

# Jessica Campbell

## Curriculum Vitaé

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## Research Interests

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Galactic magnetism; multiphase interstellar medium; radio polarization; dust extinction; star formation

## Education

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**Ph.D.**, Astronomy & Astrophysics, DADDAA & Dunlap, UofT 2016 – current  
Preliminary thesis entitled “*Polarimetry and 21 cm HI as a Probe of Galactic Magnetism in a Multiphase Interstellar Medium*” supervised by Bryan Gaensler and Susan Clark

**H.B.Sc.**, Astronomy & Physics, UofT 2011 – 2016  
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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|             |   |
|-------------|---|
| 2020 – 2021 | <b>Ontario Graduate Scholarship</b> (\$15,000), DADDAA, UofT  |
| 2020        | <b>CASCA iPoster Prize</b> , CASCA Board  |
| 2020        | <b>CASCA iPoster Prize</b> , CASCA GSC  |
| 2019        | <b>Reinhardt Fund Award</b> , DADDAA, UofT  |
| 2018        | <b>Above and Beyond Dundies Award</b> , Dunlap, UofT  |
| 2018 – 2019 | <b>University of Toronto Fellowship</b> (\$11,742), UofT  |
| 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), DADDAA, UofT   |
| 2016        | <b>CITA Undergraduate Summer Research Award</b> (\$8,400), CITA, UofT   |
| 2016        | <b>Reinhardt Fund Award</b> , DADDAA, UofT  |
| 2016        | <b>Conference Travel Grant</b> , Dunlap & DADDAA, UofT  |
| 2015        | <b>Leiden/ESA Astrophysics Program for Summer Students Fellowship</b> , Leiden Observatory, Leiden University |
| 2014        | <b>Summer Undergraduate Research Program Award</b> (\$8,000), Dunlap, UofT                                    |
| 2013        | <b>Summer Undergraduate Research Program Award</b> (\$10,000), Dunlap, UofT                                   |

## Refereed Publications

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**J. L. Campbell**, S. E. Clark, B. M. Gaensler, & A. Marchal “*Magnetic Field Coupling Between the Warm Ionized and Cold Neutral Phases of S1-C*,” 2020, to appear in ApJ (in prep)  
**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)

## Research Experience

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|---------------------|---|
| Graduate .....      |   |
| 2017 – 2021         | <b>Ph.D. Thesis</b> , DADDAA & Dunlap, UofT<br>Preliminary thesis entitled “ <i>Polarimetry and 21 cm HI as a Probe of Galactic Magnetism in a Multiphase Interstellar Medium</i> ” supervised by Bryan Gaensler and Susan Clark  |
| 2017                | <b>Graduate Research Course</b> , DADDAA & Dunlap, UofT<br>“ <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 |
| 2016 – 2017         | <b>Graduate Research Course</b> , DADDAA & Dunlap, UofT<br>“ <i>Interstellar Extinction Towards OB Stars in the Molecular Interstellar Medium of W3</i> ” supervised by Peter Martin  |
| Undergraduate ..... |   |
| 2016                | <b>Summer Undergraduate Researcher</b> , CITA, UofT<br>“ <i>Bright Infrared Stars in the W3 Giant Molecular Cloud</i> ” supervised by Peter Martin  |
| 2015                | <b>Leiden/ESA Astrophysics Program for Summer Students</b> , Leiden University<br>“ <i>Astrochemical Conditions of the Low-Mass Protostar IRAS 16293-2422 using ALMA</i> ” supervised by Mihkel Kama and Magnus Persson           |
| 2014 – 2015         | <b>Undergraduate Research Course</b> , DADDAA, UofT<br>“ <i>Using High-Resolution JCMT Imaging to Complement Herschel Observations in Regions of Massive Star Formation</i> ” supervised by Peter Martin                          |
| 2014                | <b>Summer Undergraduate Research Program</b> , Dunlap, UofT<br>“ <i>Connecting Local Galaxies to Damped Lyman Alpha Systems via 21-cm</i> ” supervised by Brian Cherinka  |
| 2013 – 2014         | <b>Undergraduate Research Course</b> , CITA, UofT<br>“ <i>Molecular Line Tracers of Kinematics in Star-Forming Regions</i> ” supervised by Rachel Friesen and Peter Martin  |
| 2013                | <b>Summer Undergraduate Research Program</b> , Dunlap, UofT<br>“ <i>Contraction Signatures Toward Dense Cores in the Perseus Molecular Cloud</i> ” supervised by Rachel Friesen   |

## Conferences

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| Presentations ..... |  |
| 2020                | <b>CASCA</b> (iPoster); York University, online  |
| 2019                | <b>New Perspectives on Galactic Magnetism</b> ; University of Newcastle upon Tyne, England |
| 2019                | <b>Big Apple Magnetic Fields</b> ; Flatiron Center for Computational Astrophysics, NY      |
| 2018                | <b>Milky Way in the Age of GAIA</b> ; Institut d’Astrophysique Spatiale, France            |
| 2016                | <b>CCUWiP</b> (poster); Dalhousie University, NS   |
| Other .....         |  |
| 2017                | <b>GMIMS Science Workshop</b> ; Dominion Radio Astrophysical Observatory, BC               |
| 2017                | <b>Python in Astronomy Conference</b> ; Lorentz Center, Leiden University                  |

