S. Ali Pourmousavi Kani

Curriculum Vitae

July 2022

School of Electrical & Electronic Engineering, The University of Adelaide, SA 5005, Australia.
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Education and Qualifications

2014	Ph.D.	Montana State University, USA.
2008	M.Sc. (First Class Hons)	Amirkabir University of Technology, Iran
2005	B.Sc. (First Class Hons)	University of Mazandaran, Iran

Current Research Interests

My research is at the intersection of power system engineering, optimisation, artificial intelligence and time series analysis. Currently, we are focused on mine electrification, flexibility aggregation at the distribution level and hybrid energy system design/operation.
I established the Adelaide Power System Summer School (APSSS) in 2020 at the School of Electrical & Electronic Engineering, The University of Adelaide. The inaugural event was held in Adelaide on February 10-14, 2020, with 37 participants and 5 speakers. More about APSSS and the event in 2020 at https://www.theapsss.com/.

Employment history

2019–	**Lecturer**, School of Electrical & Electronic Engineering, The University of Adelaide.
2017–2019	**Research Fellow**, School of Information Technology & Electrical Engineering, The University of Queensland.
2017–2017	**Postdoc**, Department of Applied Mathematics & Computer Science, Technical University of Denmark (DTU).
2014–2016	**Researcher**, Energy Management Department, NEC Laboratories America Inc.
2014–2014	**Power System Engineering Specialist**, Market Engineering Support group, California ISO.
2011–2011	**Summer Research Intern**, Energy Management Department, NEC Laboratories America Inc.

Honours and awards

2021	5th place in the third IEEE-CIS Forecast+Optimise competition with Rui Yuan, Trong Nam Dinh and Yogesh Pipada Sunil Kumar, *The University of Adelaide*, Australia.
2019	Invited Visiting Researcher, *Technical University of Denmark (DTU)*, Denmark.
2019	Outstanding Reviewer, *for the IEEE Transactions on Power Systems*.
2015	two Spot Recognition Awards, *Energy Management Department at NEC Laboratories America Inc.*
2014	Don Pierre Graduate Student Publication Award, *Montana State University, USA*.
2011	Don Pierre Graduate Student Publication Award, *Montana State University, USA*.

Research Funding and Grants

Consultancy	Project: Price, cooling and heating demand prediction tools Sponsor: *Center Denmark* Amount: $15K Role: Project leader Duration: July 2021 – December 2021
Competitive	Project: Assessment, design and operation of battery-supported electric mining vehicles and machinery Sponsor: *Future Battery Industry CRC* Amount: $1.15M Role: Project leader Duration: August 2021 – February 2024
Competitive	Project: Flexibility Aggregator Simulation Platform (FRESNO) Sponsor: *The University of Adelaide Industry PhD* and Watts, Denmark Amount: $550K

Role: Project leader
Duration: 2021 – 2025

Consultancy
Project: Distributed energy resources sizing validation for ARENA grant
Sponsor: *Riverina County Water Council, NSW, Australia*
Amount: $28K
Role: Chief Investigator
Duration: November 2020 – March 2021

Internal
Project: Research Infrastructure Grant – Real-time simulator
Sponsor: *School of Electrical and Electronic Engineering, the University of Adelaide*
Amount: $36K
Role: Project leader
Duration: 2019

Startup
Project: Startup PhD Scholarship Grant
Sponsor: *School of Electrical and Electronic Engineering, the University of Adelaide*
Amount: $82K
Role: Project leader
Duration: 2019

Professional Activities

2020– Member of the international advisory board, Flexible Energy Denmark (FED), Innovation Fund Denmark.
2020– Member of the management committee, Centre of Energy Technology, The University of Adelaide.
2020 Member of the technical committee, 10th IEEE PES Innovative Smart Grid Technologies Conference – Asia, Perth, Australia.
2019– Associate Editor, IEEE Access.
2019 Member of the technical committee, 8th International Conference on Renewable Power Generation, Shanghai, China.

Publications

I have authored 57 papers, chapters or books on statistical topics. A list of these appears on pages 2–5.

