

Tai S. Jespersen

CONTACT

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<https://github.com/TaiJespersen>

EDUCATION

Franklin and Marshall College | BA in Astrophysics Expected May 2026

- Current GPA: 3.95
- Academic honors (Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024)
- Relevant Courses
 - Computational Physics, Galaxies and Cosmology, Modern Physics, Classical Mechanics, Linear Algebra and Differential Equations, Optimization, Probability and Statistics, Multivariable Calculus

Bethesda Chevy Chase High School, MD Aug 2019 - May 2022

Menlo Atherton High School, CA Aug 2018 - May 2019

RESEARCH AND PROFESSIONAL DEVELOPMENT

Franklin and Marshall College

- Research in Astrochemistry Jan 2025 - Present
 - Observational research with Dr. Schmidt studying the systematically lower than expected abundance of sulfur in planetary nebulae

Franklin and Marshall College

- Research in Pulsar Radio Astronomy, NANOSTars Team Leader Jan 2023 - Present
 - Observational research with Dr. Fronefield Crawford leading and mentoring a team as part of the NANOSTars Research and Education Program
 - Analyze surveys such as the Parkes 70-cm, Green Bank 820 MHz, and PALFA Chunk Survey using in house rating software to discover new millisecond and binary pulsars

Franklin and Marshall College

- Research in FRB Radio Astronomy Jun 2024 - Nov 2024
 - Constructed a project and independently assembled a team that filtered data from the GREENBURST search system looking for detections of Fast Radio Bursts (FRBs)

West Virginia University | REU

- Research in Space Physics May 2024 - Jul 2024
 - Worked with Dr. Goodrich to analyze data from satellites in orbit around earth and wrote a package to prepare and run calculations on data
 - Studied electric and magnetic field wave power properties of the Auroral Acceleration Region

Franklin and Marshall College

- Astronomy Preceptor for AST101 Aug 2023 - Dec 2023
 - Assisted the professor with lecture preparations, modifying course material, grading assignments, and providing academic support to students

PEER-REVIEWED AND SUBMITTED PUBLICATIONS

1. Wenke Xia, Fronefield Crawford, Shinnosuke Hisano, Tai Jespersen, Melanie Ficarra, McKenzie Golden, Mia Gironda; Reprocessing of the Parkes 70-cm Survey and Discovery of a New Radio Pulsar in the Large Magellanic Cloud [Submitted]

TALKS AND PRESENTATIONS

- Student Teams of Astrophysics Researchers Teleconference, Feb 2025
- F&M Pre-Research Fair, Oct 2024
- WVU Undergraduate Research Symposium, Jul 2024

- Center for KINETIC Plasma Physics Workshop, Jul 2024
- F&M Spring Student Research Fair, May 2024
- Student Teams of Astrophysics Researchers Teleconference, Feb 2024
- Guest Lecture: Research Presentation on Pulsar Astronomy, Oct 2023

EXTRACURRICULARS

Franklin and Marshall College DIII Rowing

- | | |
|--|---------------------|
| • Captain | Jun 2024 - Present |
| • Oarsman and Social Media Coordinator | Aug 2022 - Jun 2024 |

Awards

- 2024 Empacher-IRCA Scholar Athlete
- 2024 MARC All-Academic Team
- 2023 MARC All-Novice Team

Student Athletic Leadership Council

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|-----------------------|--------------------|
| • Head Representative | Aug 2023 - Present |
|-----------------------|--------------------|

Phi Kappa Psi Penn Eta

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|-------------------------------|---------------------|
| • Executive Board member | Nov 2023 - Jun 2024 |
| • Recruitment Committee Chair | Dec 2023 - Jun 2024 |
| • Scholarship Committee Chair | Dec 2023 - Jun 2024 |

TBC Racing

- | | |
|-----------------------------------|---------------------|
| • Competitive Racing Team Oarsman | Jun 2023 - Aug 2023 |
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Achievements

- Made selections for notable regattas such as US Summer Nationals placing 4th in one event
- Raced internationally in the 139th Royal Canadian Henley placing 2nd in one event

SKILLS

Programming:	Proficient in Python, Experience in Java, Terminal, Git
Software and Tools:	Proficient in Google Sheets and Adobe Photoshop
Other:	Data Analysis, Observational Astronomy, Leadership, Mentoring