## Teaching and Mentoring

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| Student Supervision ..... |  |
| 2020 – 2021               | <b>Parampreet Singh</b> co-supervised with Jennifer West, undergraduate thesis (AST425Y)               |
| Student Mentorship .....  |  |
| 2018 – 2019               | <b>James Lane</b> , incoming PhD student, UofT   |
| 2017 – 2018               | <b>Colleen Gilhuly</b> , incoming PhD student, UofT<br><b>Victor Chan</b> , incoming PhD student, UofT |

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| Teaching Assistantships ..... |  |
| Fall 2020                     | <b>Practical Astronomy</b> (AST325)        |
| Winter 2020                   | <b>Galaxies and Cosmology</b> (AST222)     |
| Fall 2019                     | <b>Stars and Planets</b> (AST221)          |
| Summer 2019                   | <b>Life on Other Worlds</b> (AST251)       |
| Winter 2019                   | <b>Life on Other Worlds</b> (AST251)       |
| Fall 2018                     | <b>Great Moments in Astronomy</b> (AST210) |
| Winter 2018                   | <b>Life on Other Worlds</b> (AST251)       |
| Fall 2017                     | <b>Great Moments in Astronomy</b> (AST210) |
| Winter 2017                   | <b>Stars and Galaxies</b> (AST201)         |
| Fall 2016                     | <b>Stars and Galaxies</b> (AST101)         |
| Winter 2016                   | <b>The Sun and its Neighbours</b> (AST201) |
|                               | <b>Great Astronomical Issues</b> (PMU199)  |
| Winter 2015                   | <b>Stars and Galaxies</b> (AST201)         |

## Academic Service

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| 2020        | <b>Graduate Panel Discussion</b> (virtual), ASU, UofT                                |
| 2020        | <b>SURP Graduate Student Panel Discussion</b> (virtual), DADDAA, UofT                |
| 2020        | <b>Graduate Student Panel Discussion</b> , ASU, UofT                                 |
| 2019 – 2020 | <b>TMT Statement Committee</b> , GASA, UofT (elected)                                |
| 2019 – 2020 | <b>People Representing Intersectional Spectral Minorities</b> , GASA, UofT (elected) |
| 2018 – 2020 | <b>Dunlap Management Committee (student rep)</b> , DADDAA, UofT (elected)            |
| 2017 – 2018 | <b>Values Statement Committee</b> , DADDAA, UofT                                     |
| 2017 – 2018 | <b>Indigenous Astronomy Workshop Committee</b> , DADDAA, UofT                        |
| 2016 – 2018 | <b>CUPE Local 3902 Unit 1 Representative</b> , GASA, UofT (elected)                  |
| 2015 – 2018 | <b>Dunlap Diversity Committee (DDC)</b> , Dunlap, UofT                               |
| 2017        | <b>Dunlap Summer School Admissions Committee</b> , Dunlap, UofT                      |
| 2017 – 2018 | <b>Mediation Committee</b> , GASA, UofT (elected)                                    |
| 2017 – 2018 | <b>Graduate Course Committee</b> , GASA, UofT (elected)                              |
| 2017 – 2018 | <b>Mental Health Committee</b> , GASA, UofT (elected)                                |
| 2016 – 2017 | <b>Dunlap Associate</b> , Dunlap, UofT   |

## Professional Development

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|-------------|---|
| 2020        | <b>Dunlap Annual Retreat</b> , Dunlap, UofT                                   |
| 2020        | <b>Developing Effective Mentoring Practices in the Academy</b> , Dunlap, UofT |
| 2019        | <b>Identify, Assist, Refer Workshop</b> , DADDAA, UofT                        |
| 2015 – 2020 | <b>Teaching Assistants' Training Program (TATP)</b> , UofT                    |
|             | <i>Courses include:</i>   |
|             | Active Learning Strategies for Online Teaching                                |
|             | 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        | <b>ALMA Community Day Event</b> , NRAO & DADDAA, UofT                         |
| 2017        | <b>Dunlap Annual Retreat</b> , Dunlap, UofT                                   |
| 2016        | <b>Dunlap Annual Retreat</b> , Dunlap, UofT                                   |
| 2016        | <b>CUPE Unit 1 Local 3902 Stewards' Training</b> , CUPE, UofT                 |

## Media Coverage

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| 2017 | <b>Road Trip! UofT Students and Faculty Chase Total Solar Eclipse</b> , <i>UofT News</i> , UofT<br>( <a href="#">link to article</a> ) |
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## Outreach

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|-------------|---|
| 2020        | <b>GSC's Grad Highlights</b> , CASCA ( <a href="#">link to article</a> )    |
| 2013 – 2017 | <b>AstroTours Volunteer</b> , UofT  |
| 2015 – 2016 | <b>Director of Outreach</b> , Astronomy and Space Exploration Society, UofT |
| 2015        | <b>Fall Campus Day</b> , UofT   |
| 2013 – 2014 | <b>Director of Outreach</b> , Astronomy and Space Exploration Society, UofT |
| 2015        | <b>Science Rendezvous Solar Telescope Operator</b> , UofT                   |
| 2014        | <b>Science Rendezvous Solar Telescope Operator</b> , UofT                   |
| 2013 – 2014 | <b>Current in Space News Producer</b> , The Star Spot podcast               |
| 2013        | <b>Sidewalk Astronomy Solar Telescope Operator</b> , UofT                   |