

Catherine Laura Hale

Curriculum Vitae

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Research Interests:

Galaxy evolution - Radio Continuum Surveys - Multi-wavelength Studies - Galaxy Clustering - Evolution of Bias - AGN studies - Observational Cosmology

Education:

2015-present Post-Graduate: Merton College, University of Oxford:

DPhil (PhD) in Astrophysics working with Prof. Matt Jarvis
“Studying Galaxy Evolution with Modern Radio Surveys”
Expected completion 2019

Completed Long Term Attachment to University of Western Australia from March-May 2018 (3 months) working with Dr. Aaron Robotham, Dr. Luke Davies and Prof. Simon Driver funded by the Science and Technology Facilities Council (STFC)

2011-2015 Undergraduate: Merton College, University of Oxford:

MPhys with First Class honours in Physics.
Undergraduate at Merton College, University of Oxford. First Class results in all years. Ranked in the top ten Physics students of cohort for final grade.

Publications - First Author

Hale et al.	2018, MNRAS, 474, 4133	The clustering and bias of radio-selected AGN and star-forming galaxies in the COSMOS field
Hale et al.	Submitted to A&A	LOFAR Observations of the XMM-LSS field

Publications - Listed Author

Shimwell et al.	Submitted to A&A	
Williams et al.	Submitted to A&A	
Hatfield et al.	2018, MNRAS, 477, 3760	The environment and host haloes of the brightest $z \sim 6$ Lyman-break galaxies
Jarvis et al. 2017	Proceedings of Science, “MeerKAT Science: On the Pathway to the SKA”, Stellenbosch, 25-27 May 2016 (arXiv:1709.01901)	The MeerKAT International GHz Tiered Extragalactic Exploration (MIGHTEE) Survey
Smith et al. 2016	SF2A-2016: Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics, Centre de Recherche Astrophysique de Lyon, 14-17 June, 2016 (arXiv:1611.02706)	The WEAVE-LOFAR Survey

Talks and Posters

May 2018	University of Western Australia	Astro Morning Tea Talk - Talk title: “ <i>Radio Source Extraction with PROFOUND</i> ”
May 2018	Remote talk, conference in Penticton, Canada	SPARCS 2018 Meeting - Talk title: “ <i>Clustering with Radio Surveys</i> ”
April 2018	Remote talk, conference in Pune, India	uGMRT-MIGHTEE Meeting - Talk title: “ <i>Clustering with Radio Surveys</i> ”
December 2017	Queen Marys, UK	SKA Cosmology Meeting - Talk title: “ <i>The Evolution of Bias of Radio Sources</i> ” (given to continuum sub-working group)
September 2017	Oxford, UK	MIGHTEE Meeting - Talk title: “ <i>The Clustering of Radio Sources from JVLA-COSMOS</i> ”
July 2017	Hull, UK	National Astronomy Meeting - Talk title: “ <i>LOFAR Observations of the XMM-LSS Field</i> ”
June 2017	Bologna, Italy	The Broad Impact of Low Frequency Observing - Poster presented: <i>LOFAR Observations of the XMM-LSS Field</i>
March 2016	Cape Town, South Africa	Conference on “The Role of AGN in Galaxy Evolution” - Talk title: “ <i>Correlation Functions and Radio Reduction with LOFAR</i> ”

Computing skills:

Experience working with: Python; R; C-Programming; Topcat; ds9; **CASA**; bash and tsch

Teaching:

2017-2018	Lectured Astronomy Olympiad on Radio Astronomy
2015-2018	Graduate Mentor for Merton College, Oxford - Providing tutoring sessions on request to Undergraduate physicists
2016-2017	University of Oxford Physics Masters Course Tutor for C1 Astrophysics Course

Other Scientific Research Experience:

2014	University of Würzburg	RISE Scholarship Holder. Spent 10 weeks at the Julius Maximilian Universität Würzburg Institut für Theoretische Physik und Astrophysik under the direction of Katharina Leiter and Annika Kreikenbohm. This placement was funded by the DAAD (German Academic Exchange Service). The project involved investigating X-Ray spectra of absorbers around active galactic nuclei in order to investigate their properties.
2013	Institute of Astronomy, Cambridge	Completed an eight week placement under the direction of Prof. Paul Hewett conducting research into the properties of MgII absorbers surrounding quasi stellar objects.

Other Positions of Responsibility:

2015-2018	Events co-ordinator for the University of Oxford Women in Physics Society (OxWiP)
2016-2017	Graduate Representative for the University of Oxford Astrophysics Sub-Department
2013-2014	Female Welfare Representative for Merton College, Oxford. Undertook peer support training so students were able to talk to me confidentially and organised social welfare events for the undergraduate body.
2006-2013	Volunteer Guide Leader at 2nd Whitton Rainbow group, helping to organise and run activities for 5-7 year old girls.