

Employment

Postdoctoral researcher Dec 2017 – Feb 2020
CNRS and Aix-Marseille University

Postdoctoral research associate Aug 2017 – Nov 2017
University of Edinburgh

Education

PhD in experimental particle physics Sep 2013 – Sep 2017
University of Edinburgh

Thesis title Measurements of charmless B_s meson decays at LHCb
Supervisors Matthew Needham and Franz Muheim

MSci in physics Oct 2009 – Jul 2013
University of Birmingham

Thesis title A possible lepton flavour violation search at NA62
Supervisors Cristina Lazzeroni and Evgueni Goudzovski

Contributions to physics analysis

Measurement of $R(D^*)$ using hadronic τ decays 2017 – 2020
Major contributions to all parts of the analysis as one of two full-time proponents

Amplitude analysis of $\Lambda_b \rightarrow \chi_{c\{1,2\}} p K^-$ decays 2017
Development of the amplitude fitter within the TensorFlowAnalysis framework.

Amplitude analysis of $B_s^0 \rightarrow \phi K^+ K^-$ decays 2015 – 2017
Primary thesis work and sole full-time proponent.

Measurement of the $B_s^0 \rightarrow \phi\phi$ branching fraction and search for $B^0 \rightarrow \phi\phi$ 2014 – 2015
Thesis work and sole full-time proponent.

Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decays 2013 – 2014
Fits to the $\phi\phi$ invariant mass.

Hardware work

Ion feedback monitoring 2015 – 2016
Periodic analysis of the level of ion feedback in the HPDs installed in the RICH to predict when they need to be replaced.

RICH upgrade testbeam 2014 – 2016
Participant in 4 testbeam periods, during which I took data-taking shifts and improved the automation of the data acquisition and processing. I performed the dark count analysis and developed an online alignment tool.

Performance of MaPMTs in magnetic fields 2013 – 2014
Per-pixel efficiency measurements as a function of magnetic field strength. This work was the basis of the decision to use μ -metal shielding in the RICH upgrade.

Shifts and responsibilities

MC production model manager 2019 –

Filtered MC liaison 2018 –

Semileptonic WG MC liaison 2018 –

Review Committee member 2018 – 2019

Measurement of the $\eta_c(1S)$ production cross-section at $\sqrt{s} = 13$ TeV

L0 piquet shifts (3 weeks) 2018

LHCb control room shifts (13 \times shift leader & 11 \times data manager) 2015 – 2018

RICH piquet shifts (3 weeks) 2015 – 2016

Conferences and workshops

GDR Intensity Frontier Annual Meeting Talk: <i>Lepton flavour universality in $b \rightarrow c$ transitions</i>	Sommières, November 2019
European Physical Society Conference on High Energy Physics (EPS-HEP) Talk: <i>CP violation in multi-body charmless b-hadron decays at LHCb</i>	Ghent, July 2019
XIII Franco-Italian Meeting on B Physics Talk: <i>Lepton flavour universality violating B decays in trees</i>	Aix-Marseille University, October 2018
10th International Workshop on the CKM Unitarity Triangle Talk: <i>Tests of lepton flavour universality using semitauonic B decays at LHCb</i>	Heidelberg University, September 2018
PyHEP 2018 Talk: <i>Using TensorFlow for amplitude fits</i>	Sofia, July 2018
Heavy Quarks and Leptons (HQL) Talk: <i>Charmless b-meson and b-baryon decays at LHCb</i>	Virginia Tech, May 2016
LHCC Poster Session Poster: <i>Measurement of the $B_s \rightarrow \phi\phi$ branching fraction and angular analysis of $B_s \rightarrow \phi\pi^+\pi^-$ at LHCb</i>	CERN, March 2016
UK HEP forum: "Anomalies and Deviations" Poster: <i>Measurement of the $B_s \rightarrow \phi\phi$ branching fraction and search for $B^0 \rightarrow \phi\phi$ at LHCb</i>	STFC, Abingdon, November 2015
B-physics at frontier machines (Beauty) Poster: <i>Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decay</i>	University of Edinburgh, July 2014

Schools attended

Ecole de Gif	Clermont-Ferrand, September 2018
IN2P3 School Of Statistics	La Londe Les Maures, May 2018
European School of High-Energy Physics	Bansko, September 2015
Young Experimentalists and Theorists Institute (YETI)	Durham University, January 2015
STFC HEP summer school	University of Warwick, September 2014

Papers

Characterisation and magnetic field properties of multianode photomultiplier tubes,
S. Eisenhart *et al*, Nucl. Instrum. Meth. **A766** (2014) 167-170

Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decays,
LHCb collaboration, Phys. Rev. **D90**, (2014) 052011

Measurement of the $B_s^0 \rightarrow \phi\phi$ branching fraction and search for the decay $B^0 \rightarrow \phi\phi$,
LHCb collaboration, JHEP **10** (2015) 053

Test of the photon detection system for the LHCb RICH Upgrade in a charged particle beam,
M. K. Baszcyk *et al*, JINST **12** (2017) 01012

Oscillations of B_s^0 mesons as a probe of decays with invisible particles,
A. Poluektov and A. Morris, arXiv:1911.12729 [hep-ph], submitted to JHEP

Proceedings

Measurement of CP violation in $B_s^0 \rightarrow \phi\phi$ decays,
A. Morris, on behalf of the LHCb collaboration, PoS (Beauty 2014) 064

Charmless b -meson and b -baryon decays at LHCb,
A. Morris, on behalf of the LHCb collaboration, PoS (HQL 2016) 059

Using TensorFlow for amplitude fits,
A. Morris, on behalf of the TensorFlowAnalysis developers, DOI:10.5281/zenodo.1415413

CP violation in multi-body charmless b -hadron decays at LHCb,
A. Morris, on behalf of the LHCb collaboration, PoS (EPS-HEP 2019) 215