

# HODARI-SADIKI HUBBARD-JAMES

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Department of Physics and Astronomy, Agnes Scott College

141 E College Ave ◊ Decatur, GA 30030

## RESEARCH INTERESTS

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Stellar Astrophysics, Stellar Spectroscopy, Ages & Properties of Late Type Stars, and Astrobiology

## ACADEMIC APPOINTMENTS

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**Assistant Professor of Astronomy**

*Agnes Scott College*

*July 2023- Present*

*Decatur, GA*

**Co-Director**

*Bradley Observatory at Agnes Scott College*

*July 2024- Present*

*Decatur, GA*

## EDUCATION

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**Ph.D. in Astronomy**

*Georgia State University*

*2023*

*Atlanta, GA*

**Dissertation:** Spectral Characterization of a Complete Equatorial Sample of 615 K Dwarfs

**Advisor:** Todd J. Henry

**M.S. in Physics with Astronomy Concentration**

*Georgia State University*

*2020*

*Atlanta, GA*

**M.S. in Biomedical Engineering**

*University of Cincinnati*

*2014*

*Cincinnati, OH*

**B.A. in Physics minor Biology**

*Berea College*

*2012*

*Berea, KY*

## RELATED WORK EXPERIENCE

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**Research Advisor, STEM Scholars Program**

*Agnes Scott College*

*Jan 2024- Present*

*Decatur, GA*

**CHIRON Data Manager, CTIO/SMARTS 1.5m**

*Georgia State University*

*Dec 2018 - June 2023*

*Atlanta, GA*

**Graduate Teaching/Research Assistant**

*Georgia State University*

*Aug 2017 - June 2023*

*Atlanta, GA*

**GRE and SAT Instructor**

*University of Georgia/Educational Testing Consultants*

*Jan 2019 -Jan 2020*

*Athens, GA*

**Lab Technologist**

*Labsolutions*

*Mar 2017 - Aug 2017*

*Atlanta, GA*

**Biomedical Engineer**

*Castle Medical*

*Mar 2015 - Dec 2016*

*Smyrna, GA*

**Graduate Teaching/Research Assistant**

*University of Cincinnati*

*Aug 2012 - Dec 2014*


*Cincinnati, OH*

## GRANTS, SCHOLARSHIPS AND AWARDS

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<b>Professional Development (PDC) Award (\$4,000)</b> Agnes Scott College	2023-2024
<b>SREB Dissertation Year Award (\$20,000)</b> Southern Regional Education Board	2022-2023
<b>Provost's Dissertation Fellowship (\$15,000)</b> Georgia State University	2022-2023
<b>Beth Brown Memorial Award (Honorable Mention)</b> National Society of Black Physicists (NSBP)	Nov. 2022
<b>Chambliss Astronomy Achievement Award at AAS 240</b> American Astronomical Society	Jun. 2022
<b>Graduate Student Scholarship</b> Georgia State University Alumni Association	2020
<b>Most Inspirational Alumnus Award</b> Berea College African Students Association	2016
<b>University of Cincinnati SEED Grant recipient</b> University of Cincinnati	2014
<b>Waldemar Noll Prize in Physics</b> Berea College	2012

## REFEREED PUBLICATIONS \* \*

 **ORCID:0000-0003-4568-2079**

1. The Solar Neighborhood L: Spectroscopic Discovery of K Dwarfs Younger than 1 Gyr and New Binaries within 30 Parsecs  
**Hubbard-James, H.-S.**, Lesley, D.X., Henry, T.J., et al., 2022, AJ 164 174.\*\*
2. Mind the Gap. I. H $\alpha$  Activity of M Dwarfs Near the Partially/Fully Convective Boundary and a New H $\alpha$  Emission Deficiency Zone on the Main Sequence  
Jao, W.-C., Henry, T. J., White, R. J., ... **Hubbard-James, H.-S.**, et al., 2023, AJ, 166, 63.
3. Visual Orbits of Spectroscopic Binaries with the CHARA Array. IV. HD 61859, HD 89822, HD 109510, and HD 191692  
Lester K. V., Schaefer G. H., ... **Hubbard-James, H.-S.**, et al., 2022, AJ, 164, 228.
4. 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.
5. 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, AJ, 163, 278.
6. 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., ... **James, H.-S.**, et al., 2020, AJ, 160, 229.

