

Jessica Campbell

Curriculum Vitaé

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Research Interests

galactic magnetism; radio polarization; interstellar medium; dust extinction; star formation

Education

Ph.D., Astronomy & Astrophysics 2016 – 2021
Department of Astronomy & Astrophysics, University of Toronto, Toronto, ON
Preliminary thesis entitled “*Polarimetry and 21 cm HI as a Probe of Galactic Magnetism in a Multiphase, Turbulent ISM*” supervised by Bryan Gaensler (UofT) and Susan Clark (IAS)

H.B.Sc., Astronomy & Physics 2011 – 2016
University of Toronto, Toronto, ON
Undergraduate thesis entitled “*Using High-Resolution JCMT Imaging to Complement Herschel Observations in Regions of Massive Star Formation*” supervised by Peter Martin

Honours and Awards

<i>Summer 2019</i>	Reinhardt Fund Award , Department of Astronomy & Astrophysics, UofT
<i>2018 – 2019</i>	University of Toronto Fellowship (\$11,742), UofT
<i>2017 – 2018</i>	University of Toronto Fellowship (\$11,742), UofT
<i>2016 – 2017</i>	University of Toronto Fellowship (\$15,855), UofT
<i>2016 – 2017</i>	DAA Fellowship (\$8,891), Department of Astronomy & Astrophysics, UofT
<i>Summer 2016</i>	CITA Undergraduate Summer Research Award (\$8,400), Canadian Institute for Theoretical Astrophysics, UofT
<i>Winter 2016</i>	Reinhardt Fund Award , Department of Astronomy & Astrophysics, UofT
<i>Winter 2016</i>	Conference Travel Grant , Dunlap Institute for Astronomy & Astrophysics and Department of Astronomy & Astrophysics, UofT
<i>Summer 2015</i>	Leiden/ESA Astrophysics Program for Summer Students Fellowship , Leiden Observatory, Leiden University
<i>Summer 2014</i>	Summer Undergraduate Research Program Award (\$8,000), Dunlap Institute for Astronomy & Astrophysics, UofT
<i>Summer 2013</i>	Summer Undergraduate Research Program Award (\$10,000), Dunlap Institute for Astronomy & Astrophysics, UofT

Refereed Publications

J. L. Campbell, R. K. Friesen, P. G. Martin, P. Caselli, J. Kauffmann, & J. E. Pineda, “*Contraction Signatures Toward Dense Cores in the Perseus Molecular Cloud*,” 2016, *ApJ*, 819, 143C (17 pages)

Student Mentorship

2018 – 2019 **James Lane** (University of Victoria), incoming PhD student
2017 – 2018 **Colleen Gilhuly** (Queen’s University), incoming PhD student
Victor Chan (University of Toronto), incoming PhD student

Research Experience

Graduate

2017 – present **Ph.D. Thesis**, Dunlap Institute for Astronomy & Astrophysics, UofT and IAS
Preliminary thesis entitled “*Polarimetry and 21 cm HI as a Probe of Galactic Magnetism in a Multiphase, Turbulent ISM*” supervised by Bryan Gaensler (UofT) and Susan Clark (IAS)
Summer 2017 **Graduate Research Course**, Dunlap Institute for Astronomy & Astrophysics, UofT
“*A Magneto-ionic Radio Polarization Study of the Orion-Eridanus Superbubble Region, Loop III and the Intermediate Velocity Arch*” supervised by Bryan Gaensler
2016 – 2017 **Graduate Research Course**, Dunlap Institute for Astronomy & Astrophysics, UofT
“*Interstellar Extinction Towards OB Stars in the Molecular Interstellar Medium of W3*” supervised by Peter Martin

Undergraduate

Summer 2016 **Summer Undergraduate Researcher**, CITA, UofT
“*Bright Infrared Stars in the W3 Giant Molecular Cloud*” supervised by Peter Martin
Summer 2015 **Leiden/ESA Astrophysics Program for Summer Students**, Leiden Observatory, Leiden University
“*Astrochemical Conditions of the Low-Mass Protostar IRAS 16293-2422 using ALMA*” supervised by Mihkel Kama and Magnus Persson
2014 – 2015 **Undergraduate Research Course**, Department of Astronomy & Astrophysics, UofT
“*Using High-Resolution JCMT Imaging to Complement Herschel Observations in Regions of Massive Star Formation*” supervised by Peter Martin
Summer 2014 **Summer Undergraduate Research Program**, Dunlap Institute for Astronomy & Astrophysics, UofT
“*Connecting Local Galaxies to Damped Lyman Alpha Systems via 21-cm*” supervised by Brian Cherinka
2013 – 2014 **Undergraduate Research Course**, CITA, UofT
“*Molecular Line Tracers of Kinematics in Star-Forming Regions*” supervised by Rachel Friesen and Peter Martin
Summer 2013 **Summer Undergraduate Research Program**, Dunlap Institute for Astronomy & Astrophysics, UofT
“*Contraction Signatures Toward Dense Cores in the Perseus Molecular Cloud*” supervised by Rachel Friesen

