

JARED KOLECKI

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SOUTH BEND, IN 46556

EDUCATION

Fall 2022 - Spring 2027 (Expected) University of Notre Dame South Bend, Indiana
Ph.D in Physics

- Research focus in Astrophysics

Fall 2017 - Fall 2020 The Ohio State University Columbus, Ohio
B.S. in Astronomy & Astrophysics - 3.4 Major GPA

- Minor in Computational and Informational Sciences
- Research Distinction (Thesis: [Measuring Elemental Abundances in Metal-Poor Stars](#))

AWARDS AND HONORS

- The Ohio State University
 - Name and Seal Scholarship: 2020-2021
 - Dean's list: Autumn 2019
 - Maximus Scholarship: 2017-2018, 2018-2019

RESEARCH EXPERIENCE

Aug 2019 - July 2022 The Ohio State University Department of Astronomy Columbus, Ohio
Research Assistant (Advisor: Dr. Ji Wang)

- Analyze stellar spectra for the characterization of known and potential exoplanetary systems
- Develop automated Python frameworks to make analyses faster and more accurate
- Contributing author on papers detailing these analyses

May - July 2020 The Ohio State University Department of Astronomy Columbus, Ohio
Summer Undergraduate Research Program

- Selected competitively out of a pool of students
- Worked on spectral analysis of low-metallicity TESS targets of interest
- Presented research at the SURP Symposium at the conclusion of the program

TALKS AND COLLOQUIA

Oct 18, 2022 Ohio State University: Astronomy 2895 Columbus, Ohio
Graduate School: A Guide for First-Year Undergraduates

- A 45-minute lecture detailing my experiences leading up to and applying to graduate school

July 28, 2020 Summer Undergraduate Research Program Symposium Virtual (Zoom)
Measuring Elemental Abundances in Metal-Poor Stars

- A 5-minute talk on research completed during the Summer Undergraduate Research Program

REFEREED PUBLICATIONS

Xuan, J. W.; Wang, J.; Ruffio, J.; et al (2022), "A Clear View of a Cloudy Brown Dwarf Companion from High-resolution Spectroscopy", *The Astrophysical Journal*, Volume 937, Issue 2, id.54 ([ADS](#))

Kolecki, J. R.; and Wang, J. (2022), "Measuring Elemental Abundances of JWST Target Stars for Exoplanet Characterization I. FGK Stars", *The Astronomical Journal*, Volume 164, Issue 3, id.87 ([ADS](#))

Wang, J., **Kolecki, J. R.**, Ruffio, J., et al. (2022), “Retrieving the C and O Abundances of HR 7672 AB: a Solar-Type Primary Star with a Benchmark Brown Dwarf”, *The Astronomical Journal*, Volume 163, Issue 4, id.189 ([ADS](#))

Ishikawa, H. T., Aoki, W., Hirano, T., et al. (2022), “Elemental Abundances of Nearby M Dwarfs Based on High-Resolution Near-Infrared Spectra Obtained by the Subaru/IRD Survey: Proof of Concept”, *The Astronomical Journal*, Volume 163, Issue 2, id.72 ([ADS](#))

Kolecki, J. R., Wang, J., Johnson, J. A., et al. (2021), “Searching For Transiting Planets Around Halo Stars. I. Sample Selection and Validation”, *The Astronomical Journal* Volume 162, Issue 4, id.125 ([ADS](#))

OTHER RELEVANT EMPLOYMENT EXPERIENCE

Aug 2022 - Present University of Notre Dame South Bend, Indiana
Graduate Teaching Assistant

- Perform office hours, online help for undergraduate-level physics courses

Apr 2021 - May 2022 Huntington Learning Center Lewis Center, Ohio
ACT Prep/Math Tutor

- Teach ACT and SAT math and science concepts and test-taking strategies
- Provide homework and conceptual help for students in high-school level math courses

Aug - Dec 2020 The Ohio State University Department of Astronomy Columbus, Ohio
Instructional Assistant

- Assisted students in weekly online labs, facilitating discussion and answering questions
- Graded student assignments

COURSEWORK HIGHLIGHTS

- Stellar Evolution, Astronomical Observation and Data Analysis
- Quantum Mechanics, Statistical Mechanics, Electricity & Magnetism
- Foundations of Computer Science, Intro to Low-Level Programming

SKILLS

- Python, Wolfram Language (Mathematica), C++, C, Excel