I. Safak Bayram

safak.bayram@strath.ac.uk linkedin.com/safak-bayram Personal website
Google Scholar ORCID ID Scopus Web of Science
+44 (749) 3293-892 Address: 204 George Street, Office 367A, Royal College Building, Glasgow, UK, G1 1XQ

Overview

As an Associate Professor at the Universities of Strathclyde, my research focuses on the **electrification of transportation and mathematical modelling, optimisation, and control of smart energy grids**. My expertise, recognized by leadership roles in conferences like **IEEE SmartGridComm'23, IEEE Globecomm'25** and editorial positions at top journals (e.g. IET and Elsevier), has led to over **100 peer-reviewed publications**, **$3.5M in funding** (as a PI and co-I), and **2800+ citations** in just a decade. This impact extends to reviewing PhD projects at prestigious universities and taking leadership in IEEE Task forces and working groups.

Education

North Carolina State University, Raleigh, NC, USA **Aug. 2010 – May 2014**
Ph.D., Electrical and Computer Engineering

University of Pittsburgh, Pittsburgh, PA, USA **Jan. 2009 – Aug. 2010**
M.Sc., Telecommunications

Dokuz Eylul University, Izmir, Turkey **Sep. 2003 – Jul. 2007**
B.Sc., Electrical and Electronic Engineering

Experience

Associate Professor (Senior Lecturer) **Mar. 2023– Present**
Dept. of Electronic and Electrical Eng., University of Strathclyde, Glasgow, UK

Chancellor's Fellow (Asst. Professor/Lecturer) **Nov. 2019– Mar. 2023**
Dept. of Electronic and Electrical Eng., University of Strathclyde, Glasgow, UK

Research Asst. Professor **Nov. 2018– Present**
Dept. of Electronic and Computer Eng., The University of New Mexico, Albuquerque, NM, USA

Asstant Professor (Joint) **Jan. 2015– Nov. 2019**
Division of Sustainable Energy, Hamad Bin Khalifa University, Doha, Qatar

Staff Scientist **Jan. 2015– Nov. 2019**
Qatar Environment and Energy Research Institute, Hamad Bin Khalifa University, Doha, Qatar

Postdoctoral Researcher **Jan. 2014– Jan. 2015**
Electrical and Computer Engineering, Texas A&M University, College Station, Tx, USA

Selected Honors and Awards

- **Best Paper Award** at IEEE Transport Electrification Conference (ITEC'24), Chicago, USA.
- **Interviewed** at Scientific American Magazine on "Electric Vehicles Aren't Ready for Extreme Heat and Cold. Here's How to Fix Them", 2024 available at news link
- Faculty of Engineering, **Global Engagement Prize**, University of Strathclyde, 2023 (£2500).
- **Outstanding Service Award**, IEEE SmartGridComm' 2023, Glasgow, UK .
- **Associate Fellow of Higher Education**, Advanced HE, UK, 2022.
- **Best Paper Award** at IEEE SmartGridComm'12, Tainan City, Taiwan.
- **Best paper award** at IEEE Workshop on Smart Grid and Renewable Energy'15, Doha, Qatar.
- Journal paper listed in **Best Readings in Smart Grid Communications** prepared by IEEE Comsoc, 2014.
- Elevated to **IEEE Senior Grade, 2020** .
- **Research Excellence Travel Grant**, Texas A&M University, 2014 (£1000).
- **The US National Science Foundation Travel Grant** to attend IEEE SmartGridComm'11 (£500).

Funding

Since 2015, I have attracted more than 3.8M USD research funding as a PI/Co-I from UK and international agencies. (1 GBP = 1.27 USD)

1. Co-I, "The Hybrid Energy Box (HEB) - EVCI Configuration", **Scottish Enterprise**, 2023-24, Partners: Pier Solutions and Tronius, £170k.
2. PI, "ColdHarmonics: Harmonics Measurement of fast DC EV Charging of under low temperatures", **ERI Grid Lab Funding (EU Horizon)**, 2023-24, £20k.
3. PI, "Optimal Planning and Operation of Social and Responsible V2G hubs at Motor-Retail Sites for a Net-Zero Power Grid", **The Energy Technology Partnership (Scottish Government)**, 2023-26, £90k/.
4. Co-I, "Energy Infrastructure and Wider System Interaction", **Arnold Clark Automobiles (Industry Funding)**, 2020-24, £58k.
5. PI, "Smart Charging Algorithm Design for Human-in-the-Loop Electric Vehicle Parking Lots", **Royal Society of Edinburgh** Personal Research Fellowship, 2022-23, £60k. News Link
6. PI, "Modular EV Charger Design", **The Energy Technology Partnership (Scottish Government)**, KE Project with BumblebeeEV, 2022, £124k. News Link
7. PI, "Electric Vehicle Charging Infrastructure in Qatar: Charger Design, Grid Integration, and Cost Quantification", **Qatar National Research Fund**, 2020-23, Partners: Tallinn Tech University, Hamad Bin Khalifa University, Kahramaa, $600k.
8. Co-I, "Agile Streets- EXT#1: Beyond Off Street - Smart Meter EV Charging", Partners: Samsung Energy, Octopus, ConnectedKerb. **Innovate UK**, 2022, £53.7k. News Link
9. Co-I, "Beyond Off Street - Smart Meter EV Charging", **Innovate UK**, 2020-22, Partners: PNDC, Samsung Energy, Octopus. £135k .
10. Co-I, "ASSURE Charge", **Innovate UK**, Partners: PNDC, ConnectedKerb. £153k. News Link
11. Co-I, NPRP9-055-2-022, "Hybrid AC/DC Islanded Micro-grids in Qatar: Planning, Operation, and Cyber Security", **Qatar National Research Fund**, Partners: University of Waterloo, Texas A&M University, 2016-19, $720k
12. PI, "Demand-side management in Qatar", 2018-2021, Amount: $1.25 M, **Qatar Environment and Energy Research Institute (Internal fund)** .

