

JUSTIN H. ROBINSON – CURRICULUM VITAE

CONTACT INFORMATION

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CURRENT POSITION

Assistant Professor of Astronomy 2021-Present
Troy University (TU)

EDUCATION

Georgia State University (GSU) 2022
Ph.D., Astronomy
Advisor: Dr. Misty Bentz

GSU 2020
M.S., Physics
Advisor: Dr. Misty Bentz

Saint Mary's College of California (SMC) 2017
B.S. in Physics with Astrophysics Concentration
Advisors: Dr. Ronald Olowin, Dr. Brian Hill

PREVIOUS EMPLOYMENT

Graduate Research Assistant 2017-2022
GSU

Astronomy Graduate Lab Coordinator 2019-2021
GSU

Mathematics Tutorial Teacher 2016-2017
Taught pre-calculus and calculus tutorial classes at SMC

Laboratory Assistant 2015-2017
Assisted in the astronomy lab course at SMC

RESEARCH INTERESTS

HI 21 cm emission line diagnostics; active galactic nucleus host galaxies; extragalactic distance determinations; galaxy baryonic/dynamical/dark matter mass determinations; relationships between galaxies and supermassive black holes; supermassive black hole mass measurements via reverberation mapping.

PROFESSIONAL AFFILIATIONS

Troy Astronomical Society (TAS) 2021-Present
Georgia Space Grant Consortium (GSGC) 2018-Present
American Astronomical Society (AAS) Member 2017-Present
Arecibo Legacy Fast ALFA (ALFALFA) 2014-2017
Arecibo Pisces-Perseus Supercluster Survey (APPSS) 2014-2017

LEADERSHIP POSITIONS

Faculty Senate, TU	2022-Present
TAS President, TU	2022-Present
TAS Vice President, TU	2021-2022
Astronomy Graduate Lab Coordinator, GSU	2019-2021
AstroPAL (Peer Advising Leader), GSU	2019-2021
Georgia Outreach Team for Space (GOT Space) Graduate Lead, GSGC	2018-2021
Graduate Student Liaison, AstroPAL & Physics Graduate Student Association, GSU	2018-2019
ALFALFA Undergraduate Research Leader, SMC	2017

SKILLS

Proficient in IDL, Python, L^AT_EX, IRAF, DS9, MacOS, Windows, Microsoft Office Suite
Knowledgeable in Linux, MaximDL
CAMEL: geometric and dynamical modeling software of reverberation mapping data.
Galfit: galaxy surface brightness modeling software.
BusyFit: analytical modeling of emission line profiles.
Green Bank Telescope (GBT) GBTIDL: IDL suite for reduction and analysis of GBT spectral data.
Remote observing, GBT
Arecibo Radio Telescope IDL_LBW: IDL suite for reduction and analysis of Arecibo spectral data.
Remote observing, Arecibo Telescope

PEER-REVIEWED PUBLICATIONS

“*Investigating the Narrow Line Region Dynamics in Nearby Active Galaxies*”, Beena Meena, D. Michael Crenshaw, Henrique R. Schmitt, Mitchell Revalski, Zo Chapman, Travis C. Fischer, Steven B. Kraemer, **Justin H. Robinson**, Julia Falcone, Garrett E. Polack 2022, revised & submitted

“*Tully-Fisher Distances and Dynamical Mass Constraints for 24 Host Galaxies of Reverberation-Mapped AGN*”, **Justin H. Robinson**, Misty C. Bentz, Hélène M. Courtois, Megan C. Johnson, D. M. Crenshaw, Beena Meena, Garrett E. Polack, Michele L. Silverstein, Dading Chen 2021, ApJ, 912, 160

[Click here for the abstract](#)

“*HI Spectroscopy of Reverberation-Mapped Active Galactic Nuclei*”, **Justin H. Robinson**, Misty C. Bentz, Megan C. Johnson, Hélène M. Courtois, Benjamin Ou-Yang 2019, ApJ, 880, 68

[Click here for the abstract](#)

