

Daniella Morrone

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Education

University of Toronto

Toronto, ON, Canada

H.B.Sc. Astronomy & Physics Specialist, Minors in Mathematics and French Language

2018 – 2023

- 3.86/4.0 GPA in program specific astronomy courses; 3.75/4.0 GPA in upper-level courses.

Research Experience

Summer Research

Institute for Research on Exoplanets Trottier Grant

Montréal, QC, Canada

Advisor: Prof. Jonathan Gagné

Summer 2022

Université de Montréal, Planétarium Rio Tinto Alcan

- Identify astrometric exoplanet candidates with Gaia DR3.

Summer Undergraduate Research Program

Toronto, ON, Canada

Advisors: Dr. Lamiya Mowla & Dr. Kartheik Iyer

Summer 2021

University of Toronto

- Developed a pipeline developed to measure morphological characteristics of galaxies in real observations (XDF), mock observations and simulations (SIMBA Simulations).

Summer Student Research Program

Toronto, ON, Canada

Supervisor: Dr. JoAnne McLaurin

Summer 2019

Sunnybrook Research Institute

- Performed immunostaining techniques and analysis of behavioural tests to characterize the behaviour and pathology of prodromal Alzheimer's Disease in the TgF344-AD Rat Model.

Undergraduate Thesis

Department of Astronomy & Astrophysics

Toronto, ON, Canada

Advisors: Dr. Lamiya Mowla & Dr. Kartheik Iyer; Course Supervisor: Prof. Yanqin Wu

Fall 2021 & Winter 2022

University of Toronto

- Applying the pipeline developed in Summer 2021 (see above) to map the morphological evolution of galaxies in the Hubble eXtreme Deep Field (XDF) and SIMBA Simulations.

Scholarships & Awards

Award for Outstanding Exhibition of College Spirit and Pride

University of Saint Michael's College, University of Toronto

2022

Trottier Excellence Grant

Institute for Research on Exoplanets, \$8,000

2022

Walter John Helm Scholarship in Astronomy and Astrophysics

University of Toronto, \$1,763.43

2021

Summer Undergraduate Research Program (SURP) Fellowship

Dunlap Institute for Astronomy & Astrophysics, \$9,595

2021

Sunnybrook Research Institute (SRI) Summer Student Research Program

Sunnybrook Research Institute, \$6,978

2019

Presentations

Conference Talks

iREx Final Presentation Day

Montréal, QC, Canada

Université de Montréal

August 2022

(UPCOMING).

Undergraduate Research Conference University of Toronto <i>Mapping the Mass-Light Evolution of Galaxies in the Hubble eXtreme Deep Field (XDF) and SIMBA Simulations.</i>	Toronto, ON, Canada/Online February 2022
SDSS-V 2021 Collaboration Meeting Johns Hopkins University <i>Decoding galaxy evolution through the lens of galaxy morphology.</i>	Baltimore, MD, USA/Online August 2021
SURP Midterm Presentation University of Toronto <i>What does morphology tell us? Understanding galaxy evolution through the lens of galaxy shapes and sizes.</i>	Toronto, ON, Canada/Online July 2021
Vitrine de savoirs 2021, Sprint-présentations de la relève en recherche L'Acfas, University of Alberta <i>Que nous dit la morphologie des galaxies? Procédure pour identifier les lacunes dans nos simulations actuelles.</i>	Edmonton, AB, Canada/Online June 2021

Conference Posters

Canadian Conference for Undergraduate Women in Physics Canadian Association of Physicists <i>What does morphology tell us? Employing galaxy morphology to decode galaxy evolution.</i>	Online January 2022
SDSS-V 2021 Collaboration Meeting Johns Hopkins University <i>What does morphology tell us? Employing galaxy morphology to decode galaxy evolution.</i>	Baltimore, MD, USA/Online August 2021
SURP Poster Presentation University of Toronto <i>What does morphology tell us? Employing galaxy morphology to decode galaxy evolution.</i>	Toronto, ON, Canada/Online August 2021
407 ETR Summer Student Poster Competition Sunnybrook Research Institute <i>Behavioural and Pathological Characterization of Prodromal Alzheimer's Disease in TgF344-AD Model.</i>	Toronto, ON, Canada August 2019

