




Veronika Dornan

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ORCID




https://dornanv.github.io/

Education


- 2021 –  **Ph.D. Astronomy, McMaster University.**
Thesis title: *A Comprehensive Observational Understanding of The $M_{GCS} - M_h$ Relation.*
- 2019 – 2021  **M.Sc. Astronomy, McMaster University.**
Thesis title: *Investigating the $M_{GCS} - M_h$ Relation in High Mass Galaxies.*
- 2015 – 2019  **B.Sc. Honours Physics, Mount Allison University**, minors in astronomy and math.
Thesis title: *The Effects of Metallicity on Convective Overshoot Behaviour in Models of δ Scuti Variable Stars.*

Research Publications

Published Journal Articles






- 1 V. Dornan and W. E. Harris, “Utilizing Voronoi Tessellations to Determine Radial Density Profiles,” *The Astronomical Journal*, vol. 168, no. 2, 48, p. 48, Aug. 2024.  DOI: 10.3847/1538-3881/ad5447. arXiv: 2406.02390 [astro-ph.IM].
- 2 V. Dornan and W. E. Harris, “Investigating the $M_{GCS}-M_h$ Relation in the Most Massive Galaxies,” *The Astrophysical Journal*, vol. 950, no. 2, 179, p. 179, Jun. 2023.  DOI: 10.3847/1538-4357/acbc3. arXiv: 2304.11210 [astro-ph.GA].
- 3 V. Dornan and C. C. Lovekin, “The Effects of Metallicity on Convective Overshoot Behavior in Models of δ Scuti Variable Stars,” *The Astrophysical Journal*, vol. 924, no. 2, 130, p. 130, Jan. 2022.  DOI: 10.3847/1538-4357/ac3980. arXiv: 2111.12068 [astro-ph.SR].

Invited Research Talks

- July 26th, 2024  **John Moores Liverpool University**
The Search for A Comprehensive Understanding of The GCS-Halo Mass Relation.
- August 5th, 2024  **University of Surrey**
The Search for A Comprehensive Understanding of The GCS-Halo Mass Relation.

Conference Presentations







Oral Presentations

- 2024  **Investigating the Globular Cluster System-Halo Mass Relation In The Dwarf Regime.**
Durham University, Small Galaxies Cosmic Questions Conference, international.
-  **Determining Globular Cluster System Distributions with Voronoi Tessellations.**
University of Toronto, Globular Clusters and Their Tidal Tails Workshop, international.
- 2023  **Investigating The $M_{GCS} - M_h$ Relation in The Most Massive Galaxies.**
University of Michigan, Great Lakes Clusters and Streams Workshop, international.
-  **Investigating The $M_{GCS} - M_h$ Relation in The Most Massive Galaxies.**
University of British Columbia / NRAO, Canadian Astronomical Society AGM, national.
- 2022  **Globular Cluster System Radial Profiles: A Mosaic of Voronoi Tessellations.**
McMaster University, McMaster Clusters Workshop, international.

Conference Presentations (continued)

- 2019  **The Effects of Rotation and Metallicity on Convective Overshoot in Models of δ Scuti Stars.**
University of Ottawa, Canadian Conference for Undergraduate Women in Physics, national.
- 2019  **The Effects of Rotation and Metallicity on Convective Overshoot in Models of δ Scuti Stars.**
Acadia University, Atlantic Universities Physics and Astronomy Conference, regional.
- 2018  **The Effects of Rotation and Metallicity on Convective Overshoot in Models of δ Scuti Stars.**
University of Alberta, Canadian Undergraduate Physics Conference, national.

Poster Presentations

- 2024  **Determining Globular Cluster System Distributions with Voronoi Tessellations.**
University of Toronto / York University, Canadian Astronomical Society AGM, national.
- 2023  **Mapping Globular Cluster Systems with Voronoi Tessellations.**
Northwestern University, MODEST Workshop, international.
- 2022  **Globular Cluster System Radial Profiles: A Mosaic of Voronoi Tessellations.**
University of Waterloo, Canadian Astronomical Society AGM, national.
- 2021  **Globular Cluster Population Distributions in Massive Galaxies.**
Virtual, Canadian Astronomical Society AGM, national.
- 2020  **Globular Cluster Population Distributions in Massive Galaxies.**
York University, Canadian Astronomical Society AGM, national.
- 2019  **The Effects of Rotation and Metallicity on Convective Overshoot in Models of δ Scuti Stars.**
McGill University, Canadian Astronomical Society AGM, national.

Awards and Achievements

- 2023  **Best Student Talk**, Canadian Astronomical Society 2023 AGM, Graduate Student Committee.
- 2023  **Teaching and Learning: Theory and Inquiry Certificate**, McMaster University, MacPherson Institute.
- 2019  **Tindall/Steinitz Award in Research**, Atlantic Universities Physics and Astronomy Conference 2019, Science Atlantic.
- 2018  **Departmental Academic Leadership Award**, Mount Allison University, Department of Physics.
- 2018  **Varma Scholarship**, Mount Allison University, Department of Physics.
- 2018  **Physics Teaching Certificate**, Mount Allison University, Department of Physics.

Teaching Experience - Mount Allison University

Teaching Assistant

PHYS 1051

Intro Physics I
Two semesters

PHYS 1551

Intro Physics II
Two semesters

PHYS 1031

Stars and Galaxies
One semester

PHYS 3021

Life in The Universe
One semester

Guest Lectures

- PHYS 1551 - March 27th, 2018 - *Lecture on special relativity.*

Teaching Experience - McMaster University

Teaching Assistant

ASTRON 1Fo3

Intro Astronomy
Four semesters

PHYSICS 3No3

Physical Optics
One semester

PHYSICS 1Ao3

Intro Physics
Two semesters

ASTRON 2Bo3

The Big Questions
Four semesters

ASTRON 2Eo3

Planetary Astronomy
Three semesters

ASTRON 3Yo3

Stellar Structure
Two semesters

PHYSICS 782

Galactic Astronomy
One semester (Grad-level)

ASTRON 3Xo3

Galaxies and Cosmology
One semester

Guest Lectures

- ASTRON 3Yo3 - November 15th, 2022 - *Lecture on massive star evolution.*
- ASTRON 3Yo3 - September 5th, 2024 - *Lecture on coding for astronomers.*

Outreach and EDI

2019 –	■ W.J. McCallion Planetarium Presenter.
	■ McMaster Sidewalk Astronomy Volunteer / Coordinator.
2021 –	■ Executive Member of PIPA , Promoting Inclusion in Physics and Astronomy, McMaster University.
2023 –	■ Executive Member of The CASCA Graduate Student Committee
	■ CASCA Education and Public Outreach Committee Member
2024 –	■ Killarney Provincial Park Astronomer in Residence.
2022 – 2023	■ EDI Committee Graduate Student Representative , Department of Physics and Astronomy, McMaster University.
2022	■ Hiring Committee Graduate Student Representative , Department of Physics and Astronomy, McMaster University.

Invited Public Outreach Talks

March 29th, 2024	■ McMaster University <i>The Ultimate Guide to Eclipses.</i>
May 31st, 2024	■ Allan I. Carswell Observatory <i>The Solar Cycle: Why 2024 Has Been a Great Year for Solar Astronomy.</i>
June 26th, 2024	■ Killarney Provincial Park <i>Annus Mirabilis: Why 2024 Has Been a Great Year for Backyard Astronomy.</i>
August 19th, 2024	■ McMaster University <i>Boom in The Night Sky: The Impending Explosion of The “Blaze Star”.</i>