Book Chapters

1. SA Pourmousavi, F Shahnia, MI Azim, MA Shoeb, and GM Shafiullah, "Microgrid control overview," in *Variability, Scalability and Stability of Microgrids*, SM Muyeen, SM Islam, and F Blaabjerg, Eds. Institution of Engineering and Technology, 2020, ch. 2, pp. 15–71. https://digital-library.theiet.org/content/books/10.1049/pbpo139e_ch2.

Patents

1. A Hooshmand, SA Pourmousavi, R Sharma, and S Mohan, *Optimal battery sizing for behind-the-meter applications considering participation in demand response programs and demand charge reduction*, **US Patent 10,497,072 B2**, 2019. https://patents.google.com/patent/US10497072B2/en.
2. SA Pourmousavi, B Asghari, and R Sharma, *Resilient battery charging strategies to reduce battery degradation and self-discharging*, **US Patent 10,298,042 B2**, 2019. https://patents.google.com/patent/US10298042B2/en.
3. SA Pourmousavi, R Sharma, and B Asghari, *Innovative framework combining cycling and calendar aging models*, **US Patent 10,422,835**, 2019. https://patents.google.com/patent/US10422835B2/en.
4. R Sharma, B Asghari, and SA Pourmousavi, *Method for real-time power management of a grid-tied microgrid to extend storage lifetime and reduce cost of energy*, **US Patent 9,020,649**, 2015. https://patents.google.com/patent/US9020649B2/en.

Journal Papers

1. F D'Ettorre, M Banaei, R Ebrahimy, SA Pourmousavi, E Blomgren, J Kowalski, Z Bohdanowicz, B Łopaciuk-Gonczaryk, C Biele, and H Madsen, Exploiting demand-side flexibility: State-of-the-art, open issues and social perspective, *Renewable and Sustainable Energy Reviews*, **165**, 112605, 2022. DOI: https://doi.org/10.1016/j.rser.2022.112605.
2. S Karimi-Arpanahi, M Jooshaki, SA Pourmousavi, and M Lehtonen, Leveraging the flexibility of electric vehicle parking lots in distribution networks with high renewable penetration, *International Journal of Electrical Power & Energy Systems*, **142**, 108366, 2022. DOI: https://doi.org/10.1016/j.ijepes.2022.108366.