Research Output

*My research interests include **electrification of transportation and mathematical modelling, optimisation, and control of electric power systems.**, Since 2011, I have sustained a strong track record of high-impact peer-reviewed journals, conferences, and book chapters. In 2022 and 2023, I was listed in Stanford University's Top 2% Scientist. The average **Impact Factor** of my Journal papers is **6.9**. My overall **field-weighted citation index** (as per Sci-Val) is **2.56** which indicates that my research paper received **156% more citations** than the world average.*

The number of publications by publisher type is presented in Table 1

Table 1: Publications statistics

	IEEE	Elsevier	Others
Number of Published Journals	18	9	13
Number of Published Conferences	49	0	5

Table 2 shows the citation and h-index profile of my research output.

Table 2: Citation and h-index

	Citations	h-index
Google Scholar	2820	29
Scopus	1785	23

Figure 1 shows annual citation and publication trends. The full publication list is presented in the Publications section.

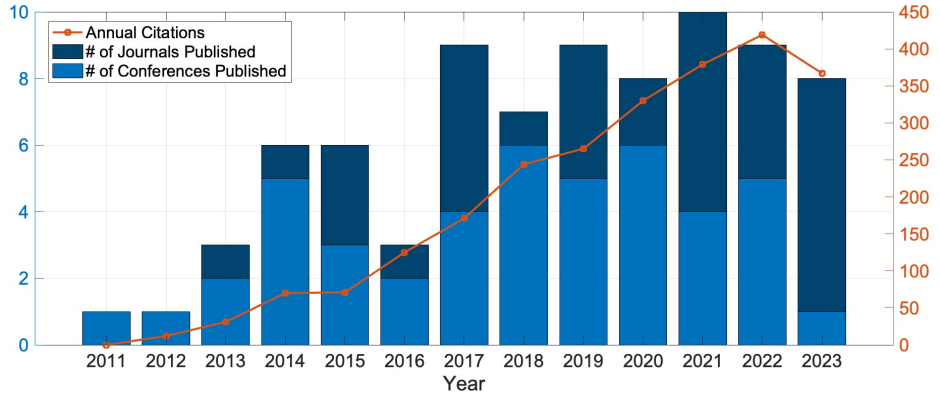

Figure 1: Document and citation trend (adopted from Google Scholar)

Student Mentoring & PhD Examination

1. Murat Senol, "Impact Assessment and Harmonics-Aware Smart Charging of Multiple EV Charging," PhD in Electrical and Computer Engineering, University of Strathclyde, UK, Expected Graduation: Oct. 2024 (**Primary Supervisor**)
2. Kathleen Davies, "Evaluation of Charging Infrastructure Roll-out Policies on Electric Vehicle Acceptance," PhD in Electrical and Computer Engineering, University of Strathclyde, UK, Expected Graduation: Oct. 2024 (**Primary Supervisor**)
3. Xiang Shi, "Optimal Planning and Operation of Social and Responsible V2G hubs at Motor-Retail Sites for a Net-Zero Power Grid," University of Strathclyde, UK, Expected Graduation: Mar. 2027 (**Primary Supervisor**) .
4. Georgios Kalyvas, "Reporposing of Unused Buildings to Develop Energy Hubs in Urban Environment," University of Strathclyde, UK, Expected Graduation: Mar. 2028 (**Primary Supervisor**) .
5. Faraj Saffouri, M.Sc. in Sustainable Energy, Hamad Bin Khalifa University, 2017 (with 2-year Thesis) (**Primary Supervisor**) .
6. Ebubekir Sahin, M.Sc. in Sustainable Energy, Hamad Bin Khalifa University, 2018 (with 2-year Thesis) (**Primary Supervisor**) .
7. Irfan Batur, 2018 M.Sc. in Sustainable Energy, Hamad Bin Khalifa University, 2018 (with 2-year Thesis).
8. Omar Alrawi, M.Sc. in Sustainable Energy, Hamad Bin Khalifa University, 2018 (with 2-year Thesis) (**Primary Supervisor**) .
9. Usman Zafar, Postdoctoral Researcher, University of Strathclyde, 2021-2023.
10. Fulin Fan, Postdoctoral Researcher, University of Strathclyde, 2022.
11. Irfan Alp Gurkaynak, Postdoctoral Researcher, University of Strathclyde, 2024-2025.
12. Shi Zhao, Nanyang Technological University, 2024 (**External Examiner**)
13. Kristian Sevdari, Denmark Technical University, 2024 (**External Examiner**)
14. Ifiok Anthony Umuren, University of the West of Scotland, UK, 2022, (**External Examiner**)
15. Dimitrios Sikeridis, The University of New Mexico, USA, 2021, (**External Examiner**)
16. Badr Al Faiya, University of Strathclyde, 2023, (**Internal Examiner**)
17. Zhiwang Feng, University of Strathclyde, 2023, (**Internal Examiner**)
18. Chunpeng Li, University of Strathclyde, 2021, (**Internal Examiner**)
19. Yljon Seferi, University of Strathclyde, 2021, (**Internal Examiner**)
20. Faisal Mumtaz, Hamad Bin Khalifa University, 2019, (**Internal Examiner**)
21. Ibrahim Ari, Hamad Bin Khalifa University, 2019, (**Internal Examiner**)

