MICHAEL JOHN SHORT

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Scholar: https://scholar.google.com/citations?user=D-jbgPkAAAAJ

CAREER SUMMARY

Professor Michael Short is an internationally recognised academic leader in Control Engineering and Systems Informatics, with over 35 years combined industrial and academic experience. Currently Research Director of the Centre for Sustainable Engineering and Associate Dean for Research & Knowledge Exchange at Teesside University, he has led major research initiatives in Industry 4.0, Smart Energy Systems, Robotics, and Digital Trade. He has been Principal Investigator or Co-Investigator on more than £5M of funded projects supported by UKRI, Innovate UK, DESNZ, EU Framework programmes, British Council, and industry, and has delivered extensive impact through collaborations with the NHS, ADNOC, Siemens, General Electric, Altilium Metals, TetraPak, KP Snacks, and others.

Professor Short has authored over 220 peer-reviewed publications, delivered numerous international keynote lectures, and received nine best paper awards. His H-index is 30 and i10-index is 66. His leadership includes directing Teesside's Centre for Sustainable Engineering, serving as REF2021 UoA12 Lead, and helping establish the £16M Net Zero Industry Innovation Centre. He is a Fellow of the Higher Education Academy, a member of the IET and IEEE, and has acted as reviewer, editor, and evaluator for leading journals, conferences, and funding bodies worldwide. His research has been widely recognised across academia, industry, and policy, with international media appearances highlighting his contributions to the Digitalization and Net Zero agendas.

EMPLOYMENT HISTORY

Oct 2023 – Present
Associate Dean (Research & Knowledge Exchange)
Research Director of the Centre for Sustainable Engineering
Professor of Control Engineering and Systems Informatics
School of Computing, Engineering and Digital Technologies,
Teesside University, UK.

Oversight and leadership/management responsibilities for research and innovation portfolio in the School of Computing, Engineering and Digital Technologies, research into industry 4.0/5.0 and smart, sustainable human-centric systems; Principal / Co-Investigator on multiple running projects and contracts funded by UKRI, ESG, DESNZ and British Council.

August 2020 – Sept 2023
Research Director of the Centre for Sustainable Engineering
Professor of Control Engineering and Systems Informatics
School of Computing, Engineering and Digital Technologies,
Teesside University, UK.

Engineering Academic Research Lead; REF21 UoA 12 Submission Lead; Module co-ordinator for two modules at postgraduate and undergraduate level; Associated student project supervision and PhD supervision. Research into Industry 4.0 and Smart Energy topics; Technical Lead for multiple projects including UKRI-funded VIC Ports, I-CAT and EU-funded REACT Projects.

Jan 2015 – July 2020 Reader (Associate Professor) of Control Engineering
School of Computing, Engineering and Digital Technologies,
Teesside University, UK.

Module co-ordinator for modules at postgraduate and undergraduate level; Associated student project supervision and PhD supervision. Research into industry 4.0 topics; Smart Energy and Smart Grid Research Group Lead; Technical Lead for EU-Funded DR-BoB and REACT Projects.

Jan 2010 – Dec 2014 Senior Lecturer in Control Engineering
School of Science and Engineering, Teesside University, UK.

Module co-ordinator for modules at postgraduate and undergraduate level; Associated student project supervision and PhD supervision. Research into dependable real-time and distributed embedded systems, control systems and real-time scheduling. Technical Lead for EU-funded IDEAS project.

Oct 2007 – Dec 2009 Lecturer in Embedded Systems and Control
Department of Engineering, University of Leicester, UK.

Module co-ordinator for modules at postgraduate and undergraduate level; Associated project student supervision including PhD supervision. Research into dependable real-time and distributed embedded systems, control systems and scheduling.

Oct 2003 – Sept 2007 Research Associate in Embedded Systems and Control
Department of Engineering, University of Leicester, UK.

Research into safety-critical distributed embedded control systems; Associated light teaching and student supervision duties. Management of Embedded Systems Demonstration Laboratory.