ACCEPTED PROPOSALS

“**HI Spectroscopy of Active Galaxies with Direct Black Hole Mass Measurements**”

GBT Project ID: GBT18B-258

Hours allocated: 208.25

COURSES DEVELOPED AND TAUGHT

SCI-1110 “Exploring the Solar System”

Undergraduate lab science course, TU

SCI-L110 “Exploring the Solar System Lab”

Undergraduate science lab, TU

SCI-1110 ONLINE “Exploring the Solar System ”

Online undergraduate lab science course, TU

SCI-L110 ONLINE “Exploring the Solar System Lab”

Online undergraduate science lab, TU

SCI-2240 “Principles of Astronomy: Stars, Galaxies, and Cosmology”

Undergraduate lab science course, TU

SCI-L240 “Principles of Astronomy: Stars, Galaxies, and Cosmology Lab”

Undergraduate science lab, TU

SCI-2240 ONLINE “Principles of Astronomy: Stars, Galaxies, and Cosmology”

Online undergraduate lab science course, TU

SCI-L240 ONLINE “Principles of Astronomy: Stars, Galaxies, and Cosmology Lab”

Online undergraduate science lab, TU

SCI-L233 “Physical Science Laboratory”

Undergraduate science lab, TU

OBSERVING EXPERIENCE

100m GBT: Green Bank Observatory, Green Bank WV

305m Arecibo Telescope: Arecibo Observatory, Arecibo PR

3.5m A.R.C. Telescope: Apache Point Observatory, Sunspot NM

0.5m A.R.C.S.A.T. Telescope: Apache Point Observatory, Sunspot NM

20m Green Bank Telescope: Green Bank Observatory, Green Bank WV

0.60m Miller Telescope: Hard Labor Creek Observatory, Rutledge GA

0.4m Meade Schmidt-Cassegrain Telescope: Geissberger Observatory, Moraga CA

WORKSHOPS

Learning Science Through the Lens of Astronomy

2021

Hosted professional development workshop for Georgia STEM teachers; interactive K-12

STEM presentations of astronomy-themed topics

Recording available, [click here](#)

Single Dish Training Workshop

2018

Observational training and data analysis tools for the 100 meter GBT

Undergraduate ALFALFA Workshop

2016

Study of galaxy detections from radio spectrum, acquisition of detection characteristics and behavior from radio emission at the Green Bank Observatory

INVITED TALKS AND COLLOQUIA

Charlie Elliott Astronomy Club

2022

“Probing Nearby Active Galaxies: Distances, Masses, Dark Matter, and Black Holes”

University of Alabama at Birmingham Physics Colloquium

2022

“Probing Nearby Active Galaxies: Distances, Masses, Dark Matter, and Black Holes”

Hosted by Dr. Michelle Wooten

Von Braun Astronomical Society

2022

“Probing Nearby Active Galaxies: Distances, Masses, Dark Matter, and Black Holes”

Space Telescope Science Institute Galaxies and AGNs Journal Club Guest Presenter

2021

“Distances and Masses for 24 Host Galaxies of Reverberation-Mapped AGN”

United States Naval Observatory Journal Club Guest Presenter

2021

“Tully-Fisher Distances and Dynamical Mass Constraints for 24 Host Galaxies of Reverberation-Mapped AGN”

Bradley Observatory at Agnes Scott College Open House 2021
 “Probing Nearby Active Galaxies: Distance, Masses, Dark Matter, and Black Holes”
 Recording available, [click here](#)

CONFERENCE TALKS

240th AAS Meeting, Talk Number 335.04D 2022
 “Distances & Black Hole Masses of Nearby Seyferts”
J. Robinson, M. Bentz

237th AAS Meeting, Talk Number 209.01 2021
 “Dynamical Masses for the Host Galaxies of Reverberation-Mapped AGN”
J. Robinson, M. Bentz

236th AAS Meeting, Talk Number 225.03 2020
 “Fundamental Properties of Active Galaxies: Distances and Masses of Nearby Seyferts,”
J. Robinson, M. Bentz
 Recording available, [click here](#)

