Michael Lotinga

BSc(hons) MSc CEng MIOA MASA

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Academic qualifications

2012 – 2014 University of Salford
MSc Environmental Acoustics
Distinction

2007 – 2008 Institute of Acoustics
Diploma Acoustics and Noise Control
Merit, awarded special commendation

2002 – 2005 Anglia Ruskin University
BSc Audio and Music Technology
Upper second-class with honours

Institutional memberships

2018-ongoing Member of the Acoustical Society of America

2017-ongoing Chartered Engineer

2016-ongoing Associate of the Institute of Noise Control Engineering

2009-ongoing Member of the Institute of Acoustics

Industry roles

2021 – ongoing ANC Soundscape Working Group

2018 – ongoing IOA Engineering Division Committee member

2014 – ongoing IOA Publications Committee member

2012 – 2014 IOA North-west Branch Committee Secretary (elected 2013) & Young Members Representative / Young Members Committee North-west Branch Representative

2011 – 2012 IOA Central Branch Committee Young Members Representative / Young Members Committee Central Branch Representative

2010 – 2022 STEM Learning – STEM Ambassador

Research experience

2023-ongoing University of Salford (doctoral study): *Reducing Environmental Footprint thought transformative Multi-scale Aviation Planning (REFMAP)*

Doctoral research student developing psychoacoustic models for human response to sound from unmanned aircraft systems. Study component of project objective to deliver flight path route optimisation digital platform to manage impacts and enhance sustainability for conventional and emerging aviation technologies.

2021-2023 WSP | Department for Business, Energy & Industrial Strategy

Scoping Review of Noise Guidance for Onshore Wind Turbines

Project manager and research lead (contractor) for a review of the technical guidance on noise assessment of onshore wind energy developments in the UK.

2017-2018 WSP | National Grid: *Identification of Novel Noise Reduction measures for Transformers*

Research lead (contractor) for a review of innovative noise control applications for electrical power transformers, aimed at identifying new and cost-effective means of managing low frequency tonal noise.

2015-2016 WSP | Department of Energy & Climate Change: *Review of the evidence on the response to amplitude modulation from wind turbines*

Deputy research lead (contractor) for review and analysis of the human response to amplitude modulation in wind turbine sound exposure, to inform development of a national planning control.

https://www.gov.uk/government/publications/review-of-the-evidence-on-the-response-to-amplitude-modulation-from-wind-turbines

2013-2014 *Investigating the accuracy of a semi-empirical model for rail-induced ground/structure-borne noise and vibration*

Master's degree project undertaken with industrial partner to evaluate a railway vibration model and compare with alternative computational models.

https://www.researchgate.net/publication/324091596_Investigating_the_accuracy_of_a_semi-empirical_model_for_rail-induced_groundstructure-borne_noise_and_vibration

Professional experience

2015 – ongoing WSP: *Associate (3 yrs) / Principal (4 yrs) Engineer, Acoustics, Noise and Vibration*

Management and delivery of environmental noise and vibration studies on national and global infrastructure, transport and industrial projects; advising government bodies on noise issues; research for commercial and in-house development projects; software development; multidisciplinary teamworking; line management; delivery of team training.

2014 – 2015 Dyson: *Noise and Vibration Engineer*

New product research and development; laboratory testing; signal analysis; rapid prototyping and developing optimal engineering solutions to design problems; multidisciplinary collaboration to achieve engineering performance targets and deliver new consumer technologies to the market.

2006 – 2012 Cass Allen Associates: *Senior Acoustics Consultant (3 yrs) / Consultant (3 yrs)*

Management of projects; measuring and analysing noise and vibration; provision of mitigation advice; assisting with company recruitment, managing and mentoring junior staff; maintaining and developing technical tools, databases and procedures.

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Publications

Lotinga, MJB, Ramos-Romero, C, Green, N & Torija, AJ, 2023. Noise from unconventional aircraft: A review of current measurement techniques, psychoacoustics, metrics and regulation. *Current Pollution Reports*, 9(4), 1-22.