Jan 2003 – Sept 2003 Research Assistant
Intelligent Systems Solutions, University of Sunderland, UK.

Development of a prototype, distributed instrumentation system for marine and offshore applications (DFT Funded); Related industrial consultancy work.

Aug 1999 – Dec 2002 EPSRC Funded Research Student
Department of Engineering and Technology,
University of Sunderland, UK.

Research into intelligent real-time robot control; associated research and minor teaching duties.

Aug 1991 – July 1999 Multi-skilled Apprentice / Instrumentation and Control Technician / Process Engineer
Federal Mogul Powertrain systems Ltd., Sunderland, UK.

Technical support, maintenance, and project management; Process control, production engineering and automation system design.

HIGHER EDUCATION

2010-2012 Postgraduate Certificate in Learning and Teaching in Higher Education (PgCLTHE)
School of Social Sciences & Law, Teesside University, UK.

1999-2003 PhD – Thesis “The Development of a Generic Controller Architecture for Advanced and Intelligent Robots”
Department of Engineering, University of Sunderland, UK.

Supervisor: Dr Kevin Burn.

1995-1999 BEng (Hons) Electrical and Electronic Engineering (part-time)
Department of Engineering, University of Sunderland, UK.

Class 2:1

FURTHER EDUCATION

1991-1995 ONC / HNC Engineering (part-time)
Wearside College, Seaview Road, Sunderland, UK.

Overall grade: Merit.

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Full member of the Institute of Engineering and Technology (MIET) and Stage 1 Chartered Engineer since 1999.
- Full member of the IEEE since 2013 (TIE and PES member).
- Member of the IEEE committee on Fault Tolerant and Dependable Systems (FTDS), which is a subcommittee of the Technical Committee on Factory Automation (TCFA) of the IEEE Industrial Electronics Society (IES) since 2013.
- International Federation of Automatic Control (IFAC) IFAC Affiliate since 2024.
- Fellow of the UK Higher Education Academy (FHEA) since 2012.
- Full member of the Engineering Professors Council (EPC).
- Associated with Brahmam Innovations since August 2025.

UNIVERSITY LEADERSHIP, MANAGEMENT AND ADMINISTRATION

- Research Strategy & Leadership: Founded and directed the Centre for Sustainable Engineering (100+ staff and PhDs) and the Smart Energy & Smart Grid Group (30+ staff). Delivered strategies that strengthened Teesside's research profile and doubled QR funding post-REF2021.
- Management Roles: Academic Lead for the Centre for Sustainable Engineering, overseeing quality, ethics, culture, and funding. Mentor for staff and doctoral researchers, fostering cross-school collaboration with Health, Life Sciences, and Business. Former Associate Dean for Research & Innovation, and Smart Energy Research Group Lead.
- Strategic Infrastructure: Played a central role in shaping the £16M Net Zero Industry Innovation Centre (NZIIC) and Teesside's involvement in the Centre for Digital Trade & Innovation (C4DTI).
- REF & Impact Delivery: Led Teesside's REF2021 UoA12 (General Engineering) submission and delivered an Impact Case Study on ICT for Smart Energy.

EXTERNAL ROLES, ACTIVITIES AND STANDING

- Reviewer for leading journals (IEEE Transactions, Applied Energy, Energies, Sensors, etc.).
- Programme committee and session chair at major conferences (IEEE ETFA, WFCS, ICINCO).

- Guest editor for Energies (Special Issue on Smart Grids, 2019) and associate topic editor.
- Grant reviewer for Innovate UK, EPSRC, STFC, EU, FCC, QRDF and others.
- Visiting Professor at VIT, Chennai; external examiner at Robert Gordon University.
- Delivered invited keynotes worldwide (China, India, Europe, Algeria, Morocco, Tunisia) on Industry 4.0, Smart Energy, and AI.
- Received nine best paper awards:

2025: Best Paper/Presenter Award, 7th IEEE International Conference on Software Engineering and Computer Science (CSECS 2025).

