

DANIEL JOHNS

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OBJECTIVE

Diligent and dedicated PhD candidate in Astronomy with extensive experience in speckle imaging, wavefront sensing, and optical instrumentation; seeking to leverage advanced research skills and technical expertise in a challenging role in space domain awareness.

WORK EXPERIENCE

Space Systems Engineer

MIT Lincoln Laboratory | Lexington, MA

Dec. 2024 – present

Predict and evaluate the potential impact of threats to space capabilities and develop, analyze, and test novel solutions to ensure the United States' continued use of space for communications, navigation, Earth observation, and other civil and military purposes.

Security Clearance: Top Secret

Fire Control Sergeant

HHBN 28th Infantry Division | Harrisburg, PA

Jul. 2019 – Dec. 2020

Assisted Senior NCOs, field-grade officers, and operations SGM in supervision of all fire control operations in the division; computed and verified accuracy of firing safety data; supervised the performance of operator, crew, and organizational maintenance on section vehicles. Received an Honorable Discharge in Dec. 2022. **Security Clearance: Secret**

Field Artillery Automated Tactical Data System Specialist

HHB 1-109th Field Artillery Regiment | Kingston, PA

Dec. 2014 – Jul. 2019

Served in an M1068 within an M109A6 155MM Field Artillery Battalion, with a world-wide contingency mission; orchestrated fire mission processing, fire support planning, and fire support execution; and performed troubleshooting of AFATDS & CPOF hardware, software, database & communications to ensure continuity between Battalion FDC and Battery FDC computer systems. **Security Clearance: Secret**

EDUCATION

PhD in Astronomy

Georgia State University | Atlanta, GA

Nov. 2024

Investigating hyperspectral speckle imaging, improving methods for wavefront sensing, and building optical turbulence generators, all for space domain awareness, with Dr. Fabien Baron and Dr. Stuart Jefferies. Presented results at AAS Meeting #241, VOLTRON 2024, and AMOS 2023. Awarded Outstanding Junior & Senior Graduate Student in Astronomy awards, 2nd Century Initiative Fellowship, and Remote Sensing for Space Sciences Fellowship; and mentored one laboratory intern and two graduate students.

Select Publications:

- **Monitoring Spacecraft Materials Using Hyper-Spectral Speckle Imaging,** *Johns et. al*, 2024, Accepted to the Journal of Astronomy and Space Sciences (JASS).

- [Performance of an Imaging Shack-Hartmann Wavefront Sensor](#), *Johns et. al*, 2023, Proceedings of the Advanced Maui Optical and Space Surveillance (AMOS) Technologies Conference, 120.

B.S. in Physics/Astronomy

Kutztown University | Kutztown, PA

May 2020

Graduated summa cum laude; performed research and observations of exoplanets and interacting binary stars with Dr. Phill Reed on research-grade telescopes and spectrographs; participated in an NSF-ARES grant working with Dr. Rob Wittenmyer at the University of Southern Queensland on the photometric commissioning of the MINERVA-Australis array; and awarded the Syed R-Ali Zaidi Award for Academic Excellence & Chambliss Academic Achievement Gold Medal.

Select Publications:

- [KELT-23Ab: A Hot Jupiter Transiting a Near-Solar Twin Near the TESS and JWST Continuous Viewing Zones](#), *Johns et. al*, 2019, AJ, 158, 78.
- [Revised Exoplanet Radii and Habitability Using Gaia Data Release 2](#), *Johns et. al*, 2018, ApJS, 239, 14.

SKILLS

- Coding data reduction, data analysis, and image reconstruction software in Julia & Python.
- Building optical instruments for wavefront sensing, adaptive optics, and turbulence generation in a laboratory setting.
- Collecting and reducing observations on research-grade telescopes

REFERENCES

Stuart Jefferies

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Fabien Baron

Georgia State University |
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Phill Reed

Kutztown University |
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