Outreach

École élémentaire catholique L'Envol, Grade 4-5 Class <i>The Sun, The Stars and the Planets Beyond.</i>	Trenton, ON, Canada/Online June 2022
UofT Talks Presents Interstellar Health: Medicine to New Heights <i>Dunlap Institute for Astronomy & Astrophysics Workshop.</i>	Toronto, ON, Canada/Online June 2022
Girls SySTEM <i>Astronomy in the Movies: Fiction vs. Reality.</i>	Toronto, ON, Canada/Online May 2022
St. Gregory Catholic Elementary School, Grade 6 Class <i>Let's Talk About Astronomy.</i>	Toronto, ON, Canada/Online January 2022

Teaching Experience

Teaching Assistant Department of Astronomy & Astrophysics, University of Toronto	Toronto, ON, Canada 2021-2022
<ul style="list-style-type: none"> – AST101H1 - The Sun and Its Neighbours (Fall 2021, 2022): First year course for non-science students about the Sun, planets, comets, and the formation of the solar system. Duties were marking assignments and the midterm test. – AST201H1 - Stars and Galaxies (Winter 2022): Second year course for non-science students about properties and life cycles of stars, galaxies, and the Universe. Duties were marking assignments and the midterm test, and responding to student emails and discussion board posts. 	

Mentorship

Mentor <i>USMC Mentorship Program</i>	University of Toronto 2021-2022
<ul style="list-style-type: none"> – Fall 2021 & Winter 2022: Ruchira Ray Verma. – Summer 2021-Winter 2022: Erica Rose, Jing-Zu Tate Li, Joshua Thoppil, Jou Glasheen. – Summer 2021: Megh Agarwal. 	
Mentee <i>Astronomy Undergraduate Mentorship Program</i>	University of Toronto 2021-2022
<ul style="list-style-type: none"> – Fall 2021 & Winter 2022: Simran Nerval. – Fall 2020 & Winter 2021: Jacob Taylor. 	

Other Relevant Work & Volunteer Experience

USMC Student Union Electoral By-Laws Review Committee St. Michael's College, University of Toronto <i>Committee Member</i>	Toronto, ON, Canada July 2022 - April 2023
Astronomy and Youth Star Chasers <i>Undergraduate Panelist</i>	Toronto, ON, Canada February 2022
AstroTours Department of Astronomy & Astrophysics, University of Toronto <i>Volunteer</i>	Toronto, ON, Canada December 2021 - Present
St. Mike's Grad Week St. Michael's College, University of Toronto <i>Panel Moderator</i>	Toronto, ON, Canada October 2021
USMC Student Union Mental Health & Accessibility Committee St. Michael's College, University of Toronto <i>Committee Member</i>	Toronto, ON, Canada Fall 2021 & Winter 2022
USMC Mentorship Program St. Michael's College, University of Toronto <i>Mentor, Academic Representative</i>	Toronto, ON, Canada Fall 2021 & Winter 2022
USMC Orientation St. Michael's College, University of Toronto <i>Leader (2019-2021), Marshal (2022)</i>	Toronto, ON, Canada Summer 2019, 2020, 2021, 2022

Technical Skills

Proficient in **Python** and have experience with **HTML**. Comfortable using **LaTeX** and **Git**. Have experience with **macOS** command line. Speak **English** with Native proficiency and **French** with Working proficiency.

Media Appearances

<i>Institute for Research on Exoplanets: Website Profile & Facebook Interview</i>	2022
<i>Astronomy and Youth: Meet Our University Student Panel</i>	2022
<i>St. Gregory Catholic Elementary School: Blog Post & Newsletter</i>	2022
<i>SURP Project Showcase: Poster & Research Summary</i>	2021
<i>SURP Student Spotlight: Student of the Week interview</i>	2021
<i>Meet the SMC Mentorship Team 2021-2022: Facebook & Instagram</i>	2021
<i>L'Acfas Vitrines des savoirs 2021: Event program & Presentation</i>	2021