

Samuel Hinton

B.E. Software Engineering (Hon), B.Sc Physics (Hon)

Contact

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Github
Personal

References available on
request.

Programming

JavaScript,
HTML5 & CSS3
Python, Java
C, C++, Matlab
SQL, LaTeX

Bash, SVN, Git,
Maven, Node.js,
AngularJS

Interests

astrophysics
cosmology
computational physics
science communication
software design

Education

2010–2015 **Bachelor of Engineering** (Software)(Hons, 1st)

University of Queensland

2010–2016 **Bachelor of Science** (Physics)(Hons, 1st)

University of Queensland

Experience

2010–2014 **GBST**

Brisbane, Queensland, Australia

Software Developer

Developed business intelligence reporting solutions , designing and developing server and client based web application code, creation of large scale SQL queries, experience optimising queries, databases and applications for network, processing and memory constraints, developed back-end server code and front-end web applications. Prioritised implementation tasks for strict release schedules, delegated work tasks for other developers and reviewed incoming work for quality.

2015–2016 **Gemini & Australian Astronomical Observatory**

La Serena, Chile

Research Intern

Utilised photometric data of Maffei 1 to determine globular cluster candidates and their properties for spectroscopic follow-up. Utilised data reduction pipelines, automated analysis methods in Python, and applied machine learning techniques to perform object classification.

2016

Lawrence Berkeley National Laboratory

Berkeley, California

Research Fellowship

Research fellowship at LBNL to work on Bayesian Hierarchical Modelling and its applications to Supernova Cosmology. Specifically, investigating how to use high dimensional hierarchical models to model individual supernova instead of populations to provide better constraints on cosmology using supernova discovered by the Dark Energy Survey.

Awards

2016 **Bok Prize** Outstanding research in Astronomy

Astronomical Society of Australia

2016 **Australian Postgraduate Award**

Australian Government

2015 **Science Faculty Graduate of the Year**

UQ

2015 **Australian Institute of Physics Prize**

UQ

2015 **University Medal (Science)**

UQ

2015 **Rhodes Scholarship Finalist**

Oxford University

2015 **Australian Gemini Undergraduate Summer Studentships**

AAO

2015 **A.W. Oakes Scholarship**

St John's College

2015 **AAO Honours Scholarship**

Australian Astronomical Observatory

2015 **Harriet Marks Bursary**

UQ

2015 **10x Deans Commendation**

UQ

2015 **Helen Thompson Prize for All Round Excellence**

St John's College

2014	University Medal (Engineering)	UQ
2014	David Andrew Krnak Memorial Prize	UQ
2014	UQ Future Leader	UQ
2014	IEEE Student Thesis Prize	IEEE
2014	IET Student Prize	The Institution of Engineering and Technology
2014	GroundProbe Prize	UQ
2014	RWH Hawken Scholar	UQ
2014	UQ Summer Research Scholarship	UQ
2012	Exxon Mobil Achievement Award	UQ
2011	Alstom Prize	UQ
2011	Walter Bruce Darker Scholarship	UQ
2010	UQ Academic Excellence Scholarship	UQ
2010	ICT Enabling Scholarship	UQ
2010	John Black Prize	UQ

Communication

2017	World Science Festival Tour Guide	Queensland Museum & UQ
	Scientific tour guide for the Large Hadron Collider exhibit during the World Science Festival.	
2017	FameLab Australia Scientist	British Council
	State finalist FameLab scientist. Public communication through radio interview and stage presentation.	
2017	Guest Scientist	ScopeTV, Channel 10
	Helped script, narrate and appear in a ScopeTV educational astronomy episode on the solar system.	
2017	Science Youth Ambassador	Wonder of Science
	Joined Wonder of Science to inspire passion in STEM fields for young school children.	
2017	Scientists and Mathematicians in Schools	CSIRO
	Partnered with Buranda State School to bring a positive impact and engagement with STEM fields.	
2016	An Evening with Dr Lisa Randall	ThinkInc
	Gave the opening speech for the Brisbane event, talking about the exciting future of astronomy.	
2016	UQ Science Demo Troupe	University of Queensland
	Joined the UQ Science Demo troupe to create resources for the group and participate in UQ demonstrations.	
2016	Uluru Astronomer in Residence	CAASTRO
	Accompanied Sky Tours to answer scientific questions from the public and gave public lectures on popular astronomy topics.	
2015	5-Minute Physics	University of Queensland
	Created interactive simulations and visualisations to increase engagement of students with educational content.	

Publications

Measuring the 2D baryon acoustic oscillation signal of galaxies in WiggleZ: cosmological constraints

Hinton, S. R. et al.

MNRAS 464 (Feb. 2017) pp. 4807–4822. 2017

ChainConsumer

Hinton, S. R.

JOSS 1.4 (Aug. 2016). *The Open Journal*, 2016

Marz: Manual and automatic redshifting software

Hinton, S.R. et al.

Astronomy and Computing 15 (2016) pp. 61–71. 2016

The 2-degree Field Lensing Survey: design and clustering measurements

Blake, C. et al.

MNRAS 462 (Nov. 2016) pp. 4240–4265. 2016

Discovery of a $z=0.65$ Post-Starburst BAL Quasar in the DES Supernova Fields

Mudd, D. et al.

ArXiv e-prints (June 2016). 2016

A Study of Quasar Selection in the Dark Energy Survey Supernova fields

Tie, S. S. et al.

ArXiv e-prints (Nov. 2016). 2016

OzDES multifibre spectroscopy for the Dark Energy Survey: first-year operation and results

Yuan, F. et al.

MNRAS 452 (Sept. 2015) pp. 3047–3063. 2015