2023: Best Paper Award, 4th International Conference on Robotics, Intelligent Automation and Control Technology (RIACT 2023).

2022: Best Paper Award, 3nd International Conference on Robotics, Intelligent Automation and Control Technology (RIACT 2022).

2021: Best Paper Award, 2nd International Conference on Robotics, Intelligent Automation and Control Technology (RIACT 2021).

2020: Best Paper Award (Mechatronics track), 4th IEEE International Conference on Robotics and Automation Sciences (ICRAS 2020).

2012: Best Work-in-Progress Paper in Emerging Technologies Award, 17th IEEE International Conference on Emerging Technologies and Factory Automation.

2011: James C. Hung Best Paper Award in Factory Automation, 16th IEEE International Conference on Emerging Technologies and Factory Automation.

2010: Best Paper Award, World Congress on Engineering 2010.

2009: Best Paper Award, World Congress on Engineering 2009.

LEARNING AND TEACHING RESPONSIBILITIES

- Over 18 years of higher education teaching experience; PGCHE qualified, Fellow of HEA.
- Experience teaching outside of UK in Ireland, Malaysia, India, and China.
- Expertise in dynamics, control systems, embedded systems, automation, AI, and applied data science.
- Developed new MSc and UG modules in digitalisation, industrial analytics, and real-time systems.
- Led Siemens partnership under the Connected Curriculum initiative (2020), embedding industrial digitalisation tools into teaching.
- Learning & Teaching grants/contracts awarded:

2007: Equipment Grant: (£90K): Altium UK Educational Equipment Award (Primary Investigator, Completed)

2020: Erasmus+ Grant (£395K): SETechTra: Erasmus+ Solar Energy Technology (SETechTra) module for STEM undergraduates (Co-Investigator, Completed)

2022: Equipment Grant (£250K): SafeTTy Systems Ltd. Technology Development Award (Primary Investigator, Completed)

RESEARCH

- Internationally recognised in applied control engineering, smart systems, AI, and systems informatics.
- Author/co-author of 220+ peer-reviewed publications with over 2,600 citations (h-index 30).
- Secured over £5M in funding from EU, UKRI, Innovate UK, and industry partners.
- Supervised 12 PhDs to completion (currently supervising 7).
- Built collaborations with leading global institutions (University of the Balearic Isles, University Kassel, IRIT, VIT, University of Tabuk, etc.).
- Technical lead on EU projects including IDEAS, DR-BoB, InteGRIDy, and REACT, generating 30+ journal articles, 40+ conference papers, and a co-authored book.
- Principal Investigator on flagship Innovate UK, DESNZ, and British Council projects, including recent work with Altilium Metals, DuoDrive, KP Snacks, and TetraPak.
- Research grants/contracts awarded:

2003: DTI SMART Award with Neptune Engineering Ltd: (£50K), Intelligent Tank Gauging System (Co-Investigator, Completed)

2007: Research Consultancy with Yorkshire Water (£31K): Digital Platform for Fault Detection in Rotating Machinery (12 Month Project, Co-Investigator, Completed)

2008: Conference Grant: (£0.5K), University of Leicester Funding (Primary Investigator, Completed)

2010: Conference Grant: (£1K), University of Teesside Funding (Primary Investigator, Completed)

2010: Research Grant: (£5K), Investigation of industrial communication protocols (1 Year Project), University of Teesside Funding (Primary Investigator, Completed)

2011: Research Grant: (£1K), Support obtained to run the RTN 2011 Workshop, ArtistDesign (Primary Investigator, Completed)

2011: Conference Grant: (£1K), University of Teesside Funding (Primary Investigator, Completed)

2012: Visiting Academic Scheme: (£1.5K), Teesside University (Co-Investigator, Completed)

