

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

Communication

2010
Professional Tutoring
2014
Physics Review
Representative
2015
College Tutoring
Honours student address
High school astronomy
talk
2016
University Tutoring
Science Demo Troupe

Education

- 2010–2015 **Bachelor of Engineering** (Software) University of Queensland
Awarded 1st class honours and graduated top of engineering cohort. Undergraduate engineering thesis entailed writing the web-application Marz to redshift spectra from the AAOmega spectrograph for the OzDES team.
- 2010–2016 **Bachelor of Science** (Physics) University of Queensland
Awarded 1st class honours and graduated top of science cohort. Thesis project investigated the 2D BAO signal found in the final Wigglez dataset to constrain cosmological parameters.

Experience

- 2010–2014 **GBST** Brisbane, Queensland, Australia
Software Developer
Developed business intelligence reporting solutions for clients, 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
Internship for the Australian Gemini Undergraduate Summer Studentship. 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–Now **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.

Recent Awards

- 2016 **University Medal (Science)** University of Queensland
Awarded in recognition of outstanding academic success.
- 2016 **Bok Prize** Astronomical Society of Australia
Recognising outstanding research in astronomy by an Honours student or eligible Masters student over all Australian universities.
- 2016 **Australian Postgraduate Award** Australian Government
A PhD scholarship awarded to students of exceptional research potential.

2015	Australian Gemini Undergraduate Summer Studentships	AAO
	Studentship at the Gemini South telescope awarded to 3 Australian students.	
2015	A.W. Oakes Scholarship	St John's College
	Awarded to an honours student of outstanding academic success and research potential.	
2015	AAO Honours Scholarship	Australian Astronomical Observatory
	Awarded to an honours student undertaking a research project co-supervised by an AAO staff-member.	
2015	Harriet Marks Bursary	University of Queensland
	Awarded to an science honours student for academic merit.	
2014	University Medal (Engineering)	University of Queensland
	Awarded in recognition of outstanding academic success.	
2014	David Andrew Krnak Memorial Prize	University of Queensland
	Awarded to the top graduating engineering student for outstanding academic performance.	
2014	UQ Future Leader	University of Queensland
	Recognises graduating students who have gone beyond their typical program of studies to make a positive impact on campus and community.	
2014	IEEE Student Thesis Prize	IEEE
	Awarded for the best final year thesis in all fields of electric engineering and information technology.	
2014	IET Student Prize	The Institution of Engineering and Technology
	Awarded to a student of outstanding academic accomplishment at the end of their degree.	
2014	GroundProbe Prize	University of Queensland
	Awarded for best thesis project in microwave, photonics & communications..	

Other Awards

2015	Australian Institute of Physics Prize	UQ
2015	Rhodes Scholarship Finalist	Oxford University
2015	10x Deans Commendation	UQ
2015	Helen Thompson Prize for All Round Excellence	St John's College
2014	RWH Hawken Scholar (2010–2014)	Awarded to highly performing students UQ
2014	UQ Summer Research Scholarship	UQ
2012	Exxon Mobil Achievement Award	Top mechanical engineering student. UQ
2011	Alstom Prize	Top electrical engineering student. UQ
2011	Walter Bruce Darker Scholarship	Top 3rd year engineering student. UQ
2010	UQ Academic Excellence Scholarship	UQ
2010	ICT Enabling Scholarship	UQ
2010	John Black Prize	Highest performing first year male. UQ
2009	OP1	Highest possible secondary education exit score. QTAC

Publications

Marz: Manual and automatic redshifting software
Hinton, S.R. et al.

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