

Lin Yen-Hsing

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Personal Website (more detailed information!)



EDUCATION

National Tsing Hua University

Interdisciplinary Program of Science (IPS) double program in Physics and Astrophysics

Hsinchu, Taiwan

2017 – 2021

National Tsing Hua University

Institute of Astronomy (IoA)

Hsinchu, Taiwan

2021 – Current

ACADEMIC EXPERIENCE

Institute of Astronomy and Astrophysics, Academia Sinica

Undergraduate Student, PI: Dr. Hiroyuki Hirashita

Taipei, Taiwan

2019 – 2021

- Geometry effects on dust attenuation curves with different grain sources at high redshift
- Investigating the effect of geometry and dust grain size distribution on the SED of high redshift galaxies using radiation transfer code SKIRT.

Institute of Astronomy, NTHU

Undergraduate / Master Student, PI: Prof. Hsiang-Yi Karen Yang

Hsinchu, Taiwan

2020 – Current

- Evolution and feedback of AGN Jets of Different Cosmic-ray (CR) Composition
- Investigating the effect of jet composition with 3D CRMHD simulation of CRp and CRe jet using FLASH.

SCIENTIFIC PUBLICATIONS

1. **Yen-Hsing Lin**, Hiroyuki Hirashita, Peter Camps, Maarten Baes, “Geometry effects on dust attenuation curves with different grain sources at high redshift”, MNRAS, Volume 507, Issue 2, October 2021, Pages 2755–2765
2. Yuan-Ming Hsu, Hiroyuki Hirashita, **Lin Yen-Hsing**, Peter Camps, Maarten Baes, “Effects of dust sources on dust attenuation properties in IllustrisTNG galaxies at $z \sim 7$ ”, MNRAS, accepted.
3. **Yen-Hsing Lin**, H.-Y. Karen Yang, Ellis R. Owen, “Evolution and feedback of AGN Jets of different Cosmic-ray Composition”, MNRAS, submitted.

AWARDS

• 2022 Physical Society in Taiwan: Undergraduates Student Thesis Award

- I won the award with my paper “Geometry effects on dust attenuation curves with different grain sources at high redshift”, 2022.12.12

• 2022 NCTS Student Outstanding Paper Award

- I won the award with my paper “Geometry effects on dust attenuation curves with different grain sources at high redshift”, 2022 Summer

• 2022 TPS Annual Meeting Poster Competition: Honorable Mention

- Annual Meeting of the Physical Society of Taiwan, 2022.01.25.

- **2021 NTHU Physics Poster Competition: 1st place**

– NTHU Physics Department. 2021.12.29.

INVITED TALKS

1. NCTS Annual Theory Meeting

– Simulating the effects of cosmic-ray dominated jets in galaxy clusters. 2022.12.14

2. NCTS Outstanding student paper award ceremony

– Geometry effect on dust attenuation curves of different grain sources in high redshift, 2022.09.23

3. NCTS Astrophysics seminar

– Evolution of AGN Jets of different Cosmic-ray Composition, 2022.08.26.

4. NTU Physics department student seminar

– Geometry effect on dust attenuation in high redshift / Evolution of AGN Jets of different Cosmic-ray Composition, 2021.05.13

CONTRIBUTED TALKS

1. 2021 Galaxy Evolution Workshop (Poster)

– Evolution of AGN Jets of different Cosmic-ray Composition, 2022.02.07

2. TPS annual meeting (Poster)

– Evolution of AGN Jets of different Cosmic-ray Composition, 2022.01.25

3. NTHU Physics department poster competition (Poster)

– Evolution of AGN Jets of different Cosmic-ray Composition, 2021.12.28

4. ASIAA Hiroyuki Hirashita's mini workshop (Oral)

– Evolution of AGN Jets of different Cosmic-ray Composition, 2021.12.13

5. ASROC 2020 (Poster)

– Geometry effects on dust attenuation curves with different grain sources at high redshift, 2020.09.03

6. Galaxy Workshop 2020 (Poster)

– Geometry effects on dust attenuation curves with different grain sources at high redshift, 2021.02.05

I am also presenting in NTHU journal club (astro-ph, host by Prof. Tomo Goto) roughly twice per month.