2012: FP7 EU Project Grant (€2,673K): IDEAS - Intelligent Neighbourhood Energy Allocation & Supervision (3 Year Project, ID 600071). TU Allocation: €461K (Primary Investigator, Completed)

2013: Visiting Academic Scheme: (£1.5K): University of the Balearic Isles, Spain (Primary Investigator, Completed)

2016: H2020 EU Project Grant (€4,274K): DR-BOB – Demand Response in Blocks of Buildings (3 Year Project, ID 696114). TU Allocation: €845K (Co-Investigator, Technical Lead, Completed)

2016: Research Consultancy (£10K) with Quorum Developments Ltd.: Development of a prototype SCADA system for remote monitoring and control of distributed generators (2 Month Project, Principal Investigator, Completed)

2017: Research Grant (€150K): DFT4FTT - Dynamic Fault-Tolerance for Flexible Time-Triggered Ethernet (2 Year Project), Spanish Government (Overseas Co-Investigator, Travel/Dissemination Expenses of €10K Covered, Completed)

2017: H2020 EU Project Grant: (€12,329K): inteGRIDy: integrated Smart GRID Cross-Functional Solutions for Optimized Synergetic Energy Distribution, Utilization & Storage Technologies (4 Year Project, ID 731268). TU Allocation €649K (Co-Investigator, Completed).

2019: H2020 EU Project Grant (€8,974K): REACT - Renewable Energy for self-sustAinable island CommuniTies (3 Year Project, ID 824395). TU Allocation: €625K (Co-Investigator, Technical Lead, Completed)

2021: Innovate UK/UKRI Clean Maritime Demonstration Competition Research Grant (£213.5K): VICPorts – Vertically Integrated Cloud-Based Port Microgrids (9 Month Project, ID: 10007967). TU Allocation: £90K (Principal Investigator, Completed).

2022: HMRC Research Contract (£50K): Digital Trade Technology: Barriers and Opportunities (2 Month Project & Commissioned Report). TU Allocation £38K (Principal Investigator, Completed).

2022: Innovate UK Fast Start Innovation Grant with Tascomp (£50K): I-CAT: Development of a novel energy efficiency and visualisation toolbox (6 Month Project, ID: 10046056). TU Allocation £29K (Principal Investigator, Completed).

2023: IDTC/EDRF Digitalisation Fund with Tascomp (£61K): Development of an Adaptive Control Edge Device for use with Prodigy SCADA system (5 Month Project). TU Allocation £61K (Principal Investigator, Completed).

2023: Enterprise Singapore Development Grant (£239k): Cloud-Based Analytics and Optimization Framework for Smart Cities (18 Month Project, Ref: 23022ELD). TU Allocation £130K (Principal Investigator, Completed).

2023: Innovate UK/MSI - Digital Supply Chain Hub Flagship Phase 4 Research Grant (£489K): PROGRESS: Physical assuRance fOr diGital tRadE SyStems (22 Month Project, ID 10069246). TU Allocation £238K (Co-Investigator, Completed).

2023: Innovate UK/MSI - Digital Supply Chain Hub Flagship Phase 4 Research Grant (£492K): CM-NICE: Critical Minerals: Network Insight Collaboration Environment (18 Month Project, ID: 10069672). TU Allocation £19.5K (Co-Investigator, Completed).

2023: Innovate UK – Net Zero Launchpad Collaborative R&D Grant (£550K): Development of novel technologies for end-of-life electric vehicle battery recycling stations to support feedstock production to the UK's largest planned recycling refinery in Teesside (18 Month Project, ID: 10075111). TU Allocation £180K (Principal Investigator, Completed).

2024: DESNZ – Industrial Energy Transformation Fund (IETF) Collaborative R&G Grant (£418K): H2FOOD: Fuel switch to H2 for Heating Equipment Targeting Decarbonisation in the Food Sector (12 Month Feasibility Project, ID: IETF24096). TU Allocation £161K (Principal Investigator, Completed).

