

Hyerin Cho (조혜린)

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EDUCATION	Center for Astrophysics Harvard & Smithsonian Ph.D. Candidate in Astronomy and Astrophysics	Sep. 2020 - (May 2026)
	Center for Astrophysics Harvard & Smithsonian Master of Arts in Astronomy and Astrophysics	Sep. 2020 - May 2023
	GIST(Gwangju Institute of Science and Technology), <i>cum laude</i> B.S. Physics Major / Math Minor	Mar. 2015 - Feb. 2020
	California Institute of Technology Study Abroad Program	Sep. 2017 - Dec. 2017
	University of California, Berkeley Summer Session	Jun. 2016 - Aug. 2016
RESEARCH EXPERIENCE	Seoul National University Visiting Student Intern Supervisor: Prof. Ji-hoon Kim <i>Impacts of galactic perturbers on fueling the MBH with a resolution appropriate accretion model</i>	Mar. 2020 - Aug. 2020
	OzGrav, Swinburne University of Technology Visiting Student Intern Supervisors: Prof. Matthew Bailes, Prof. Adam Deller, Prof. Ryan Shannon <i>Localized ASKAP FRBs' high time resolution and their analysis.</i>	Mar. 2019 - Jun. 2019
	Curtin Institute of Radio Astronomy (CIRA) Visiting Research Associate / Summer Studentship Supervisors: Prof. Jean-Pierre Macquart, Dr. Clancy James, Dr. Ian Morrison <i>Recovering the full time resolution of ASKAP FRB voltage data.</i>	Dec. 2018 - Feb. 2019
	Caltech Theoretical Astrophysics Summer Undergraduate Research Fellow Supervisor: Prof. Sterl Phinney <i>Numerical modeling of time-independent accretion discs with instabilities.</i>	Jun. 2018 - Aug. 2018
	GIST General Intelligence and Smart Environment Laboratory Student Intern Supervisor: Prof. Kin Choong Yow <i>Studying deep learning and its applications to physics problems.</i>	Oct. 2015 - Aug. 2017

PUBLICATIONS [Google Scholar](#), [arXiv](#), [ads](#)

1. First-author articles
- Cho et al. 2025 [submitted to ApJ](#), "Bridging Scales in Black Hole Accretion"

and Feedback: Relativistic Jet linking the Horizon to the Host Galaxy”

- **Cho** and Narayan 2025 [submitted to ApJ](#), “Variability in Black Hole Accretion: Dependence on Rotational and Magnetic Energy Balance”
- **Cho** et al. 2024 [ApJ](#), 977, “Multizone Modeling of Black Hole Accretion and Feedback in 3D GRMHD: Bridging Vast Spatial and Temporal Scales”
- **Cho** et al. 2023 [ApJL](#), 959, “Bridging Scales in Black Hole Accretion and Feedback: Magnetized Bondi Accretion in 3D GRMHD”
- **Cho** and Narayan 2022 [ApJ](#), 932, “Analytical Model of Disk Evaporation and State Transitions in Accreting Black Holes”
- **Cho** et al. 2020 [ApJL](#), 891, “Spectropolarimetric analysis of FRB 181112 at microsecond resolution: Implications for Fast Radio Burst emission mechanism”

2. Co-authored articles

- Su, ... **Cho**, ... 2025 [ApJL](#), 981, “Bridging Scales: Coupling the Galactic Nucleus to the Larger Cosmic Environment”
- Sutinjo, ... **Cho**, ... 2023 [ApJ](#), 954, “Calculation and Uncertainty of Fast Radio Burst Structure Based on Smoothed Data”
- Scott, **Cho**, ... 2023 [A&C](#), 44, “CELEBI: The CRAFT Effortless Localisation and Enhanced Burst Inspection pipeline”
- Bhandari, ..., **Cho**, ... 2020 [ApJL](#), 901, “Limits on precursor and afterglow radio emission from a fast radio burst in a star-forming galaxy”
- Sammons, ..., **Cho**, ... 2020 [ApJ](#), 900, “First constraints on compact dark matter from Fast Radio Burst microstructure”
- Prochaska, ..., **Cho**, ... 2019 [Science](#), 366, “The low density and magnetization of a massive galaxy halo exposed by a fast radio burst”

AWARDS & FELLOWSHIPS

Ilju Foundation Study Abroad Scholarship Aug. 2020 - Jul. 2024
 Selected as 1 of 6 recipients nationwide in Korea across all disciplines for a prestigious doctoral scholarship (~ 120,000 over four years) awarded to support Ph.D. studies abroad.

Talent Award of Korea (대한민국인재상) Dec. 2020
 Awarded by the South Korean government to outstanding young leaders demonstrating excellence, creativity, and public service. Selected as one of the top national recipients representing Korea’s next-generation talent.

GIST Outstanding Thesis Award (우수논문상) Feb. 2020
 GIST Future Research Talent Award (미래인재상) Feb. 2020
 Korea National Science and Engineering Scholarship Mar. 2015 - Feb. 2020
 A scholarship to fund full tuition for 8 semesters from Korea Student Aid Foundation, Ministry of Education ([국가이공계장학금](#))

CIRA Summer Studentship Dec. 2018 - Feb. 2019
 Caltech Summer Undergraduate Research Fellowship Jun. 2018 - Aug. 2018

TEACHING EXPERIENCE

Teaching Assistant Sep. 2022 - Dec. 2022
 Harvard AY17 Galactic and Extragalactic Astronomy (undergraduate course)

Teaching Assistant Sep. 2021 - Dec. 2021
 Harvard AY200 Radiative Processes in Astrophysics (graduate course)

Teaching Assistant Sep. 2019 - Dec. 2019
GIST MM4016 Introduction to Topology (4th-year course)

Teaching Assistant Mar. 2018 - Jun. 2018
GIST PS3101 Electromagnetism II (3rd-year course)

LANGUAGE Korean (native), English (fluent)
PROFICIENCY