Teaching & Curriculum Development

University of Strathclyde, Glasgow, UK **Nov 2019– Present**

Department of Electronic and Electrical Engineering

- EE995: Energy Decarbonisation Technologies (Curriculum Development), 2024-
- EE994: Energy Storage Systems(Module Registrar & Curriculum Development), 2023-
- EE802: Control and Protection of Future Networks, 2020-
- EE313: Engineering Analyses (Curriculum Development), 2020-23
- EE 271: Electronic and Electrical Techniques and Design 2, 2020-
- EE 107: Electronic and Electrical Techniques and Design 1, 2020

Hamad Bin Khalifa University, Doha, Qatar **2015– 2019**

Division of Sustainable Energy, College of Engineering and Science

- SENR 654: Smart Power Grids (Curriculum Development), Fall 2015-2018 .
- CSE 507: Advanced Systems Optimization (Curriculum Development), Spring 2025-2018 .

North Carolina State University, Raleigh, NC, USA **2010– 2014**

Teaching Assistant, Department of Electrical and Computer Engineering

- Smart Grid Communication and Sustainable Computing, Fall 2013 .
- Introduction to Computing Systems, Spring 2012, Fall 2013 .
- Computer Networks Fall 2010, 2011, 2012

Publications

BOOKS AND BOOK CHAPTERS

1. **I. S. Bayram** and Ali Tajer, "Plug-in Electric Vehicle Grid Integration", Artech House Inc.Amazon
2. **I. S. Bayram** and R. Jovanovic, "Energy-Efficient Architectures for 6G Networks", *The Role of 6G and Beyond on the Road to Net-Zero Carbon*, IET 2023 Link
3. **I. S. Bayram**, M. Ismail, and R. Jovanovic, "The Role of Smart Metasurfaces in Smart Grid Energy Management", *Backscattering and RF Sensing for Future Wireless Communication*, Wiley 2021. Amazon
4. **I. S. Bayram**, R. Sims, G. Burt, and S. Galloway, "Energy Storage Sizing for Charging Stations", *Electric Vehicle Integration in a Smart Microgrid Environment*, CRC Press, 2021 Link
5. **I. S. Bayram** and M. Devetsikiotis"Analytical Problems in Energy Storage Systems", *Advance Data Analytics for Power Systems*, (Eds. A. Tajer, S. Perlaza, V. Poor), Cambridge University Press, ISBN 9781108859806, 2021. doi
6. M. Ismail, **I. S. Bayram**, E. Serpedin, K. Qaraqe, "5G-Enhanced Smart Grid", *Enabling 5G Communication System to Support Vertical Industries*, (Eds. M. Imran, Y. Sambo, and Q. Abbasi), Wiley, ISBN 978-1119515531, 2020. Link
7. **I. S. Bayram**, "Demand-side Management for PV Grid Integration", *Solar Resource Mapping: Fundamentals and Applications*, (Eds. J. Polo, L. M. Pomares, A. Sanfilippo) Springer, ISBN 978-3-319-97484-2, 2019. Link
8. F. Mumtaz, **I. S. Bayram**, A. Elrayyah, "Importance of energy storage system in the smart grid", *Communication, Control and Security Challenges for the Smart Grid*, (Eds. S. M. Muyeen and S. Rahman), IET, ISBN:978-1-78561-142-1, 2017. Link
9. **I. S. Bayram**, G. Michailidis, M. Devetsikiotis, S. Bhattacharya, and F. Granelli,"Smart Vehicles in the Smart Grid: Challenges, Trends, and Applications to the Design of Charging Stations", *Control for Optimization Theory of Electric Smart Grids*, (Eds. A. Chakrabortty and M. Ilic), Springer-Verlag (ISBN: 1461416043), 2012. Link

JOURNALS

1. A Mousaei, Y Naderi, **I S Bayram**, "Advancing state of charge management in electric vehicles with machine learning: a technological review", *IEEE Access*, (IF 3.9), 2024 doi.
2. F Fan, **I S Bayram**, U Zafar, S Bayhan, B Stephen, S Galloway, "Probabilistic assessment of community-scale vehicle electrification using GPS-based vehicle mobility data: a case study in Qatar", *IEEE Open Journal of Vehicular Technology*, (IF 6.4), 2024 doi.

