. K. Sheikh-El-Eslami, "Fuzzy evaluation of energy efficiency improvement impact on load shape," in *2007 IEEE Lausanne POWERTECH, Proceedings*, 2007, pp. 1429-1434.
  - [26] M. K. Sheikh-El-Eslami and H. Seifi, "Short-term electricity price forecasting using a fuzzy stochastic predictor," in *2006 IEEE Power Engineering Society General Meeting, PES*, 2006.
  - [27] M. K. Sheik-El-Eslami, M. P. Moghaddam, and S. Jadid, "Expansion planning in private generation companies: A practical method," in *2006 IEEE Power Engineering Society General*

Meeting, PES, 2006.

- [28] M. P. Moghaddam, M. Sheikh-El-Eslami, and S. Jadid, "Power market long-term stability: A hybrid MADM/GA comprehensive framework," in *2006 IEEE Power Engineering Society General Meeting, PES*, 2006.
- [29] M. P. Moghaddam, M. K. Sheikh-El-Eslami, and S. Jadid, "A price guideline for generation expansion planning in competitive electricity markets," in *2005 IEEE Power Engineering Society General Meeting*, 2005, pp. 197-201.

 **Ph.D. Thesis Supervisory:**

1. Majid Roustaei, Value-Based Transmission Pricing Approach to Improve Investment in Transmission Network, Tarbiat Modares University, 2015
2. Saeed Rahmani Dabbagh, Internal Transactions Framework for a Virtual Power Plant in Competitive Environments, Tarbiat Modares University, 2016
3. Hassan Jalili, Modeling of Retailer's Behavior in Capacity Market, Tarbiat Modares University, 2016
4. Morteza Shabanzadeh, Designing a Competitive Mechanism to Determine the Optimal Type and Capacity of Coalition Members of Virtual Power Plants, Tarbiat Modares University, 2017.

 **M.Sc. Thesis Supervisory:**

1. Neda Hajibandeh, Electricity Market Analysis using Similarity-Based Behavioral Model, Tarbiat Modares University, 2010
2. Mohammad Birjandi, Optimal Determination of FTRs for Primary Auctions considering Energy Market Conditions, Tarbiat Modares University, 2011
3. Seyed Ali Reza Razavian, A New Hybrid Approach for Electricity Price Forecasting, Tarbiat Modares University, 2011
4. Afshin Farshidfar, Value-Based Allocation of Transmission Costs in Electricity Markets, Tarbiat Modares University, 2011
5. Amadali Khatibzadeh, Evaluating the Effect of Value-based Transmission Expansion Planning on Power Market Players, Tarbiat Modares University, 2011
6. Mansour Charwand, Determination of Midterm Optimal Strategy for Electricity Retailers, Tarbiat Modares University, 2011
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#### **D. Professional Experience:**

- ☐ 2009-2015: *Deputy Dean for Research of Iran Power System Engineering Research Centre (IPSERC)*
- ☐ 2010-2012: *Member and Officer of Iran Electricity Market Regulatory Board (I.R. Iran Ministry of Energy)*
- ☐ 2011-2013: *Head of Power Department (Tarbiat Modares University)*
- ☐ 2015- : *Deputy Dean for Research and Technology of faculty of Electrical & Computer Engineering (Tarbiat Modares University)*
- ☐ 2006- : *Management of More than 15 Research Projects for Iran Grid Management Company (IGMC), Tavanir Company, and Reginal Electricity Companies (I.R. Iran Ministry of Energy)*