

Yongjung Kim | CV

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Positions

KIAA Fellow <i>Kavli Institute for Astronomy and Astrophysics at Peking University</i> Advisor: Prof. Linhua Jiang	Beijing, China 2019.11 – present
Postdoctoral Fellow <i>Research Institute for Basic Sciences at Seoul National University</i> Advisor: Prof. Myungshin Im	Seoul, Korea 2019.09 – 2019.10

Education

Seoul National University <i>Ph.D. in Astronomy</i> Thesis title: Survey of Faint Quasars at High Redshifts Supervisor: Prof. Myungshin Im	Seoul, Korea 2013.03 – 2019.08
Seoul National University <i>B.S. in Astronomy</i> Minor: Physics	Seoul, Korea 2009.03 – 2013.02

Research Interests

Observational Cosmology with Quasars
◦ High-redshift Quasar Survey with Infrared Medium-deep Survey (IMS)
◦ Contribution of faint quasars to the cosmic reionization and ionizing backgrounds
◦ Growth of the supermassive black holes with their host galaxies at various redshifts
◦ Demography of quasars along the cosmic time
◦ Multi-wavelength surveys (participating in IMS, DESI, & CSST)

Research Grants

The 2020 China Postdoc Science Special Grant <i>Funded by China Postdoctoral Science Foundation (\$26,000)</i> Subject: Quasar and Host Galaxy Properties with the Newest Large Survey Data	2020
The 2020 China Postdoc Science General Grant <i>Funded by China Postdoctoral Science Foundation (\$12,000)</i> Subject: Quasar and Host Galaxy Properties with the Newest Large Survey Data	2020
Top 100 Fellowship <i>Postdoc International Exchange Program at PKU (\$7,000)</i> Subject: Enhanced Studies on High-redshift Quasars	2019

Honors and Awards

Scholarship for Creative Academic Performance <i>Brain Korea 21 Program for Leading Universities and Students as a BK fellow (\$ 58,000)</i> awarded by National Research Foundation of Korea	2013 – 2019
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Academic Excellence Scholarship <i>Partial tuition scholarship (\$2,000)</i> awarded by Seoul National University	2014, 2015
SNU in Global Research Awards <i>2nd place</i> awarded by Office of International Affairs at Seoul National University	2013
Best Poster Presentation Awards at the 2012 Fall KAS Meeting <i>1st place</i> awarded by Korean Astronomical Society	2012
Lotte Scholarship <i>Full tuition scholarship (\$5,000)</i> awarded by Lotte Foundation	2012
Presidential Science Scholarship <i>Full tuition scholarship (\$10,000)</i> awarded by National Research Foundation of Korea	2009 – 2010

Observational Experience

Classical Observations

Magellan Baade 6.5 m Telescope <i>IMACS & FIRE</i> 2015 January 18-19, September 11-13; 2016 December 3-5; 2018 September 9-10 (10 nights)	Las Campanas Observatory
Otto Struve 2.1 m Telescope <i>SQUEAN & CQUEAN</i> 2014 June 3-8, November 3-9; 2015 June 19-28; 2016 July 25-28; 2017 February 1-11, April 19-26, September 16-24, December 26-31; 2018 April 16-25; 2019 February 5-14 (81 nights)	McDonald Observatory
Maidanak 1.5 m Telescope <i>SNUCAM</i> 2013 August 2-7 (6 nights)	Maidanak Observatory

Observations awarded as PI

Palomar 200 inch Telescope <i>DBSP (Remote)</i> 2 nights in 2020B, 2 nights in 2021A	Palomar Observatory (Telescope Access Program)
James Clerk Maxwell Telescope <i>SCUBA-2</i> 9.00 hr in 2018A	East Asian Observatory
Gemini 8 m Telescopes <i>GMOS-N, GMOS-S, & FLAMINGOS-2</i> 9.00 hr in 2016B; 13.00 hr in 2017B; 7.92 hr in 2018A; 14.00 hr in 2018B; 10.14 hr in 2019A; 6.9 hr in 2020A	Gemini Observatory (K-GMT Science Program)
Atacama Large Millimeter/submillimeter Array <i>12m Arrays</i> 3.6 hr in Cycle 4; 2.6 hr in Cycle 5	

Observations awarded as Co-PI

Gemini 8 m Telescope <i>GMOS-S</i> 1 night in 2015A; 6.70 hr in 2016A; 24.00 hr in 2017A (for thesis; PI: Myungshin Im)	Gemini Observatory (K-GMT Science Program)
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Outreach and Other Experiences

KIAA-DoA Seminar Committee Organizing seminar talks at KIAA & DoA at PKU	2021
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PKU Lunch Talk Committee*Organizing lunch talks at PKU*

2020

Technical Research Personnel*Serving duty on Korean military service*

2016 – 2019

Lecturer for International Astronomy Olympiad (IAO) students in Korea*Subject: Basic and Application of Observational Astronomy*

2017

Teaching assistant & lecturer for undergraduate class*Astronomical Observation and Lab (1 semester); Astronomy Lab (1 year)*

2013 – 2014

Undergraduate internship*Center for the Exploration of the Origin of the Universe (CEOUI) at SNU*

2012 – 2013

*Subject: The Red Objects in the GRB 100205A Field**Supervisor: Prof. Myungshin Im*

Computer Skills

Programming: IDL (fluent), PYTHON (fluent), R (basic)**Data Analysis:** IRAF, SEXTRACTOR, SWARP, SCAMP, CASA, GALFIT, TOPCAT, etc.**Others:** L^AT_EX, Microsoft Office, Adobe Photoshop, etc.

