

Michael T. Power

Academic Curriculum Vitae

September 2024

1 Personal

Full Name: Michael Thomas Power
Date of Birth: April 27, 1995
Citizenship: Canada
Office Address: Department of Astronomy and Astrophysics, University of Toronto
60 St. George Street, Toronto, ON M5S 3H8, Canada

2 Degrees

Ph.D.: 2024 – present, University of Toronto (Astronomy & Astrophysics)
Thesis:
Supervisor: Christopher D. Matzner
M.Sc.: 2024, Memorial University of Newfoundland (Physics)
Thesis: *The Curious Case of V CVn*
Supervisor: Hilding R. Neilson
B.Ed.: 2020, Cape Breton University (Secondary Mathematics & Physics)
B.Sc.Hon.: 2018, Saint Mary's University (Physics)
Thesis: *On the Theory of Ambipolar Diffusion, With Applications to ...*
Supervisor: David A. Clarke
Dip.Eng.: 2015, Cape Breton University (Mechanical)

3 Employment

Graduate Researcher	University of Toronto	2024 – present
Teaching Assistant	University of Toronto	2024 – present
Graduate Researcher	Memorial University of Newfoundland	2022 – 2024
Teaching Assistant	Memorial University of Newfoundland	2022 – 2024
Supply Teacher	Newfoundland & Labrador English School District	2022 – 2024
Teacher	Cabot High School (CBVRCE)	2021 – 2022
Private Tutor	Various	2010 – 2021
Laboratory Instructor	Cape Breton University	2019 – 2020
Research Assistant	TRIUMF	2018
Teaching Assistant	University of British Columbia	2018
Teaching Assistant	Saint Mary's University	2016 – 2018
Undergraduate Researcher	Saint Mary's University	2017
Undergraduate Researcher	Cape Breton University	2015
Teaching Assistant	Cape Breton University	2014 – 2015
Summer Engineering Student	Nova Scotia Power Inc.	2015
Summer Engineering Student	Nova Scotia Power Inc.	2013

4 Honours and Awards

Fellow of the School of Graduate Studies – Memorial University of Newfoundland	2024
Commencement Speaker – Cabot High School	2024

Dean's Scholarship – Memorial University of Newfoundland	2023 – 2024
NSERC – Canada Graduate Scholarships - Master's Program	2023 – 2024
Commencement Speaker – Cabot High School	2023
President's Hall of Academic Excellence – Saint Mary's University	2018
Saint Mary's University Undergraduate Symposium Winner	2017
NSERC – Undergraduate Student Research Award	2017
Dean's Honour List – Saint Mary's University	2016 – 2018
Silver Medal in Engineering – Highest GPA in Class	2015
Engineers Nova Scotia Student Affairs Award	2015
Engineers Nova Scotia Entrance Scholarship	2015
Cape Breton Professional Engineering Memorial Scholarship	2015
Dean's Honour List – Cape Breton University	2013 – 2015
Dean's Scholarship – Cape Breton University	2013 – 2015
Lieutenant Governor's Medal	2012

5 Publications

5.1 Refereed Publications

- Power, M. T., Neilson, H. R. (2024). The Curious Case of V CVn. MNRAS (pending submission; ArXiv link soon)
- Lee-Dadswell, G. R., Barrett, N., & Power, M. (2017). Cluster Sizes in a Classical Lennard-Jones Chain. Physical Review E, 96(3)

5.2 Theses

- Power, M. T. (2024). The Curious Case of V CVn (masters dissertation)
- Power, M. T. (2018). On the Theory of Ambipolar Diffusion, with Applications to Astrophysical Jets (honours dissertation)

5.3 Manuscripts in Progress

- Power, M. T., Neilson, H. R. (2024). A Stellar Wind Bow Shock and Polarization Calculator for ZEUS3D. JCP.
- Clarke, D. A., Power, M. T., & MacMackin, C. T. (n.d.). Adiabatic and isothermal, two- and one-fluid models for ambipolar diffusion. MNRAS.

6 Invited Talks

“Star Formation: The Story So Far” – RASC, St. John's, NL	2024
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7 Contributed Talks

“The Curious Case of V CVn” – CASCA, Toronto, ON	2024
“On the Theory of Ambipolar Diffusion” – AUPAC, Fredericton, NB	2018

8 Contributed Posters

“The Morphology of Non-Ideal MHD Jets” – EPS Plasma, Bordeaux, France 2023

9 Scientific Media Appearances

“BBC Digital Press Release” – Newfoundland Eclipse 2024

“CBC Here and Now” – Newfoundland Eclipse 2024

“CBC On the Go” – Newfoundland Eclipse 2024

10 Computational Languages, Skills, and Technology

Bash

C++

Compute Canada’s Cedar Supercluster

FORTRAN

MPI

OpenMP

Python

11 Certifications

ACENET Parallel Computing School Certificate of Completion

Newfoundland and Labrador Teacher’s Certificate

Nova Scotia Teacher’s Certificate (ATC I)

12 Professional Affiliations

Member, Nova Scotia Teacher’s Union (NSTU)

Member, Canadian Association of Physicists (CAP)

Member, Canadian Astronomical Society (CASCA)

13 Full-Time Teaching

13.1 University Courses

Math-1206L	Calculus II Lab	2019, 2020–W
Math-2208L	Differential Equations Lab	2019, 2020–W
Phys-1201L	Elements of Physics II Lab	2020–W
Phys-1204L	General Physics II Lab	2020–W
Math-1105L	Calculus I Lab	2019–F
Math-2109L	Multivariate Calculus Lab	2019–F
Phys-1101L	Elements of Physics I Lab	2019–F
Phys-1104L	General Physics I Lab	2019–F

13.2 High School Courses

Calculus 12	2020
Geology 12	2022
Mathematics 10	2020, 2021, 2022

Mathematics at Work 11	2022
Mathematics at Work 12	2021
Mathematics Essentials 11	2022
Mathematics Essentials 12	2021
Physics 11	2020
Physics 12	2020
Pre-Calculus 11	2022
Science 9	2020, 2021, 2022
Science 10	2020