Conferences

2019 **New Perspectives on Galactic Magnetism**; University of Newcastle upon Tyne, England
2019 **Big Apple Magnetic Fields**; Flatiron Institute, New York
2018 **The Milky Way in the Age of Gaia**; Institut d’Astrophysique Spatiale, France
2017 **GMIMS Science Workshop**; Dominion Radio Astrophysical Observatory, Penticton
2017 **Python in Astronomy Conference**; Lorentz Center, Leiden University
2016 **Canadian Conference for Undergraduate Women in Physics**; Dalhousie University, Nova Scotia

Conference Presentations

Talks	
2019	New Perspectives on Galactic Magnetism ; University of Newcastle upon Tyne, England
2019	Big Apple Magnetic Fields ; Flatiron Center for Computational Astrophysics, New York
2018	Milky Way in the Age of GAIA ; Institut d'Astrophysique Spatiale, France
Posters	
2016	Canadian Conference for Undergraduate Women in Physics ; Dalhousie University, Nova Scotia

Teaching Assistantships

Winter 2020	Galaxies and Cosmology (AST222)
Fall 2019	Stars and Planets (AST221)
Summer 2019	Life on Other Worlds (AST251)
Winter 2019	Life on Other Worlds (AST251)
Fall 2018	Great Moments in Astronomy (AST210)
Winter 2018	Life on Other Worlds (AST251)
Fall 2017	Great Moments in Astronomy (AST210)
Winter 2017	Stars and Galaxies (AST201)
Fall 2016	Stars and Galaxies (AST101)
Winter 2016	The Sun and its Neighbours (AST201) Great Astronomical Issues (PMU199)
Winter 2015	Stars and Galaxies (AST201)

Professional Service

2020	Graduate Student Panel , Astronomy Student Union, UofT
2019 – current	TMT Statement Committee , GASA, UofT
2019 – current	People Representing Intersectional Spectral Minorities , GASA, UofT
2018 – current	Dunlap Management Committee Student Representative , DADDAA, UofT
2017 – 2018	Values Statement Committee , DADDAA, UofT
2017 – 2018	Indigenous Astronomy Workshop Committee , DADDAA, UofT
2016 – 2018	CUPE Local 3902 Unit 1 Representative , GASA, UofT
2015 – 2018	Dunlap Diversity Committee (DDC) , Dunlap, UofT
Summer 2017	Dunlap Summer School Admissions Committee , Dunlap, UofT
2017 – 2018	Mediation Committee , GASA, UofT
2017 – 2018	Graduate Course Committee , GASA, UofT
2017 – 2018	Mental Health Committee , GASA, UofT
2016 – 2017	Dunlap Associate , Dunlap, UofT

Professional Development

2019	Identify, Assist, Refer Workshop , DADDAA, UofT
2015 – 2019	Teaching Assistants' Training Program (TATP) , UofT
	<i>Courses include:</i>
	Women in STEM: Teaching and Learning Roundtable
	Teaching Dossiers and Statements of Teaching Philosophy
	Creating a Culture of Accessibility
	Active Learning in Discussion-based Classrooms
	PowerPoint and Beyond – Using Visual Aids in the Classroom
2017	ALMA Community Day Event , NRAO and DADDAA, UofT
2017	Dunlap Annual Retreat , Dunlap, UofT
2016	Dunlap Annual Retreat , Dunlap, UofT
2016	CUPE Unit 1 Local 3902 Stewards' Training , CUPE, UofT

Media Coverage

2017 **Road Trip! U of T Students and Faculty Chase Total Solar Eclipse**, *UofT News*, University of Toronto ([link to article](#))

Public Outreach

2013 – 2017 **AstroTours Volunteer**, UofT
2015 – 2016 **Director of Outreach**, Astronomy and Space Exploration Society, UofT
Fall 2015 **Fall Campus Day**, UofT
2013 – 2014 **Director of Outreach**, Astronomy and Space Exploration Society, UofT
Summer 2015 **Science Rendezvous Solar Telescope Operator**, UofT
Summer 2014 **Science Rendezvous Solar Telescope Operator**, UofT
2013 – 2014 **Current in Space News Producer**, The Star Spot podcast
Summer 2013 **Sidewalk Astronomy Solar Telescope Operator**, UofT