Dr Aidan Thomas Parkinson BEng(Hons) MSc PhD CEng

aidanparkinson.xyz

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Roles

2014 - Present	Senior Engineer at Ove Arup and Partners International Ltd.
2014 - Present	Referee for scientific journals: Energy; Energy Economics; Applied Energy; Energy Policy; Journal of Environmental Management
2016 - Present	Director at Realfeed Ltd.
2020 - 2021	Senior Research Associate at University of Cambridge
2016 - 2020	Building Performance and Systems Skills Manager at Ove Arup and Partners International Ltd.

Higher Education

2010 - 2016	**PhD, Cambridge University Engineering Department** Supervised by Prof. Peter Guthrie, Dissertation: *An Exploration of Building Energy Performance and Financial Value with Demonstration on UK Offices.*
2008 - 2009	**MSc, Bartlett School of Graduate Studies, University College London** Environmental Design and Engineering, Dissertation: *Environmental Noise in Schools.*
2003 - 2008	**BEng (Hons) 2:1, School of the Built Environment, Heriot-Watt University** Architectural Engineering, Dissertation: *Measurement of Retinal Straylight using the Compensation Comparison Method.*

Grants, Awards and Memberships

2022	Fellow of the mission-impossible-team
2021	Member of the Royal Economic Society
2017	Chartered Engineer, Engineering Council
2017	Member of the Chartered Institute of Building Services Engineers
2014 - Present	Twenty-three *Invest-in-Arup* projects £300,000
2011 - 2012	Numerous awards to the *GreenBRIDGE society* as Treasurer £9,100.
2010 - 2013	*EPSRC MBEKTN Industrial CASE Award*, Grosvenor Estates, £90,000.
2010	Member of Wolfson College, Cambridge

Selected Experience: Software Applications and Quantitative Insight

2020 - 2021	**Learning IoT Web Application** A progressive web application and cloud services to be used as a learning resource to support a syllabus of executive education in internet-of-things. Employs EC2, ECS, S3, Certificates Manager, Route 53, React, Eclipse Mosquitto, an ELK stack and RaspberryPi. The web application is available at: `learning.aidanparkinson.xyz`. The source-code is available at `github.com/aidan-parkinson`.
2019	**FaucetSDN: Device Automated Qualification (DAQ)** Defining and witnessing device test functionality of a software tool for qualifying network edge devices for enrolment on an enterprise network. DAQ software is designed for continuous deployment as a package of Docker containers running on a Faucet compatible Openflow switch controller. The code is managed in a public repository and available at: `github.com/faucetsdn/daq`.
2017	**An Application for Monte-Carlo Simulations of Building Lifecycle Cost** I have independently developed a Python class and functions to automate Monte-Carlo simulations of building life-cycle cost scenarios. This tool estimates costs for offering Schoolhaus buildings to schools as a service. The source-code is available at: `github.com/realfeed/lifecycle-cost`.
2016 - Present	**busmethodology.org.uk** The BUS Methodology Partner network consists of 35 licensed partners who are provided with the training and resources to deliver occupant satisfaction evaluation and benchmark analysis using the BUS Methodology tool. I took a leading role in a transformation of the service to automate processes, enhance customer experience and deliver the database of ¿70000 consistent response records in a way that should realise more of the products potential. I specified and provided content for: a static HTML marketing website; an Angular web user-interface; an EVE REST API; and a MongoDB database. Deployment of this domain is somewhat automated with Terraform and employs various AWS services (S3, Elasticbeanstalk, Secrets Manager, Cloudfront, Web Application Firewall, Route 53, IAM, Certificates Manager) and MongoDB Atlas. All domain services are now available at the domain and I continue to project manage the business: `busmethodology.org.uk`.
2013 - 2015	**Evaluating the Energy Performance of Buildings within a Value at Risk Framework** I assessed socio-economic risks to the energy performance of commercial property in the UK under explorative scenarios describing plausible development of the national energy system towards 2050. A Rapid Calculator was developed from the assumptions of the DECC 2050 Pathways using Matlab, validated through random sampling. Exhaustive exploration of the Rapid Calculator through batch processing was employed to identify time-series energy system pathways for 4 diverse scenarios at reasonable limits of plausibility. The scientific publications are available at: `researchgate.net/project/Appropriate-Responses-by-Landlords-to-the-Energy-Management-of-Mixed-Use-Large-Scale-Developments`.

Selected Experience: Building Services Engineering

2021	**Lamda Hellix, ATH3 and ATH4** Preparation of a Building Management System / Power Monitoring System Stage 3 and Stage 4 design documentation for two adjacent 8MW data centres situated in the Athens region.
2021	**90 Long Acre** Preparation of Smart Buildings addenda to a Stage 4 Building Management System specification for a 36,100sqm mixed-use development situated in Covent Garden, London.
2021	**Museum of London, Annexe** Preparation of Building Management System Stage 4 design documentation for a mixed-use Annexe to the Museum of London relocated to Smithfield Market, London.
2019 - 2020	**Google KGX1** Review of all technical submittals by specialist contractors for compliance with system integration requirements for a 100,000sqm office to be occupied by Google in Kings Cross, London.
2018	**Delos/Arup Workplace Wellbeing Survey** Collaboration between Delos Insights and Arup to develop a wellbeing questionnaire, to be applied for evaluation of projects seeking WELL Standard accreditation.
2018	**Feasibility Study, 4 Millbank, BBC** I evaluated the capacities of the landlords systems serving the BBC's demised areas to understand fit-out constraints. The project involved site observations, measurements, interviews, review of record information and production of an assured report.
2017 - 2018	**Infrastructure Upgrade, Animal Plant Health Agency** Replacement of Building Management Systems (BMS) across a site that includes 15 high containment laboratories at Weybridge. I made recommendations of alarm classifications, conducted a gap analysis of required system instrumentation through plant surveys, interviewed laboratory operators and scientists and developed specifications for the new site BMS control room and BMS head-end user interface.
2016 - 2017	**Sustainability Strategy and Carbon Management Improvement Plan, University of Warwick** I created a projection tool in MS Excel to explore sensitivity of the campus to a range of possible energy efficiency interventions.
2015 - 2019	**BUS Methodology, Various Clients Worldwide** An occupant satisfaction survey tool licensed to a partner network. As part of a small specialist team, I taught classroom training sessions, developed an e-learning course and contributed to BUS Partner Meetings in addition to my contributions to the web domain.
2014 - 2018	**Portfolio Carbon Reduction Strategy, Crown Estate** I conducted post-occupancy evaluation and license to alter technical reviews for a number of buildings on Regent Street. I produced the The Crown Estate compliance strategy for the Energy Efficiency Regulations.
2014 - 2015	**N08 East Village, Qatari Diar Delancey** Development of two towers of over 25-storeys within the site of the former London Olympic Park. I contributed to Stages D and E through load calculations, assessments of thermal comfort using building simulation, service coordination and production of system schematics and specifications.