3. U Akram, M Nadarajah, R Shah, and SA Pourmousavi, Sizing hess as inertial and primary frequency reserve in low inertia power system, *IET Renewable Power Generation*, **15**, (1), 99–113, 2021. DOI: 10.1049/rpg2.12008.
4. MB Tookanlou, SA Pourmousavi, and M Marzband, A comprehensive day-ahead scheduling strategy for electric vehicles operation, *International Journal of Electrical Power & Energy Systems*, **131**, 106912, 2021. DOI: 10.1016/j.ijepes.2021.106912.
5. MB Tookanlou, SA Pourmousavi, and M Marzband, An optimal day-ahead scheduling framework for e-mobility ecosystem operation with drivers' preferences, *IEEE Transactions on Power Systems*, **36**, (6), 5245–5257, 2021. DOI: 10.1109/TPWRS.2021.3068689.
6. MM Hasan, SA Pourmousavi, AJ Ardakani, and TK Saha, A data-driven approach to estimate battery cell temperature using a nonlinear autoregressive exogenous neural network model, *Journal of Energy Storage*, **32**, 101879, 2020. DOI: 10.1016/j.est.2020.101879.
7. MA Mirzaei, M Nazari-Heris, B Mohammadi-Ivatloo, K Zare, M Marzband, and SA Pourmousavi, Robust flexible unit commitment in network-constrained multicarrier energy systems, *IEEE Systems Journal*, 2020. DOI: 10.1109/JSYST.2020.3012338.
8. SA Pourmousavi, P Wild, and TK Saha, Improving predictability of renewable generation through optimal battery sizing, *IEEE Transactions on Sustainable Energy*, **11**, (1), 37–47, 2020. DOI: 10.1109/TSTE.2018.2883424.
9. G De Zotti, SA Pourmousavi, JM Morales, H Madsen, and NK Poulsen, Consumers' flexibility estimation at the tso level for balancing services, *IEEE Transactions on Power Systems*, **34**, (3), 1918–1930, 2019. DOI: 10.1109/TPWRS.2018.2885933.
10. G De Zotti, SA Pourmousavi, JM Morales, H Madsen, and NK Poulsen, A control-based method to meet tso and dso ancillary services needs by flexible end-users, *IEEE Transactions on Power Systems*, **35**, (3), 1868–1880, 2019. DOI: 10.1109/TPWRS.2019.2951623.
11. G De Zotti, SA Pourmousavi, H Madsen, and NK Poulsen, Ancillary services 4.0: A top-to-bottom control-based approach for solving ancillary services problems in smart grids, *IEEE Access*, **6**, 11694–11706, 2018. DOI: 10.1109/ACCESS.2018.2805330.
12. M Marzband, M Javadi, SA Pourmousavi, and G Lightbody, An advanced retail electricity market for active distribution systems and home microgrid interoperability based on game theory, *Electric Power Systems Research*, **157**, 187–199, 2018. DOI: 10.1016/j.epsr.2017.12.024.
13. SA Pourmousavi and TK Saha, Evaluation of the battery operation in ramp-rate control mode within a PV plant: A case study, *Solar Energy*, **166**, 242–254, 2018. DOI: https://doi.org/10.1016/j.solener.2018.03.035.
14. RA Kordkheili, SA Pourmousavi, M Savaghebi, JM Guerrero, and MH Nehrir, Assessing the potential of plug-in electric vehicles in active distribution networks, *Energies*, **9**, (1), 34, 2016. DOI: 10.3390/en9010034.
15. SA Pourmousavi, MH Nehrir, and RK Sharma, Multi-timescale power management for islanded microgrids including storage and demand response, *IEEE Transactions on Smart Grid*, **6**, (3), 1185–1195, 2015. DOI: 10.1109/TSG.2014.2387068.
16. SA Pourmousavi and MH Nehrir, Introducing dynamic demand response in the LFC model, *IEEE Transactions on Power Systems*, **29**, (4), 1562–1572, 2014. DOI: 10.1109/TPWRS.2013.2296696.
17. SA Pourmousavi, SN Patrick, and MH Nehrir, Real-time demand response through aggregate electric water heaters for load shifting and balancing wind generation, *IEEE Transactions on Smart Grid*, **5**, (2), 769–778, 2014. DOI: 10.1109/TSG.2013.2290084.
18. SA Pourmousavi and MH Nehrir, Real-time central demand response for primary frequency regulation in microgrids, *IEEE Transactions on Smart Grid*, **3**, (4), 1988–1996, 2012. DOI: 10.1109/TSG.2012.2201964.
19. SA Pourmousavi and MM Ardehali, Very short-term wind speed prediction: A new artificial neural network–Markov chain model, *Energy Conversion and Management*, **52**, (1), 738–745, 2011. DOI: 10.1016/j.enconman.2010.07.053.
20. SA Pourmousavi, GH Riahy, and D Mazhari, An innovative hybrid algorithm for very short-term wind speed prediction using linear prediction and Markov chain approach, *International journal of green energy*, **8**, (2), 147–162, 2011. DOI: 10.1080/15435075.2010.548887.
21. SA Pourmousavi, MH Nehrir, CM Colson, and C Wang, Real-time energy management of a stand-alone hybrid wind-microturbine energy system using particle swarm optimization, *IEEE Transactions on Sustainable Energy*, **1**, (3), 193–201, 2010. DOI: 10.1109/TSTE.2010.2061881.

Conference Papers

1. NT Dinh, SA Pourmousavi, S Karimi-Arpanahi, YPS Kumar, M Guo, D Abbott, and JAR Liisberg, Optimal sizing and scheduling of community battery storage within a local market, ser. e-Energy '22, Virtual Event: Association for Computing Machinery, 2022, pp.34–46. DOI: 10.1145/3538637.3538837.

