JUNJING (TONY) FAN

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ACADEMIC BACKGROUND

Physics Specialist Program/Honours Bachelor of Science with **High Distinction**

University of Toronto, Physics

Sep 2016 – Dec 2020 | Toronto, Canada

- After excelling physics and math in King City Secondary School, I started pursuing a bachelor degree at the UofT.
- Through my hard work, I obtained a **cGPA of 3.82**.
- I have a working understanding of **ADVANCED PHYSICS**, especially in topics such as Classical Mechanics, Quantum Mechanics, Thermal Dynamics, Particle Physics, Relativistic Mechanics, Optics, and Electrodynamics.
- I am well versed in **MATHEMATICS**, having obtained high grades in Calculus, Linear Algebra, PDE and ODE, and Complex Variables.
- I learned a wide set of **LABORATORY** and **CODING** skills through the physics laboratory courses, reading and following instructions, operating equipment, recording data, and Python coding skills for data organization and data analysis.
- With the collaborative lab projects with classmates, I developed strong communication and team-building skills that benefit in settings where I have to work with others
- As an international student, I won Drew Thompson Scholarships multiple times.

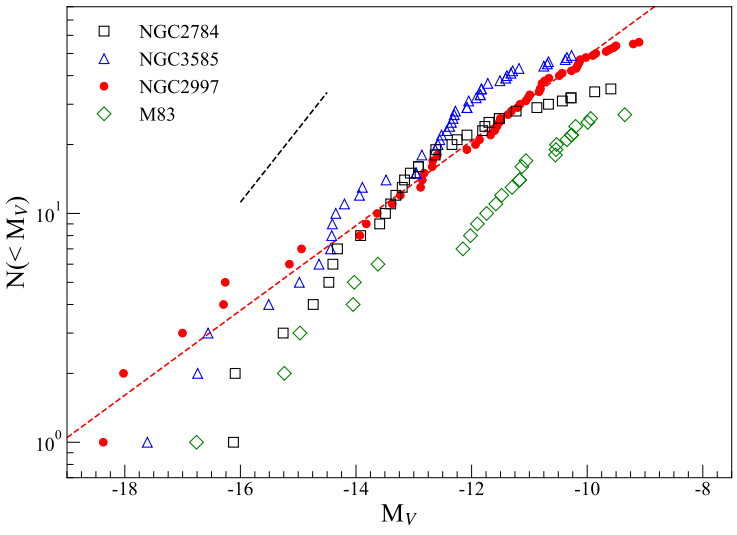
EXPERIENCE

Researcher

University of Toronto, Astronomy & Astrophysics

Aug 2019 – Present | Toronto, Canada

- I have been working as the leading author/researcher of the paper **Dwarf Galaxy Discoveries from the KMTNet Supernova Program III: Early Evolutionary Stage of the NGC 2997 Group** as an assistant to my professor.
- My work involved visual identification of new dwarf galaxies using deep stacked images, conducting photometry using elliptical models, construction of surface brightness profiles for Sérsic fitting, group property **data analysis** such as radial number density distribution, radial color distribution, mass segregation test, color magnitude relation, luminosity function, interpretation of the dynamical state of the group, and comparison to other published results.
- Figure on the right shows an example of the said analyses. It is the luminosity function analysis showing the faint-end slopes of the galaxy groups (NGC 2784, NGC 3585, NGC 2997 and M83) being shallower than the theoretical prediction from the ΛCDM model.



- I conducted all my analyses with my own Python codes, which involved a lot of coding and data analysis skills. I learned and professionalized my LaTeX coding skills as well through this project.
- **Fan et al, submitted to ApJ in Dec. 2021**, see below for the link to a copy of the paper.

Medical Sciences

Mount Sinai Hospital

Aug 2015 – Jan 2016 | Toronto, Canada

- Worked in **PATHOLOGY LAB**, duties include sorting specimens from patients, preparing certain specimens in formalin for examination, assisting in autopsy of deceased patients, and recording data during autopsy.
- Also worked in kinesiology department, duties include sorting patient records, faxing documents, calling patients for appointments, and translating for some patients who don't speak English.

Marketing Assistant

CareToGo by Belair Care Medical Ltd.

Oct 2021 – present | Toronto, Canada

- Assisting in building an App for the platform.
- Working with nurses and health care workers to recruit clients for the platform.
- Creating marketing/investment pitch purposed digital contents for attracting clients and investments.

Business Assistant

HXM

Jan 2016 – Aug 2016 | Shanghai, China

- Worked in the clothing production line of the company, where I assisted in packaging of produced clothes for shipping.
- Also worked in the office as the assistant to the legal representative of the company, duties include, bookkeeping cash flows, emailing clients and faxing documents, booking inspection sessions with customers.

ABOUT ME

Courageous
I had a lot of courage to come to Canada alone to pursue an academic career at the age of 15.

Persistent & Consistent
I have shown my persistence and consistency throughout my academic years, earning myself a cGPA of 3.82 in the Physics Specialist Program at the University of Toronto.

Patient and Detail Oriented
I am a very detail oriented worker, which requires a lot of patience. This applies not only to my academic career, but also to many other aspects of my life. I like to take my time and organize everything so that I don't miss out on any little details.

LANGUAGE AND SKILLS

Patient | Hard-Working | Detail Oriented | Active Listening

English
Mandarin

Python/Astropy
Data Analysis
LaTeX
Laboratory Skills
Instruction Following

PUBLICATION

Dwarf Galaxy Discoveries from the KMTNet Supernova Program III. Early Evolutionary Stage of the NGC 2997 Group, **submitted to ApJ: Click here to view a copy of the paper**

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