



Sheikh-El-Eslami, Mohammad Kazem

Associate Professor

Electrical Power Systems

B.Sc. in electrical engineering from Tehran University, Tehran, Iran, 1992

M.Sc. in electrical engineering from Tarbiat Modares University, Tehran, Iran, 2001

Ph.D. in electrical engineering from Tarbiat Modares University, Tehran, Iran, 2005

Address: Faculty of electrical and computer engineering, Tarbiat Modares University, Nasr Bridge, Tehran, I.R. Iran

Phone: +98 21 82884920

Fax: +98 21 88220121

E-mail: aleslam@modares.ac.ir

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] M. Pazoki, M.K. Sheikh-El-Eslami and H. Delkhosh, "Integrating the dynamic frequency security in the real-time scheduling considering the accurate models and network constraints," *Electrical Engineering* p. 45312, 2024
- [2] M. Hajati, M.K. Sheikh-El-Eslami H. Delkhosh, "Maximizing social welfare in local flexibility markets by integrating the value of flexibility loss (VOFL)," *Electric Power Systems Research* vol.235, p. 110840, 2024
- [3] M. Azimi, H. Delkhosh and M.K. Sheikh-El-Eslami, "An Extended Vulnerability Assessment Method for Interdependent Cyber-Physical Power System: Fast and Precise Solution," *IEEE Transactions on Smart Grid*, 2024
- [4] G.A. Khanbeigi, G. Jahanfarnia, M.K. Sheikh-El-Eslami and K. Karimi, "A hierarchical heuristic method to analysis of economics and safety of a pressurized water reactor in a power market," *Journal of Industrial Engineering International*, vol.19, no. 1, p. 55, 2023
- [5] R. Khodabakhsh, M.R. Haghifam and M.K. Sheikh-El-Eslami, "Designing a bi-level flexibility market for transmission system congestion management considering distribution system performance improvement," *Sustainable Energy, Grids and Networks* vol.34, p. 101000, 2023
- [6] M. Nozarian, H. Seifi, M.K. Sheikh-El-Eslami and H. Delkhosh, "Hydro thermal unit commitment involving demand response resources: A MILP formulation," *Electrical Engineering* vol.105, no. 1, pp. 175-192, 2023
- [7] L.B. Khouzestani, M.K. Sheikh-El-Eslami, A.M. Salemi and I. Gerami, "Virtual smart energy hub: A powerful tool for integrated multi energy systems operation," *Energy* vol.265, p. 126361, 2023
- [8] M. Moradi, M. Parsa Moghaddam, R. Zamani and M.K. Sheikh-El-Eslami, "A novel community-based local electricity market for multiple communities with joint energy trading considering the risk of participation," *IET Generation, Transmission & Distribution*, vol.17, no. 5, pp. 1148-1165, 2023
- [9] M.G. Firoozjaee and M.K. Sheikh-El-Eslami, "A two-stage simulation-based framework for optimal resilient generation and transmission expansion planning," *IET Generation, Transmission & Distribution* vol.16, no. 21, pp. 4273-4290, 2022
- [10] R. Khodabakhsh, M.R. Haghifam and M.K. Sheikh-El-Eslami, "Transmission system congestion management with demand-side flexibility resources considering distribution system performance improvement," *Tabriz Journal of Electrical Engineering* vol.52, no. 2, pp. 103-114, 2022
- [11] M. G. Firoozjaee and M. K. Sheikh-El-Eslami, "A hybrid resilient static power system

