HODARI-SADIKI JAMES

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Department of Physics and Astronomy, Georgia State University
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RESEARCH INTERESTS

Astrobiobogy, K Dwarf Stars, Stellar Spectroscopy, Stellar Properties, & The Solar Neighborhood

EDUCATION

Ph.D. in Astronomy — *Spring 2023 (Expected)*
Georgia State University — Atlanta, GA

M.S. in Physics with Astronomy Concentration — *2020*
Georgia State University — Atlanta, GA

M.S. in Biomedical Engineering — *2014*
University of Cincinnati — Cincinnati, OH

B.A. in Physics minor Biology — *2012*
Berea College — Berea, KY

WORK EXPERIENCE

Graduate Teaching/Research Assistant — *Aug 2017 - Present*
Georgia State University — Atlanta, GA

CHIRON Data Manager, CTIO/SMARTS 1.5m — *Dec 2018 - Present*
Georgia State University — Atlanta, GA

GRE and SAT Instructor — *Jan 2019 -Jan 2020*
Educational Testing Consultants/University of Georgia — Athens, GA

Lab Technologist — *Mar 2017 - Aug 2017*
Labsolutions — Atlanta, GA

Biomedical Engineer — *Mar 2015 - Dec 2016*
Castle Medical — Smyrna, GA

Graduate Teaching/Research Assistant — *Aug 2012 - Dec 2014*
University of Cincinnati — Cincinnati, OH

Physics Teaching Assistant — *Aug 2009 - May 2012*
Berea College — Berea,KY

GRANTS, SCHOLARSHIPS AND AWARDS

SREB Dissertation Year Award ($20,000) — 2022-2023
Southern Regional Education Board

Provost's Dissertation Fellowship ($15,000) — 2022-2023
Georgia State University

Chambliss Astronomy Achievement Award at AAS 240 — 2022
American Astronomical Society

Graduate Student Scholarship 2020
Georgia State University Alumni Association

Most Inspirational Alumnus Award 2016
Berea College African Students Association

University of Cincinnati SEED Grant recipient 2014
University of Cincinnati

Waldemar Noll Prize in Physics 2012
Berea College

REFEREED PUBLICATIONS

1. The Solar Neighborhood L: Spectroscopic Discovery of K Dwarfs Younger than 1 Gyr and New Binaries within 30 Parsecs
Hubbard-James, H., Lesley, D.X., Henry, T.J., et al., 2022, In Press.

2. The Solar Neighborhood XLVIII: Nine Giant Planets Orbiting Nearby K Dwarfs, and the CHIRON Spectrograph's Radial Velocity Performance
Paredes L. A., Henry T. J., Quinn S. N., Gies D. R., Hinojosa-Goñi R., **James H.S.**, Jao W.-C., et al., 2021, AJ, 162, 176.

3. Mapping out the Stellar Populations of IC 2602 and IC 2391
Nisak, A.H., White, R.J., Yep, A., ... **James, H.S.**, et al., 2022, In Press.

4. TOI 564 b and TOI 905 b: Grazing and Fully Transiting Hot Jupiters Discovered by TESS
Davis A. B., Wang S., Jones M., Eastman J. D., et al., 2020, AJ, 160, 229.

5. TOI 694b and TIC 220568520b: Two Low-mass Companions near the Hydrogen-burning Mass Limit Orbiting Sun-like Stars
Mireles I., Shporer A., Grieves N., Zhou G., Günther M. N., Brahm R., et al., 2020, AJ, 160, 133.

6. KELT-25 b and KELT-26 b: A Hot Jupiter and a Substellar Companion Transiting Young A Stars Observed by TESS
Rodríguez Martínez R., Gaudi B. S., Rodriguez J. E., Zhou G., et al., 2020, AJ, 160, 111.

7. A Well-aligned Orbit for the 45 Myr-old Transiting Neptune DS Tuc Ab
Zhou G., Winn J. N., Newton E. R., Quinn S. N., Rodriguez J. E., et al., 2020, ApJL, 892, L21.

8. TESS Spots a Hot Jupiter with an Inner Transiting Neptune
Huang C. X., Quinn S. N., Vanderburg A., Becker J., Rodriguez J. E., et al., 2020, ApJL, 892, L7.

