

# Isaiah Tristan

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## EDUCATION

Rice University, Houston, TX  
Bachelor of Science in Astrophysics  
GPA: 3.51

Graduation Date: May 12, 2018

## RESEARCH EXPERIENCE

### Researcher

September 2017 - Present

Rice University

- Currently working under Dr. Andrea Isella on determining if asymmetries in protoplanetary disks could be caused by interactions with neighboring stars
- Presented an introductory presentation of my research concept in my Undergraduate Research Seminar class

### Laboratory Assistant

June 2017 - August 2017

Texas A&M University

- Worked under Dr. Don Collins on a multi-year project through the Atmospheric Science REU program
- Worked with a team to refine a cloud chamber used to study in-cloud production of aqueous secondary organic aerosols
- Hands-on experience with mechanical and electrical work
- Analyzed aerosol data collected during experiments in order to make changes to the methods or instruments used
- Presented a research poster at the A&M Summer Geosciences Summer Poster Session

### Research Assistant

June 2016 - August 2016

The University of Texas at Austin

- Worked under Brendan Bowler on a solo project through the TAURUS REU Program
- Developed a method and code for finding and validating widely-separated co-moving companions to target objects in order to find host stars of free-floating exoplanets
- Took observational data at the McDonald Observatory in Fort Davis, Texas, when needed data was missing
- Gave oral presentations to the Departments of Astronomy at both UT Austin and Rice University

### Independent Research

August 2016 - Present

- Continuing searches for potential host stars and working on confirming current candidates with Dr. Bowler

## WORK EXPERIENCE

### Teaching Assistant for Stars, Galaxies, and the Universe (ASTR 201)

August 2016 - Present

- Graded homework and essays for classes of 100-150 students (with 1 other TA)
- Held weekly office hours to help students with homework. Student turnout ranged from 5 to 30 students per session
- Tutored students one-on-one when requested. This involved help with algebra and physics as related to homework and discussions on more advanced topics in astronomy

## CONFERENCE PRESENTATIONS

*"A Search for Host Stars of Free-Floating Planetary Mass Objects"*

I. T. Tristan, B. P. Bowler, 2017, AAS 229th Meeting at Grapevine, Texas

*"Creating and Sustaining a Cloud in a Chamber"*

I.T. Tristan, C. Milan, D. R. Collins, 2017, A&M Summer Geosciences Summer Poster Session

*"Finding Host Stars for Free-Floating Exoplanets"*

I. T. Tristan, B. P. Bowler, 2017, 7th Texas Astronomy Undergraduate Symposium at Houston, Texas

## PUBLICATIONS

*"Planets Around Low-Mass Stars (PALMS). VI. Discovery of a Remarkably Red Planetary-Mass Companion to the AB Dor Moving Group Candidate 2MASS J22362452+4751425"*

B. P. Bowler, M. C. Liu, D. Mawet, H. Ngo, L. Malo, G. N. Mace, J. N. McLane, J. R. Lu, I. T. Tristan, S. Hinkley, L. A. Hillenbrand, E. L. Shkolnik, B. Benneke, W. M. J. Best, 2016, *accepted for publication in AJ*

## SKILLS

Experienced in Mathematica and Python  
Able to work with MATLAB, R, IDL, IRAF, and HTML

Familiar with MS Word/Pages, MS Excel/Numbers, MS PowerPoint/Keynote, Logic Pro X, and Final Cut Pro X

## **EXTRACURRICULAR ACTIVITIES**

### **Astrobiology Journal Club, Vice President**

July 2017- Present

- Assists the president in planning and choosing topics for meetings, where members discuss current proposals and research regarding the new and growing field of life outside of Earth

### **Rice Anime Club, Secretary**

June 2017 - Present

- Reformed the club from a 'sit-and-watch-tv' club. It now has public nights, where members try different restaurants and events around town related to Japanese culture or anime, and members attend anime meetings or cons around Houston. We plan to publish a periodical of our member's own stories and/or manga at the end of the school year
- Managed the club's email account (replying to member's suggestions, sending out news emails, etc.)

### **Leadership Coaching Program with the Doerr Institute, Participant**

August 2016 - December 2016

- Attended meetings with a leadership coach who taught about scheduling, balancing workloads, and group dynamics
- Implemented learned leadership skills within study groups (organization, facilitating discussions, etc.)

### **Campanile [Rice's College Yearbook], Writer and Editor**

August 2015 - May 2016

- Wrote stories for events that happened during the school year, edited other's stories, and helped critique graphic designs

### **Queer Resource Center at Rice, Fundraising Committee Member**

February 2015 - May 2015

- Brainstormed ideas and created plans to later be used when raising money for the Queer Resource Center