7th Perimeter Astronomy Conference 2019
 “Connecting AGN Host Galaxies to the Cosmic Distance Ladder”

Georgia Regional Astronomers Meeting 2018
 “HI Spectroscopy of Reverberation-Mapped Active Galactic Nuclei”
 Recording available, [click here](#)

6th Perimeter Astronomy Conference 2018
 “HI Spectroscopy of Reverberation-Mapped Active Galactic Nuclei”
 Recording available, [click here](#)

5th Perimeter Astronomy Conference 2017
 “The Radio View of Galaxies in the Nearby Universe”

UNDERGRADUATE STUDENTS ADVISED

Aster Hamaker, BS in physics, astronomy & astrophysics minor, TU 2022-Present
 Thomas Kay, BS in physics, astronomy & astrophysics minor, TU 2022-Present
 Veronica Lahue, BS in physics, astronomy & astrophysics minor, TU 2022-Present
 Mystic Wilkes, BS in physics, astronomy & astrophysics minor, TU 2022-Present
 Austen Hensley, BS in physics, TU 2021

ASTRONOMY SERVICE

Referee for *The Astrophysical Journal (ApJ)* 2022-Present

UNIVERSITY SERVICE

Physics & Astronomy Undergraduate Advisor, TU 2021-Present

Summer 2022 Commencement Faculty Representative, TU 2022

IMPACT Faculty Representative, TU 2022
 Representative of Chemistry & Physics Department for new student orientation session

Trojan Day Faculty Representative, TU 2021, 2022
 Representative of Chemistry & Physics Department for prospective students

COLLEGE SERVICE

Astronomy & Astrophysics Colloquium Director, TU 2022-Present
Curate and manage invited speakers for the astronomy & astrophysics colloquium series for the College of Arts and Sciences at TU

HOSTED SPEAKERS

Dr. Mitchell Revalski
“How Galaxies are Shaped by Supermassive Black Hole Winds” 2022

Dr. Michelle Wooten
“Light Pollution at Home in the South: How it Affects Us and What We Can Do” 2022

Academic Affairs Committee, TU 2022-Present

Athletic Advisory Committee, TU 2022-Present

Research Committee, TU 2022-Present

Faculty Senate, TU 2022-Present

DEPARTMENT SERVICE

New Astronomy Course Development, TU 2022-Present
“Extragalactic Astronomy” 2022
“Astronomy Capstone” 2022

Student Recruitment to Physics Major, TU 2022-Present
Students recruited: 5

Astronomy & Astrophysics Minor Development, TU 2022-Present
Develop requirements and material included in new Astronomy & Astrophysics minor

Online Instruction Material Development, GSU 2020
Built online curriculum for 1010 and 1020 introductory astronomy labs

Workshop Development for Graduate Students Through AstroPAL, GSU 2019-2021
Developed material for 1st and 2nd year graduate students (qualifying exam preparation, coding, scientific writing, etc.)

PREVIOUS TEACHING EXPERIENCE

GSU Substitute Lecturer 2019
Taught 7 astronomy lectures as a substitute instructor

Astronomy Lab Instructor 2017-2020
Taught 1010 and 1020 labs for introductory astronomy courses at GSU

Mathematics Tutorial Teacher 2016-2017
Taught pre-calculus & calculus tutorial classes at SMC

Mathematics Tutor 2016-2017
Student tutor at SMC

SMC Substitute Lecturer 2016-2017
Taught 2 astronomy lectures as a substitute instructor

Teaching Assistant, Astronomy 2015-2017

Mathematics Private Tutor 2013-2015

PUBLIC OUTREACH

Charlie Elliott Astronomy Club Invited Talk “Probing Nearby Active Galaxies: Distances, Masses, Dark Matter, and Black Holes”	2022
Von Braun Astronomical Society Invited Talk “Probing Nearby Active Galaxies: Distances, Masses, Dark Matter, and Black Holes”	2022
TAS President Curation and preparation of club presentations and invited speakers; director of observing sessions	2022-Present