Lotinga, MJB, Lewis, T, Powlson, J & Berry, B, 2023. Onshore wind turbine noise: A review of the current guidance framework for the UK Government (Part 2: Conclusions and recommendations). *Acoustics Bulletin*, 49(6), 26-38.

WSP, 2023. *A review of noise guidance for onshore wind turbines*. Project report 70081416-001-03-05. Department for Business, Energy & Industrial Strategy. DOI: 10.13140/RG.2.2.13483.92961/2.

Lotinga, MJB, Lewis, T, Powlson, J & Berry, B, 2023. Onshore wind turbine noise: A review of the current guidance framework for the UK Government (Part 1: Introductory project overview). *Acoustics Bulletin*, 49(5), 26-32.

Lotinga, MJB & Lewis, T, 2021. *Subjective responses to wind turbine noise amplitude modulation: pooled analysis of laboratory listening studies and synthesis of an AM character rating penalty*. Wind Turbine Noise, Remote from Europe, 18-21 May 2021. INCE-Europe.

Lotinga, MJB, Saunders, B & Sica, G, 2021. Predicting sound levels generated by jet fan ventilation systems in tunnels. *High Speed Two (HS2): Infrastructure Design and Construction (Volume 1)*. DOI: 10.1680/hs2.65765.261. Institution of Civil Engineers

Lotinga, MJB, Lewis, T & Taylor, T, 2019. *Music venue noise: A development planning case-study examining the application of the 'Agent of Change' principle, a novel legal mechanism, and noise control design issues*. Inter-noise 2019, 16-19 June, Madrid.

WSP, 2018. *Appraisal of Sustainability for the proposed Airports National Policy Statement* (authored noise sections of Main Report, Health Impact Analysis, Appendix A-2: Quality of Life, and Appendix A-4: Noise). Department for Transport.

Lotinga, MJB & Perkins, RA, 2017. *A method to control amplitude modulation in wind turbine noise within the UK planning regime.* International Congress on Sound and Vibration (ICSV24), London, 23-27 July 2017. International Institute of Acoustics and Vibration.

Lotinga, MJB, Perkins RA et al, 2017. *A review of the human exposure-response to amplitude-modulated wind turbine noise: Health effects, influences on community annoyance, methods of control and mitigation*. ICBEN 2017, 19-22 June, Zurich.

WSP, 2017. *Appraisal of Sustainability: Revised draft Airports National Policy Statement* (authored noise sections of Main Report, Health Impact Analysis, Appendix A-2: Quality of Life, and Appendix A-4: Noise). Department for Transport.

McKenzie, A, Cand, M, Bowdler, D, Jiggins, M, Irvine, G, Reid, M, Perkins, R, Lotinga, M, Hayes, M & Bullmore, A, 2017. A planning condition for wind turbines. *Acoustics Bulletin* 42 (6), pp56-60. Institute of Acoustics.

Perkins, RA, Lotinga, MJ (co-lead) et al, 2017. *Development of an approach to controlling the impact of amplitude modulation in wind turbine noise- exposure-response research, application and implementation*. Wind Turbine Noise 2017, 2-5 May, Rotterdam.

Lotinga, MJ, Perkins RA & Lewis, T, 2017. Perception and control of amplitude modulation in wind turbine noise. *Acoustics Bulletin* 42(2), 41-48.

WSP | Parsons Brinckerhoff, 2017. *Appraisal of Sustainability: Draft Airports National Policy Statement* (authored noise sections of Main Report, Health Impact Analysis, Appendix A-2: Quality of Life, and Appendix A-4: Noise). Department for Transport.

Perkins, RA, Lotinga, MJ (co-lead) et al, 2016. *A review of research into the human response to amplitude-modulated wind turbine noise and development of a planning control method*. Inter-noise 2016, 21-25 August, Hamburg.

WSP | Parsons Brinckerhoff, 2016. *Wind Turbine AM Review: Phase 2 Report*. Report 3514482A-2-3. Department of Energy & Climate Change / Department for Business, Energy & Industrial Strategy.