2. EMV Blomgren, R Ebrahimy, A Pourmousavi Kani, J Kloppenborg Moler, F D'Ettorre, M Banaei, and H Madsen, Behind-the-meter energy flexibility modelling for aggregator operation with a focus on uncertainty, in *2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*, 2021, pp.1–6. DOI: 10.1109/ISGTEurope52324.2021.9640146.
3. Y Yao, N Ertugrul, and SA Pourmousavi, Power sharing and voltage regulation in islanded dc microgrids with centralized double-layer hierarchical control, in *2021 31st Australasian Universities Power Engineering Conference (AUPEC)*, 2021, pp.1–6. DOI: 10.1109/AUPEC52110.2021.9597804.
4. N Ertugrul, AP Kani, M Davies, D Sbarbaro, and L Morán, Status of mine electrification and future potentials, in *2020 International Conference on Smart Grids and Energy Systems (SGES)*, 2020, pp.151–156. DOI: 10.1109/SGES51519.2020.00034.
5. MI Azim, SA Pourmousavi, W Tushar, and TK Saha, Feasibility study of financial p2p energy trading in a grid-tied power network, in *2019 IEEE Power & Energy Society General Meeting (PESGM)*, 2019, pp.1–5. DOI: 10.1109/PESGM40551.2019.8973809.
6. MM Hasan and S Ali Pourmousavi, Battery cell temperature estimation model and cost analysis of a grid-connected pv-bess plant, in *2019 IEEE Innovative Smart Grid Technologies - Asia (ISGT Asia)*, 2019, pp.1804–1809. DOI: 10.1109/ISGT-Asia.2019.8881157.
7. GD Zotti, D Guericke, SA Pourmousavi, JM Morales, H Madsen, and NK Poulsen, Analysis of rebound effect modelling for flexible electrical consumers, 4, IFAC Workshop on Control of Smart Grid and Renewable Energy Systems CSGRES 2019, vol. 52, 2019, pp.6–11. DOI: https://doi.org/10.1016/j.ifacol.2019.08.146. https://www.sciencedirect.com/science/article/pii/S2405896319304823.
8. G De Zotti, SA Pourmousavi, H Madsen, and NK Poulsen, Utilizing flexibility resources in the future power system operation: Alternative approaches, in *2018 IEEE International Energy Conference (ENERGYCON)*, IEEE, 2018, pp.1–6. DOI: 10.1109/ENERGYCON.2018.8398773.
9. SA Pourmousavi, P Wild, F Bai, R Yan, TK Saha, and D Eghbal, Learning from a 3.275 MW utility-scale PV plant project: Update and new remarks, in *Proceedings of the CIGRE Paris Conference*, 2018.
10. Y Vardanyan, F Banis, SA Pourmousavi, and H Madsen, Optimal coordinated bidding of a profit-maximizing EV aggregator under uncertainty, in *2018 IEEE International Energy Conference (ENERGYCON)*, IEEE, 2018, pp.1–6. DOI: 10.1109/ENERGYCON.2018.8398821.
11. MM Hasan, SA Pourmousavi, F Bai, and TK Saha, The impact of temperature on battery degradation for large-scale BESS in PV plant, in *2017 Australasian Universities Power Engineering Conference (AUPEC)*, 2017, pp.1–6. DOI: 10.1109/AUPEC.2017.8282448.
12. M Parandehgheibi, SA Pourmousavi, K Nakayama, and RK Sharma, A two-layer incentive-based controller for aggregating BTM storage devices based on transactive energy framework, in *2017 IEEE Power Energy Society General Meeting*, 2017, pp.1–5. DOI: 10.1109/PESGM.2017.8274230.
13. SA Pourmousavi, M Behrangrad, AJ Ardakani, and MH Nehrir, Ownership Cost Calculations for Distributed Energy Resources Using Uncertainty and Risk Analyses, *ArXiv e-prints*, 2017. arXiv: 1709.08023.
14. S Mohan, A Hooshmand, SA Pourmousavi, and R Sharma, BSS sizing and economic benefit analysis in grid-scale application, in *Innovative Smart Grid Technologies Conference (ISGT), 2016 IEEE Power & Energy Society*, IEEE, 2016, pp.1–5. DOI: 10.1109/ISGT.2016.7781262.
15. SA Pourmousavi, B Asghari, and RK Sharma, A novel algorithm to integrate battery cyclic and calendar agings within a single framework, in *Innovative Smart Grid Technologies Conference (ISGT), 2016 IEEE Power & Energy Society*, IEEE, 2016, pp.1–5. DOI: 10.1109/ISGT.2016.7781028.
16. SA Pourmousavi, M Behrangrad, MH Nehrir, and AJ Ardakani, LFC model for multi-area power systems considering dynamic demand response, in *Transmission and Distribution Conference and Exposition (T&D), 2016 IEEE/PES*, IEEE, 2016, pp.1–5. DOI: 10.1109/TDC.2016.7519908.
17. RA Kordkheili, SA Pourmousavi, JR Pillai, HM Hasanien, B Bak-Jensen, and MH Nehrir, Optimal sizing and allocation of residential photovoltaic panels in a distribution network for ancillary services application, in *Optimization of Electrical and Electronic Equipment (OPTIM), 2014 International Conference on*, IEEE, 2014, pp.681–687. DOI: 10.1109/OPTIM.2014.6850976.
18. K Marchese, SA Pourmousavi, and MH Nehrir, The application of demand response for frequency regulation in an islanded microgrid with high penetration of renewable generation, in *North American Power Symposium (NAPS), 2013*, IEEE, 2013, pp.1–6. DOI: 10.1109/NAPS.2013.6666857.
19. AJ Litchy, C Young, SA Pourmousavi, and MH Nehrir, Technology selection and unit sizing for a combined heat and power microgrid: Comparison of WebOpt and HOMER application programs, in *North American Power Symposium (NAPS), 2012*, IEEE, 2012, pp.1–6. DOI: 10.1109/NAPS.2012.6336337.

