

# HYEIN YOON

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## CURRENT POSITION/EMPLOYMENT

<b>LAMP Postdoctoral Researcher</b> Seoul National University, South Korea	Dec 2023 – Present
<b>ASKAP–FLASH Survey Project Scientist</b> ASKAP–FLASH (First Large Absorption Survey in H I) Survey Science Team, Australia The University of Sydney, Australia (Affiliate)	Oct 2021 – Present

## RESEARCH INTERESTS

Neutral atomic hydrogen (H I) gas observations — H I absorption and emission spectral lines — Radio data processing and interferometric imaging — Environmentally-driven galaxy evolution — Large radio surveys — Data quality assessment — Automatic spectral line finder and source extractor

## EDUCATION

<b>Ph.D. in Astronomy, Yonsei University, South Korea</b> - <b>Thesis:</b> The Impact of Large-scale Environments on Galaxy Evolution: Insights from the Neutral Hydrogen Gas in Galaxies Inside and Outside of the Virgo Cluster - <b>Thesis Committee:</b> Prof. Aeree Chung (Yonsei; Supervisor), Dr. O. Ivy Wong (CSIRO), Prof. Sukyoung K. Yi (Yonsei), Prof. Myungkook James Jee (Yonsei), Prof. Ho Seong Hwang (SNU)	Aug 2019
<b>M.S. in Astronomy, Yonsei University, South Korea</b> - <b>Thesis:</b> Diagnostics to Probe Environmental Effects on Late-type Galaxies in the Virgo Cluster - <b>Thesis Committee:</b> Prof. Aeree Chung (Yonsei; Supervisor), Prof. Yong-Ik Byun (Yonsei), Prof. Soo-Chang Rey (CNU)	Feb 2013
<b>B.S. in Astronomy, Physics (double major), Yonsei University, South Korea</b>	Feb 2011

## RESEARCH EXPERIENCE AND ADVANCED EDUCATION

<b>Postdoctoral researcher, Data Discovery Center, Seoul National University</b> - Studying environmentally-driven galaxy evolution with H I and multi-wavelength data - Supervisor: Prof. Ho Seong Hwang, Prof. Jubee Sohn, Prof. Ji-hoon Kim (Supported by LAMP program)	2023 – Present
<b>Project Scientist, ASKAP–FLASH Project</b> - Observing H I 21-cm absorption, Data validation for ASKAP Commissioning and Full Survey	2021 – Present
<b>Postdoctoral researcher, Sydney Institute for Astronomy, The University of Sydney</b> - FLASH wide-field survey to detect H I 21-cm absorption lines toward $0.4 < z < 1.0$ - Supervisor: Prof. Elaine Sadler (Supported by ASTRO 3D program)	2019 – 2023
<b>Research assistant, Yonsei University</b> - Studying H I emission of galaxies in various density environments from void to clusters	2011 – 2013 (Master) / 2013 – 2019 (Ph.D.)
<b>Endeavour visiting researcher at ICRAR/UWA</b> - International Centre for Radio Astronomy Research/University of Western Australia - Awarded Australian Government Endeavour Research Fellowship, Host: Dr. O. Ivy Wong (CSIRO)	2016 – 2017 (7 months)
<b>Advanced schools, observer trainings, research/observation visits:</b> - ATCA/Parkes/LBA training (2016, 2020, 2022, 2023), Pawsey supercomputing training (2019), NRAO 14th synthesis imaging school (2014), Research/observation visits (ATCA, JVLA, GMRT, NRO, FAST, KVN: 2012 – 2023)	

## OBSERVING EXPERIENCE AND SUCCESSFUL PROPOSALS

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**Korean VLBI Network** (90 hours, PI of 2022A\_0286)  
**Australia Telescope Compact Array** (11.5 hours, PI of CX473 + Duty astronomer)  
**Westerbork Synthesis Radio Telescope, 72-m configuration** (96 hours, PI of R14A011)  
**Karl G. Jansky Very Large Array, D-configuration** (7.5 hours, PI of 14A-304)  
**Giant Metrewave Radio Telescope** (20 hours, PI of 25\_034)  
**Co-I projects:** LBA (V631), e-MERLIN (CY12212), JVLA (21A-310), MeerKAT (MKT-22047, MKT-20135), GMRT (43\_078, 43\_076, 40\_096, 40\_092, 36\_002), ATCA (C3515, C3392), NRO 45-m (CG121032, CG112025)

## TEACHING/SUPERVISING EXPERIENCE

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**Student mentoring (2015 – Present):** CSIRO summer student program - Lan Tran (UNSW), PhD students in the FLASH team - Renzhi Su (SHAO, now Zhejiang Lab), Simon Weng (USyd), Emily Kerrison (USyd)  
**Research supervisor at the University of Sydney:** Physics Special Studies Program – Astro (PHYS2921; Semester 1 2023) - Daniel Jian (USyd)  
**Course lecturer/unit coordinator at the University of Sydney:** Data Science in Astronomy: Algorithms (OLET1618; Semester 1 and 2 2020)  
**Teaching Assistant at Yonsei University:** Astrophysics II (Fall 2012), Radio astronomy (Spring 2012), Understanding of Space (Fall/Spring 2011)

