Janik Karoly
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Job Positions

Postdoctoral Research Associate (Supervisor: Dr. Kate Pattle) *Apr. 2024 – Present*
University College London, London UK

Education

Jeremiah Horrocks Institute, University of Lancashire, Preston UK *Sep. 2020 – Mar. 2024*
Astronomy and Astrophysics PhD in Observational Star Formation – Moses Holden Fellow

B.S. Santa Clara University (SCU), Santa Clara, CA (**GPA: 3.90**) *Sep. 2016 – June 2020*
College of Arts and Sciences:
Physics Major (**GPA: 3.96**), Political Science Minor, SCU Honors Program Graduate

Invited Talks

- Invited seminar at Liverpool John Moores University, Liverpool, UK, 08 Oct. 2025. *Tracing the Magnetic Architecture of the Galactic Center: Magnetic Fields Aligned with Orbital Streamers*
- Invited colloquium speaker at the Argentine Institute of Radio Astronomy, Buenos Aires, Argentina, 31 Mar. 2025. *Submillimeter Dust Polarimetry: Illuminating the Magnetic Fields in our Galaxy – from Low-mass Molecular Clouds to the Galactic Center*.
- Invited speaker at the MPIfR Science with APEX, Ringberg Castle, Germany, 19-22 Jan. 2022. *A New MKID Continuum Camera with Polarization Capabilities for the JCMT*
- Invited Seminar at **East Asian Observatory (JCMT)**, Hawaii, USA, 02 Sept. 2022. *An Overview of BISTRO Science and a Look Ahead at BISTRO-3.*

Telescope and General Astronomy Experience

I have 25 papers total, with **4 first-author,** 6 second/third-author papers and an **h-index of 8**
I organized and hosted the 2025 JCMT Summer School at UCL, September 8-9th 2025 (20 people).
I am a member of the BISTRO (**B**-Fields **I**n **ST**ar-Forming **R**egion **O**bservations) large program at the JCMT and **lead** of the BISTRO Galactic Center Team (20+ members). I am also a **member of the MagMaR** (Magnetic Fields in Massive Star-forming Regions) ALMA survey and of **ACES** (ALMA CMZ Exploration Survey).
I have visited the James Clerk Maxwell Telescope (JCMT) as a **guest observer and have submitted 10 proposals** to JCMT as PI that have been accepted and awarded telescope time for a total of 60 hours **(~$120,000)**. I have also participated in the **scientific evaluation of JCMT proposals** as requested by the JCMT TAC. I have **submitted proposals to ALMA** as PI which included **reviewing and grading** ALMA proposals as part of their peer-review process. I have also **applied for and was awarded** SALT time from part of guaranteed telescope time at UCLan.
I am also a member of the team **developing the next-generation MKID camera** on JCMT.

Supervisor Roles:

- Supervised high school students during a summer research project at UCL as part of the Astro-Shift25 initiative (Summer 2024 & 2025)
- Supervised two summer research students at UCL from In2research
- Second supervisor to MSc students at UCL (24/25, 25/26)

General Posters and Talks

- Poster at **Stellar Origins 2025** Conference, Vienna, Austria, Sept. 2025
- Talk at **National Astronomical Meeting**, Durham, England, July 2025.
- Talk at **European Astronomical Society**, Cork, Ireland, June 2025.
- Talk at **Armagh Galactic Star Formation Workshop**, Armagh, Northern Ireland, Sept. 2024.
- Talk at **National Astronomical Meeting**, Hull, England, July 2024.
- Talk at **RAS Meeting: New Eyes on the Cold Universe**, London, UK, Nov. 2023.
- Talk at **National Astronomical Meeting**, Cardiff, Wales, July 2023.
- Poster at **National Astronomical Meeting**, Cardiff, Wales, July 2023.
- Talk at **JCMT Users Meeting**, Universities College London, June 2023.
- Poster at **National Astronomical Meeting**, Warwick, UK, July 2022.
- Seminar at **Eddington Astronomical Society**, Kendal, UK, Jan. 2023.
- Talk at the **SOFIA School 2022**: Understanding mid and far-IR data, online, Feb. 2022.
- Recorded talk at **SOFIA Science Center Workshop**, June 2021.
- Seminar at the **SOFIA Science Center/NASA Ames**, California, USA, September 2019.

Funding Awards

- **Awarded £1,000** in grant money from UCL Doctoral School and **secured matched funding** from STFC funds for 2025 JCMT Summer School
- UKRI Research England QR funding at UCLan - **£2400** for outreach at Alston Observatory

Astronomy Schools

- Attended two ALMA Science Workshops in the UK
- Attended the 2nd NCTS International Astronomy Winter School on Magnetism in Star-forming and Galactic Environments in Taipei, Taiwan
- Attended the 2024 European Radio Interferometry School (ERIS) in Granada

Previous Research Experience

NASA Ames Research Center, SOFIA Science Center

Determining excitation temperature across ridge in IC63 *June 2020 – Sep. 2020*

- Worked with reduced **SOFIA/EXES** observations of H_2 transitions to determine temperatures in the IC 63 PDR across a ridge and **mentored undergraduate students** in their projects

Studying the magnetic field in the starless core L183 *June 2019 – Sep. 2019*

- Reduced sub-millimeter polarimetry observations from **JCMT** to investigate the role of magnetic fields in star formation in L183

Honors and Awards

- John B. Drahmann Prize (Santa Clara University)
    - "awarded to the graduating physics major who exemplifies the hard-working and earnest values of John B. Drahmann, longtime dean of sciences and professor of physics."
- Fox Fellowship Recipient (Summer 2018 & 2019)
    - Physics Department undergraduate research funding award

Employment

- University College London *Oct. 2024 – Present*
  - Tour guide at UCL Observatory
- Universities Space Research Association *June 2020 – Sep. 2020*
  - 3-month contract to continue previous work and start new projects (see above)
- University of Lancashire *Sep. 2020 – Mar. 2024*
  - **Grader** for undergraduate Physics and Astrophysics modules, **lab tutor** for 1st year physics labs, **lab instructor** for 3rd year physics lab and **astronomy outreach worker** at Alston Observatory
- Santa Clara Physics Department *Apr. 2018 – June 2020*
  - **Grader** for physics classes (class sizes: 40-60 students). **Led review sessions** for first year students before final exams. **Tutored** undergraduate students in physics individually (1-on-1, appointment format) and ran drop-in tutoring sessions

Community/Outreach

- Tutored high school and undergraduate students through the In2research and Astro-Shift25 programs while at UCL
- Delivered 10+ science talks to students aged 5-16 as part of the outreach program at University of Lancashire
- Led tours of Alston Observatory (University of Lancashire) for school and private groups
- Led tours of the UCL Observatory for school and private groups
- Organized the summer postgraduate seminar series for two years at UCLan
- Organized the University of Lancashire's Physics and Astronomy Department's contribution to Lancashire Science Festival (Oct. 2021 & May 2024)