20. SA Pourmousavi, AS Cifala, and MH Nehrir, Impact of high penetration of PV generation on frequency and voltage in a distribution feeder, in *North American Power Symposium (NAPS), 2012*, IEEE, 2012, pp.1–8. DOI: 10.1109/NAPS.2012.6336320.
21. SA Pourmousavi and MH Nehrir, *Real-time optimal demand response for frequency regulation in smart μgrid environment*, 2012.
22. SA Pourmousavi, RK Sharma, and B Asghari, A framework for real-time power management of a grid-tied microgrid to extend battery lifetime and reduce cost of energy, in *Innovative Smart Grid Technologies (ISGT), 2012 IEEE PES*, IEEE, 2012, pp.1–8. DOI: 10.1109/ISGT.2012.6175707.
23. SA Pourmousavi and MH Nehrir, Demand response for smart microgrid: Initial results, in *Innovative Smart Grid Technologies (ISGT), 2011 IEEE PES*, IEEE, 2011, pp.1–6. DOI: 10.1109/ISGT.2011.5759181.
24. SA Pourmousavi, MH Nehrir, and C Sastry, Providing ancillary services through demand response with minimum load manipulation, in *North American Power Symposium (NAPS), 2011*, IEEE, 2011, pp.1–6. DOI: 10.1109/NAPS.2011.6024876.
25. CM Colson, MH Nehrir, and SA Pourmousavi, Towards real-time microgrid power management using computational intelligence methods, in *Power and Energy Society General Meeting, 2010 IEEE*, IEEE, 2010, pp.1–8. DOI: 10.1109/PES.2010.5588053.
26. SA Pourmousavi, SM Mousavi, AK Kaviani, and GH Riahy, Very short-term wind speed prediction using linear regression among ANN and Markov chain, in *The International Conference on Power System Analysis, Control and Optimization (PSACO-2008)*, 2008.
27. SA Pourmousavi, SM Mousavi, AK Kaviani, and GH Riahy, Very short-term wind speed prediction using linear regression among ANN and Markov chain, in *The International Conference on Power System Analysis, Control and Optimization (PSACO-2008)*, 2008.
28. SA Pourmousavi and GH Riahy, A new ANN-based methodology for very short-term wind speed prediction using Markov chain approach, in *Electric Power Conference, 2008. EPEC 2008. IEEE Canada*, IEEE, 2008, pp.1–6. DOI: 10.1109/EPC.2008.4763386.
29. AJ Ardakani, AK Kavyani, SA Pourmousavi, SH Hosseinian, and M Abedi, Siting and sizing of distributed generation for loss reduction, *International Conference on Power Systems*, 1–6, 2007.
30. SA Pourmousavi and NF Ershad, Annual electricity demand prediction for iranian agriculture sector using ANN and PSO, in *Electrical Power Conference, 2007. EPC 2007. IEEE Canada*, IEEE, 2007, pp.446–451.
31. E Safavieh, AJ Ardakani, AK Kaviani, SA Pourmousavi, SH Hosseinian, and M Abedi, A new integrated approach for very short-term wind speed prediction using wavelet networks and PSO, in *Proceedings of the International Conference on Power Systems*, 2007.