3. M Zeinali, N Erdogan, **I S Bayram**, JS Thompson, "Impact of Communication System Characteristics on Electric Vehicle Grid Integration: A Large-Scale Practical Assessment of the UKs Cellular Network for the Internet of Energy". *Electricity*, 2023 doi.

4. A. Rey-Pommier, F. Chevallier, P. Ciais, J. Kushta, T. Christoudias, **I. S Bayram**, and Jean Sciare."Detecting nitrogen oxide emissions in Qatar and quantifying emission factors of gas-fired power plants - A four-years study", *Atmospheric Chemistry and Physics* (IF 6.5), 2023 doi.

5. M. Senol, **I. S. Bayram**, S. Galloway, "Electric vehicles under low temperatures: a review on battery performance, charging needs, and power grid impacts", *IEEE Access*, 2023 (*Student Paper* (IF 3.9) doi.

6. **I.S. Bayram**, A Saad, R Sims, and S Galloway, "Statistical characterisation of public AC EV chargers in the UK", *IEEE Access*, (IF 3.9) 2023 doi

7. M Jamshed, M. Ismail, H. Pervaiz, R. Atat, **I. S. Bayram**, Q. Ni, "Reinforcement Learning-based Allocation of Fog Nodes for Cloud-based Smart Grid Services", *e-Prime*, 2023 doi

8. L. Gurriaran, K. Tanaka, **I. S. Bayram**, Y. Proestos, J. Lelieveld, P. Ciais, "Warming-induced increase in power demand and CO2 emissions in Qatar and the Middle East", *Journal of Cleaner Energy* (IF 11), 2023 doi.

9. **I.S. Bayram** and S Galloway, "Pricing-based Distributed Control of Fast EV Charging Stations Operating Under Cold Weather". *IEEE Transactions on Transportation Electrification*, 2022 (IF 6.4) doi.

10. O. Alrawi, S. Al-Ghamdi, **I.S. Bayram**, and M. Koc "Economic Viability of Rooftop Photovoltaic Systems and Energy Storage Systems in Qatar", *MDPI Energies*, 2022 (*Student Paper* (IF 3.2) doi.

11. **I. S. Bayram**, U. Zafar, S Bayhan, "Could Petrol Industry be a Key to Transport Electrification? A GIS-based Coverage Analysis of Fast EV Chargers", *IEEE Access* (IF 3.9) doi.

12. L. Lin, H. Khan, A. Abdallah, F. Hashim, K. Rabie, I. Khan, M. Khairi, R.Sehiemy, K. Mahmoud, M. Darwish, **I. S. Bayram**, X. Li, "Hierarchical Optimization and Grid Scheduling Model for Energy Internet: A GA-Based Layered Approach", *Frontiers in Energy Research*, 2022 (IF 3.5) doi.

13. R Jovanovic, **I. S. Bayram**, S Voss, "A GRASP approach for solving large scale electric bus scheduling problems", *MDPI Energies*, 2021 (IF 3.2) doi.

14. I. Koncar and **I.S. Bayram**, "A Probabilistic Methodology to Quantify the Impacts of Cold Weather on Electric Vehicle Demand: A Case Study in the UK", *IEEE Access*, 2021 (*Student Paper* (IF 3.9) doi.

15. R. Jovanovic, S. Bayhan, **I.S. Bayram**, "A multiobjective analysis of the potential of scheduling electrical vehicle charging for flattening the duck curve", *Journal of Computational Science*, vol. 48, 2021 (IF 3.9) doi.

16. **I.S. Bayram** and M Devetsikiotis, "Optimal Design of Electric Vehicle Charging Lots with Multiple Charger Types", *International Journal of Energy Research*, Wiley, 2021 (IF 4.7) doi.

17. S. Canbulat, K. Balci, O Canbulat, **I.S. Bayram**, "Techno-Economic Analysis of On-Site Energy Storage Units to Mitigate Wind Energy Curtailment: A Case Study in Scotland", *MDPI Energies*, 2021 (*Student Paper* (IF 3.2) doi.

18. C. Kong, B. P. Rimal, M. Reisslein, M. Maier **I.S. Bayram**, M. Devetsikiotis, "Cloud-Based Charging Management of Smart Electric Vehicles in a Network of Charging Stations: Price Incentive vs. Capacity Expansion", *IEEE Transactions on Services Computing*, 2021, IF 11.01) doi.

19. **I.S. Bayram**, S. Galloway and G. Burt, "A Stochastic Sizing Model for On-site Storage Systems in Electric Vehicle Parking Lots", *Journal of Energy Storage*, vol. 32, 2020 (IF 8.9) doi.

