

# Hye-Jin Park

## PhD candidate

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Last Update: Dec. 2024

Academic qualifications	<b>Ph.D. in Astronomy</b> Australian National University, Australia	Mar. 2022-pres.
	Thesis: <i>"Linking optical IFU data with multi-wavelength data : Probing the evolution of stars, gas, and dust in galaxies"</i>	
	Advisor: Dr. Andrew Battisti	
	<b>M.Sc. in Astronomy and Space Science</b> Sejong University, South Korea	Aug. 2021
Academic Employment History	Thesis: <i>"Gas Dynamics and Star Formation in NGC 6822"</i>	
	Advisor: A/Prof. Se-Heon Oh	
	<b>B.Sc. in Astronomy and Space Science</b> Chungnam National University, South Korea	Aug. 2019
	<b>- Study Abroad Program</b> Boise State University, USA	Jan.-May 2017
Academic Employment History	<b>Post-MSc Research Assistant</b> Sejong University, South Korea	Sept. 2021-Jan. 2022
	Supervisor: A/Prof. Se-Heon Oh	
	<b>Graduate Research Assistant</b> Sejong University, South Korea	Sept. 2019-Aug. 2021
	Supervisor: A/Prof. Se-Heon Oh	
Academic Employment History	<b>Undergraduate Research Assistant</b> Chungnam National University, South Korea	Aug. 2018-Aug. 2019
	Supervisor: Prof. Young Sun Lee	

Awards	Name	Type	Amount (USD)	Year
	ASTRO3D <sup>1</sup> Travel support	Travel	\$11k	2022-pres.
	ASA ECR Symposium Travel Grant	Travel	\$0.2k	2024
	RSAA Best Presentation	Prize	\$0.2k	2022
	ANU PhD Scholarship	Scholarship	–	2022-pres.
	RSAA Supplementary Scholarship	Scholarship	–	2022-pres.
	CNU Prize for Undergraduate Excellence	Prize	–	2019
	Changwon-si General Scholarship	Scholarship	\$1.5k	2019
	CNU Merit Scholarship	Scholarship	\$4.5k	2018-2019
	CNU Creative Korea Scholarship	Scholarship	\$0.85k	2018
	CNU Global Talent Scholarship	Scholarship	\$3k	
	CNU Jeongsimwha Scholarship	Scholarship	\$0.6k	

Observing Proposals	Period	Telescope	PI(s)	Time allocated
	2024A	ALMA	A.Man	33.7 hrs (1)
	2024A	AAT	H-J.Park & A.Battisti	21 nights (2)
	(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)			

Observing Experience	Period	Telescope/Instrument	Location	Time
	Jan.-Mar. 2024	AAT/KOALA	Coonabarabran, Australia	21 nights


Publications	<b>Summary: 9 + 1 submitted (3 first-authored; citation: 12)</b> Publication library on ADS <a href="#">↗</a> <b>First-authored</b>
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<sup>1</sup>The ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions [↗](#)




1. **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. (2024, *MNRAS*, 535, 729P)  
*"The spatially resolved relation between dust, gas, and metal abundance with the TYPHOON survey"*
2. **Park H.-J.**, Kim S., Kim S.-J., van Putten M. (2022, *ApJ*, 938, 69)  
*"On the Mass Function of GWTC-2 Binary Black Hole Systems and Their Progenitors"*
3. **Park H.-J.**, Oh S.-H., Wang J., Zheng, Y., Zhang H.-X., de Blok W.J.G. (2022, *AJ*, 164, 82P)  
*"Gas Dynamics and Star Formation in NGC 6822"*

#### Co-authored

1. 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-Mattheu 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. (submitted to PASA)  
*"The MAGPI Survey: the kinematic morphology-density relation (or lack thereof) and the Hubble sequence at  $z \sim 0.3$ "*
2. Battisti A.J., Shivaee I., **Park H.-J.**, Declair M., Calzetti D., Mathew J., da Cunha E. (under revision after submission to PASA)  
*"Constraining the link between the 2175Å dust absorption feature and PAHs in Nearby Star-Forming Galaxies using SWIFT/UVOT and JWST/MIRI"*
3. 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. (2024, *MNRAS*, 534, 883C)  
*"Quantifying azimuthal variations within the interstellar medium of spiral galaxies with the TYPHOON survey"*
4. Mun M., Wisnioski E., Battisti A., J., 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. (2024, *MNRAS*, 530, 5072M)  
*"The MAGPI survey: evolution of radial trends in star formation activity across cosmic time"*
5. 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. (2024, *MNRAS*, 527, 2991C)  
*"The MAGPI survey: effects of spiral arms on different tracers of the interstellar medium and stellar populations at  $z \sim 0.3$ "*
6. 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. (2023, *MNRAS*, 519, 318K)  
*"WALLABY Pilot Survey: H I gas kinematics of galaxy pairs in cluster environment"*
7. Koo J.-R., Lee Y. S., **Park H.-J.**, Kim Y. K., Beers T. C. (2022, *ApJ*, 925, 35K)  
*"Determination of Sodium Abundance Ratio from Low-resolution Stellar Spectra and Its Applications"*

**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"* 

<b>Professional Members</b>	ASA (Astronomical Society of Australia)	2024-pres.
	MAUVE (MUSE and ALMA Unveiling 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 <sup>2</sup> 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 - Photometry-related: MAGPHYS, SKIRT-PTS, Swarp, IRAF, TOPCAT			
Teaching & Outreach	Outreach team, Australian National University, Australia <i>- Introducing Mt Stromlo Observatory to visiting school (year 6-12)</i> MSATT <sup>3</sup> program, Australian National University, Australia <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 <i>- Marking (~ 200 non-astronomy students in total)</i> Radio Astronomy, Sejong University, South Korea <i>- Running practical sessions with HI 21 cm data (~ 30 3rd year astronomy students)</i>			
				Apr. 2024-pres.
				2023
				3 semesters, 2020-2021
				1 semester, 2020
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 			
				Mar. 2024-pres.
				Mar. 2024-pres.
				2023
				2023
				2022
				2021
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

<sup>2</sup>Korean Astronomical Society

<sup>3</sup>McNamara-Saunders Astronomical Teaching Telescopes 