ECR PERSPECTIVES

Panel Bios

UK ECR HEP-ex Jobs Event, 24th June 2024

DR KIRSTY DUFFY

Kirsty is a neutrino physicist, specialising in measurements of neutrino oscillation and neutrino interactions with nuclei. She did her PhD at Oxford as part of the T2K collaboration (2012-2016), where her thesis analysis was the first joint measurement of neutrino and antineutrino oscillation, and excluded CP conservation at 90% probability. Following a 6-month postdoctoral position at Oxford, she moved to Fermilab as a Lederman postdoctoral fellow (2017-2021). At Fermilab she joined the MicroBooNE and DUNE experiments. In October 2021 Kirsty returned to the UK (and Oxford) with a UKRI Future Leader's Fellowship to work on MicroBooNE and DUNE. She is now Physics Coordinator and UK Spokesperson for the MicroBooNE collaboration. Kirsty was (very!) recently successful in an application for an associate professor position in Oxford, which she will start in September 2024.

DR JAY HOWARTH

James (Jay) is a Lecturer at the University of Glasgow, Royal Society University Research Fellow, and member of the ATLAS Collaboration at CERN. He obtained his PhD at the University of Manchester in 2013, followed by a research fellowship at DESY and a postdoctoral research position at the University of Manchester. His research focuses on top quark physics in general, particularly on the properties of top quarks at hadron colliders, and more recently on Quantum Entanglement and similar phenomena in collider experiments.

DR DANIEL HYNDS

Daniel is a detector physicist, having spent most of his career working on silicon pixel R&D and detector construction. After studying Chemical Physics at the University of Glasgow, he gained a PhD in silicon detectors as part of the LHCb Phase I Upgrade. Following many ungodly hours in the harsh yellow light of the CERN accelerator complex, he finally moved to CERN in 2014 as a fellow working on silicon R&D and tracking algorithms for future colliders - principally the proposed Compact Linear Collider. In 2018 he returned to the LHCb VELO, responsible for the construction of detector modules and starting work on fast timing detectors. Late in 2020 he was appointed Research Lecturer at the University of Oxford, currently on preparations for the ATLAS ITk pixel detector construction and semiconductor R&D. He is passionate about training, and has established an annual online programme of instrumentation training provided by UK lecturers. Next week will see the inaugural hands-on summer school for UK HEP instrumentation.

DR DAN JOHNSON

Dan did his DPhil at the University of Oxford where he analysed multi-body decays of charm mesons using data from the CLEO III and CLEO-c experiments (Cornell University, USA), and pursued high-precision measurements of CP violation in the decays of beauty particles using data from the newly-inaugurated LHCb experiment (CERN, Switzerland). Moving to CERN as a Research Fellow, and later a Staff member, he focussed on measurements that test models of quantum chromodynamics: studies of 'diffractive' proton-proton interactions as well as searches for new hadrons consisting of quarks in exotic arrangements.

Later at MIT, and now at Birmingham, Dan's focus turned to dark matter. He is using LHCb data, and planning for future long-lived-particle-search experiments at the High-Luminosity LHC, to undertake new searches for particles that, if discovered, would open the doorway to a secret garden - a 'dark sector' - of new particles and interactions that could fill this gap.

DR MATT KENZIE

Matt is an Associate Professor at the University of Cambridge. He did his PhD on Higgs physics at CMS with Imperial College London (2010-2014). He was then a CERN fellow and changed experiments to LHCb (2014 - 2016). Matt's next position was a Junior Research Fellowship at Cambridge (2016-2019) during which time he was awarded an STFC Ernest Rutherford Fellowship. He moved (with the fellowship) to his first academic position at the University of Warwick in 2019 (as an Assistant Professor). In 2021 he was awarded an ERC starter grant. He then moved back to Cambridge as an Associate Professor in 2023. Matt has held various positions of responsibility / convenorships within LHCb which he believes has helped career progression. These include three WG convenorships within LHCb (B2OC WG, Statistics + ML WG, Flavour Tagging WG). He was also the LHCb-UK Physics Coordinator (2020-2022). Matt is now on the Editorial Board for LHCb. He has predominantly worked on physics analysis for his entire career (at CMS and LHCb) but have more recently started some hardware activities and started physics case studies for FCC.

DR SARAH WILLIAMS

Sarah is an Assistant Professor in High Energy Physics at the University of Cambridge and has been a member of the ATLAS collaboration since 2010. After completing her PhD in Cambridge on searches for supersymmetric dark matter, she worked as a physics lecturer on the Maastricht Science Programme in the Netherlands before returning to Cambridge in 2016. She spent 6 years in joint teaching-research posts at multiple Cambridge Colleges (Murray Edwards College then Queens' college). During this time she continued her work on new physics searches in ATLAS and developed her interest in future colliders beyond the LHC. She spent 2 years as a UK representative on the ECFA ECR panel and is an active member in the future circular collider (FCC) feasibility study. She was appointed as an assistant professor at the Cavendish Laboratory in 2023, and has continued her work on ATLAS (she is currently ATLAS UK physics coordinator and has just finished a 2-year term as chair of the statistics committee) and future colliders. As of January 2024 she is one of the UK representatives on plenary ECFA.

DR ESTIFA'A ZAID

Estifa'a is a postdoctoral researcher specialising in muon precision physics at the University of Liverpool. Presently involved in the muon g-2 experiment and KLOE collaboration, she is engaged in the new measurement for the anomalous magnetic moment of the muon as well as its theoretical prediction. Her recent completion of a PhD on ATLAS at the University of Edinburgh focused on exotic searches with tau-lepton final states. Estifa'a developed techniques to tackle the experimental challenges associated with reconstructing and identifying displaced hadronic taus. Throughout her work in particle physics research, from antimatter gravity measurements on ALPHA-g to Supersymmetry searches at forthcoming colliders, she is motivated by the search for new physics capable of addressing the unanswered questions within the Standard Model.