

MAN YIN LEO LEE

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EDUCATION

- Master of Philosophy, The Chinese University of Hong Kong (CUHK)** **Expected August 2024**
Major in Physics, CGPA: 3.9/4.0
Advisor: Renbin Yan
- Bachelor of Science, The University of Hong Kong (HKU)** **May 2021**
Major in Physics, Minor in Computer Science
One-semester exchange in McGill University (Winter 2020)

RESEARCH EXPERIENCE

- South African Astronomical Observatory (SAAO), Cape Town** **Present**
Visiting student
Advisor: Sabyasachi Chattopadhyay
- Establish the complete fibre system production process for the Affordable Multiple Aperture Spectroscopy Explorer (AMASE) project.

- Department of Physics, CUHK** **August 2021 - Present**
Graduate researcher and research assistant
Advisor: Renbin Yan
- Utilized stacking techniques on spectroscopic data from SDSS MaNGA to obtain the auroral-to-strong line ratio, enabling measurements on the temperature of Low-Ionization Emission line regions (LIERs) in quiescent galaxies.
 - Perform insertion, polishing, and testing of optical fibres used in the Affordable Multiple Aperture Spectroscopy Explorer (AMASE) project.

- Laboratory for Space Research, HKU** **May 2020 - August 2021**
Summer Research Fellow and research assistant
Advisor: Pablo Saz Parkinson
- Project title: Machine Learning at the Pixel Level to improve the low-energy sensitivity of the MAGIC telescopes.
 - Conducted in-depth data analysis on both real observational data and the generated Monte Carlo data, employing statistical and computational techniques to draw conclusions.
 - Utilized a 3-layer Convolutional Neural Network (CNN) to classify images of gamma-ray events and images of background events.

- Department of Physics, HKU** **August 2020 - May 2021**
Final-year project student
Advisor: Stephen Chi Yung Ng and Pablo Saz Parkinson
- Thesis title: Searches for γ -ray pulsars in the galactic center region.
 - Performed unguided searches for three pulsar candidates located in the vicinity of the Galactic Center by applying the time differencing method to the Fermi-LAT data.

POSTER AND CONFERENCE PRESENTATION

Conference Presentations

- **Lee M.Y.L.**, Yan R., Ji X., Lin Z., “Ionized gas in quiescent galaxies: Temperature measurement and constraint on the ionization source”, East Asian Young Astronomers Meeting 2024; January 2024; Chiang Mai, Thailand. (Accepted abstract)

- **Lee M.Y.L.**, Yan R., Ji X., “The ‘shocking’ ionization mechanism of LIERs”, International Conference on Resolving Galaxy Ecosystems Across All Scales; December 2023; Hong Kong, China. (Accepted abstract)

Poster Presentations

- **Lee M.Y.L.**, Yan R., Ji X., Lin Z., “Ionized gas in quiescent galaxies: Temperature measurement and constraint on the ionization source”, The 243rd Meeting of the American Astronomical Society; January 2024; New Orleans LA. (Accepted abstract)
- **Lee M.Y.L.**, Yan R., “Temperature measurement of low-ionization gas in quiescent galaxies as a constraint on the ionizing source”, The 25th Guo ShouJing Astronomical Conference; May 2023; Huangshan, China.
- **Lee M.Y.L.**, Yan R., “Watching Aurora in Passive Galaxies: Temperature measurement and constraint on ionization source”, Research Poster Exhibition; May 2023; University Library, CUHK. (Honorable Mention Award ;4th out of >60 participants)
- **Lee M.Y.L.**, Uvaliyev A., “Machine Learning at the Pixel Level to Improve the Low-Energy Sensitivity of the MAGIC Telescopes”, Research Jamboree; August 2021; The Laboratory of Space Research, HKU. (Best Presenter Award)
- **Lee M.Y.L.**, “Machine Learning to Improve the Low-Energy Sensitivity of MAGIC Telescopes”, Summer Research Fellowship Poster Presentation; August 2020; Department of Physics, HKU.

TEACHING EXPERIENCE

Teaching Assistant, Department of Physics, CUHK

Courses: Origins – From Cosmos to Life (Summer 2023), Astronomy (Winter 2023), Physics Laboratory II (Fall 2022)

- Guided students in conducting lab experiments and assessed their lab reports.
- Organized and conducted weekly office hours while also grading assignments and examinations.
- Evaluated presentations, providing grades and valuable feedback.

AWARD AND SCHOLARSHIP

Postgraduate studentships, CUHK	August 2022 - Present
Summer Research Fellowship, HKU	May 2020 - August 2020
Reaching Out Award, HKSAR Government Scholarship Fund	April 2020
HKU Worldwide Undergraduate Student Exchange Scholarship, HKU	April 2020

OTHER PROFESSIONAL EXPERIENCE

Local Organizing Committee	Present
International Conference on Resolving Galaxy Ecosystems Across All Scales	
The Chinese University of Hong Kong	

WORKING EXPERIENCE

The Hong Kong Space Museum	May 2019 - July 2019
<i>Summer Intern, Exhibition Team</i>	

- Design captivating interactive exhibits that enlighten the public about the underlying physical principles behind the displays.
- Plan and execute a series of engaging astronomical events and programs.
- Provide comprehensive assistance and explanations to the public, elucidating how the exhibits visually represent and demonstrate various principles of physics.

AIESEC Bratislava	July 2019 - August 2019
<i>Exchange Intern</i>	

- Coordinate summer day camps for teenagers in Slovakia, featuring a team of 10 interns from diverse countries.
- Raise awareness about the impacts of global warming and climate change among the general public.

LEADERSHIP AND OUTREACH EXPERIENCE

Residence Tutor

Adam Schall Residence, United College, CUHK

September 2022 - Present

Student Mentor

Hong Kong Joint School Astronomical Society

September 2017 - Present

SKILLS AND LANGUAGES

Programming Languages

Python, C, C++, C#, Java, Bash

Language Proficiency

Cantonese: Native, English: Fluent, Mandarin: Fluent

IELTS result (Oct 2023)

Overall 8.0, Listening 9.0, Reading 8.0, Writing 7.0, Speaking 7.0