Last modified November 14, 2019

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

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

Refereed Publications

J. L. Campbell, A. Roy, P. G. Martin, M. Rahman, S. Song, & L. Einstein, "*On the Bright Infrared Stars in the W3 Giant Molecular Cloud,*" 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)

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

Teaching Assistantships

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)

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

Professional Service

2019 – current **TMT Statement Committee**, Graduate Astronomy Students Association, UofT
2019 – current **People Representing Intersectional Spectral Minorities (PRISM)**, Graduate Astronomy Students Association, UofT
2018 – current **Dunlap Management Committee (DMC) 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 (DDC)**, 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

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**, 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**, 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