20. **I.S. Bayram**, "Smart Grid Status in Hot Arid Climates - Drivers, Challenges, and Lessons Learned from Qatar", in Current Smart Grid Status - Different Country Stories/Experience, *IEEE Smart Grid Newsletter*, 2020 doi.

21. E. Sahin, **I.S. Bayram**, M.Koc "Demand Side Management Opportunities and Framework (DSM-F) for Resource-Rich Countries: Case Study Qatar", *Journal of Cleaner Production*, vol. 241, 2019, (*Student Paper*, IF 11.07). doi

22. I. Batur, **I. S. Bayram**, M. Koc, "Assessment of Supply-Side and Demand-Side Policies Impact on Energy Consumption and CO2 Emissions from Urban Passenger Transportation: The Case of Istanbul", *Journal on Cleaner Production*, vol. 219, 2019 (*Student Paper*, IF 11.07) doi

23. Z. Fotohoui, M. Narimani, E. Hashemi, **I.S. Bayram**, "A General Model for EV Drivers' Charging Behaviour", *IEEE Transactions on Vehicular Technology*, vol. 68, 2019 (IF 6.23) doi.

24. O. Alrawi, **I.S. Bayram**, S. Al-Ghamdi, M. Koc, "High-Resolution Household Load Profiling and Evaluation of Rooftop PV Systems in Selected Houses in Qatar", *Energies*, vol. 12, 2019 (*Student Paper*, IF 3.2) doi.

25. **I. S. Bayram**, F. Saffouri, M. Koc, "Generation, Analysis, and Applications of High-resolution Electricity Load Profiles in Qatar", *Journal on Cleaner Production*, vol. 184, 2018 (*Student Paper*, IF 11.07) doi.

26. **I. S. Bayram**, A. Tajer, M. Abdallah, and K. Qaraqe, "A Stochastic Sizing Approach for Sharing-based Energy Storage Applications", *IEEE Transactions on Smart Grid*, vol. 8, no. 3, 2017 (IF 10.4) doi.

27. **I. S. Bayram**, and T. Ustun, "A Survey on Behind the Meter Energy Management Systems", *Renewable and Sustainable Energy Reviews*, vol. 72, 2017 (IF 15.9) doi.

28. **I. S. Bayram** and A. Tajer, "Exploiting PEV Batteries For V2X Applications", *IEEE SmartGrid Newsletter*, May 2017 doi.

29. C. Kong, R. Jovanovic, **I.S. Bayram**, M. Devetsikiotis, "A Hierarchical Optimization Model for a Network of Electric Vehicle Charging Stations", *Energies*, vol. 10, 5 (IF 3.2) doi.

30. **I. S. Bayram** "Demand Profiles of GCC Members: An Overview", *EAI Transactions on Smart Cities*, vol. 17, no. 5, 2017 doi.

31. R. Jovanovic, **I. S. Bayram** "Residential Demand Response Scheduling with Consideration of Consumer Comfort", *Applied Sciences*, vol. 6, 2016 (IF 2.7) doi.

32. **I. S. Bayram**, G. Michailidis, and M. Devetsikiotis, "Unsplittable Load Balancing in a Network of Charging Stations Under QoS Guarantees, *IEEE Transactions on Smart Grid*, vol. 6, 2015 (IF 10.2) doi.

33. **I. S. Bayram**, M. Abdallah, A. Tajer, and K. Qaraqe, "Capacity Planning Framework for EV Charging Infrastructures with Multi-Class Customers", *IEEE Transactions on Smart Grid*, vol. 6, 2015 (IF 10.2) doi.

34. C. Kong, **I. S. Bayram**, M. Devetsikiotis "Revenue Optimization Frameworks for Multi-Class PEV Charging Stations", *IEEE Access*, vol. 3, 2015 (IF 3.9) doi.

35. **I. S. Bayram** and I. Papapanagiotou "A Survey on Communication Technologies and Requirements for Internet of Electric Vehicles", *Eurasip Journal on Wireless Communications*, vol. 223, 2014 (IF 2.5) doi.

36. **I. S. Bayram**, G. Michailidis, M. Devetsikiotis, and F. Granelli "Electric Power Allocation in a Network of Fast Charging Stations", *IEEE Journal on Selected Areas in Communications*, vol. 31, 2013 (IF 8.08) **IEEE Communication Society Best Reading in Smart Grid**. doi.

37. **I.S. Bayram**, "A Stochastic Sizing Approach to Community Energy Storage Systems in Smart Grid", *Gazi University Science Journal: PART:C Design and Technology*, vol.7, issue 1, 2019. doi.

38. M Senol, **I.S. Bayram**, K Sevdari, O Gershke, L Hunter "Harmonics-aware Modelling of Smart EV Charging", IEEE Open Journal of the Industrial Electronics Society, 2024 (*Under Review*).

39. X Shi, **I.S. Bayram**, S Galloway "Opportunities and Challenges for EV Charging Hubs for V2G Markets", IEEE Access, 2024 (*Under Review*).