- expansion planning framework," *International Journal of Electrical Power & Energy Systems*, vol. 133, p. 107234, 2021.
- [12] Z. Kaheh, R. B. Kazemzadeh, and M. K. Sheikh-El-Eslami, "Flexible ramping services in power systems: Background, challenges, and procurement methods," *Iranian Journal of Science and Technology, Transactions of Electrical Engineering*, vol. 45, pp. 1-13, 2021.
 - [13] S. A. Beni and M.-K. Sheikh-El-Eslami, "Market power assessment in electricity markets based on social network analysis," *Computers & Electrical Engineering*, vol. 94, p. 107302, 2021.
 - [14] A. Avar and M. K. Sheikh-El-Eslami, "Optimal DG placement in power markets from DG Owners' perspective considering the impact of transmission costs," *Electric Power Systems Research*, vol. 196, p. 107218, 2021.
 - [15] M. Aryani, M. Ahmadian, and M.-K. Sheikh-El-Eslami, "Coordination of risk-based generation investments in conventional and renewable capacities in oligopolistic electricity markets: A robust regulatory tool," *Energy*, vol. 214, p. 118856, 2021.
 - [16] A. Yeganefar, M. R. Amin-Naseri, and M. K. Sheikh-El-Eslami, "Improvement of representative days selection in power system planning by incorporating the extreme days of the net load to take account of the variability and intermittency of renewable resources," *Applied Energy*, vol. 272, p. 115224, 2020.
 - [17] R. Tahmasebifar, M. P. Moghaddam, M. K. Sheikh-El-Eslami, and R. Kheirollahi, "A new hybrid model for point and probabilistic forecasting of wind power," *Energy*, vol. 211, p. 119016, 2020.
 - [18] G. A. Khanbeigi, G. Jahanfarnia, N. M. Sharifloo, M. K. Sheikh-el-Eslami, and K. Karimi, "Trade-off Between Cost and Safety To Cope with Station Blackout in A PWR in A Deregulated Electricity Market," *Journal of Electrical Engineering & Technology*, vol. 15, pp. 2045-2056, 2020.
 - [19] Z. Kaheh, R. Baradaran Kazemzadeh, and M. K. Sheikh-El-Eslami, "A solution based on fuzzy max-min approach to the bi-level programming model of energy and exiramp procurement in day-ahead market," *Scientia Iranica*, vol. 27, pp. 846-861, 2020.
 - [20] M. Aryani, M. Ahmadian, and M.-K. Sheikh-El-Eslami, "Designing a regulatory tool for coordinated investment in renewable and conventional generation capacities considering market equilibria," *Applied Energy*, vol. 279, p. 115728, 2020.
 - [21] 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.
 - [22] 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.
 - [23] 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.
 - [24] 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.
 - [25] 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.
 - [26] 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.
 - [27] 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.
 - [28] 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.
 - [29] 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.
 - [30] 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.
- [31] 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.
 - [32] 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.
 - [33] 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.
 - [34] M. Shabanzadeh, M.-K. Sheikh-El-Eslami, and M.-R. Haghifam, "An interactive cooperation model for neighboring virtual power plants," *Applied Energy*, vol. 200, pp. 273-289, 2017.
 - [35] 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.
 - [36] 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.
 - [37] 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.
 - [38] 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.
 - [39] 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.
 - [40] 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.
 - [41] 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.
 - [42] 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.
 - [43] 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.
 - [44] 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.
 - [45] 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.
 - [46] 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.
 - [47] H. Golpira, 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.
 - [48] 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.
 - [49] 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.
 - [50] Sheikhini 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.
 - [51] 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.
 - [52] 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.

- [53] 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.
- [54] 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.
- [55] 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.
- [56] 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.
- [57] 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.
- [58] 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.
- [59] 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.
- [60] A. Sheikhini 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.
- [61] 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.
- [62] 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.
- [63] 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.
- [64] 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.
- [65] 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.
- [66] 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.
- [67] 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.
- [68] 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.
- [69] 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.
- [70] 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.
- [71] 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.
- [72] 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.
- [73] 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.
- [74] 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.

- [75] 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.
- [76] 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.
- [77] 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.
- [78] 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.
- [79] 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.
- [80] 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.
- [81] 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.
- [82] 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.
- [83] 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.
- [84] 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.
- [85] 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.
- [86] 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.
- [87] 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.
- [88] 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.
- [89] 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.
- [90] 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] CHOGHAEI M., SHEIKH-EL-ESLAMI M., "Integration of P2G and Renewables in Stochastic Day-ahead Electricity-Gas Scheduling", *Proceedings of 31st international conference on electrical engineering (ICEE 2023)*, 2023.
- [2] HASANI KIYAKALYE S., SHEIKH-EL-ESLAMI M., SEYED HAMED D., "A Linear Model for Wind Farms Preventive Maintenance Scheduling Considering the Wind Speed Uncertainty and Electricity Market Conditions", *Proceedings of 2022 9th Iranian Conference on Renewable Energy & Distributed Generation (ICREDG)*, 2022.
- [3] 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.
- [4] 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.
- [5] 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.
- [6] 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.
- [7] 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.
 - [8] 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.
 - [9] 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.
 - [10] 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.
 - [11] 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.
 - [12] 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.
 - [13] 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.
 - [14] 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.
 - [15] 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.
 - [16] 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.
 - [17] 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.
 - [18] 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.
 - [19] 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.
 - [20] 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.
 - [21] 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.
 - [22] 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.
 - [23] 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.
 - [24] 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.
 - [25] 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.
 - [26] 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.
- [27] M. B. Rad, M. P. Moghaddam, 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.
 - [28] 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.
 - [29] M. K. Sheikh-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.
 - [30] 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.
 - [31] 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.
5. Madi Golchoob Firoozgaei, Resilient Generation and Transmission Expansion Planning by Considering Microgrid, Tarbiat Modares University, 2022.
- 6.