2024: Innovate UK Knowledge Transfer Partnership (KTP) Collaborative R&D Grant (£301K): Digital Engineering for Aluminium Dip brazing (34 Month Project, ID: 10099474). TU Allocation £202K (Co-Investigator, Ongoing).

2024: British Council UK-India Education and Research Initiative (UKIERI) Research and Mobility Partnerships (£112K): Development of UG/PG research themes in Energy and Sustainability within Renewable Energy Taught courses in India and UK (24 Month Project, ID: 45574534). TU Allocation: £50K (Co-Investigator, Ongoing).

2024: University of Tabuk, Saudi Arabia, Deanship Research Grant (£220K): Smart Cities Get Smarter: using NEOM as an example (24 Month Project, ID: S-1445-2265). TU Allocation £60K (Foreign Co-Investigator, Ongoing).

2024: Innovate UK/UKRI Smart Shipping Acceleration Fund (£340K): Marine to Electric Power – SeNZe-Tech™ the Smart Way to Clear the Hurdles (6 Month Project, ID: 10129706). TU Allocation: £68K (Principal Investigator, Completed).

2024: British Council GREAT Talks Funding Support (£10K): Innovating to Net Zero, and how to get involved (1 Month Project and Travel Support, Principal Investigator, Completed).

2025: Mitsubishi Ltd. / Novuna Research Contract (£30K): Development of a hydrogen strategy for fleet vehicles (12 Month Project, Principal Investigator, Ongoing).

2025: TetraPak Research Contract (£53K): Energy efficiency and performance improvement of Mozzarella Manufacturing (4 Month Project, Principal Investigator, Phase 1 Ongoing).

2026: British Council / International Science Partnership Fund with Malaysia (£160K): Development of a Microbubble Aeration Prototype System for the Aquaculture Farming Industry (24 Month Project, ID 2499 Malaysia). TU Allocation: £80K (Co-Investigator, Ongoing).

2026: EPSRC Northern Net Zero Impact Accelerator (£65k): Smart Industrial Belt (12 Month Project, ID: RP-1002483, Co-Investigator, Ongoing).

2026: Barts' Health Trust Research/Concultancy Contract (£20k): AI, Digitalisation and Robotics in Healthcare Facilities Management and NHS Green Transition (6 Months Project, Primary Investigator, Ongoing).

- A full list of publications is included at the end of this CV.

ENTERPRISE AND ENGAGEMENT

- Extensive collaboration with industry partners including ADNOC, Siemens, GE Energy, TetraPak, Novuna, KP Snacks, and Altilium Metals.
- Expertise in technology transfer, prototyping, and digital engineering applications.
- Consultancy experience in process optimisation, smart grids, and control systems (>£200K).
- Director of UK-based AI/IoT startup Kolayam Digital since April 2026 (Chief Scientific Officer Position).
- Strong public profile with Sky, BBC, IET, NewsX, and other international media coverage; active in outreach through Digital Leaders & British Council GREAT initiatives.
- Independently named on the UK 'Net Zero 50' list in 2022 and 2025.

LIST OF PUBLICATIONS

Journal Articles

1. Chaouech, L., Ali, J.B., Berghout, T., Betin, F., Xue, Y. and Short, M. (2026), Adaptive Fuzzy Sliding Mode Control with Scalar Sign Function for High-Precision Trajectory Tracking of 3-DOF Planar Robotic Manipulators, *International Journal of Fuzzy Systems*, In Press, August 2026.

2. Short, M., Segovia, E., Hamad, F., Patel, D., Dawood, H. and Tether, C. (2026), Comprehensive energy balance analysis and techno-economic evaluation of static hydrogen carbon savings for an industrial dual-fuel combustor used in food manufacturing. *Fuel*, Vol. 418, No. 138675, August 2026.

