

Oliver James Hall

PhD student in asteroseismology

date of birth

16-05-1994

contact

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languages

english, dutch
(bilingual)

programming

Python (advanced)
Unix, LaTeX, Git
(intermediate)
R (basic)

skills

pystan
bayesian statistics
hierarchical models
software development
& publication (Python)

education

2016 → 2020 **PhD in Physics & Astronomy** University of Birmingham, UK
Supervisor: Dr. Guy R. Davies
Asteroseismology with Kepler, K2 and TESS

I am interested in a Bayesian use of asteroseismology in population studies, and what it can tell us about stellar physics & analysis systematics.

2012 → 2016 **M.Sci. Physics & Astrophysics** University of Birmingham, UK
Dissertation supervisor: Prof. William J. Chaplin
Detecting Signatures of Stellar Activity Cycles in Solar-Type Stars
1st Class w. Honours

My masters research aimed to detect signatures of stellar activity in asteroseismic *Kepler* data. Modules studied included Quantum & Classical Mechanics, Relativity, Cosmology, Atomic & Stellar Physics, as well as C++ and MATLAB courses and frequently lab-based group research.

2006 → 2012 **Gymnasium** Gemeentelijk Gymnasium Hilversum, Netherlands
Most notable A-Level equivalent grades achieved:
9/10 in Maths, Physics and Chemistry
8.5/10 average across eleven subjects

teaching and research

2017 → now **2nd Year Laboratory Projects Demonstrator** University of Birmingham, UK
Taught projects varying from spectroscopy to the building of a theremin. Helped students build apparatus, understand their results, and was responsible for marking their work and providing constructive feedback.

2016 → now **3rd Year Observatory Laboratory Supervisor** University of Birmingham, UK
Helped supervise students in their research using the University of Birmingham Observatory. Helped the students understand their results, as well as aiding them in the use of IRAF, Unix, LaTeX and Python.

2015 **Summer Undergraduate Research Experience (SURE)** University of Leicester, UK
Was selected to perform a six-week project using Python to program a Universal-Robots UR5 robotic arm system to perform careful experimental testing on a prototype focal plane for the Cherenkov Telescope Array under Dr. Jon Lapington. Disseminated results through a report and group presentation.

2015 **Ogden Trust Teach Physics Intern** Bishop Challoner Catholic College, Birmingham, UK
Was selected as one of the Ogden Trust's Teach Physics interns. I helped teach pupils throughout lessons and prepared, taught a lesson & careers workshop of my own design, and was shortlisted for the 'Teach Physics Outstanding Intern 2015' award.

grants & awards

2018	IOP Research Student Conference Fund - £300 (<i>declined</i>)	Institute of Physics, UK
2016	Royal Society Partnership Grant - £3000	The Royal Society, UK

presentations

Dec. 2018	Birmingham-Warwick Science Meet-Up <i>"Testing asteroseismology with Gaia DR2: Hierarchical Models & the Red Clump"</i>	University of Warwick, UK
Jul. 2018	TASC4/KASC11 <i>"Testing asteroseismology with Gaia DR2: Luminosity of the Red Clump"</i>	Aarhus University, Denmark
Apr. 2017	T'DA 2 <i>"Estimating TESS backgrounds with mixture models – Update"</i>	Aarhus University, Denmark
Nov. 2016	T'DA 1 <i>"Estimating TESS backgrounds with mixture models"</i>	University of Birmingham, UK

conferences & research visits

Jan. 2019	T'DA 8	Aarhus University, Denmark
Oct. 2018	T'DA 5	Ohio State University, OH, USA
Oct. 2018	3 week research visit to KeplerGO	NASA Ames Research Centre, CA, USA
Jul. 2018	T'DA 4	Aarhus University, Denmark
Jul. 2018	TASC4/KASC11	Aarhus University, Denmark
Jan. 2018	1 week research visit to SAC	Aarhus University, Denmark
Dec. 2017	T'DA 3	KU Leuven, Belgium
Jul. 2017	TASC3/KASC10 (presented poster, LOC)	University of Birmingham, UK
Apr. 2017	T'DA 2	Aarhus University, Denmark
Nov. 2016	Asteroseismology of stellar activity cycles	Observatoire de la Côte d'Azur, France
Nov. 2016	T'DA 1	University of Birmingham, UK

outreach

2011	Oral Presentation Presented the research I conducted for my Masters of Commerce degree.	California Business Conference
2010	Poster As part of the course work for BUS320, I created a poster analyzing several local businesses and presented this at a conference.	Annual Business Conference, Oregon

publications

Near a Raven – A Critical Review of Poe's Works

John Smith

Sprinkler Publishing, New York, 2010