## ORAL PRESENTATIONS (SELECTED, LAST 5 YEARS)

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**ATNF Colloquium, CSIRO-Marsfield, Sydney, Australia, Sep 2023** (in-person)  
**The evolution of gas in and around galaxies workshop, Stanley, USA, July 2023** (in-person)  
**2023 ACAMAR workshop: Gas in galaxies, Perth, Australia, July 2023** (invited talk, in-person)  
**Astronomical Society of Australia – ASM, Australia, July 2023/July 2021** (in-person/remote)  
**IAU General Assembly 2022 Division J/Symposium 373, Busan, South Korea, Aug 2022** (in-person/e-talk)  
**2022 ASTRO 3D Science Meeting, Melbourne, Australia, June 2022** (in-person)  
**SIFA Morning Tea talk, University of Sydney, Sydney, Australia, Mar 2022/June 2021/July 2020** (remote)  
**2021 ASTRO 3D Science Meeting, Virtual, Australia, Sep 2021** (remote)  
**East-Asia SKA workshop, Japan, May 2021** (remote)  
**ATNF Co-learnium, CSIRO-Marsfield, Sydney, Australia, Jan 2021** (remote)  
**Meeting of the American Astronomical Society (236th/233rd), USA, June 2020/Jan 2019** (remote/in-person)

## SERVICE AND OUTREACH (SELECTED)

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**ATNF TAC:** Australia Telescope National Facility Time Assignment Committee, 2023 – 2026  
**Session chair at conferences:** “ACAMAR workshop: Gas in galaxies”, “2023 Astronomical Society of Australia - Annual Science Meeting”, “IAU General Assembly Division J Galaxies and Cosmology”, 2022 – 2023  
**Local organizer:** Co-organizer of weekly SIFA Morning Tea, University of Sydney, 2022  
**Science organizer & Session chair:** SOC and Session chair for “2021 ASTRO 3D Science Meeting”, 2021  
**Local organizer:** University of Sydney node coordinator for ASTRO 3D NSW Nodes Monthly Meeting, 2021  
**Duty Astronomer:** ATCA duty astronomer, Oct 2020  
**Mentoring for juniors:** Korea Foundation for Woman in Science/Engineer/Technology (WISET), 2018 – 2019  
**Global mentoring for career development:** WISET and General Electrics, 2018  
**Local organizer:** LOC for “SKA in Seoul on H I Science” conference, 2015  
**Volunteering (translation/editing):** Africa-Asia Destitute Relief Foundation (ADRF), 2015  
**Public outreach:** Yonsei astronomy public outreach activities (“Byul-a-rum”), 2008 – 2009  
**Volunteering (teaching):** Chungam community child center, 2007 – 2008

## GRANTS, AWARDS, AND SCHOLARSHIPS

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**Research Travel Grant:** Korea Foundation for Woman in Science/Engineer/Technology (WISET), 2018  
**Award for Student Poster Competition:** “Yonsei Astro Poster Jamboree”, Yonsei University, 2017  
**Endeavour Research Fellowship:** Australian Government, 2016  
**BK21/BK21 Plus Scholarship:** National Research Foundation of Korea, 2011 – 2012, 2013 – 2016  
**Teaching/Research Assistantship:** Yonsei University, 2011 – 2012  
**Honors:** Yonsei University, 2010  
**Truth Scholarship (University Designated):** Yonsei University, 2009 – 2010  
**Yonsei Internal/External Scholarship:** Yonsei University, 2009

## PROGRAMMING SKILLS

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**Languages:** Python, HTML, Fortran, LaTeX, IDL (basic), Matlab (basic), C (basic)

**Astronomical data processing tools:** CASA, MIRIAD, AIPS, Karma, GIPSY, SoFiA, IRAF, DisPerSE, Fv

## COLLABORATIONS/MEMBERSHIPS

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ASKAP—FLASH (First Large Absorption Survey in H I), ASKAP spectral line WG (ASKAP spectral line and data validation working group), ASTRO 3D (The ARC Centre of Excellence for All Sky Astrophysics in 3 Dimensions), BUDHIES (Blind Ultra Deep H I Environmental Survey), SKA-KOREA WG (SKA-KOREA Science Working Group - H I science), VERTICO (Virgo Environment Traced In CO), VIVA (VLA Imaging of Virgo in Atomic gas), ASA (Astronomical Society of Australia), IAU (International Astronomical Union Junior Member), KAS (Korean Astronomy Society), WISET (Korea Foundation for Woman in Science/Engineer/Technology)