3. Bettahar, F., Abdeddaim, S., Betka, A., Short, M., Al-Greer, M, Bajaj, M., Blazek, V. and Propkop, L. (2026), Intelligent Energy-Aware Control of a Single-Stage Photovoltaic-Battery Powered Brackish Water Reverse Osmosis Desalination System. *Energy Reports*, Vol. 15, No. 109343, June 2026.

4. E.H. Amalu, B.B.M. Babu, D.J. Hughes, M. Short, O.A. Fabunmi, G. Jothiprakash, D. Sun, Z. Lu & S. Sundaram (2026) Critical weight percent of graphene nanoplatelets (GNPs) that optimizes water barrier and transport properties of ethylene vinyl acetate (EVA) for improved photovoltaic module packaging reliability. *Next Materials*, Vol. 11, No. 101762, April 2026.

5. E.H. Amalu, O.A. Fabunmi, D.J. Hughes, M. Short, & E.L. Omairey (2026) Moisture ingress evaluation of encapsulation materials using multiphysics modelling for perovskite solar cell packaging, *Next Materials*, Vol. 11, No. 101694, April 2026.

6. Wattegama, R., Short, M., Aggarwal, G., Al-Greer, M. and Naidoo, R. (2026) A Systematic Review of Hierarchical Control Frameworks in Resilient Microgrids: South Africa Focus. *Energies*, Vol. 19, No. 3, pp. 644, January 2026.

7. Bettahar, F., Abdeddaim, S., Charouff, O., Betka, A., Short, M., Guerrida, L. and Lemdjed, B. T. (2025) Parameter Estimation of a Three-Phase Induction Motor. *Journal of Engineering and Technology for Industrial Applications (JETIA)*, Vol. 11, No. 55, pp. 73-85, October 2025.

8. Mnasri, S., Short, M. et al. (2025) Energy and Water Management in Smart Buildings using Spiking Neural Networks, *Energies*, Vol. 18, No. 19, pp., 5089, September 2025.

9. Amalu, E., Adebayo, D.S., Chong, P.L., Short, M., Hughes, D.J., Tchuenbou-Magaia, F., Ladhe, P., Gebremedhin, A., Di Sabatino, M., and Ekere, N.N. (2025) Development of a solar energy technology training module for STEM undergraduates for solar energy sector deployment, *Journal of Mathematics Science and Technology Education,* Vol. 2, No. 1, pp. 33-54, June 2025.

10. Devi, R., Kaur, G., Seehra, A., Rattan, M., Aggarwal, G., & Short, M. (2025) Low-Power Energy-Efficient Hetero-Dielectric Gate-All-Around MOSFETs: Enablers for Sustainable Smart City Technology. *Energies*, Vol. 18, No. 6, pp. 1422, March 2025.

11. Rehman, S., Al-Greer, M., Burn, A.S., Short, M. and Cui, X. (2025) High-Volume Battery Recycling: Technical Review of Challenges and Future Directions. *Batteries*, Vol. 11, No. 3, pp. 34, Feb 2025.

12. Amrouche, F., Blunt, M., Iglauer, S., Aiouache, F. and Short, M. (2024) A novel hybrid enhanced oil recovery technique to enhance oil production from oil-wet carbonate reservoirs by combining electrical heating with nanofluid flooding. *Materials Today Sustainability*, Vol. 27, No. 100915, July 2024.

13. Short, M. and Al-Saadi, M. (2023) Multiagent-Based Control for Plug-and-Play Batteries in DC Microgrids with Infrastructure Compensation. *Batteries*, Vol. 2023, No. 9, pp. 597, December 2023.

14. Amalu, E., Short, M., Chong, P.L., Hughes, D.J., Adebayo, D.S., Tchuenbou-Magaia, F., Ladhe, P., Kukka, M., Polyzou, O., Oikonomou, T.I., Karatsas, C., Gebremedhin, A., Ossian, C. and Ekere, N.N. (2023) Critical skills needs and challenges for

STEM/STEAM graduates increased employability and entrepreneurship in the solar energy sector, *Renewable and Sustainable Energy Reviews*, Vol. 187, No. 113776, November 2023.

