

Jessica Campbell

Curriculum Vitaé

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Research Interests

galactic magnetism; radio polarization; multiphase 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

<i>2018 – 2019</i>	James Lane (University of Victoria), incoming PhD student
<i>2017 – 2018</i>	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

<i>2020</i>	Developing Effective Mentoring Practices in the Academy , Ryerson University & Dunlap, UofT
<i>2019</i>	Identify, Assist, Refer Workshop , DADDAA, UofT
<i>2015 – 2019</i>	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
<i>2017</i>	ALMA Community Day Event , NRAO and DADDAA, UofT
<i>2017</i>	Dunlap Annual Retreat , Dunlap, UofT
<i>2016</i>	Dunlap Annual Retreat , Dunlap, UofT
<i>2016</i>	CUPE Unit 1 Local 3902 Stewards' Training , CUPE, UofT

Media Coverage

<i>2017</i>	Road Trip! U of T Students and Faculty Chase Total Solar Eclipse , <i>UofT News</i> , University of Toronto (link to article)
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Public Outreach

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