

# Tom Wu

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tomwurdzfz.github.io

## EDUCATION

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University of Toronto St. George, Honours B.Sc	Toronto, Canada	Sep. 2021 – May. 2025
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- **Astronomy & Physics** Specialist, **Computer Science** Major
- Upper year elective courses in **Relativity**, **Scientific Computing** and **AI**
- **Dean's List Scholar** in all previous years

High School Affiliated to Renmin University of China (RDFZ)	Beijing, China	Sep. 2018 – Jun. 2021
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- AP Curriculum Program, 8 APs with score 4+

## PUBLICATION

1. Wu, T. Y., & Fishbach, M. (2024, August 7). *Are long gamma-ray bursts progenitors to merging binary black holes?*. arXiv.org. <https://arxiv.org/abs/2408.04064> (Submitted to ApJ)

## AWARDS & SCHOLARSHIPS

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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

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<b>Supervised Study in Astronomy and Astrophysics</b>	Toronto, Canada
Supervisor: Prof. Maya Fishbach	Sep. 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**, **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.

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<b>Supervised Study in Astroparticle Physics</b>	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 true behavior of **detector electronics** using computing clusters and developed a pipeline which I used with acquired data to **improve simulation accuracy**.

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<b>Summer UROPS Research Exchange</b>	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** that automates the tedious graphene flake search process.

## SELECTED ACADEMIC EXPERIENCE

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### Victoria College Peer Tutor

Toronto, Canada

Physics Tutor

Aug.2024 - Apr.2025

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

### Physics Second Year Learning Community

Toronto, Canada

Member

Sep. 2022 – Apr. 2023

Contributed actively to bi-weekly discussions on Physics and study strategies. Practiced communicating and collaborating skills in academics in a group setting.

### Recognized Study Group

Toronto, Canada

Group Leader

Feb. 2022 – May.2022

Completed certified leader training, 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

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Proficient

Python

Intermediate

Java

Basic Experience

MATLAB, C, C++, R

## EXTRACURRICULAR EXPERIENCE

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