15. Gudlaugsson B, Ahmed, T., Dawood H, Ogwumike, C., Short M, and Dawood, N. (2023) Cost and environmental benefit analysis: An assessment of renewable energy integration and smart solution technologies in the InteGRIDy project. *Cleaner Energy Systems*, Vol. 5, No. 1000071, June 2023.

16. Ahmed, T., Gudlaugsson B, Ogwumike, C., Dawood H, Short M, and Dawood, N. (2023) Evaluation Framework for Techno-economic Analysis of Energy System Retrofit Technologies, *Energy & Buildings*, Vol. 286, No. 112967, May 2023.

17. Al-Saadi, M., Al-Greer, M. and Short, M. (2023) Reinforcement Learning-Based Intelligent Control Strategies for Optimal Power Management in Advanced Power Distribution Systems: A Survey. *Energies*, Vol. 16, No. 4, pp. 1608, February 2022.

18. Amrouche, F., Blunt, M., Iglauer, S., Short, M., Crosbie, T. and Cordero, E. (2022) Using Magnesium Oxide Nanoparticles in a Magnetic Field to Enhance Oil Production from Oil-wet Carbonate Reservoirs, *Materials Today Chemistry*, Vol. 27, No. 101342, January 2023.

19. Amrouche, F., Xu, D, Short, M., Iglauer, S., Vinogradov, J. and Blunt, M. (2022) Experimental study of electrical heating as an innovative approach to enhance oil production from oil-wet carbonate reservoirs, *Fuel*, Vol. 324, Part A, No. 124559, May 2022.

20. Gudlaugsson B., Ghanem D.A., Dawood H., Pillai G., Short M. (2022). A Qualitative Based Causal-Loop Diagram for Understanding Policy Design Challenges for a Sustainable Transition Pathway: The Case of Tees Valley Region, UK. *Sustainability*, Vol. 14, No, 8, pp. 4462, April 2022.

21. Abugchem. F., Short, M., Ogwumike, C. and Dawood, H. (2022) Optimal Battery Dispatch Using Finite-Input Set Non-Linear Model Predictive Control: Algorithm Development and Case Study, *Electronics*, Vol. 11, No. 1, pp. 101, January 2022.

22. Short, M. (2021) On Binomial Quantile and Proportion Bounds, *Communications in Statistics Part A: Theory and Methods*, Vol. 52, No. 12, pp. 4183–4199, May 2023.

23. Al-Saadi, M., Al-Greer, M. and Short, M. (2021) Strategies for controlling microgrid networks with energy storage systems: A review. *Energies*, Vol. 14, No. 21, pp. 7234, October 2021.

24. Adegbenro, A., Short, M. and Angione, C. (2021) An Integrated Approach to Adaptive Control and Supervisory Optimisation of HVAC Control Systems for Demand Response Applications, *Energies*, Vol 14, No. 8, pp. 2378, April 2021.

25. El-Dalahmeh, Mo., Al-Greer, M., El-Dalahmeh, Ma. and Short, M. (2021) Smooth Particle Filter Based Likelihood Approximations for Remaining Useful Life Prediction of Lithium-Ion Batteries, *IET Smart Grid*, Vol. 4, Issue 2, pp. 151-161, February 2021.

26. El-Dalahmeh, Ma., Al-Greer, M., El-Dalahmeh, Mo. and Short, M. (2020) Time-Frequency Image Analysis and Transfer Learning for Capacity Prediction of Lithium-Ion Batteries, *Energies*, Vol. 13, No. 20, pp. 5447, October 2020.

27. Williams, S., Short, M., Crosbie, T. & Shadman-Pajouh, M. (2020) A Decentralized Informatics, Optimization, and Control Framework for Evolving Demand Response Services, *Energies*, Vol. 13, No. 16, pp. 4191, August 2020.

