

Daniel A. Yahalomi

✉ daniel.yahalomi@columbia.edu | 🏠 danielyahalomi.com | 🌐 dyahalomi

Education

Columbia University

Candidate for Ph.D. in Astronomy and Astrophysics

New York, NY

2020-

Massachusetts Institute of Technology

B.S. in Physics w/ Minors in Computer Science and Comparative Media Studies

Cambridge, MA

2014-2018

- **Thesis**, Statistical Analyses of Gravitational Microlensing Probability Densities
- **Advisor**, Professor Paul L. Schechter

Research Interests

I study extrasolar planets with a focus on formation, architecture, and habitability. I am also interested in characterizing self-lensing binary star systems to investigate white-dwarf structure models and evolution.

Research Experience

Center for Astrophysics | Harvard & Smithsonian

Astronomer at the CfA with Dr. David Latham as a part of TESS Science Team.

Cambridge, MA

Sep 2018 – Present

Massachusetts Institute of Technology

Undergraduate Researcher studying gravitational microlensing with Professor Paul Schechter.

Cambridge, MA

Jan 2017 – June 2018

NASA Jet Propulsion Laboratory

Summer Intern on Systems Engineering team for the Europa Clipper Mission.

Pasadena, CA

May 2016 – July 2016

Massachusetts Institute of Technology

Undergraduate Researcher on LIGO Mission with Professor Erotokritos Katsavounidis.

Cambridge, MA

March 2015 – Sep 2015

Dartmouth College

Research Assistant on fermibounce cosmology modeling with Professor Stephon Alexander.

Hanover, NH

June 2014 – July 2014

Princeton University

Research Assistant on SuMIRe PFS project with Professor David Spergel.

Princeton, NJ

July 2013 – Aug 2013

Honors & Awards

- **Sigma Xi Associate Member**, Scientific Research Honors Society – 2020-Present.
- **NSF GRFP Honorable Mention** – 2020.
- MIT Water Polo team **Theo St. Francis Award** for leadership, perseverance, and outstanding moral presence on and off the pool deck – 2017.
- Association of Collegiate Water Polo Coaches **All-Academic Superior Team** – 2017.
- Association of Collegiate Water Polo Coaches **All-Academic Superior Team** – 2016.

Publications

First Author Publications

2. **Yahalomi, D. A.** et al. “The Mass of the White Dwarf Companion in the Self-Lensing Binary KOI-3278: Einstein vs. Newton.” *The Astrophysical Journal*, 880, 33 (2019).

1. **Yahalomi, D. A.**, Schechter, P. L., and Wambsganss, J. “A Quadruply Lensed SN Ia: Gaining a Time-Delay...Losing a Standard Candle.” MIT Journal of Undergraduate Research, Fall 2017 – arXiv:1711.07919.

Co-Author Publications

7. Mireles, I. et al. **including Yahalomi D. A.** “TOI 694 b and TIC 220568520 b: Two Low-Mass Companions Near the Hydrogen Burning Mass Limit Orbiting Sun-like Stars” AAS Journals, submitted – arXiv:2006.14019.
6. Beatty, T. G. et al. **including Yahalomi D. A.** “The TESS Phase Curve of KELT-1b Suggests a High Dayside Albedo” AAS Journals, submitted – arXiv:2006.10292.
5. Wong, I. et al. **including Yahalomi D. A.** “Systematic Phase Curve Study of Known Transiting Systems from Year 1 of the TESS Mission” The Astronomical Journal, submitted – arXiv:2003.06407.
4. Dragomir, D. et al. **including Yahalomi D. A.** “Securing the Legacy of TESS through the Care and Maintenance of TESS Planet Ephemerides” The Astronomical Journal, 159, 219 (2020).
3. Diaz, M. R. et al. **including Yahalomi D. A.** “TOI-132 b: A short-period planet in the Neptune desert transiting a V=11.3 G-type star.” Monthly Notices of the Royal Astronomical Society, 493, 973 (2020).
2. Wong, I., et al. **including Yahalomi, D. A.** “Exploring the atmospheric dynamics of the extreme ultra-hot Jupiter KELT-9b using TESS photometry.” The Astronomical Journal, submitted – arXiv:1910.01607.
1. Rodriguez, J., et al. **including Yahalomi, D. A.** “An Eccentric Massive Jupiter Orbiting a Sub-Giant on a 9.5 Day Period Discovered in the Transiting Exoplanet Survey Satellite Full Frame Images.” The Astronomical Journal, 157, 191 (2019).

Talks & Posters

AAS 235th Meeting

Poster: “Discovery of a Warm Jupiter near Resonance with an Exterior sub-Neptune.”

Honolulu, HI

Jan 2020

Princeton Exoplanet Group Meeting

Invited Talk: “Characterizing White Dwarfs in Self-Lensing Binaries, plus a Planet Surprise...”

Princeton, NJ

Nov 2019

Harvard Exoplanet Pizza Lunch

Talk: “Characterizing White Dwarfs in Self-Lensing Binaries, plus a Planet Surprise...”

Cambridge, MA

Nov 2019

Sagan Exoplanet Workshop: Astrobiology for Astronomers

Poster: “Mass of the WD Companion in the Self-Lensing Binary KOI-3278: Einstein vs. Newton.”

Pasadena, CA

July 2019

AAS 233rd Meeting

Talk: “A Dynamical Mass for the White Dwarf in the Self-Lensing Binary KOI-3278.”

Seattle, WA

Jan 2019

MIT Undergraduate Cosmology Workshop

Talk: “A Quadruply Lensed SN Ia: Gaining a Time-Delay...Losing a Standard Candle.”

Cambridge, MA

Aug 2017

AAS HEAD 16th Meeting

Poster: “Using Microlensing to Investigate Macro-Models of the Supernova iPTF16geu.”

Sun Valley, ID

Aug 2017

Columbia Nevis Laboratory

Invited Talk: “Using Microlensing to Investigate Macro-Models of the Supernova iPTF16geu.”

Irvington, NY

June 2017

Manhattan Microlensing Conference

Talk: “Using Microlensing to Investigate Macro-Models of the Supernova iPTF16geu.”

New York, NY

June 2017

Outreach

Harvard-MIT Science Research Mentoring Program

Head of Observing – taught classes & led observing sessions with high school students.

Cambridge, MA

Sep 2018 – Present

Harvard Observing Project

Observer – coordinated and ran weekly observing for undergraduates on 16” Clay Telescope.

Cambridge, MA

Jan 2019 – Present

MIT President’s Advisory Committee

One of Four Undergraduate Representatives on MIT President Reif’s advising committee.

Cambridge, MA

Sep 2017 – June 2018

MIT Committee on Student Life

One of Three Undergraduate Representatives.

Cambridge, MA

Sep 2015 – June 2018

MIT Undergraduate Association Student Support and Wellness Committee

Vice-Chair (2016-2017), Committee Member (2017-2018).

Cambridge, MA

Sep 2016 – June 2018

MIT Physics Department: Intro to Mechanics Review (8.01R).

Undergraduate Teaching Assistant

Cambridge, MA

Jan 2015

Other Experiences

15th European Maccabi Games

USA Water Polo Team Member. Silver Medal Winner.

Budapest, Hungary

Aug 2019

London Marathon

Charity Entry through the “Children of Peru” Foundation.

Cambridge, MA

April 2017

MIT Varsity Water Polo Team

Captain (2017). DIII Eastern Champions (2014, 2016). DI Nationally Ranked 20th (2015).

Cambridge, MA

Aug 2014 – Nov 2017