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CURRENT POSITION/EMPLOYMENT

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|---|--------------------|
| ASKAP–FLASH Survey Project Scientist | Oct 2021 – Present |
| ASKAP–FLASH (First Large Absorption Survey in H I) Survey Science Team, Australia | |
| ASTRO 3D Postdoctoral Research Associate | Sep 2019 – Present |
| The University of Sydney, Australia (Supervisor: Prof. Elaine Sadler) | |

RESEARCH INTERESTS

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

EDUCATION

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| Ph.D. in Astronomy, Yonsei University, South Korea | Aug 2019 |
| - Thesis: The Impact of Large-scale Environments on Galaxy Evolution: Insights from the Neutral Hydrogen Gas in Galaxies Inside and Outside of the Virgo Cluster | |
| - Thesis Committee: 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) | |
| M.S. in Astronomy, Yonsei University, South Korea | Feb 2013 |
| - Thesis: Diagnostics to Probe Environmental Effects on Late-type Galaxies in the Virgo Cluster | |
| - Thesis Committee: Prof. Aeree Chung (Yonsei; Supervisor), Prof. Yong-Ik Byun (Yonsei), Prof. Soo-Chang Rey (CNU) | |
| B.S. in Astronomy, Physics (double major), Yonsei University, South Korea | Feb 2011 |

RESEARCH EXPERIENCE AND ADVANCED EDUCATION

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|---|--|
| Project Scientist, ASKAP–FLASH Project | 2021 – Present |
| - Observing H I 21-cm absorption, Data validation for ASKAP Commissioning and Full Survey | |
| Postdoctoral researcher, The University of Sydney | 2019 – Present |
| - FLASH wide-field survey to detect H I 21-cm absorption lines toward $0.4 < z < 1.0$ | |
| Research assistant, Yonsei University | 2011 – 2013 (Master) / 2013 – 2019 (Ph.D.) |
| - Studying H I emission of galaxies in various density environments from void to clusters | |
| Endeavour visiting researcher at ICRAR/UWA | 2016 – 2017 (7 months) |
| - International Centre for Radio Astronomy Research/University of Western Australia | |
| - Awarded Australian Government Endeavour Research Fellowship, Host: Dr. O. Ivy Wong (CSIRO) | |
| Advanced schools, trainings, research/observation visits: | |
| - ATCA observer/DA training (2016, 2020, 2022), 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

- 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

Student mentoring (2015 – Present): CSIRO summer student program - Lan Tran (UNSW), PhD students in the FLASH team - Renzhi Su (SHAO, now Zhejiang), 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)

ATNF Colloquium, CSIRO, 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, 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)

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

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

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

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)