

Hye-Jin Park

Postdoctoral Researcher
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Academic qualifications	Ph.D. in Astronomy Australian National University, Australia <i>Thesis: "Linking optical IFU data with multi-wavelength data : Probing the evolution of stars, gas, and dust in galaxies"</i> <i>Advisor: Dr. Andrew Battisti</i>	Mar. 2022-Dec. 2025		
	M.Sc. in Astronomy and Space Science Sejong University, South Korea <i>Thesis: "Gas Dynamics and Star Formation in NGC 6822"</i> <i>Advisor: A/Prof. Se-Heon Oh</i>	Aug. 2021		
	B.Sc. in Astronomy and Space Science Chungnam National University, South Korea - Study Abroad Program Boise State University, USA	Aug. 2019 Jan.-May 2017		
Academic Employment History	Postdoctoral Researcher CEA Paris-Saclay, Gif-sur-Yvette, France <i>Supervisor: Prof. Frédéric Galliano</i> Post-MSc Research Assistant Sejong University, South Korea <i>Supervisor: A/Prof. Se-Heon Oh</i> Graduate Research Assistant Sejong University, South Korea <i>Supervisor: A/Prof. Se-Heon Oh</i> Undergraduate Research Assistant Chungnam National University, South Korea <i>Supervisor: Prof. Young Sun Lee</i>	Dec. 2025-pres. Sept. 2021-Jan. 2022 Sept. 2019-Aug. 2021 Aug. 2018-Aug. 2019		
Awards	Name RSAA Travel Fund UWA/ICRAR Seminar Series Travel Fund RSAA Best Annual Review talk ASTRO3D ¹ Travel support ASA ECR Symposium Travel Grant RSAA Best Annual Review talk ANU PhD Scholarship RSAA Supplementary Scholarship CNU Prize for Undergraduate Excellence Changwon-si General Scholarship CNU Merit Scholarship CNU Creative Korea Scholarship CNU Global Talent Scholarship CNU Jeongsimwha Scholarship	Type Travel Travel Award Travel Travel Award Scholarship Scholarship Prize Scholarship Scholarship Scholarship Scholarship Scholarship Scholarship Scholarship Scholarship	Amount (USD) \$0.3k \$1k \$0.2k \$11k \$0.2k \$0.2k – – – \$1.5k \$4.5k \$0.85k \$3k \$0.6k	Year 2025 2025 2024 2022-2024 2024 2022 2022-pres. 2022-pres. 2019 2019 2018-2019 2018
Observing Proposals	Period 2024A 2024A	Telescope ALMA AAT	PI(s) A.Man H-J.Park & A.Battisti	Time allocated 33.7 hrs 21 nights
	(1) co-I of “Gas fractions of Early Type Galaxies at z=0.3 from the MAGPI survey” (Program ID: 2024.1.00034.S) (2) PI of “Probing dust, gas, and metal in dwarf galaxies by linking AAOmega-KOALA IFU and Herschel” (Program ID: A/2024A/13)			(1) (2)
Observing Experience	Period Jan.-Mar. 2024	Telescope/Instrument AAT/KOALA	Location Coonabarabran, Australia	Time 21 nights

¹The ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions ↗

Publications

Summary: 12 papers in total

Publication library on ADS ↗

First-authored (N: 4; citation: 28)

1. **Park H-J.**, Battisti A.J., Marchal A., Cortese L., Wisnioski E., Seibert M., Kim S-J., McClure-Griffiths N., de Blok W.J.G., Grasha K., Madore B. F., Rich J. A., Beaton R. L.
“Exploring the potential for kinematically colder H_I component as a tracer for star-forming gas in nearby galaxies” (2025, *MNRAS*, 540, 2623P)
2. **Park H-J.**, Battisti A.J., Wisnioski E., Cortese L., Seibert M., Grasha K., Madore B.F., Groves B., Rich J. A., Beaton R. L., Chen Q-H., Mun M., McClure-Griffiths N. M., de Blok W.J.G., Kewley L.
“The spatially resolved relation between dust, gas, and metal abundance with the TYPHOON survey” (2024, *MNRAS*, 535, 729P)
3. **Park H-J.**, Kim S., Kim S-J., van Putten M.
“On the Mass Function of GWTC-2 Binary Black Hole Systems and Their Progenitors” (2022, *ApJ*, 938, 69)
4. **Park H-J.**, Oh S-H., Wang J., Zheng, Y., Zhang H-X., de Blok W.J.G.
“Gas Dynamics and Star Formation in NGC 6822” (2022, *AJ*, 164, 82P)

