





# ADAM LISTER

## CURRICULUM VITAE

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### RESEARCH INTERESTS

Neutrino Physics · Neutrino Interactions · Neutrino Oscillations · Sterile Neutrino Searches · LArTPC R&D · Detector Calibration

### ACADEMIC POSITIONS

2019–present | **Postdoctoral Research Associate, University of Wisconsin - Madison.**

### EDUCATION

- 2015–2019 | **PhD Experimental Particle Physics, Lancaster University.**  
Thesis Title: Constraint of Systematic Uncertainties in an Electron Neutrino Search Using Muon Neutrinos at MicroBooNE  
Advisors: Dr Andrew Blake, Dr Jaroslaw Nowak
- 2013–2014 | **MSc Particles, Strings and Cosmology, Durham University.**  
Thesis Title: Neutrino Oscillations in Long Baseline Experiments  
Advisor: Prof. Silvia Pascoli
- 2010–2013 | **BSc Astrophysics (1st class), Aberystwyth University.**

### LEADERSHIP POSITIONS

- 2022-present | **NOvA Detector Systematics Convener**  
2020-2022 | **NOvA Production Convener**

## AWARDS

- 2019 | Lancaster University Department Prize
- 2018 | Fermilab Neutrino Physics Center Fellowship
- 2017 | Poster Prize, 50th Annual Fermilab Users Meeting

## PRESENTATIONS

### TALKS

- 2022 | *Probing Neutrino Oscillations at The NOvA Experiment*  
Invited Talk, 55th Annual Fermilab Users Meeting
- 2018 | *MicroBooNE and the Path to Resolving the MiniBooNE Low-Energy Excess*  
Seminar, University of Wisconsin — Madison
- 2018 | *Measuring Electron Diffusion in MicroBooNE*  
Contributed Talk, IOP HEPP and APP Meeting

### POSTERS

- 2020 | *Event Selection and Systematic Uncertainties for the NOvA Sterile Neutrino Search*, Neutrino 2020
- 2017 | *Towards a Longitudinal Electron Diffusion Measurement in MicroBooNE*, 50th Annual Fermilab Users Meeting
- 2016 | *Measurements of Muon Neutrino Charged-Current Interactions by the MicroBooNE Experiment*, Neutrino 2016

## PUBLIC OUTREACH

- 2018 | Saturday Morning Physics On-Site Coordinator
- 2018 | MicroBooNE Tour Guide
- 2018 | "Particle Physics in the US", Lancaster University Physics Masterclass
- 2017 | LAr and High Voltage Station, Fermilab Open House
- 2016 | Particle Physics Masterclass, Lancaster University Physics Masterclass
- 2015-2016 | Special Relativity Workshop, Lancaster University Physics Masterclass

## SELECT PUBLICATIONS

- A. Lister and M. Stancari, *Investigations on a Fuzzy Process: Effect of Diffusion on Calibration and Particle Identification in Liquid Argon Time Projection Chambers*, 2201.09773.

- MICROBooNE collaboration, *Search for an Excess of Electron Neutrino Interactions in MicroBooNE Using Multiple Final-State Topologies*, *Phys. Rev. Lett.* **128** (2022) 241801 [2110.14054].
- MICROBooNE collaboration, *Measurement of the longitudinal diffusion of ionization electrons in the MicroBooNE detector*, *JINST* **16** (2021) P09025 [2104.06551].
- MICROBooNE collaboration, *Measurement of differential cross sections for  $\nu_\mu$ -Ar charged-current interactions with protons and no pions in the final state with the MicroBooNE detector*, *Phys. Rev. D* **102** (2020) 112013 [2010.02390].
- DUNE collaboration, *Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume IV: Far Detector Single-phase Technology*, *JINST* **15** (2020) T08010 [2002.03010].