Invited Talks

Mar. 2021 *Demand Response: An Electric Vehicle's Perspective*
Invited by the Flexible Energy Denmark (FED) in the Annual International Advisory Board meeting for project review (online) – Talked about the importance of EVs as a source of flexibility in the future and the significance of considering EV drivers' preferences and pricing.

Dec. 2020 *Application of AI & ML in power systems engineering*
Invited by NOJA Power in the weekly presentation on the cutting-edge research and development in the area of power system (online) – Explained AI and ML for power system and their application in electric vehicle V2G and G2V operation and pricing.

Feb. 2019 *Technical challenges of accommodating EVs and PHEVs in the future grid*
Invited by the International Workshop on "Addressing Challenging Issues of Grids with High Penetration of Grid Connected Inverters: Towards Future and Smart Grids" – Reviewed the status of EVs and PHEVs in Australia and future projection, different standard on chargers and connection, opportunities and challenges.

Dec. 2017 *Energy Storage Application in Active Distribution Networks: Concept, Implementation, and Analysis*
Invited by the Amirkabir University of Technology (AUT), Iran, on behalf of the Iran National Elites Foundation (INEF) – Reviewed the status of small-scale PV and battery systems in Australia, and the potential applications of energy storage in the future distribution networks.

Oct. 2017 *Big Data Tools and Procedures in Power Systems Research*
Invited by the IEEE Queensland Student Chapter, Australia – Introduced the application of Data Scientific procedures and tools in power systems research with live demos.

Sayed Nasrollah Hashemian Ataabadi <sayednasrollah.hashemianataabadi@adelaide.edu.au>

Supervision

Postdoc Mentorship

Hirad Assimi, The University of Adelaide
Project: FBICRC Mining Operational Vehicles Electrification (MOVE)
PhD: The University of Adelaide
Duration: 2021 – 2023

Current PhD Students

Sayed Nasrollah Hashemian, The University of Adelaide
Project: FBICRC Mine Electrification – developing algorithms for charging scheduling of electric haul trucks
Role: Co-Supervisor
Supervisory Team: A/Prof Wen Soong
Duration: 2022 – 2026

Hao Wang, The University of Adelaide
Project: FBICRC Microgrid Battery Deployment – developing Redox Flow battery model and energy management system
Role: Principal Supervisor
Supervisory Team: A/Prof Nesimi Ertugrul, and A/Prof Wen Soong
Duration: 2021 – 2025

Yogesh Pipada Sunil Kumar, The University of Adelaide
Project: FRESNO A – developing decision-making tools for aggregator operation in the electricity market
Role: Principal Supervisor
Supervisory Team: A/Prof Nesimi Ertugrul, A/Prof Markus Wagner, and Dr Jon Liisberg from Watts, Denmark
Duration: 2021 – 2025

Trong Nam Ding, The University of Adelaide
Project: FRESNO C – developing advanced game-theoritic model of prosumers
Role: Principal Supervisor
Supervisory Team: Prof Derek Abbott, Dr Mingyu Guo, and Dr Jon Liisberg from Watts, Denmark
Duration: 2021 – 2025

Rui Yuan, The University of Adelaide
Project: FRESNO B – developing probabilistic models of consumers reaction to price signals
Role: Principal Supervisor
Supervisory Team: Dr Giang Nguyen, A/Prof Wen Soong, and Dr Jon Liisberg from Watts, Denmark
Duration: 2021 – 2025

Sahand Karimi-Arpanahi, The University of Adelaide
Project: Predictability measurement and storage system sizing and operation
Role: Principal Supervisor
Supervisory Team: A/Prof Nesimi Ertugrul
Duration: 2020 – 2024

Emma Blomgren, Technical University of Denmark, Denmark
Project: developing market mechanisms for multi-carrier energy systems in Flexible Energy Denmark (FED) project
Role: Co-Supervisor
Supervisory Team: Prof Henrik Madsen, Dr Razgar Ebrahimy
Duration: 2019 – 2022

