HEATHER PRINCE

Department of Astrophysical Sciences
Princeton University
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EDUCATION

2016-2021 **PhD in Astrophysical Sciences** in progress
Advisor: Professor Jo Dunkley
Princeton University, USA

2014-2015 **Master of Science** received cum laude
Thesis: Gravitational Lensing of the Cosmic Microwave Background: Techniques and Applications
Advisor: Professor Kavilan Moodley
University of KwaZulu-Natal, South Africa

2013 **Bachelor of Science Honors** received summa cum laude
Research Project: Real Space Gravitational Lensing Reconstruction from CMB Temperature and Polarization
Advisor: Professor Kavilan Moodley
University of KwaZulu-Natal, South Africa

2010-2012 **Bachelor of Science** with distinction
Majors: Mathematics and Physics
Rhodes University, South Africa

AWARDS

Princeton 2016 **Princeton University First Year Fellowship**
Dean's Grant

UKZN 2014 **Vincent Maphai Scholarship**
awarded to the top-ranked Master's student in the university
Square Kilometer Array MSc Bursary

Rhodes 2012 **Rhodes University Foundation Scholarship**
awarded to the top student graduating with a bachelor's degree
David Williams Memorial Prize for Mathematics
awarded to the top third year Mathematics student
Alexander Ogg Prize for Physics
in recognition of Academic Achievement
Academic Honors
Investec Rhodes Top 100 Award for Academic Excellence in Science

Rhodes 2011	**Rhodes Governors Scholarship** awarded to the top second year student in the Faculty of Science or Pharmacy **Maryam Babangida Scholarship** awarded to the top female second year student **Sydney Cruise Memorial Prize** awarded to the top second year Mathematics student **Trevor Williams Prize** awarded to the top second year Physics student **Janinne Franke Prize** awarded to the top second year Computer Science student

CONFERENCE PRESENTATIONS

March 2019	**Cosmology on Safari**, South Africa
January 2018	**Atacama Cosmology Telescope collaboration meeting**, Princeton
December 2015	**Square Kilometre Array Bursary Conference**, Stellenbosch, South Africa
September 2015	**University of KwaZulu-Natal Research Day**, Pietermaritzburg, South Africa Award for runner up to best presentation
January 2015	**Cosmology on Safari**, Bonamanzi Game Reserve, South Africa
December 2014	**Square Kilometre Array Bursary Conference**, Stellenbosch, South Africa Award for runner up to best MSc Astronomy presentation
November 2014	**South African Gravity Society Conference**, Cape Town, South Africa Award for best postgraduate student oral presentation
November 2014	**Dark Side of the Universe Conference**, Cape Town, South Africa
September 2014	**University of KwaZulu-Natal Research Day**, Pietermaritzburg, South Africa
July 2014	**South African Institute of Physics Conference**, Johannesburg, South Africa Award for best MSc oral presentation in the Astrophysics division

PUBLICATIONS

Prince, H., Moodley, K., Ridl, J., Bucher, M. *Real space lensing reconstruction using cosmic microwave background polarization.* Accepted for publication in JCAP, eprint arXiv:1709.02227 (2018)

Partridge, B., Bonavera, L., López-Caniego, M. et. al. (including **Prince, H.**) *Can CMB Surveys Help the AGN Community?* Galaxies, 5, 47 (2017)

WORKSHOPS ATTENDED

December 2013 & 2014	**Radio Astronomy School**, University of KwaZulu-Natal, Durban, South Africa Lectures on radio astronomy theory and techniques, data analysis group project

January 2014	**Exploiting Nature's Telescopes: A first look at the Hubble Space Telescope Frontier Fields**, Durban, South Africa Gravitational lensing conference and HST data analysis project

COMPUTER SKILLS

Programming Languages	Confident: Python (used extensively in my master's research) Competent: Java, C++ (one semester coding in each as an undergraduate)
Markup Languages	LaTeX
Operating Systems	Mac, Windows, some Linux

TEACHING, MENTORING AND OUTREACH

2018-2019	**Undergraduate mentoring** Mentored an undergraduate student as part of the Undergraduate Women in Physics Program *Princeton University, USA*
Fall 2018	**Assistant in Instruction for AST205: Planets in the Universe** Hold office hours and precepts, set and grade assignments and exams *Princeton University, USA*
2014-2015	**Astrophysics and Cosmology Research Unit (ACRU) Tutor** Tutor undergraduate students with bursaries from ACRU in physics *University of KwaZulu-Natal, South Africa*
2014-2015	**School Presentations** Talks on astrophysics at four schools for ACRU outreach
2012	**Physics Lab Demonstrator** Demonstrate for first year physics and electronics practicals *Rhodes University, South Africa*
2011-2012	**Physics Academic Development Program Tutor** Additional tutoring for first year physics students *Rhodes University, South Africa*
2010	**Khanye Maths and Science Club Tutor** Tutor students from underprivileged high schools in mathematics and physics *Rhodes University, South Africa*

REFERENCES

Jo Dunkley
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Princeton, USA
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