

# Jessica Campbell

## Curriculum Vitaé

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## Research Interests

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galactic magnetism; radio polarization; multiphase interstellar medium; dust extinction; 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 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

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

## Student Mentorship

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- 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

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- 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

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- 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

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- 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

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- 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

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- 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

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- 2019 **Identify, Assist, Refer Workshop**, DADDAA, UofT
- 2015 – 2019 **Teaching Assistants' Training Program (TATP)**, UofT
- Courses include:*
- 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

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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**, 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