40. R Jovanovic, **I.S. Bayram**, S Voss, S Bayhan "Exploring the potential of placing charging stations at relief stands for EV fleets in ride-hailing and taxi services", IEEE Access, 2024 (*Under Review*).

CONFERENCE (FULL PAPER)

1. M Senol, **I. S. Bayram**, S Galloway, "Harmonic Emission of EV Smart Charging", *IEEE Transportation Electrification Conference & Expo*, 2024 (accepted for publication).

2. M Senol, **I. S. Bayram**, S Galloway, "Stochastic Harmonic Assessment of Multiple Fast EV Charging", *IEEE Transportation Electrification Conference & Expo*, 2024 (accepted for publication).

3. **I. S. Bayram** and K Sevdari, "Stochastic Modelling of Fast DC Charging Stations with Shared Power Modules", *International Conference on Renewable Energies and Smart Technologies*, 2024 (accepted for publication).

4. **I. S. Bayram**, Ali Saad, Ryan Sims, Colin Herron, Stuart Galloway, "Usage Analysis of Public AC Chargers in the UK", *IET EVI Conference*, Glasgow, UK, 2023 doi.

5. U. Zafar, **I. S. Bayram**, S. Bayhan, R. Jovanovic, "Analysis of GPS-based Vehicle Mobility Data towards the Electrification of Transportation in Qatar", *IEEE Annual Conference of the Industrial Electronics Society*, Brussels, Belgium, 2022.doi

6. **I. S. Bayram**, "Probabilistic Capacity Planning Frameworks for Electric Vehicle Charging Stations with Overstay", *IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids*, Singapore, 2022 doi.

7. S. Bayhan, R. Jovanovic,**I. S. Bayram**, "Optimization of electric vehicle charge scheduling with consideration of battery degradation", *24th European Conference on Power Electronics and Applications*, Hannover, Germany, 2022.

8. K. Davies, **I. S. Bayram**, S Galloway, "Challenges and Opportunities for Electric Vehicle Retail Business: Power Systems Perspective", *IEEE Smart Grid and Renewable Energy Conference*, Doha, Qatar, 2022 doi.

9. R. Jovanovic, S Bayhan, **I. S. Bayram**, "Capacity Optimization of EV Charging Networks: A Greedy Algorithmic Approach", *IEEE Smart Grid and Renewable Energy Conference*, Doha, Qatar, 2022 doi.

10. **I. S. Bayram**, "Impacts of Electric Vehicle Charging under Cold Weather on Power Networks", *IEEE International Universities Power Engineering Conference*, UK, 2021 doi.

11. **I. S. Bayram**, "Capacity Optimisation Framework for Fast Charging Stations Operating under Cold Weather", *IEEE International Universities Power Engineering Conference*, UK, 2021 doi.

12. U Zafar, **I. S. Bayram**, S Bayhan, "A GIS-based Optimal Facility Location Framework for Fast Electric Vehicle Charging Stations", *IEEE Symposium on Industrial Electronics*, Japan, 2021 doi.

13. S Bayhan, H Komurcugil, **I. S. Bayram**, "Deadbeat Control of a Three-Phase T-type Inverter with Output LC Filter for UPS Applications", *IEEE Symposium on Industrial Electronics*, Japan, 2021 doi.

14. **I. S. Bayram**, "Quantifying the Effects of Communication Network Performance in Vehicle-to-Grid Frequency Regulation Services", *International Conference on UK-China Emerging Technologies (UCET)*, Glasgow, UK, 2020 doi.

15. R. Jovanovic, **I. S. Bayram** and S. Bayhan, "An Online Model for Scheduling Electrical Vehicle Demand at Park-and-Ride Facilities to Smooth Solar Ramps", *IEEE World Congress on Computational Intelligence*, 2020, Glasgow, UK doi.

16. **I. S. Bayram** and S. Bayhan, "Location Analysis of Electric Vehicle Charging Stations for Maximum Capacity and Coverage", *IEEE International Conference on Compatibility, Power Electronics, and Power Engineering*, 2020, Setubal, Portugal doi.

17. M. Zeinali, **I. S. Bayram**, J. Thompson, "Performance Assessment of UK's 4G Cellular Network for Vehicle to Grid Smart Grid Applications", *International Conference on Communications (ICC)*, Dublin, Ireland, 2020 doi.

18. O. Alrawi, **I.S Bayram**, S. Al-Ghamdi, M. Koc, "Impact of Energy Subsidies on The Economic Viability of Rooftop Photovoltaic Systems in Qatar", *International Exergy, Energy and Environment Symposium*, 2020, Doha, Qatar.

19. **I. S. Bayram**, "Resource Provisioning in Plug-in Electric Vehicle Charging Lots", *International Exergy, Energy and Environment Symposium*, 2020, Doha, Qatar.

20. R. Jovanovic and **I.S Bayram**, "Scheduling Electric Vehicle Charging at Park-and-Ride Facilities to Flatten Duck Curves", *IEEE Vehicle Power and Propulsion Conference*, 2019, Vietnam doi.