TEACHING

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| • Advisor of astronomy club , National Hsinchu Girl's Senior High School, Taiwan
<i>Teaching high school students about astronomy knowledge, telescope operation and club management</i> | 2019 – 2022 |
| • Teaching assistant , NTHU Physics department, Taiwan
<i>TA of General Physics B</i> | Fall 2021 |
| • Teaching assistant , NTHU Physics department, Taiwan
<i>TA of Introduction to Black Hole Astrophysics</i> | Spring 2022 |
| • Teaching assistant , NTHU Physics department, Taiwan
<i>TA of Fundamental observational astronomy</i> | Spring 2022 |
| • Lecturer , NTHU Physics department, Taiwan
<i>Lecturer of Taiwan astronomy observation network observer training camp</i> | Summer 2022 |
| • Teaching assistant , NTHU Institute of Astronomy, Taiwan | Fall 2022 |

UNDERGRADUATE ASTROPHYSICS LECTURES

- **General Astronomy I (10610PHYS241000):** A+
- **General Astronomy II (10620PHYS242000):** A+
 - Final Project: Space Probes that visited Jupiter
- **Fundamentals of Observational Astronomy (10620PHYS391000):** A
 - Final Project: Analysis on variable star CSS J142443.3+043850
- **Introduction to Modern Cosmology (10720PHYS434000):** A+
 - Final Project: BAO and it's observation
- **Introduction to Astrophysics (10920PHYS433000):** A+
 - Presentation: The LYNX Space Telescope
- **Introduction to Black Hole Astrophysics (10920PHYS480000):** A+
 - Presentation: HR 6819 - A hierarchical triple system with BH?
 - Final Project: SAME - Surveying AGN Magnetic structure with Event horizon telescope (Research Proposal)

GRADUATE ASTROPHYSICS LECTURES

The first 3 digits of the course ID represent the year that the course was given. I graduated and entered the master program since year 110.

- **Observational Astronomy (10710ASTR610000):** A+
 - Final Project: Using intensity profile to search for structures around red giants
- **Star Formation (10810ASTR550000):** A
 - Final Project: Autobiography of HH-111
- **Cosmology (10810ASTR640000):** B+
 - Final Project: IRL- β relation
- **Stellar Astrophysics (10820ASTR510000):** A+
- **Computational Astrophysics (10820ASTR660000):** A+
 - Final Project: Dust geometry effect on galaxy SED with TNG100 galaxies
- **Astro-ph (10910ASTR600600):** A+
- **Colloquium (10920ASTR592000):** A-
- **High Energy Astrophysics (11010ASTR635000):** A+
 - Midterm Presentation: Paper Report Connor et al. (2021)
 - Final Presentation: Relativistic Jets from AGN (paper report Blandford et al. 2019)
- **Frontier of Astrophysics Seminars I (11010ASTR600700):** A+
- **Astrophysical Radiative Processes (11020ASTR620000):** A+
- **Galactic Astronomy (11020ASTR530000):** A+
 - Final Presentation: Unveiling the nature of AGN bubbles with Lynx X-ray Observatory
- **Interstellar Medium (11020ASTR650000):** A+
 - Final Presentation: How does ISM model affect galaxy SED fitting?
- **Colloquium (11110ASTR591000):** TBD
- **Special Topic: Scientific Writing and Short Talks (11110PHYS597002):** TBD

EXTRACURRICULAR ACTIVITIES

- **EASY Astronomy and Earth Science promotion team** 2017 – Current
Vice Coordinator and Chief Editor for FB, IG, Blogger and Patreon.
Cooperating with Science Monthly, Pansci and Mandarin Daily News.
- Astronomy Club of University Union in Taiwan (ACUUT) 2019 – Current
Academic Staff (2019 – 2020) / Supervisor (2021 – Current) /
Chief editor of science communication group (2021 – Current)
- NTHU Astronomy Club 2017 – Current
Education officer (2018 – 2019) / Vice director (2019 – 2020)
Host of Astrophysics Study Group (2018 – 2020)
- ASIAA Astronomy on Tap 2021 – Current
Staff
- ACUUT Camp of Leadership 2022 Summer 2021
Staff
- ACUUT Workshop in Space technologies July 2022
Coordinator
- ACUUT Workshop in Astrophotography February 2022
Coordinator
- ACUUT Camp of Leadership 2021 Summer 2021
Coordinator
- ACUUT 5th Summit Summer 2019
Director of Academic Group
- NTHU Astronomy Camp Summer 2018
Academic Staff
- NTHU IPS Multi-Domain Science Camp Summer 2018
Academic Staff

POPULAR SCIENCE / EDUCATIONAL PUBLICATIONS

Note: Articles on *Science Monthly* are reviewed by anonymous, professor-level reviewers, while articles on *Pansci* are reviewed by their editors.