9. MASCARA-4 b/bRing-1 b: A retrograde hot Jupiter around a bright A-type star
Dorval P., Talens G. J. J., Otten G. P. P. L., Brahm R., Jordán A., et al., 2020, A&A, 635, A60.

10. TESS discovery of an ultra-short-period planet around the nearby M dwarf LHS 3844
Vanderspek R., Huang C. X., Vanderburg A., Ricker G. R., Latham D. W., Seager S., Winn J. N., et al., 2019, ApJL, 871, L24.

11. HD2685 b: A Hot-Jupiter orbiting an early F-type star detected by TESS
Jones M. I., Brahm R., Espinoza N., Wang S., Shporer A., et al., 2019, A&A, 625, A16.

12. HD 202772A b: A Transiting Hot Jupiter around a Bright, Mildly Evolved Star in a Visual Binary Discovered by TESS
Wang S., Jones M., Shporer A., Fulton B. J., Paredes L. A., Trifonov T., et al., 2019, AJ, 157, 51.

TEACHING EXPERIENCE

Joint Instructor *Spring 2022 - Present*
Georgia State University Atlanta, GA

- Co-Lecturer for a Synchronous (Online and In-Person Instruction) Introductory Astronomy Course ASTR 1000 (Introduction to the Universe)
- Gave twelve (12) lectures over the semester, on topics such as, the Solar System, Astrobiology and Life in the Universe, and Stellar Evolution.

Graduate Teaching Assistant *Aug 2017 - Jul 2021*
Georgia State University Atlanta, GA

- Instructor for Introductory Astronomy Lab ASTR 1010 (Astronomy of the Solar System) Fall 2017, 2018, 2019, & 2020, Spring 2019, & 2021
- Instructor for Introductory Astronomy Lab ASTR 1020 (Stellar and Galactic Astronomy) Fall 2020, Spring 2018, & 2020

GRE and SAT Instructor *Jan 2019 -Jan 2020*
Educational Testing Consultants/ University of Georgia Athens, GA

- Instructor for GRE Test Prep course at the University of Georgia Spring 2019, & Summer 2019
- Instructor for SAT Test Prep course at the University of Georgia Spring 2019, Summer 2019, & Fall 2020

Graduate Teaching Assistant *Aug 2012 - May 2014*
University of Cincinnati Cincinnati, OH

- Instructor for Biomedical Engineering Labs, Basic Electrical Circuits, & BME Senior Capstone I Fall 2012, & 2013, Spring 2013, & 2014

RESEARCH EXPERIENCE

Spectral Characterization of K dwarfs *Aug 2017- Present*
Advisor: Dr. Todd J. Henry Atlanta, GA

- Spectroscopic determination of K dwarf stellar properties, including age, activity, metallicity, & temperature using high resolution (R=80,000) CHIRON spectra.

Biomedical Engineer and Research Scientist *Mar 2015 - Nov 2016*
Castle Medical Smyrna, GA

- Lead validation studies of the Golden Gate/InCCA Clinical Chemistry Photo-Analyzers.

Thermo-responsive Polymers for Cell-Based Therapeutic Applications *Aug 2012- Dec 2014*
Advisor: Dr. Daria Narmoneva Cincinnati, OH

- In-vitro production of intact human cell sheets for improvement of Diabetic Wound healing outcomes.

SERVICE & OUTREACH

CHIRON Data Manager Dec 2018 - Present
Georgia State University

· Organize, process, and distribute all calibration and scientific data acquired using the CHIRON echelle spectrometer. CHIRON is mounted on the CTIO/SMARTS 1.5m telescope which is operational for upwards of 300 nights per year. Data from CHIRON has been used to publish at least 30 peer-reviewed articles since December 2017.

Grad Life at Georgia State Panalist Aug 2022
Georgia State University

· Invited as the College of Arts & Sciences representative for a Georgia State University graduate orientation panel discussing life as a grad student.

STEM Hands Summer Camp Jun 2022
Georgia Outreach Team for Space (GOT Space)

· Presented and Lead activities for a group of ∼15 high school students who are either deaf or hard of hearing

NASA Science Activation Planetary ReaCH Workshop Apr 2022
Arizona State University

· Participated in a workshop and an outreach event focused on engaging audiences in planetary science and exploration, with an explicit focus on Latinx and Black communities

AstroPal Grad-Student Association Aug 2020 - Present
Georgia State University

· Mentoring 1st and 2nd year graduate students in the Physics & Astronomy Department.

