

S. JEAN FEESER

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EDUCATION

- Doctor of Philosophy** | *Astronomy and Astrophysics, Computational Science Minor* Expected May 2030
Pennsylvania State University
- Bachelor of Science** | *Astronomy (Special Honors) and Physics* May 2021
University of Texas at Austin
- Secondary Science (Grades 7-12) Texas Educator Certificate, UTeach Natural Sciences

WORK EXPERIENCE

- High School Science Teacher** January 2022 – June 2024
Stephen F. Austin High School Austin, TX
- Planned and implemented inquiry-based science curriculum (Biology and Advanced Biology, grade 9; Chemistry and Advanced Chemistry, grade 10) with an emphasis on Maker education.
 - Attended weekly professional learning committee meetings to engage students in an educational experience that promotes collaboration, self-directed learning, and empathy-driven design thinking.
 - Organized and directed a group of 10 teachers as academy team lead.
 - Supervised student organizations, including Student Council, Rocketry Club, and Women in STEM Club.
 - Advised and supported 9th and 10th grade students in academic and socio-emotional learning.
- 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.** *Spectral Typing with Artificial Intelligence: Classifying Low-Resolution Near-Infrared Spectra of Standard M/L/T Dwarfs*. RNAAS, 2024, 8(4), 102.

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

Bunton-Waller Graduate Fellowship Pennsylvania State University, Graduate School	Aug 2024
Homer F. Braddock Scholarship Pennsylvania State University, Eberly College of Science	Aug 2024
Robert W. Graham Endowed Graduate Fellowship Pennsylvania State University, Graduate School	Aug 2024
CSMA Micro-Grant American Astronomical Society	Nov 2023
Aspire Award for Research Excellence University of Texas College of Natural Sciences	Apr 2021
John W. Cox Endowed Scholarship John W. Cox Endowment for the Advanced Studies in Astronomy	May 2020
AISD Future Teacher Scholarship University of Texas UTeach Natural Sciences	Sep 2019
Robert Noyce Scholarship National Science Foundation	Apr 2019
Amanda Howze Amsler Endowed Presidential Scholarship University of Texas College of Education	Sep 2019
Charles Butt Scholarship for Aspiring Teachers Charles Butt Foundation	Apr 2018
Jane Sanford Beasley Scholarship University of Texas UTeach Natural Sciences	Oct 2017
Kodosky Foundation Scholarship University of Texas UTeach Natural Sciences	Sep 2017
Segal AmeriCorps Education Award Americorps National Service Trust	Aug 2017

VOLUNTEER AND OUTREACH

AstroNight with Penn State Prepared and presented astronomy demonstrations for campus visitors	Oct 2024 State College, PA
Explore UT with UTeach Maker Designed Maker activities and workshops for campus visitors	Feb 2020 Austin, TX
Museum Day with MathHappens Led educational activities in mathematics designed for children	Sep 2019 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