Academic References

Professor Myungshin Im◦ mim@astro.snu.ac.kr, +82-2-880-6585

◦ Department of Physics and Astronomy, Seoul National University, Korea

Professor Linhua Jiang◦ jiangKIAA@pku.edu.cn, +86-10-62755783

◦ Kavli Institute for Astronomy and Astrophysics, Peking University, China

Publications

Refereed Publications- 14 in total (7 as first author, 7 as co-author) [Link to ADS Library](#)

14. **Kim, Y.** & Im, M., 2021, ApJL, 910, 11: *Pure Density Evolution of the Ultraviolet Quasar Luminosity Functions at $2 \lesssim z \lesssim 6$*
13. **Kim, Y.**, Im, M., et al. 2020, ApJ, 904,111: *The Infrared Medium-deep Survey. VIII. Quasar Luminosity Function at $z \sim 5$*
12. **Kim, Y.**, & Im, M. 2019, ApJ, 879, 117: *High Star Formation Rates of Low Eddington Ratio Quasars at $z \gtrsim 6$*
11. **Kim, Y.**, Im, M., et al. 2019, ApJ, 870, 86: *The Infrared Medium-deep Survey. VI. Discovery of Faint Quasars at $z \sim 5$ with a Medium-band-based Approach*
10. **Kim, Y.**, Im, M., et al. 2018, ApJ, 855, 138: *The Infrared Medium-deep Survey. IV. The Low Eddington Ratio of A Faint Quasar at $z \sim 6$: Not Every Supermassive Black Hole is Growing Fast in the Early Universe*
9. **Kim, Y.**, Im, M., et al. 2015, ApJL, 813, 35: *Discovery of a Faint Quasar at $z \sim 6$ and Implications for Cosmic Reionization*
8. **Kim, Y.**, Im, M., et al. 2015, PKAS, 30, 463: *Newly Discovered Footprints of Galaxy Interaction around Seyfert 2 Galaxy NGC 7743*
7. Shin, S., Im, M., **Kim, Y.**, et al. 2020, ApJ, 893, 45: *The Infrared Medium-deep Survey. VII. Faint Quasars at $z \sim 5$ in the ELAIS-N1 Field*
6. Lee, S.-K., Im, M., ..., and **Kim, Y.** 2019, MNRAS, 490, 135: *More connected, more active: galaxy clusters and groups at $z \sim 1$ and the connection between their quiescent galaxy fractions and large-scale environments*
5. Im, M., Choi, C., ..., **Kim, Y.**, et al. 2019, JKAS, 52, 11: *Intensive Monitoring Survey of Nearby Galaxies (IMSNG)*
4. Jeon, Y., Im, M., Kim, D., **Kim, Y.** et al. 2017, ApJS, 231, 16: *The Infrared Medium-deep Survey. III.*

Survey of Luminous Quasars at $4.7 \leq z \leq 5.4$

3. Kim, J.-W., Im, M., ..., **Kim, Y.** et al. 2016, ApJ, 821, 10: *Discovery of a Supercluster at $z \sim 0.91$ and Testing the Λ CDM Cosmological Model*
2. Jeon, Y., Im, M., ..., **Kim, Y.** et al. 2016, JKAS, 49, 25: *The Infrared Medium-Deep Survey. V. A New Selection Strategy for Quasars at $z > 5$ Based on Medium-Band Observations with SQUEAN*
1. Karouzos, M., Im, M., ..., **Kim, Y.** et al. 2014, ApJ, 797, 26: *The Infrared Medium-Deep Survey. II. How to Trigger Radio AGNs? Hints from their Environments*

Conferences

Invited Talks

- "Hunting for Faint High-redshift Quasars with Infrared Medium-deep Survey", K-GMT Science Program Users Meeting 2020, On-line, 2020, November 19-20.
- "Discoveries and Properties of High-redshift Quasars with IMS", Science and Evolution of Gemini Observatory 2018, San Francisco (USA), 2018, July 22-26.

Selected Talks

- "Quasar Luminosity Function at $z \sim 5$ with IMS", Summer All Zoom Epoch of Reionization Astronomy Conference (SAZERAC), On-line, 2020, July 6-9.
- "High Star Formation Rates of Low Eddington Ratio Quasars at $z \gtrsim 6$ ", Cosmic Evolution of Quasars: from the First Light to Local Relics, Beijing (China), 2019, October 21-25.
- "IMS J2204+0112, a Low Eddington Ratio in the Epoch of Reionization", Extremely Big Eyes on the Early Universe at Kavli IPMU, Tokyo (Japan), 2019, March 25-29.
- "The Low Eddington Ratio of IMS J2204+0112, a Faint Quasar at $z \sim 6$ ", Extremely Big Eyes on the Early Universe at UCLA, Los Angeles (USA), 2019, January 28 - February 1.
- "Discovery and Properties of IMS J2204+0112, a Faint Quasar with Low Eddington Ratio at $z \sim 6$ ", K-GMT Science Program Users Meeting 2018, Daejeon (Korea), 2018, February 26-27.
- "High- z Quasar Survey with IMS: Are Quasars Growing Fast in the Early Universe?", East-Asia AGN Workshop 2017, Kagoshima (Japan), December 4-6.