

Tom Wu

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tomwurdz.github.io

EDUCATION

University of Toronto St. George, Honours B.Sc Toronto, Canada Sep. 2021 – May. 2025

- **Astronomy & Physics** Specialist, **Computer Science** Major
- Upper year elective courses in **Relativity**, **Scientific Computing** and **AI**
- Recognized as a **Dean's List Scholar** for all completed academic years

High School Affiliated to Renmin University of China (RDFZ) Beijing, China Sep. 2018 – Jun. 2021

- AP Curriculum Program, 8 APs with score 4+

PUBLICATION

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- **Wu, T. Y.**, & Fishbach, M. (2024). Are Long Gamma-Ray Bursts Progenitors to Merging Binary Black Holes? *The Astrophysical Journal*, 977(2), 239. <https://doi.org/10.3847/1538-4357/ad98ed>

AWARDS & SCHOLARSHIPS

Victoria College - The Regents In-course Scholarship	2022,2023,2024
Dean's List Scholar	2022,2023,2024
Undergraduate Summer Research Exchange Award	2023
University of Toronto Admissions Scholarship	2021
IMMC Global Meritorious, Regional Outstanding	2020

RESEARCH EXPERIENCE

Supervised Study in Astronomy and Astrophysics Toronto, Canada
Supervisor: Prof. Maya Fishbach Aug. 2023 – Present
My project in 2023-24 focused on understanding black hole populations with **gravitational waves** and **gamma-ray burst**, in which I estimated binary black hole merger **delay time distribution**, the **effectiveness factor** and **spin dependence**. I'm continuing research in the Fall/Winter Semester of 2024-2025, focusing on **parameter estimation** based on **binary neutron star** rates and other sources.

Supervised Study in Astroparticle Physics Toronto, Canada
Supervisor: Prof. Miriam Diamond / Prof. Ziqing Hong May. 2024 – Sep. 2024
My project was on detector simulations for the **SuperCDMS experiment**, I simulated the real-world behavior of **detector electronics** using computing clusters and developed a pipeline which I used with acquired data to **improve simulation accuracy**.

Summer UROPS Research Exchange Singapore
Supervisor: Prof. Alexey Berdyugin May. 2023 – Jul. 2023
I studied the possibility of using **machine learning** techniques to find and map 2D materials like graphene. I worked on developing software and hardware to **automate** the tedious graphene flake search process.

SELECTED ACADEMIC EXPERIENCE

Teaching Assistant

Toronto, Canada

AST201 - Stars and Galaxies

Jan.2025 - May.2025

I will be a teaching assistant for this **astronomy course** in the upcoming 2025 Winter semester. This course is intended for students with no science background and usually with **1000** enrolments. I will complete health, safety and accessibility training programs prior to the start of the term.

Victoria College Peer Tutor

Toronto, Canada

Physics Tutor

Aug.2024 - May.2025

I am **hired by the University** as a Physics Tutor, offering **weekly** in-person drop-in tutoring service to all undergraduate students. Focusing on first-year **physics foundation courses** PHY131/132/151/152.

Recognized Study Group

Toronto, Canada

Group Leader

Feb. 2022 – May.2022

I completed certified leader training and systematically learning important aspects of working in an academic group and received co-curricular credit. Displayed leadership and communication skills in a group of 8.

PROGRAMMING LANGUAGE

Proficient

Python

Intermediate

Java

Basic Experience

MATLAB, C, C++, R

EXTRACURRICULAR EXPERIENCE

AstroTours at the University of Toronto

Toronto, Canada

Volunteer

Nov. 2022 – Present

I work as a volunteer for this monthly departmental event usually with around **100 visitors**, I answer Astronomy-Related questions from the public, usually related to objects the telescope is observing. Some of my past roles include interactive demo guide, lab tour guide, telescope tour guide, I have experience on **operating the 8-inch Telescope** in the observatory dome.

Residence Building Floor Council

Toronto, Canada

Floor Vice President (yr 3)

Sep. 2023 – May.2024

Floor Vice President (yr 2)

Sep. 2022 – May. 2023

I was elected Vice President of the floor during the academic year, I organized and coordinated extracurricular activities for a group of **around 35 people**.

2023 Victoria College Orientation

Toronto, Canada

Orientation Leader

Sep. 2023

I completed certified leader training, studied and tested communication skills and ran various activities during the Orientation and served intensely for 95 hours within a week.