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\*\*Variations of my name in literature include: James, H.S., James, H-S, Hodari-Sadiki, J., and **Hubbard-James, H.-S.**

7. 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. ... **James, H.-S.**, et al., 2020, AJ, 160, 133.
8. 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., ... **James, H.-S.**, et al., 2020, AJ, 160, 111.
9. 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., ... **James, H.-S.**, et al., 2020, ApJL, 892, L21.
10. TESS Spots a Hot Jupiter with an Inner Transiting Neptune  
Huang C. X., Quinn S. N., Vanderburg A., ... **James, H.-S.**, et al., 2020, ApJL, 892, L7.
11. 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., ... **James, H.-S.**, et al., 2020, A&A, 635, A60.
12. 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., ... **James, H.-S.**, et al., 2019, ApJL, 871, L24.
13. HD2685 b: A Hot-Jupiter orbiting an early F-type star detected by TESS  
Jones M. I., Brahm R., Espinoza N., Wang S., ... **James, H.-S.**, et al., 2019, A&A, 625, A16.
14. 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., ... **James, H.-S.**, et al., 2019, AJ, 157, 51.
15. Rare earth doped downshifting glass ceramics for photovoltaic applications  
Leonard, R.L., Gray, S.K., **James, H.-S.**, et al., 2013, Journal of non-crystalline solids, 366, pp.1-5.

## RESEARCH EXPERIENCE

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### **Spectral Characterization of K dwarfs**

*Aug 2017- Present*

RECONS

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*

University of Cincinnati

Cincinnati, OH

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

## TEACHING EXPERIENCE

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### **Instructor of Record**

Agnes Scott College

*Fall 2023- Present*

Decatur, GA

- AST 301: Astrophysics II: Dynamics (*Fall 2024*)
- PHY 400: Physics Capstone Colloquium (*Fall 2024*)
- PHY 420: Advanced Seminar in Physics & Astronomy (*Fall 2024*)
- AST 200L: Intermediate Observational Techniques (*Spring 2024*)
- PHY/MAT 231: Think Like a Data Scientist (*Spring 2024*)
- PHY 503L: Elements of Physics II Lab (*Spring 2024*)
- AST 300: Astrophysics I: Radiation (*Fall 2023*)
- PHY/MAT 131: Intro to Computer Programming (*Fall 2023*)

### **Joint Instructor**

Georgia State University

*Spring 2022*

Atlanta, GA

- Co-Lecturer for a Synchronous (Online and In-Person Instruction) Introductory Astronomy Course ASTR 1000 (Introduction to the Universe)

### **Graduate Teaching Assistant**

Georgia State University

*Aug 2017 - Jul 2021*

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**

Educational Testing Consultants/ University of Georgia

*Jan 2019 -Jan 2020*

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**

University of Cincinnati

*Aug 2012 - May 2014*

Cincinnati, OH

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

### **Lecturer**

University of Cincinnati

*Fall 2013*

Cincinnati, OH

- Lecturer for a Basic Electrical Circuits course (BME 3071) in the Biomedical Engineering department at the University of Cincinnati.

## SERVICE & OUTREACH

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<b>NCAA III - Faculty Athletics Representative (FAR)</b> Agnes Scott College	<i>Sept. 2024- Present</i>
<b>Co-Director Bradley Observatory</b> Agnes Scott College	July 2024 - Present
<b>Faculty Advisor, Agnes Scott College SPS</b> Agnes Scott College	Aug 2023 - Present
<b>Physics Faculty Search Committee</b> Agnes Scott College	Aug 2023 - May 2024
<b>CHIRON Data Manager</b> Georgia State University	Dec 2018 - June 2023
<b>Invited Talk at the Bradley Observatory Open House</b> Agnes Scott College	Dec. 2022
<b>Grad Life at Georgia State Panelist</b> Georgia State University	Aug 2022
<b>STEM Hands Summer Camp</b> Georgia Outreach Team for Space (GOT Space)	Jun 2022
<b>NASA Science Activation Planetary Reach Workshop</b> Arizona State University	Apr 2022
<b>Astronomy Curriculum Committee Member</b> Georgia State University	Sept 2021 - June 2023
<b>AstroPal Grad-Student Association</b> Georgia State University	Aug 2020 - June 2023
<b>Hard Labor Creek Observatory Open House</b> Georgia State University	Aug 2017 - Jan 2020
<b>Volunteer Lecturer &amp; Mentor</b> Freedom University	Aug 2015 - Aug 2019

## MENTORING

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<b>Jacinda Byam</b> - Undergraduate Student, Agnes Scott College.	May 2024 - Present
<b>Daniela Garcia-Lara</b> - Undergraduate Student, Agnes Scott College.	May 2024 - Present
<b>Sebastian Carrazco Gaxiola</b> - PhD Candidate, Georgia State University.	Aug 2022 - Present
Tim Johns - Graduate Student, Georgia State University.	May 2022 - July 2023
D. Xavier Lesley - Graduate Student, Ohio State University.	Jan 2021 - July 2023
Dan Johns - Graduate Student, Georgia State University.	Sep 2020 - May 2022
Andrey Brevett - Undergraduate Student, Berea College.	Aug 2018 - Aug 2022
Edgar Ortiz - High School Student, Freedom University.	Aug 2015 - Aug 2016
Chukwuemeka Chikelu - Graduate Student, University of Cincinnati.	Aug 2014 - Aug 2015

## PROFESSIONAL AFFILIATIONS

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

## TECHNICAL PROFICIENCY

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### 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
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