

# JOSHUA S. SPEAGLE (沈佳士)

Statistical Sciences | Astronomy & Astrophysics

University of Toronto

[joshspeagle.github.io](https://joshspeagle.github.io) | [j.speagle@utoronto.ca](mailto:j.speagle@utoronto.ca)

## EQUITY, DIVERSITY, AND INCLUSION PHILOSOPHY

---

For hundreds of years, explicit and implicit discrimination have barred racialized and marginalized individuals from participating fully and freely in science. As scientists and people, **we must create a community in which all members feel that their diverse backgrounds are an integral part of what it means to be a scientist** rather than something that excludes them from the profession.

As the US-born son of a Chinese immigrant that has spent a substantial portion of my life living abroad in China, Japan, and most recently Canada, **I have deep, personal connections to international and immigrant experiences**. This is mirrored in my professional career where my friends, colleagues, and collaborators span many cultures and countries. I aim to bring this experience and empathy with me when pursuing equity, diversity, and inclusion (EDI) initiatives within the diverse, international communities we inhabit.

My efforts to improve EDI in Science, Technology, Engineering, and Mathematics (STEM) fields span several channels:

1. **EDUCATION:** To help create and/or serve on committees to review degree requirements, course offerings, curricula, and teaching practices with the goal of further diversifying the undergraduate and graduate student body within STEM.
2. **TRAINING:** To help establish programming and data science programs targeted towards racialized and marginalized communities in STEM.
3. **SUPPORT:** To create and grow specialized funding streams to be used specifically for EDI-related activities, such as establishing targeted fellowships or supporting professional development programs.
4. **COMMUNITY:** To improve ways that departments can strengthen representation within the academic STEM community through changes to admissions, hiring, and culture, while also building substantive and long-lasting partnerships with organizations and initiatives working with underrepresented groups in post-secondary education.
5. **OUTREACH:** To ensure departments have a presence at conferences, workshops, and networking events focused on marginalized communities in

STEM, such as events held by organizations like the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS).

6. **DATA:** To expand and improve the collection of data on representation, inclusion, climate, salary, outcomes, and other topics, along with developing analysis frameworks to analyze them in a transparent and equitable manner.
7. **REPRESENTATION:** To make EDI a core organizing principle around which academic departments function, including developing frameworks that build on targeted EDI goals to guide organizers, speakers, and attendees when planning department-related activities such as colloquia or workshops.

## PAST EXPERIENCE

---

**I have engaged with EDI initiatives throughout my academic career.** Over the summers of 2017-2019, I taught students from marginalized backgrounds as part of the Banneker Institute at Harvard University, including developing and (co-)teaching a two-week intensive curriculum to introduce them to computer programming and data analysis. This helped provide them with skills and confidence to tackle problems related to their own summer and future research projects.

During my graduate studies at Harvard University in the Department of Astronomy, I participated in multiple EDI initiatives with other students including:

- establishing a mental health survey within the Department,
- running workshops to address long-standing peer-to-peer sexual harassment issues, and
- coordinating a set of actionable, student-led EDI proposals co-written and co-signed by >90% of the student body.

These led to concrete changes in the Department of Astronomy's operating structure, including opening membership on academic committees to graduate students to allow for shared responsibility in decision-making.

At the University of Toronto, as a member of the 2021 Graduate Admission Committee in the David A. Dunlap Department of Astronomy & Astrophysics (DADDAA) I successfully pushed to have a more equitable review process and to consider a more diverse set of candidates for admission.

Since 2021, I also served on the committee that helped organize and run the Summer Undergraduate Research Program (SURP) jointly hosted by the DADDAA, the Dunlap Institute for Astronomy & Astrophysics (Dunlap), and, prior to 2021, the Canadian Institute for Theoretical Astrophysics (CITA). In addition to helping manage one of the largest summer astronomy research programs in Canada with 30+ participants over

16 weeks, I also play a key role in trying to build a sense of community among participants by planning and organizing events such as an end-of-summer poster competition as well as leading data collection efforts to monitor outcomes and improve the program going forward. I hope to continue building on efforts to make the program more accessible, establish an alumni network, and open participation to international students.