28. Short, M. and Selvakumar, A. (2020) "Non-Linear Tank Level Control for Industrial Applications", *Applied Mathematics*, Vol. 11, No. 9, pp. 876-889, August 2020.

29. Jelic, M., Batic, M., Tomasevic, N., Barney, A., Polatidis, H., Crosbie, T., Abi Ghanem, D., Short, M. and Pillai, G. (2020) "Towards self-sustainable island grids through optimal utilization of renewable energy potential and community engagement", *Energies*, Vol. 13, No. 13, pp. 3386, July 2020.

30. Gailani, A.; Al-Greer, M.; Short, M.; Crosbie, T.; Dawood, N. (2020) "Lifetime Degradation Cost Analysis for Li-Ion Batteries in Capacity Markets using Accurate Physics-Based Models", *Energies*, Vol. 13, No. 11, pp. 2816, June 2020.

31. Gailani, A., Crosbie, T., Al-Greer, M. and Short, M. (2020) "On the Role of Regulatory Policy on the Business Case for Energy Storage in both EU and UK Energy Systems: Barriers and Enablers". *Energies*, Vol. 13, No. 5, pp. 1080, March 2020. (Featured Cover Article)

32. Williams, S. and Short, M. (2020) "Electricity Demand Forecasting for Decentralised Energy Management". *Energy and Built Environment*, Vol. 1, No. 2, pp. 178-186, January 2020.

33. Fakhri, A.M., Al-Greer, M., Short, M. and Crosbie, T. (2020) "Degradation Cost Analysis of Li-ion Batteries in the Capacity Market with Different Degradation Models". *Electronics*, Vol. 9, No. 1, pp. 9, January 2020.

34. Short, M., Rodriguez, S., Charlesworth, R., Crosbie, T. and Dawood, N. (2019) "Optimal Dispatch of Aggregated HVAC Units for Demand Response: An Industry 4.0 Approach", *Energies*, Vol. 12, No. 22, pp. 4320, November 2019.

35. Short, M. and Abugchem, F. (2019) "Experimental Analysis of the Jitter Sensitivity of a Real-Time Adaptive Controller", *International Journal of Engineering and Technology Innovation*, ISSN 2223-5329, Vol. 9, No. 4, pp. 241-256, October 2019.

36. Short, M. and Twiddle, J. (2019) "An Industrial Digitalisation Platform for Condition Monitoring and Predictive Maintenance of Pumping Equipment", *Sensors*, Vol. 19, No. 17, pp. 3781, August 2019.

37. Short, M. and Dawood, M. (2018) "Probabilistic timing analysis of periodic traffic streams in a one-switch network with random interference", *Current Analysis on Communication Engineering*, Vol. 1, pp. 1-7, October 2018.

38. Williams, S., Short, M. and Crosbie, T. (2018) "On the use of thermal inertia in building stock to leverage decentralised demand side frequency regulation services", *Applied Thermal Engineering*, Vol. 133, Issue C, pp. 97-106, 2018.

39. Crosbie, T., Broderick, J., Short, M., Charlesworth, R. and Dawood, M. (2018) "Demand Response Technology Readiness Levels for Blocks of Buildings", *Buildings*, ISSN: 2075-5309, Vol. 8, Article 13, January 2018.

40. Short, M. and Abugchem, F. (2017) “A microcontroller-based adaptive Model Predictive Control platform for process control applications”, *Electronics*, ISSN: 2079-9292, Vol. 6, No. 4, Article 88, October 2017.

41. Short, M. (2017) “Eligible Earliest Deadline First: Server-Based Scheduling for Master-Slave Industrial Wireless Networks”, *Computers and Electrical Engineering*, Vol. 64, Issue C, pp. 303-319.

42. Short, M. (2017) “Timing analysis for embedded systems using non-preemptive EDF scheduling under bounded error arrivals”, *Applied Computing and Informatics*, Vol. 13, pp. 130-139, July 2017.

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