

John C. Hood II

CONTACT INFORMATION

Vanderbilt University
Physics & Astronomy Department
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EDUCATION

Vanderbilt University, Department of Physics & Astronomy, Nashville, Tennessee, USA

Ph.D, Astrophysics, projected graduation date: May 2021

Thesis Advisor: Kelly Holley-bockelmann

Fisk University, Department of Physics, Nashville, Tennessee, USA

M.A., Physics, August 2017

Thesis Topic: “The Search for Optical and Gamma-ray ”Orphan Flares” in the SMARTS Sample of FERMI-Bright Blazars ”

Thesis Advisor: Jedidah Isler

Columbus State University, Columbus, Georgia, USA

B.S., Major: Astrophysics and Planetary Geology, Minor: Physics, Geology, Certificate: Robotics
– May 2014

POSITIONS HELD

School for Science and Math at Vanderbilt Instructor (August 2017- Current)

Department of Education

Vanderbilt University, Nashville, TN

Mentor for the Pulsar Search Collaboratory (June 2016)

Department of Physics and Astronomy

Vanderbilt University, Nashville, TN

Observatory Technician (July 2014 – July 2015)

Director: Shawn Cruzen and Rosa Williams

Coca-Cola Space Science Center, Columbus, GA (July 2010 – July 2015)

RESEARCH INTERESTS

- Multi-waveband observations of blazar variabilities from radio to high energy γ -rays
- Study of the physical mechanisms that cause blazar jets and their variabilities
- Robotic telescopes, instrumentation and interferometry
- Computational astrophysics, specifically using Python
- Cosmological observations, theory and experimental Astrophysics

PUBLICATIONS: IN PROGRESS

“The search for orphan flares via multi-waveband observations of Fermi-bright blazars”
Hood, J.C., Isler, J., Holley-Bockelmann, K., Denser, T. 2017, in prep

PRESENTED TALKS (2014– PRESENT)

Jul 2016 “20th Anniversary Celebration”

Invited talk at Coca-Cola Space Science Center, Columbus, GA

Apr 2014 “Da-Klaw, Columbus State Universities Robotic Hand”

project talk at the ICRAR, Florida International University, Miami, Florida

OBSERVATION EXPERIENCE

Optical Telescopes: ~500+ hours of solar observing monitoring sunspot activity at the West Rock Observatory’s 0.6m telescope (2011-2015).

~ 200 hours of deep sky Galaxy and star cluster surveying using the West Rock Observatory's 0.6m telescope. (2013-2015).

CONFERENCE
POSTERS,
ABSTRACTS, AND
CIRCULARS (2014–)

- “A Search for Optical and Gamma-ray ”Orphan Flares” in the SMARTS Sample of Fermi-Bright Blazars”
Hood J.C. et al.
2017, 230th AAS Meeting (Poster 44), Austin Texas
- “CSU’s MWV Observatory: A Facility for Research, Education and Outreach”
John Hood, Nicholas D. Carpenter, Cameron B. McCarty, James H. Samford, Michael Johnson, Andrew W. Puckett,
Rosa N. Williams, Shawn T. Cruzen
2014, 223rd AAS meeting (Abstract 446.01)

PROFESSIONAL
WORKSHOPS

Aug 2016 Dunlap Institute Instrumentation Summer School, University of Toronto

PROFESSIONAL AND
ACADEMIC
AFFILIATIONS

- American Astronomical Society (AAS): 2015–present
- Sigma Xi : April 2017– present
- Society of Amature Radio Astronomers SARA: 2015–present

SCHOLARSHIPS,
FELLOWSHIPS, &
COMPETITIVE
AWARDS

Graduate

- GAANN Fellowship (2016-2017)
- Dunlap Institute Summer School Travel Award (2016)
- NSF GO-FARR Grant (2015–2016)

Undergraduate

- Larry M. Pollata Student Service Award (2015)
- Georgia Institute of Museum and Library Services IMLS Grant (2013–2015)
- Space Grant (2011-2013)

TEACHING &
PUBLIC
OUTREACH

Astronomy Webcast Team (July 2014 – July 2015)

Director: Shawn Cruzen
Coca-Cola Space Science Center, Columbus, GA

Introductory Astronomy Lab TA (July 2011 – July 2014)

Professor: Rosa Williams
Columbus State University, Columbus, GA

Astronomy Education & Outeach Team (July 2010 – July 2015)

Director: Shawn Cruzen and Rosa Williams
Coca-Cola Space Science Center, Columbus, GA

PROFESSIONAL
EXPERIENCE

- WestRock Observatory and operations technician (2014-2015)

- Columbus State University Radio Astronomy lead (2013–current)
- Columbus State University, Department of Earth and Space Science: Teaching Assistant (2011-2014)
- Mucgoggee County School District robotics teacher trainer for Lego EV3/VEX systems (2014)
- Lathe/milling machine work, Columbus Technical College: Student (2006–2008)

SKILLS

- Proficient in the Following Software: MaximDL, Astrometrica, SRT, Find Orb, Registax, LaTeX, AutoCad, PlaneWaveSTI, CIAO, Sherpa Tools, DS9, SAS, HEASoft, and Matlab with minor experience in CASA and AIPS
- Familiar with the following scripting languages/ operating systems: Java, Windows, Python, Lenox, MacOS
- Proficient in creating mount models and plate solving for large robotic telescopes
- sheet metal fabrication
- arc, MIG and TIG welding experience

ACADEMIC HIGHLIGHTS

- team leader responsible for designing and building the Coca-Cola space Science Centers robotics exhibit
- student lead for the 2014 FCRAR robotics conference/ showcase
- Columbus State University, student ambassador for CSU day at the capital (2014, 2015)

HONORS, SERVICE & LEADERSHIP

- Columbus State University student employee of the year (2013-2014)
- Sigma Gamma Epsilon, Theta Delta Chapter: Vice President (2013–2014)
- American Institute for professional Geologists: student member (2012-2014)

MAJOR PROJECTS

- WestRock Observatory, Radio telescope technician (2014-present)