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
7. Morteza Mirdar, Planning Strategy of VPP for Participating in Ancillary Services Markets, Tarbiat Modares University, 2012
8. Amir Niromandfam, Insurance Design for Hedging Electricity End Users against Price Volatility, Tarbiat Modares University, 2012
9. Mohammad Javad Fathi, Optimal VAR Planning in Distribution Networks considering Wind Power and Energy Markets, Tarbiat Modares University, 2012
10. Heresh Naderi, Risk Modeling and Hedging for a Disco. As a Wholesale Market Participant, Tarbiat Modares University, 2012
11. Hamid Reza Moayyed Kazemi, GEP Strategy Assessment from Regulatory View using Agent-based Systems, 2012
12. Sadegh Amani Beni, A New Framework for determination of Disco. Operation Costs from Regulatory View, Tarbiat Modares University, 2013
13. Seyyed Mohsen Hashemi, Economic Evaluation of Energy Hubs considering Uncertainties, Tarbiat Modares University, 2013
14. Alireza Moayyed Kazemi, Regulator viewpoint Multi agent assessment of generation expansion planning strategies in restructured power systems, Tarbiat Modares University, 2013
15. Eisa Hadi, Modeling The Impact of Residential Electricity and Heat Generation on Retail Electricity Rates, Tarbiat Modares University, 2014

16. Reza Nesaei Kalati, Bidding Strategy for DR Participation in Capacity Markets, 2015
17. Reza Tahmasebifar, A Hybrid Approach for Probabilistic Forecasting of Electricity Price, Tarbiat Modares University, 2015
18. Saleh Asgari Moghadam, Harmonic Load Estimation using Independent Component Analysis, Tarbiat Modares University, 2016
19. Abbas Sharifi, Determining the Retail Market Framework in Future Distribution System with Participation of Active Customers, Tarbiat Modares University, 2016
20. Asghar Akbari, Modeling the Behavior of Retail Market Participations using Stochastic Multi-Layer Agent-Based Model, Tarbiat Modares University, 2017
21. Amang Mouludi Azar, Optimal Planning Of Virtual Power Plant For Coincident Participation in Thermal & Electrical Market, Tarbiat Modares University, 2018
22. Mohammad Ojaghloo Shahabi, Nash-Cournot Equilibrium of Imperfect Electricity Markets in the presence of Large Customers, Tarbiat Modares University, 2018
23. Ali Avar, Value-Based Transmission Costs Allocation using Valid Capacity Concept, Tarbiat Modares University, 2019
24. Danial YekNoor Haredasht, Strategic Sizing of Energy Storage System for Conventional Generator in A Competitive Market Environment with Variable Penetration of Renewable Resources, Tarbiat Modares University, 2019
25. Vahid Nazari Farsani, interval probabilistic forecasting of electricity price based on deep learning, Tarbiat Modares University, 2020
26. Farzin Shahbazi, Dynamic Planning of virtual power plants in Competitive Market Based on Economic Considerations, Tarbiat Modares University, 2020
27. Reza Rahmani, Risk-based Profit Sharing Scheme for Medium-term Management of Virtual Power Plant Internal Transaction, Tarbiat Modares University, 2020
28. Mohammad Bagshahi, Profitable emission-reducing energy storage planning by considering ancillary services markets, Tarbiat Modares University, 2021
29. Mohammad Morabbi Pazuki, A competitive mechanism for improving the frequency security in the real time market, Tarbiat Modares University, 2022
30. Hamed Hazrati, Block of Use Retail Market Pricing Design Based on the Load Profiles, 2022
31. Jafar Hanifenejad, Power loss allocation in multi-microgrids with the possibility of power exchange using graph theory, Tarbiat Modares University, 2022
32. Shahin Karimi, Economic risk management of compressed air energy storage system and cogenerating of heat and electricity, Tarbiat Modares University, 2022
33. Samah Alsabti, Optimal sizing of battery energy storage in microgrid with demand response program, Tarbiat Modares University, 2022
34. Seyyed Zakariyya Asayeshfard, Integration of prosumers with battery storage or cryptocurrency miners via transactive energy, Tarbiat Modares University, 2023
35. Mojtaba Choghaei, Modeling the integration of P2Gs and renewables in coupled gas and electricity day-ahead scheduling, Tarbiat Modares University, 2023

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)*
- ☐ 2015-2017 : *Deputy Dean for Research and Technology of faculty of Electrical & Computer Engineering (Tarbiat Modares University)*
- ☐ 2017-2024: *Head of Power Department (Tarbiat Modares University)*
- ☐ 2024- : *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)*

E. Honors:

- ☐ 2017-2020: Top 1% of Scientists based on ESI