21. **I.S Bayram**, "Non-intrusive Electricity Sub-metering in Selected Households in Qatar", *IEEE 4th UK China Emerging Technologies Conference*, 2019, Glasgow, UK doi.

22. **I.S Bayram**, O. Custem, J. Bigler, K. Maher, "Demonstration of a Smart Villa Energy Monitoring Platform in Qatar", *IEEE 4th UK China Emerging Technologies Conference*, 2019, Glasgow, UK, doi.

23. **I.S Bayram**, "A Stochastic Simulation Model to Assess the Impacts of Electric Vehicle Charging on Power Generation: A Case Study for Qatar", *IEEE Transportation Electrification*, 2019, Novi, MI, USA doi.

24. **I.S Bayram** and M. Ismail, "A Stochastic Model for Fast Charging Stations with Energy Storage Systems", *IEEE Transportation Electrification Conference and Expo*, 2019, Novi, MI, USA, doi.

25. **I.S Bayram**, "Energy Storage Sizing and Photovoltaic Self-Consumption in Selected Households in Qatar", *IEEE 8th International Conference on Power and Energy Systems*, 2018, Colombo, Sri Lanka doi.

26. R. Jovanovic, **I.S Bayram**, S. Voss, "GRASP Approach for solving the 2-connected m-dominating set problem in Power Systems", *IEEE 12th International Conference on Compatibility, Power Electronics, and Power Engineering*, 2018, Doha, Qatar doi.

27. **I.S Bayram**, "Teaching Smart Power Grids: A sustainability Perspective", *IEEE 12th International Conference on Compatibility, Power Electronics, and Power Engineering*, 2018, Doha, Qatar doi.

28. I. Batur, **I.S Bayram**, M. Koc, "The Role of Plug-in Electric Vehicles in Reducing CO2 Emissions in Istanbul: A System Dynamics Approach", *IEEE 12th International Conference on Compatibility, Power Electronics, and Power Engineering*, 2018, Doha, Qatar doi.

29. O. Alrawi, **I.S Bayram**, M. Koc, "High-Resolution Behind-the-Meter Load Profiling in Selected Qatari Household", *IEEE 12th International Conference on Compatibility, Power Electronics, and Power Engineering*, 2018, Doha, Qatar doi.

30. M. Ismail, **I.S Bayram**, M. Shahin, and E. Serpedin, "Testbed of Advanced Metering Infrastructure for Load Monitoring, Control, and Detection of Data Integrity Cyber-attacks in Smart Grids", IAC-ETITAI, Vienna, Austria, 2018 .

31. **I. S. Bayram**, O. Alrawi, H. Al-Naimi, and M. Koc, "Direct Load Control of Air Conditioner in Qatar: An Empirical Study", *6th International Conference on Renewable Energy and Applications*, Nov 5-8, 2017, San Diego, CA, USA doi.

32. **I. S. Bayram** and M. Koc, "Demand Side Management for Peak Reduction and PV Integration in Qatar", *IEEE International Conference on Networking, Sensing and Control*, May 16-18, 2017, Calabria, Italy doi.

33. **I. S. Bayram**, M. Al-Qahtani, F. Saffouri, M. Koc, "Estimating the Cost of Summer Cooling in Bahrain", *IEEE GCC Conference and Exhibition*, May 8-11, Manama Bahrain doi.

34. F. Saffouri, **I. S. Bayram**, M. Koc, "Quantifying the Cost of Cooling in Qatar", *IEEE GCC Conference and Exhibition*, May 8-11, 2017, Manama Bahrain doi.

35. F. Mumtaz and **I. S. Bayram**, "Planning, Operation, and Protection of Microgrids: An Overview", *International Conference on Energy and Environment Research*, Sept 7-11, 2016, Barcelona, Spain doi.

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40. Qi Wang, **I. S. Bayram**, F. Granelli, and M. Devetsikiotis, "Fast Power Charging Strategy for EV/PHEV in Parking Campus with Deployment of Renewable Energy", *IEEE The International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks*, Athens, Greece, 2014 doi.

41. **I. S. Bayram**, M.Z. Shakir, M. Abdallah, K. Qaraqe, "A Survey on Energy Trading and Exchange in Smart Grid", *IEEE Global Conference on Signal and Information Processing*, Atlanta, USA, 2014 doi.

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44. Maria Carmen Falvo, Danilio Sbordone, **I. S. Bayram**, and Michael Devetsikiotis, "A Review on EV Charging Stations: European and American Standards", *IEEE International Symposium on Power Electronics, Electrical Drives, Automation and Motion*, Naples, Italy, 2014 doi.

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POSTER PRESENTATIONS

1. X Shi, **I. S. Bayram**, "The Impact of V2G Service in Motor Retail Business", ETP Annual Conference, Glasgow, UK, 2023.

2. O. Alrawi, F. Saffouri, **I. S. Bayram**, M. Koc, "Direct-load control experiments and case studies in Qatar Foundation Community Housing", *Qatar Foundation Annual Research Conference*, Doha, Qatar, 2018.