1. **Lin Yen-Hsing**, “The closest black hole: Gaia BH1”, *Pansci*, November 2022.
2. **Lin Yen-Hsing**, “The return of Falcon Heavy”, *Pansci*, November 2022.
3. **Lin Yen-Hsing**, “Dark Energy spectroscopic instrument (DESI)”, *Science Monthly*, submitted.
4. **Lin Yen-Hsing**, “DART”, *Mandarin Daily News*, November 2022.
5. **Lin Yen-Hsing**, “SpaceX’s path for reusability”, *Mandarin Daily News*, August 2022.
6. **Lin Yen-Hsing**, “The science behind JWST’s first images”, *Pansci*, July 2022.
7. **Lin Yen-Hsing**, “The next stop: Uranus!”, *Mandarin Daily News*, June 2022.
8. Tiger Hsiao, **Lin Yen-Hsing**, “3D-DASH: The largest HST NIR survey”, *Pansci*, July 2022.
9. Chiang Ping-Cheng, **Lin Yen-Hsing**, “Atmospheric Corona”, *Science Monthly*, June 2022.
10. Tiger Hsiao, **Lin Yen-Hsing**, “The reason to look far: why astronomers are looking for the first generation galaxies”, *Pansci*, May 2022.

11. [Lin Yen-Hsing](#), “Fermi Bubbles: The ultra hot remanent of SMBH jets”, Pansci, April 2022.
12. [Lin Yen-Hsing](#), “Measuring the geometry of the universe: Euclid Space Telescope”, Science Monthly, April 2022.
13. [Lin Yen-Hsing](#), “SMBH triggered Star Formation in Henize 2-10”, Pansci, March 2022.
14. [Lin Yen-Hsing](#), “ISS and it’s successors”, Pansci, February 2022.
15. [Lin Yen-Hsing](#), Huang Tzu-Chuan, “DART”, Science Monthly, December 2021.
16. [Lin Yen-Hsing](#), “The Astro2020 Report”, Pansci, November 2021.
17. [Lin Yen-Hsing](#), “JWST: Science Objectives”, Pansci, October 2021.
18. Chen Chi-Yun, [Lin Yen-Hsing](#), “JWST: Launch sequence and orbit”, Pansci, October 2021.
19. Shao Ssu-Chi, [Lin Yen-Hsing](#), “JWST: Overview”, Pansci, October 2021.
20. Chiang Ping-Cheng, [Lin Yen-Hsing](#), “Your noon is not your noon: Sundial and Analemma”, Science Monthly, October 2021.
21. [Lin Yen-Hsing](#), “Third year result from DES”, Science Monthly, August 2021.
22. [Lin Yen-Hsing](#), Shao Ssu-Chi, “Hubble’s upgrade history”, Pansci, July 2021.
23. [Lin Yen-Hsing](#), “Creating an universe in lab: Cosmological Simulations”, Science Monthly, May 2021
24. [Lin Yen-Hsing](#), “The sky full of satellites”, Pansci, April 2021.
25. [Lin Yen-Hsing](#), “Hunting the invisible monster: A non-accreting black hole in a triple star system”, Pansci, March 2021.
26. [Lin Yen-Hsing](#), “Ambition of astronomers: The HabEx Space Telescope”, Science Monthly, March 2021
27. [Lin Yen-Hsing](#), Huang Tzu-Chuan, “A billion mile journey: Hayabusa 2”, Pansci, January 2021
28. [Lin Yen-Hsing](#), “The Roman Space Telescope”, Pansci, January 2021
29. [Lin Yen-Hsing](#), “Ambition of astronomers: The LYNX Space Telescope”, Science Monthly, December 2020
30. Chang,Chiung-Yin, [Lin Yen-Hsing](#), “Is the starry night stationary?”, Science Monthly, April 2020
31. [Lin Yen-Hsing](#), “Sentinel under the night sky: Telescopes that protect the Earth”, Science Monthly, December 2019
32. Chen Tzu-Hsiang, Huang Tzu-Chuan, [Lin Yen-Hsing](#), “The journey has just begun: What is INSIGHT doing on Mars?”, Science Monthly, August 2019
33. **EASY Team** ([Lin Yen-Hsing](#), Li,Yen-Ting, HCHS Astronomy Club 29th), “From the opposition of Mars to the transit of Venus: Secrets of the alignment between planets”, Science Monthly, January 2019
34. Cheng Miao-Ching, [Lin Yen-Hsing](#) et al. (2019), “Earth Science: Investigation and Implementation (Teacher’s book)”, Lungteng Cultural CO., LTD.

RECENT INFORMAL SCIENCE TALKS

The audience of my talks range from elementary school to graduated astrophysics students.

1. **Observation astronomy I**
 - 2022.10.04, NTHU Astronomy Club Astrophysics study group lectures.
2. **Physical principles in observational astronomy**
 - 2022.07.10, Malaysia Olympiad on Astronomy and Astrophysics 2022 guest lecture