Co-authored (N: 9)

1. Kim S-J., Marchal A. McClure-Griffiths N. M., Dawson J. R., Dempsey J., Dénes H., Dickey J. M., Gibson S. J., Jameson K., Kemp I., Lee B., Lee M-Y., Leroy A. K., Lynn C., Ma Y. K., Miville-Deschenes M-A., Muller E. G. M., Murray C., Nguyen H., Pingel N. **Park H-J.**, Stanimirović S., Uscanga L., and van Loon J. Th.
“A Detailed GASKAP-HI View of Shells and Loops in the Magellanic Bridge” (submitted - under first revision)
2. Sextl E., Kudritzki R-P., Bresolin F., Grasha K., **Park H-J.**, Chen Q-H., Battisti A. J., Seibert M., Madore B. F., Rich J. A.
“The TYPHOON Stellar Population Synthesis Survey. II. Pushing Full-Spectral Fitting to the Limit in the Nearby Grand Design Barred Spiral M83” (2025, *A&A*, 987, 138S)
3. Foster C., Donoghoe M. W., Battisti A.J., D’Eugenio F., Harborne K., Venville T., Lagos C. D. P., Mendel T., Bagge R., Barsanti S., Bellstedt S., Boecker A., Chen Q-H., Derkenne C., Ferré-Matteu A., Gjergo E., Gupta A., Muller E. G. M., Santucci G., **Park H-J.**, Remus R-S., Thater S., van de Sande J., Vaughan S., Brough S., Croom S. M., Valenzuela L. M., Wisnioski E.
“The MAGPI Survey: the kinematic morphology-density relation (or lack thereof) and the Hubble sequence at z~0.3” (2025, *PASA*, 42, 22)
4. Battisti A.J., Shivaei I., **Park H-J.**, Decleir M., Calzetti D., Mathew J., da Cunha E.
“Constraining the link between the 2175Å dust absorption feature and PAHs in Nearby Star-Forming Galaxies using SWIFT/UVOT and JWST/MIRI” (2025, *PASA*, 42, 22B)
5. Chen Q-H., Grasha K., Battisti A. J., Wisnioski E., Li Z., **Park H-J.**, Groves B., Torrey P., Mendel T., Madore B. F., Seibert M., Sextl E., Garcia A. M., Rich J. A., Beaton R. L., Kewley L. J.
“Quantifying azimuthal variations within the interstellar medium of spiral galaxies with the TYPHOON survey” (2024, *MNRAS*, 534, 883C)
6. Mun M., Wisnioski E., Battisti A., Mendel T. J., Ellison S., L., Taylor E. N., Lagos C. D. P., Harborne K. E., Foster C., Croom S. M., Bellstedt S., Barsanti S., Gupta A., Valenzuela L. M., Chen Q-H., Grasha K., Mukherjee T., **Park H-J.**, Sharda P., Sweet S. M., Remus R-S., Zafar T.
“The MAGPI survey: evolution of radial trends in star formation activity across cosmic time” (2024, *MNRAS*, 530, 5072M)
7. Chen Q-H., Grasha K., Battisti A. J., Wisnioski E., Mendel T., Sharda P., Santucci G., Li Z., Foster C., Mun M., **Park H-J.**, Tsukui T., Sharma G., Lagos C. D. P., Barsanti S., Valenzuela L. M., Gupta A., Thater S., Jin Y., Kewley L.

“The MAGPI survey: effects of spiral arms on different tracers of the interstellar medium and stellar populations at $z \sim 0.3$ ” (2024, MNRAS, 527, 2991C)

8. Kim S-J., Oh S-H., Wang J., Staveley-Smith L., Koribalski B. S., Kim M., **Park H-J.**, Kim S., Spekkens K., Westmeier T., Wong O. I., Meurer G. R., Kamphuis P., Catinella B., McQuinn K. B. W., Bigiel F., Holwerda B. W., Rhee J., Lee-Waddell K., Deg N., Verdes-Montenegro L., Bi-Qing, Madrid J. P., Dénes H., Elagali A.
“WALLABY Pilot Survey: H I gas kinematics of galaxy pairs in cluster environment” (2023, MNRAS, 519, 318K)
9. Koo J-R., Lee Y. S., **Park H-J.**, Kim Y. K., Beers T. C.
“Determination of Sodium Abundance Ratio from Low-resolution Stellar Spectra and Its Applications” (2022, ApJ, 925, 35K)

