# S. JEAN FEESER

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## EDUCATION

**Bachelor of Science** | ***Astronomy (Special Honors) and Physics*** GPA: 3.62
University of Texas at Austin May 2021

- Secondary Science (Grades 7-12) Texas Educator Certificate, UTeach Natural Sciences

## WORK EXPERIENCE

**High School Science Teacher** January 2022 – present
Stephen F. Austin High School Austin, TX

- Plans and implements inquiry-based science curriculum (Biology and Advanced Biology, grade 9; Chemistry and Advanced Chemistry, grade 10) with an emphasis on Maker education.
- Attends weekly professional learning committee meetings to engage students in an educational experience that promotes collaboration, self-directed learning, and empathy-driven design thinking.
- Organizes and directs a group of 10 teachers as academy team lead.
- Supervises student organizations, including Student Council, Rocketry Club, and Women in STEM Club.

**High School Biology Teacher** July 2021 – January 2022
KIPP Austin Brave High School Austin, TX

- Planned and implemented inquiry-based science curriculum (Honors Biology, grade 11).
- Attended weekly professional development to improve instruction and classroom management skills.
- Advised and supported 9th grade group in academic and socio-emotional learning.

**Research Assistant** June 2021 – August 2021
TIDES Advanced Summer Research Fellowship Austin, TX

- Completed a supervised research project inferring physical properties of brown dwarfs using low-resolution spectra and data-driven models, the results of which were published in MNRAS.

**Research Assistant** June 2020 – August 2020
Summer Undergraduate Research Fellowship Austin, TX

- Completed a supervised research project determining spectral type to absolute magnitude relationships in twelve bands using a volume-limited sample of brown dwarfs, the results of which were presented at AAS 237.

**Academic Coach** May 2018 – May 2023
GradePower Learning Austin, TX

- Provided academic support for K-12 students in a small group setting (1-3 students).
- Supported students with cognitive and physical learning disabilities.
- Trained new coaches on proper practices and teaching pedagogy.

## PUBLICATIONS

First Author

- **Feeser, S. J.**, Best, W., Sanghi, A., Liu, M. *Updated Spectral Type Polynomials for Ultracool Dwarfs with CatWISE Photometry*. RNAAS, 2022, 6(12), 265.
- **Feeser, S. J.**, & Best, W. *Using old and new approaches: determining physical properties of brown dwarfs with empirical relations and machine learning models*. MNRAS, 2022, 513(1), 516-535.

Contributing Author

- Zhou, T., Theissen, C., Burgasser, A., Best, W., **Feeser, S. J.** (submitted for publication). *Spectral Typing with Artificial Intelligence: Classifying Low-Resolution Near-Infrared Spectra of Standard M/L/T Dwarfs*.

## Presentations

- Feeser, S. Jean. *Using Old and New Approaches: Determining Physical Properties of Brown Dwarfs with Empirical Relations and Machine Learning Models*. College of Natural Sciences Undergraduate Research Forum, University of Texas at Austin, 2022.
- Feeser, S. Jean. *Using Old and New Approaches: Determining Luminosities of Brown Dwarfs with Spectral Type Polynomials and Machine Learning*. College of Natural Sciences Undergraduate Research Forum, University of Texas at Austin, 2021.
- Feeser, S. Jean, & Best, William M. J. *Using Old and New Approaches: Determining Luminosities of Brown Dwarfs with Spectral Type Polynomials and Machine Learning*. American Astronomical Society meeting #237, 2021, id. 333.02.

## Awards and Fellowships

**CSMA Micro-Grant** Nov 2023
American Astronomical Society

**Aspire Award for Research Excellence** Apr 2021
University of Texas College of Natural Sciences

**John W. Cox Endowed Scholarship** May 2020
John W. Cox Endowment for the Advanced Studies in Astronomy

**AISD Future Teacher Scholarship** Sep 2019
University of Texas UTeach Natural Sciences

**Robert Noyce Scholarship** Apr 2019
National Science Foundation

**Amanda Howze Amsler Endowed Presidential Scholarship** Sep 2019
University of Texas College of Education

**Charles Butt Scholarship for Aspiring Teachers** Apr 2018
Charles Butt Foundation

**Jane Sanford Beasley Scholarship** Oct 2017
University of Texas UTeach Natural Sciences

**Kodosky Foundation Scholarship** Sep 2017
University of Texas UTeach Natural Sciences

**Segal AmeriCorps Education Award** Aug 2017
Americorps National Service Trust

## Volunteer and Outreach

**Explore UT with UTeach Maker** Feb 2020
Designed Maker activities and workshops for campus visitors Austin, TX

**Museum Day with MathHappens** Sep 2019
Led educational activities in mathematics designed for children Austin, TX

**Austin Maker Faire with UTeach Maker** May 2019
Presented to educators about Maker lessons in science and mathematics Austin, TX

**"College 101" Presentation Day** Nov 2017
Addressed high school students about science and higher education Austin, TX

**Part-time AmeriCorps Member** May – Aug 2017
Served high-needs students in the local Austin community Austin, TX

**McDonald Observatory Volunteer** Jul – Aug 2015; Apr 2016
Worked as a telescope operator, tour guide assistant, and Information Desk attendant Fort Davis, TX

## SKILLS

**Languages**: English (Native), Spanish (Intermediate)
**Programming/Software**: Python, MATLAB, Mathematica, C++, MESA, LaTeX, ML, CAD
**Other**: Microsoft Office, Google Drive, web design, written and oral communication

## REFERENCES

**Dr. Will Best**, University of Texas at Austin (wbest@utexas.edu)
**Dr. Caroline Morley**, University of Texas at Austin (cmorley@utexas.edu)
**Dr. Michael Montgomery**, University of Texas at Austin (mikemon@astro.as.utexas.edu)
**Dr. Don Winget**, University of Texas at Austin (dew@astro.as.utexas.edu)