3. **I. S. Bayram**, M Abdallah, and K. Qaraqe "Energy Storage Sizing for Smart Grid Applications", *Qatar Foundation Annual Research Conference*, Doha, Qatar, 2014.

4. F. Saffouri, **I. S. Bayram**, M. Koc, "Demand Side Management And Social Studies To Curb Electricity Consumption In Qatar", *International Conference on Energy Research and Social Science*, Citges, Spain, 2-5 April, 2017.
5. **I. S. Bayram** and Hamed Mohsenian-Rad, "Modeling the Impact of Weather Conditions on the Generation Output of PV-DGs", *Qatar Foundation Annual Research Conference*, Doha, Qatar, 2016.
6. **I. S. Bayram** "Stochastic Modeling Approach to Public Charging Stations", *NCSU-SRI Workshop on Cyber-Physical Applications in Smart Power Systems*, Raleigh, NC., 2011

Service

International Academic Community

- **Tresurer**, IEEE Workshop on the Electronic Grid (eGrid), 2025.
- **Technical Program Chair**, IEEE SmartGridComm, Glasgow, UK, 2023 .
- **Symposium Chair**, Smart Grid Track, IEEE Globecomm, Taiwan, 2025.
- **Technical Program Chair**, IEEE SmartGridComm, Glasgow, UK, 2023 .
- **Symposium Chair**, IEEE Smart Grid and Renewable Energy Workshop, Doha, Qatar, 2023.
- **Symposium Co-Chair**, Data Analytics and Computation, IEEE SmartGridComm, Singapore, 2022.
- **Member**, IEEE PES EV Charging Task Force, 2023-
- **Member**, IEEE P2030 Smart Grid Interoperability Working Group, 2022-
- **Member**, IEEE Technical Committee on SGC, 2022-
- **Associate Editor**, Elsevier ePrime, 2022 - Present
- **Associate Editor**, IET Electrical Systems in Transportation, 2020 - Present
- **Associate Editor**, IET Energy Conversion and Economics, 2022 - Present
- **Associate Editor**, MDPI Energies-Electric Vehicles Section, 2019 - Present
- **Research proposal reviewer**, Innovation Centre, Hamad Bin Khalifa University, 2019-
- **Symposium Chair**, IEEE 12th International Conference on Compatibility, Power Electronics, and Power Engineering, Doha, Qatar, 2018.

Department/University-level Service

- **Chair**, Diversity and Inclusion Working Group, Dept. of EEE, University of Strathclyde, 2023 - Present.
- **Chair**, Athena Swan Self Assessment Working Group, Dept. of EEE, University of Strathclyde, 2023 - Present.
- **Departmental Representative**, Diversity and Inclusion Working Group, Faculty of Engineering, University of Strathclyde, 2024 - Present.
- **Faculty of Engineering Representative**, Race Equality Steering Group, University of Strathclyde, 2024 - Present.
- **Member**, STEM Outreach Activity Working Group, University of Strathclyde, 2024 - Present.

Talks and Tutorials

- "European Experience for EV Grid Integration", Panellist, **IEEE International Conference on Renewable Energies and Smart Technologies**, Kosova, Jun. 2024.
- "Public AC Chargers in the UK: Current Status ", Panellist, **UK-Singapore Electromobility Workshop**, Singapore, Apr. 2023.
- "Smart Transportation Systems to Enable Net-zero in Road Transportation," Engineering Seminar Series, **Texas A&M University at Qatar**, Sept. 2022.
- "The Role of Home Energy Management Systems on Road to Net Zero Future," **Nottingham Trent University, EROS International Programme**, 2021.
- "Race to Net-zero: Challenges in Transportation Research," **Scottish Power Networks-Strathclyde Research Liaison**, March 2021

- "Stochastic Models and Optimization Techniques for Efficient Integration of Electric Vehicles in Smart Grids," Tutorial, **IEEE International Conference on Communications, Control, and Computing Technologies**, Arizona, Nov. 2020.
- "A Network of Batteries: Opportunities and Challenges with Electric Vehicles," **Strathclyde Global Engineering Webinar Series**, August 2020.
- "The Role Probabilistic Modelling and Simulation in Electric Vehicle Grid Integration," Tutorial, **IEEE Transportation Electrification Conference and Expo**, Chicago, IL, June 2020.
- "EV Integration in Desert Environments: Challenges and Opportunities," **Qatar University**, Qatar, 2019.
- "Smart Grids in Qatar: Demand-side Management, PV Integration, and Plug-in Electric Vehicles," **University of New Mexico**, USA, 2017.
- "PEVs as Flexible Loads in Smart Grids," First Smart Grid Resilience Workshop, Keynote Speech (with Prof. Devetsikiotis), **IEEE Global Communications Conference**, San Diego, CA, USA.
- "Electrical Vehicles and Smart Grids: Efficient Load Control and Resource Provisioning," **3rd Texas A&M University at Qatar Annual Research and Industry Forum**, April 2014.

References

Available upon request.