Hard Labor Creek Observatory Open House Aug 2017 - Jan 2020
Georgia State University

· Helped set up telescopes for public to view of several astronomical objects during the open house.

Volunteer Lecturer & Mentor Aug 2015 - Aug 2019
Freedom University

· Math and SAT instructor for students at Freedom University.

MENTORING

Tim Johns - Graduate Student, Georgia State University & RECONs Group. May 2022 - Present

D. Xavier Lesley - Graduate Student, Southern Connecticut State University. Jan 2021 - Present

Dan Johns (AstroPal Mentee) - Graduate Student, Georgia State University. Sep 2020 - May 2022

Andrey Brevett - Undergraduate Student, Berea College. Aug 2018 - Present

Edgar Ortiz - High School Student, Freedom University. Aug 2015 - Aug 2016

Chukwuemeka Chikelu - Graduate Student, University of Cincinnati. Aug 2014- Aug 2015

PROFESSIONAL AFFILIATIONS

Southern Regional Education Board (SREB)	Aug 2022 - Present
American Astronomical Society (AAS)	Oct 2017 - Present
National Society of Black Physicists (NSBP)	Aug 2021 - Present
Biomedical Engineering Society (BMES)	May 2015 - May 2017

TECHNICAL PROFICIENCY

Programming Language

- Expert: Python, Matlab, bash
- Intermediate Proficiency: IDL, R, HTML/CSS
- Limited Proficiency: C++, Julia

Software and Packages

- Astronomy: Astropy, IRAF/PyRAF, TOPCAT, DS9
- Telescope Operation: CTIO 1.5 telescope (computerized), CTIO 0.9 telescope (computerized), Multiple Tripod & Table Top Telescopes (manual)
- Others: LaTeX, MS Office, Git Repository

NON-REFEREED ABSTRACTS AND CONFERENCE PROCEEDINGS

1. Spectroscopic Identification of Young and Active K Dwarfs Within 25 Parsecs
Hubbard-James, H., Lesley, D.X., Henry, T.J., Paredes, L. A., Nisak, A., 2022, Poster presentation, American Astronomical Society 240th Meeting Abstracts.
2. A Kinematic and Spectroscopic Analysis of the Nearest K Dwarfs
Lesley, D.X., **Hubbard-James, H.**, Henry, T.J., Paredes, L. A., Nisak, A., 2022, Oral presentation, American Astronomical Society 240th Meeting Abstracts.
3. Spectroscopic Identification of Young and Active K Dwarfs Within 25 Parsecs
Hubbard-James, H., Lesley, D.X., Henry, T.J., Paredes, L. A., Nisak, A., 2022, Oral presentation, 2022 Astrobiology Science Conference (AbSciCon 2022).
4. Spectroscopic Identification of Five K Dwarfs Younger than 1 GYR Within 30 parsecs
Hubbard-James, H., Lesley, D.X., Henry, T.J., 2021, Oral presentation, 2021 National Society of Black Physicists Conference.
5. A Kinematic and Spectroscopic Analysis of the Nearest K Dwarf Stars
Lesley, D.X., **Hubbard-James, H.**, Henry, T.J., 2021, Oral presentation, 2021 National Society of Black Physicists Conference.
6. Solar System Realms: Stars Taking Up Space Where Planets Could Be
Henry, T. J., Jao, W., Paredes, L. A., Vrijmoet, E. H., **James, H.**, et al., 2021, In: American Astronomical Society Meeting Abstracts.
7. A Radial Velocity Survey of the Complete Sample of K Dwarfs within 25 Parsecs.
Paredes, L. A., Henry, T. J., Jao, W., **James, H.**, et al. In: American Astronomical Society Meeting Abstracts. Vol. 53. Jan. 2021, p. 332.02
8. Constructing a Spectral Rubric for Estimating the Age and Activity of K Dwarfs within the Solar Neighborhood

James, H., Henry, T. J., Paredes, L., Nisak, A., Jao, W., Hinojosa-Goñi, R., Aviles, R., 2020, In: American Astronomical Society Meeting Abstracts. Vol. 52.