

# Jessica Campbell

## Curriculum Vitae

Department of Astronomy & Astrophysics  
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## Research Interests

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

## Education

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**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*” 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

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

## Refereed Publications

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**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)

## Conference Posters

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**Campbell JL**, Friesen RF, Martin PG, Caselli P, Kauffmann J, Pineda JE. *Infall Signatures of Dense Cores in the Perseus Molecular Cloud*. Poster presented at the 3rd annual Canadian Conference for Undergraduate Women in Physics; 2016 Jan 8 – 10; Dalhousie, NS

## Research Experience

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Graduate .....	
<i>2017 – present</i>	<b>Ph.D. Thesis</b> , Dunlap Institute for Astronomy & Astrophysics, UofT and IAS Preliminary thesis entitled “ <i>Polarimetry and 21 cm HI as a Probe of Galactic Magnetism</i> ” supervised by Bryan Gaensler (UofT) and Susan Clark (IAS)
<i>Summer 2017</i>	<b>Graduate Research Course</b> , Dunlap Institute for Astronomy & Astrophysics, UofT “ <i>A Magneto-ionic Radio Polarization Study of the Orion-Eridanus Superbubble Region, Loop III and the Intermediate Velocity Arch</i> ” supervised by Bryan Gaensler
<i>2016 – 2017</i>	<b>Graduate Research Course</b> , Dunlap Institute for Astronomy & Astrophysics, UofT “ <i>Interstellar Extinction Towards OB Stars in the Molecular Interstellar Medium of W3</i> ” supervised by Peter Martin
Undergraduate .....	
<i>Summer 2016</i>	<b>Summer Undergraduate Researcher</b> , CITA, UofT “ <i>Bright Infrared Stars in the W3 Giant Molecular Cloud</i> ” supervised by Peter Martin
<i>Summer 2015</i>	<b>Leiden/ESA Astrophysics Program for Summer Students</b> , Leiden Observatory, Leiden University “ <i>Astrochemical Conditions of the Low-Mass Protostar IRAS 16293-2422 using ALMA</i> ” supervised by Mihkel Kama and Magnus Persson
<i>2014 – 2015</i>	<b>Undergraduate Research Course</b> , Department of Astronomy & Astrophysics, UofT “ <i>Using High-Resolution JCMT Imaging to Complement Herschel Observations in Regions of Massive Star Formation</i> ” supervised by Peter Martin
<i>Summer 2014</i>	<b>Summer Undergraduate Research Program</b> , Dunlap Institute for Astronomy & Astrophysics, UofT “ <i>Connecting Local Galaxies to Damped Lyman Alpha Systems via 21-cm</i> ” supervised by Brian Cherinka
<i>2013 – 2014</i>	<b>Undergraduate Research Course</b> , CITA, UofT “ <i>Molecular Line Tracers of Kinematics in Star-Forming Regions</i> ” supervised by Rachel Friesen and Peter Martin
<i>Summer 2013</i>	<b>Summer Undergraduate Research Program</b> , Dunlap Institute for Astronomy & Astrophysics, UofT “ <i>Contraction Signatures Toward Dense Cores in the Perseus Molecular Cloud</i> ” supervised by Rachel Friesen

## Teaching Assistantships

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<i>Fall 2018</i>	<b>Great Moments in Astronomy</b> (AST210)
<i>Winter 2018</i>	<b>Life on Other Worlds</b> (AST251)
<i>Fall 2017</i>	<b>Great Moments in Astronomy</b> (AST210)
<i>Winter 2017</i>	<b>Stars and Galaxies</b> (AST201)
<i>Fall 2016</i>	<b>Stars and Galaxies</b> (AST101)
<i>Winter 2016</i>	<b>The Sun and its Neighbours</b> (AST201) <b>Great Astronomical Issues</b> (PMU199)
<i>Winter 2015</i>	<b>Stars and Galaxies</b> (AST201)

## Student Mentorship

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<i>2018 – 2019</i>	<b>James Lane</b> (University of Victoria), incoming PhD student
<i>2017 – 2018</i>	<b>Colleen Gilhuly</b> (Queen’s University), incoming PhD student <b>Victor Chan</b> (University of Toronto), incoming PhD student

## Conferences

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- 2018    **The Milky Way in the Age of Gaia**, Orsay, France  
2017    **Python in Astronomy Conference**, Lorentz Center, Leiden University  
2016    **Conference for Undergraduate Women in Physics**, Dalhousie University, Nova Scotia

## Professional Service

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- 2018 – 2019    **Dunlap Management Committee Student Representative**, Dunlap Institute for Astronomy & Astrophysics, UofT  
2017 – 2018    **Values Statement Committee**, Department of Astronomy & Astrophysics, UofT  
2017 – 2018    **Indigenous Astronomy Workshop Committee**, Department of Astronomy & Astrophysics, UofT  
2016 – 2018    **CUPE Local 3902 Unit 1 Representative**, Graduate Astronomy Students Association, UofT  
2015 – 2018    **Dunlap Diversity Committee**, Dunlap Institute for Astronomy & Astrophysics, UofT  
Summer 2017    **Dunlap Summer School Admissions Committee**, Dunlap Institute for Astronomy & Astrophysics, UofT  
2017 – 2018    **Mediation Committee**, Graduate Astronomy Students Association, UofT  
2017 – 2018    **Graduate Course Committee**, Graduate Astronomy Students Association, UofT  
2017 – 2018    **Mental Health Committee**, Graduate Astronomy Students Association, UofT  
2016 – 2017    **Dunlap Associate**, Dunlap Institute for Astronomy & Astrophysics, UofT

## Professional Development

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- 2017    **GMIMS Science Workshop**, Dominion Radio Astrophysical Observatory, Penticton  
         **ALMA Community Day Event**, National Radio Astronomy Observatory and Department of Astronomy & Astrophysics, UofT  
2017    **Dunlap Annual Retreat**, Dunlap Institute for Astronomy & Astrophysics, UofT  
2016    **Dunlap Annual Retreat**, Dunlap Institute for Astronomy & Astrophysics, UofT  
2016    **CUPE Unit 1 Local 3902 Stewards' Training**, Canadian Union of Public Employees, UofT  
         *Module 1: Handling Grievances*  
         *Module 2: What's our Duty?*  
2015 – 2016    **Teaching Assistant Training Program: Non-Certificate Courses**, UofT  
         Active Learning in Discussion-based Classrooms  
         PowerPoint and Beyond – Using Visual Aids in the Classroom

## Media Coverage

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

## Public Outreach

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- 2013 – 2017    **AstroTours Volunteer**, Department of Astronomy & Astrophysics, 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**, Dunlap Institute for Astronomy & Astrophysics, UofT