Julian Lemos Vinasco, Technical University of Denmark, Denmark
Project: developing flexibility aggregation methods considering technical constraints
Role: Co-Supervisor
Supervisory Team: Prof Henrik Madsen and Dr Jon Liisberg from Watts, Denmark
Duration: 2018 – 2021

Supervision Activities

Mahsa Bagheri Tookanlou, Northumbria University, United Kingdom

Project: Electric vehicle scheduling and operation
Role: Co-Supervisor
Supervisory Team: Dr Mousa Marzband
Duration: 2019 – 2022
Current Appointment: Power System Consultant at RINA

Giulia De Zotti, Technical University of Denmark, Denmark
Project: She developed novel control-based algorithms for ancillary services provision in the future electricity market
Role: Co-Supervisor
Supervisory Team: A/Prof Juan Miguel Morales Gonzales from University of Malaga, Prof Henrik Madsen and Niels K. Poulsen from DTU, Denmark
Duration: 2017 – 2019
Current Appointment: Project Lead at Ørsted

Md Mehedi Hasan, The University of Queensland, Australia
Project: She developed novel control-based algorithms for ancillary services provision in the future electricity market.
Role: MSc co-supervisor
Supervisory Team: Prof Tapan K. Saha from UQ
Duration: 2017 – 2019
Current Appointment: Electrical Engineer at Kordia

Teaching

2020 – *ELEC ENG 2101 Electronic Circuits*
Course coordinator and instructor
Second-year EEE students
Number of students: ~100

2020 – *ELEC ENG 2105 Electronic Circuits M*
Course coordinator and instructor
Second-year Mech Eng students
Number of students: ~50

2020 – *ELEC ENG 4087-7087 Electricity Market & Power Systems Operation*
Course developer, coordinator and instructor
Fourth-year and PG students
Number of students: ~40

Editorial Activities

Associate Editor — IEEE Access (IF: 4.098), IEEE
December 2019 – Present

Subject Track Chair — The 10th IEEE PES Innovative Smart Grid Technologies Conference – Asia
23 – 26 November 2020, Perth, Australia
Subject Track Chair on Microgrids, Standalone Power Systems, and Virtual Power Plants

Technical Committee Member — The 8th International Conference on Renewable Power Generation
24 – 25 October 2019, Shanghai, China
IET Renewable Power Generation (ISSN: 1752-1424, IF: 3.488), IET

Guest Editor — Special Issue on “Demand Response in Electricity Markets”
January 2018
Energies (ISSN: 1996-1073, IF: 2.707), MDPI

Reviewer

IEEE
IEEE Transactions on Power Systems, ISSN: 0885-8950
IEEE Transactions on Smart Grid, ISSN: 1949-3053
IEEE Transactions on Sustainable Energy, ISSN: 1949-3029

IET — IET Generation, Transmission and Distribution, ISSN: 1751-8695
IET Renewable Power Generation, ISSN: 1752-1424

Elsevier — Applied Energy, ISSN: 0306-2619
Electric Power Systems Research, ISSN: 0378-7796
Sustainable Energy, Grids and Networks, ISSN: 2352-4677

Taylor & Francis — Electric Power Component and Systems, ISSN: 1532-5016
International Journal of Green Energy, ISSN: 1543-5083

John Wiley & Sons — International Transactions on Electrical Energy Systems, ISSN: 2050-7038
Wind Energy, ISSN: 1099-1824

Lead Organiser

The Adelaide Power System Summer School (APSSS) [Website, Youtube Channel]

2020 "Application of Artificial Intelligence (AI) in power systems and smart grids" [Web page]
February 10-14, 2020 | Adelaide, Australia
with 37 participants selected from 84 applicants, and 5 lecturers and one industry workshop.
Overall evaluation of participants: 95% satisfied, 84% expectation met, 100% recommended.

Professional Membership

IEEE — Power and Energy System (PES) society
Student Member, 2008 – 2014
Member, 2014 – 2019
Senior Member, 2019 – Present

IEA — The Institute of Engineers Australia,
MIEAust, 2017 – 2018

EESA — Electric Energy Society of Australia
Member, 2017 – Present

Community Services

2017–2018 Secretary, IEEE Joint Chapter of Power Electronics/Industrial Electronics/ Industry Applications Societies