EVENTS

September Meeting Organized club presentations, directed observation session	2022
November Meeting Served as presenter, directed observation session	2022
STEMapalooza Conference Presented GOT Space presentations and demonstrations to Georgia STEM teachers; ran virtual and augmented reality demonstrations	2021
10th Georgia NASA STEM Conference Presented professional development workshop to Georgia STEM teachers	2020
Scientific Consultant for “Race Through Space: Galaxy Edition” App Selected galaxies, provided physical information, and calculated distance scales for Science ATL and Atlanta Science Festival’s app Click here for the app homepage	2020
GSU Publicity & Outreach Committee Member Reporting of outreach events and student groups in the GSU official newsletter.	2020-2022
GOT Space Graduate Lead GOT Space Program lead ambassador in association with the GSGC Click here for GOT Space’s website	2018-2021

EVENTS

GOT Space Virtual Presentations: Frederick Douglass High School Organized presentations for 5 classes, presented for 1	2021
GOT Space Virtual Presentations: Trip Elementary School Organized presentations for 7 classes	2021
GOT Space Virtual Presentations: Northside Elementary School Presented for 3 classes	2021
GOT Space Virtual Presentations: Wolf Creek Elementary School Organized demonstrations and presentations for 2 classes	2020
GOT Space Virtual Presentations: Stone Mountain Middle School Organized presentations for 4 classes	2020
GOT Space Virtual Presentations: Flat Shoals Elementary School Presented for 2 classes	2020
GOT Space Virtual Presentations: Jean Childs Young Middle School Organized virtual presentations for 6 classes	2020

GOT Space Virtual Presentations: Maynard Holbrook Jackson High School Organized virtual presentations for 3 classes	2020
Virtual GOT Space Public Talk Hosted virtual talk and Q&A: “Building M87’s Supermassive Black Hole Image” Recording available, click here	2020
Atlanta Science Festival “Imagining the Future” Event Presented for 4 classes at Jean Childs Young Middle School	2020
NASA National Space Grant 30th Anniversary Event on Capitol Hill 1 of 3 representatives of Georgia outreach and GSGC; ran virtual and augmented reality demonstrations; met with 2 Georgia representatives to discuss impact and future funding	2020
Trip Elementary School STEM Night Organized science demonstrations and telescope observations, answered questions for several hundred students	2020
GOT Space Presentations: Maynard Holbrook Jackson High School Organized presentations for 6 classes	2020
Carver Early College Science & Engineering Fair Organized 3 GOT Space ambassadors and I’s participation as science fair judges	2019
GOT Space presentations: Maynard Holbrook Jackson High School Organized presentations for 6 classes	2019
STEM Undergraduate Ambassador Training Co-Facilitator 1 of 2 graduate lead facilitators for training of 18 undergraduate GOT Space ambassadors	2019
Atlanta Race Through Space 5K Ran GSGC sponsor tent	2019
GOT Space presentations: Lanier High School Organized presentations for 3 classes	2019
Trip Elementary School STEM Night Ran science demonstrations and answered questions for several hundred students	2019
GOT Space presentations: Maynard Holbrook Jackson High School Organized presentations for 4 classes	2019
GOT Space presentations: Alpharetta High School Lead presentation for Alpharetta Astronomy Club meeting	2018
GOT Space presentations: Cristo Rey Jesuit High School Organized presentations for 5 classes	2018
Hard Labor Creek Observatory Volunteer Operate telescopes & answer public questions during open houses	2018-2022
SMC On-campus APPSS Research Display	2016
SMC Physics Outreach Program Member Research presentations at Saint Mary’s High School, Stockton CA and Athenian High School, Danville CA	2015-2017
SMC Physics & Engineering Program Recruitment Represented the physics department on preview days for prospective students	2015-2017

REFERENCES

Professor Misty Bentz, Ph.D.

Department of Physics and Astronomy, GSU
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Professor D. Michael Crenshaw, Ph.D.

Department of Physics and Astronomy, GSU
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Professor H el ene M. Courtois, Ph.D.

Department of Physics, University of Lyon
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Megan Johnson, Ph.D.

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Lori Skillings

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