

# Shaun C Read



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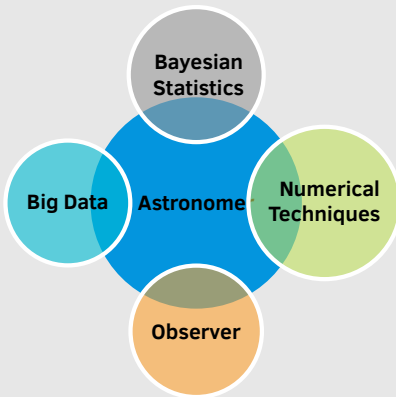
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philastrophist

## Technical Skills

### Overview



### Programming

Python

Shell • SQL • Matlab •  $\text{\LaTeX}$

C • C++ • R • Ruby • IDL • html

## Education

### Ph.D, Astronomy

University of Hertfordshire, UK

2015 - present

Expected completion: 2019

### MPhys in Physics

Durham University, UK

2:1 with Honours

2010 - 2014

## Affiliations

Fellow of the Royal Astronomical Society, FRAS

## Summary

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## Experience

Oct 2015 - Present

### Ph.D Student

**Supervisor:** Dr Dan Smith

University of Hertfordshire, UK

**Thesis:** *Measuring the Physical Properties of Distant Galaxies and Black Holes in the Era of Surveys*

- Studying the relation between the star-formation rate and radio luminosity of galaxies.
- Using new photometric time-series techniques to estimate quasar black-hole masses using reverberation mapping
- Innovating new Bayesian methods to infer complete distributions from incomplete, noisy data in order to mitigate observational bias and explore large datasets.

Jun 2016

### Observing

William Herschel Telescope

- Observed 4 nights with WHT I

Jan 2016 - Present

### Programming teaching assistant & tutor

University of Hertfordshire, UK

- Taught students Python and Matlab for scientific programming courses.
- Assisted students with programming exercises.
- Lead programming lectures and demonstrations.

Nov 2016 - Mar 2017

### 'Physics of stars' demonstrator

University of Hertfordshire, UK

- Assisted students at the Bayfordbury teaching observatory.
- Instructed in the use of 16-inch telescopes and the reduction of data.
- Projects included PNe imaging and constructing open cluster HR-diagrams.

Jul 2014 - Jul 2015

### Insight Analyst

Linkdex, UK

**Summary:** Processing big data from raw consumer search patterns to an explanative format suitable for client business strategies.

- Big data processing with Python & sci-kit learn
- Communication with the backend team
- API design, visualisation, and automation development.

Jun 2013 - Aug 2013

### Summer Student

National Physical Laboratory, UK

**Supervisor:** Dr Alastair Sinclair

- Worked with the Time & Frequency Team.
- Analysed Gaussian beam quality for the strontium ion optical clock group.
- Developed analytical Matlab code and the optical bench setup required.

## Research Interests

- **Star-formation:** *LOFAR*, FIR, empirical relations, FIRC, MagPhys, SFG-AGN interface.
- **Reverberation mapping:** High redshift, photometric techniques,  $t_{lag} - L_{5100}$ , selection biases.
- **Big data & Bayesian analysis:** Large surveys, advanced Bayesian statistical inference, bias mitigation.

# Publications

## Published

- *The Far-Infrared Radio Correlation at low radio frequency with LOFAR/H-ATLAS*, **Read, S. C.**; Smith, D. J. B.; Gürkan, G.; Hardcastle, M. J.; Williams, W. L.; Best, P. N.; Brinks, E.; Calistro-Rivera, G.; Chyży, K. T.; Duncan, K.; Dunne, L.; Jarvis, M. J.; Morabito, L. K.; Prandoni, I.; Röttgering, H. J. A.; Sabater, J.; Viaene, S., 2018MNRAS.480.5625R
- *LOFAR/H-ATLAS: a deep low-frequency survey of the Herschel-ATLAS North Galactic Pole field*, Hardcastle, M. J.; Gürkan, G.; van Weeren, R. J.; Williams, W. L.; Best, P. N.; de Gasperin, F.; Rafferty, D. A.; **Read, S. C.**; Sabater, J.; Shimwell, T. W.; Smith, D. J. B.; Tasse, C.; Bourne, N.; Brienza, M.; Brüggen, M.; Brunetti, G.; Chyży, K. T.; Conway, J.; Dunne, L.; Eales, S. A.; Maddox, S. J.; Jarvis, M. J.; Mahony, E. K.; Morganti, R.; Prandoni, I.; Röttgering, H. J. A.; Valiante, E.; White, G. J., 2016MNRAS.462.1910H

## Submitted and in preparation

- *Highly Efficient Photometric Reverberation Mapping at High Redshift*, **Read, S.C.**; Smith, D. J. B.; Jarvis, M. J.; Gürkan, G.,
- *On the Causes of the Mass Dependency of the Star-formation Rate – Radio Luminosity Relation with LOFAR, Horizon-AGN, and CANDID*, **Read, S.C.**; Smith, D. J. B.; Gürkan, G.; Hardcastle, M. J.; et al.,
- *Bias and Accretion Rate Dependency in the Reverberation-Mapped Lag-luminosity Relation*, **Read, S.C.**; Smith, D. J. B.; et al.,
- *Galaxy Morphological Classification in Deep-Wide Surveys via Unsupervised Machine Learning*, Martin, G.; Kaviraj, S.; Hocking, A.; **Read, S.C.**; Geach, J.,
- *Brown dwarfs with Gaia*, Gonzalez, E.; Pinfield, D.; **Read, S.C.**,

## Presentations

April 2017	<b>European Week of Astronomy and Space Science</b> Liverpool, UK Poster	European Astronomical Society, <i>EAS</i>
July 2017	<b>National Astronomy Meeting</b> Hull, UK Contributed talk	Royal Astronomical Society, <i>RAS</i>
June 2016	<b>National Astronomy Meeting</b> Nottingham, UK Contributed talk & poster	Royal Astronomical Society, <i>RAS</i>
May 2016	<b>The Cosmic FIR Landscape</b> University of Lisbon, Portugal Contributed talk	H-ATLAS consortium