Press Release **Park H-J.**, Kim S., Kim S-J., van Putten M., 2022, Sejong Press Release
“The origin of the supermassive black hole binaries using GWST-2” ↗

Professional Members	ASA (Astronomical Society of Australia)	2024-pres.
	MAUVE (Multiphase Astrophysics to Unveil the Virgo Environment) survey	2023-pres.
	MAGPI (A MUSE Large Program to study galaxies in the middle ages) survey	2022-pres.
	TYPHOON survey (Large FoV IFU survey for nearby galaxies)	2022-pres.
	WALLABY (The Widefield ASKAP L-band Legacy All-sky Blind surveY) survey	2020-pres.

Select Talks	Name	Type	Date	Location
	2024 Dust and Gas across Cosmic Time	Poster/Sparkler	Dec. 2024	Hiroshima, Japan
	ASA ECR Seminar Series at Macquarie Univ.	Invited talk	Nov. 2024	Sydney, Australia
	2024 ASA Annual Science Meeting	Contributed talk	June 2024	Online
	The 3rd Australia-ESO meeting	Contributed talk	Sept. 2024	Canberra, Australia
	ANU Astronomy Society ASTRO3D Symposium	Invited talk	Aug. 2023	Canberra, Australia
	3D view of Galaxies Online Series	Contributed talk	Aug. 2023	Online
	2023 ASTRO3D Science Meeting	Sparkler talk	June 2023	Perth, Australia
	2023 Coordinated Surveys of the Southern Sky	Contributed talk	Mar. 2023	Garching, Germany
	2022 Mount Stromlo Student Seminar	Contributed talk	Nov. 2022	Canberra, Australia
	IAU-General Assembly	Contributed e-talk	Aug. 2022	Busan, S. Korea
	2021 KAS ² Spring Meeting	Contributed talk	Apr. 2021	Online
	Workshops on Environment effects	Contributed talk	Feb. 2021	Online

Research skills Programming Languages:
- Python, IDL (basic), fortran (basic)
Software:
- Radio: CASA, GIPSY, 3D-Barolo, BAYGUAD, ROHSA
- Optical: nGIST
- Photometry-related: MAGPHYS, SKIRT-PTS, Swarp, IRAF, TOPCAT

Teaching & Outreach	Outreach team, Australian National University, Australia	2024
	- <i>Introducing Mt Stromlo Observatory to visiting school (year 6-12)</i>	
	MSATT ³ program, Australian National University, Australia	2023
	- <i>Year 8 student supervision for astronomical data analysis (Alexander Rickard-Ryan)</i>	
	“ <i>l Carinae: hydrogen line analysis by spectroscopy; distance derivation using photometry</i> ”	
	Introduction to Astronomy, Sejong University, South Korea	3 semesters, 2020-2021
	- <i>Marking (~ 200 non-astronomy students in total)</i>	
	Radio Astronomy, Sejong University, South Korea	1 semester, 2020
	- <i>Running practical sessions with HI 21 cm data (~ 30 3rd year astronomy students)</i>	

²Korean Astronomical Society

³McNamara-Saunders Astronomical Teaching Telescopes ↗

Community, Professional Services	ANU Seminar Committee ANU Astronomy and Astrophysics Distinguished Visitor Committee 2023 Mount Stromlo Student Writing Retreat Organiser - <i>RSAA Strategy Initiatives scheme (\$14k)</i> The 3rd Australia-ESO meeting LOC ↗ 2022 Mount Stromlo Student Seminar Committee ↗ - <i>ASTRO3D Conference support (\$1.6k)</i> - <i>RSAA Conference support (\$0.2k)</i> - <i>Ozgrav Conference support (\$0.4k)</i> - <i>ANU PARSA Conference support (\$0.6k)</i> 2021 Radio Summer School LOC ↗	2024 2024 2023 2022 2021
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References	Dr. Andrew Battisti Associate Prof. Emily Wisnioski Associate Prof. Se-Heon Oh	University of Western Australia, Australia Australian National University, Australia Sejong University, South Korea
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