3. **Radiative transfer**
 - 2022.02.22, NTHU Astronomy Club Astrophysics study group lectures.
4. **Physics Principles behind Astrophotography**
 - 2022.02.07, ACUUT mini lecture series on Astrophotography.
5. **Modelling cosmic-ray in galaxy clusters**
 - 2022.01.15, NTHU IPS Winter Chat.
6. **Astrophysical Black Holes**
 - 2021.12.28, NTHU Astronomy Club Astrophysics study group lectures.
7. **Universe in 0 and 1**
 - 2021.12.26, EASY Online Talk.
8. **A new force in Taiwan's astronomy community:
Astronomy Club Union of Universities of Taiwan (ACUUT)**
 - 2021.11.27, NTHU Astronomy Club 50th anniversary.
9. **Summary of Astro2020**
 - 2021.11.16, NTHU Astronomy Club Astrophysics study group lectures.
10. **Cosmological models**
 - 2021.11.09, NTHU Astronomy Club Astrophysics study group lectures.
11. **Special and General Relativity**
 - 2021.11.02, NTHU Astronomy Club Astrophysics study group lectures.
12. **Story of EASY and Science Communication**
 - 2021.08.04, ACUUT: Astronomy Chat Room.
13. **Paper Review: Yang et al. 2019**
 - 2021.07.20, NTHU Astronomy Club Astrophysics study group lectures.
14. **Popular Science Writing**
 - 2021.07.20, HCHS/HGSH/CKSH Astronomy Club cadre training camp.
15. **Cosmology and Galaxy Evolution (LV. 3)**
 - 2021.07.13, ACUUT Camp of leadership 2021.
16. **Cosmology and Galaxy Evolution (LV. 2)**
 - 2021.07.04, ACUUT Camp of leadership 2021.
17. **Cosmology and Galaxy Evolution (LV. 1)**
 - 2021.07.04, ACUUT Camp of leadership 2021.
18. **Fly by the king of planets**
 - 2021.06.27, EASY Online Talk.
19. **Telescopes that protect the Earth**
 - 2021.05.30, EASY Online Talk.
20. **The Kaleidoscope of Satellite Orbits**
 - 2021.05.19, HGSH Astronomy Club Club lectures.
21. **Astro-photography**
 - 2021.05.19, HGSH Astronomy Club Club lectures.
22. **Galaxy Evolution (Observational)**
 - 2021.05.04, NTHU Astronomy Club Astrophysics study group lectures.
23. **Galaxy Evolution (Theoretical)**

- 2021.04.27, NTHU Astronomy Club Astrophysics study group lectures.
- 24. **Python and Linux: An astrophysical approach**
 - 2021.04.06, NTHU Astronomy Club Astrophysics study group lectures.
- 25. **Observatories Above the Sky: Introduction to Space Telescopes**
 - 2021.03.28, EASY Online Talk.
- 26. **Processing astro-photography images**
 - 2021.03.24, HGSH Astronomy Club Club lectures.
- 27. **The Kaleidoscope of Satellite Orbits**
 - 2021.03.09, Nanshan High School.
- 28. **The Union's Role in Scientific promotion of astronomy**
 - 2021.03.06, ACUUT annual meeting.
- 29. **The Story of counting stars: Power of Astrometry**
 - 2021.02.21, EASY Online Talk.
- 30. **Geometry effect on dust attenuation curves at high redshift / ASIAA summer student program**
 - 2021.01.16, IPS Winter Chat.
- 31. **The Kaleidoscope of Satellite Orbits**
 - 2020.12.27, EASY Online Talk.
- 32. **Interstellar Medium**
 - 2020.12.01, NTHU Astronomy Club Astrophysics study group lectures.
- 33. **Nobel Prize in Physics 2020**
 - 2020.11.29, EASY Online Talk.
- 34. **Modern cosmology / Stellar evolution / Exoplanet detection**
 - 2020.07.30, HCHS Earth Science Competition Team Training lectures.
- 35. **Telescopes that protect the Earth**
 - 2020.08.04, Neihu Parent-Child class.
- 36. **Distance Ladder**
 - 2020.07.29, HCHS Earth Science Competition Team Training lectures.
- 37. **Modern Cosmology**
 - 2020.04.22, NTHU Astronomy Club lectures.
- 38. **Python: Errors and data analysis**
 - 2020.04.21, NTHU Astronomy Club Astrophysics study group lectures.
- 39. **Black hole Observations before EHT**
 - 2020.04.08, HGSH Astronomy Club Club lectures.
- 40. **Dust**
 - 2020.03.31, NTHU Astronomy Club Astrophysics study group lectures.
- 41. **Stars (I)**
 - 2020.03.10, NTHU Astronomy Club Astrophysics study group lectures.
- 42. **Processing astro-photography images**
 - 2020.03.04, HGSH Astronomy Club Club lectures.
- 43. **Fly pass the king of planets**
 - 2019.11.16, NTHU Astronomy Club lectures.

44. **Special relativity (I)**

- 2019.10.29, NTHU Astronomy Club Astrophysics study group lectures.

45. **Distance Ladder**

- 2019.10.01, NTHU Astronomy Club Astrophysics study group lectures.

This CV is created by modifying Doruk Çetin's Simple-CV template.
Last update on December 20, 2022.