

CONTACT INFORMATION

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Dept. of Physics and Astronomy

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CURRENT POSITION

Associate Professor of Physics and Astronomy (2016-present)

PREVIOUS POSITIONS

Assistant Professor of Physics and Astronomy, GSU (2010-2016)

Hubble Fellow, Dept. of Physics and Astronomy, U. of CA, Irvine (2009-2010)

Postdoctoral Researcher, Dept. of Physics and Astronomy, U. of CA, Irvine (2007-2009)

RESEARCH INTERESTS

Active Galactic Nuclei (AGNs), Black Hole Masses, Black Hole Scaling Relationships, AGN Physical Structure and Kinematics, Host Galaxy Characteristics

EDUCATION

PhD, Astronomy (June 2007) - Ohio State U., Advisor: B. M. Peterson

MS, Astronomy (March 2005) - Ohio State U.

BS, Physics with College Honors (June 2002) - U. of Washington, Seattle

BS, Astronomy with Math Minor (June 2002) - U. of Washington, Seattle

Diploma, Valedictorian (June 1998) - Mead High School, Spokane, WA

PROFESSIONAL MEMBERSHIPS

American Astronomical Society

International Astronomical Union

American Association of Physics Teachers

American Physical Society

HONORS AND AWARDS

GSU College of Arts & Sciences Outstanding Junior Faculty Award (2014)

GSU College of Arts & Sciences Dean's Early Career Award (2013)

Top 20 Women Professors in Georgia, StateStats.org (2013)

Hubble Fellowship (2009-2010)

Allan Markowitz Graduate Award for Excellence in Observational Astronomy (2006)

National Science Foundation Graduate Research Fellowship (2004-2007)

2nd Place, Mathematics and Physical Sciences, Hayes Graduate Research Forum (2004)

Ohio State U. Graduate Fellowship (2002-2003)

Phi Beta Kappa Inductee (2002)

Baer Prize for Undergraduate Excellence in Astronomy (2000-2001)

Golden Key National Honor Society Inductee (2001)

National Society of Collegiate Scholars Merit Scholarship (2001)

Ronald E. McNair Scholar (2000-2002)

NASA Space Grant Scholar (1998-2002)

UW Undergraduate Scholar (1998-1999, 1999-2000)

GRANTS

- \$10,000: GSU Student Technology Fee (ended)
Improving the View: Telescope Upgrades at HLCO
- \$66,000: Hubble Space Telescope, General Observer Program 13816 (active)
High-Resolution Imaging of Active Galaxies with Direct Black Hole Mass Measurements
- \$20,000: GSU Student Technology Fee (ended)
Dark Sky Observing from Downtown Atlanta
- \$13,000: Hubble Space Telescope, General Observer Program 13330 (active)
Mapping the AGN Broad Line Region by Reverberation
- \$81,000: Hubble Space Telescope, General Observer Program 12961 (active)
A Cepheid Distance to NGC6814
- \$862,000: National Science Foundation CAREER Program (active)
CAREER: Campaigning for Better Black Hole Mass Relations
- \$26,000: National Radio Astronomy Observatories, Student Support Grant (ended)
HI Spectroscopy of Reverberation-Mapped AGN Host Galaxies
- \$54,000: Hubble Space Telescope, General Observer Program 11662 (ended)
Improving the Radius-Luminosity Relationship for Broad-lined AGNs with a New Reverberation Sample
- \$46,000: Hubble Space Telescope, General Observer Program 11661 (ended)
The Black Hole Mass – Bulge Luminosity Relationship for the Nearest Reverberation-Mapped AGNs
- \$10,000: Georgia State University Research Initiation Grant (ended)
Testing the State of the Art Techniques in Black Hole Mass Measurements
- \$97,000: Hubble Fellowship 51251.01 (ended)
A Detailed Study of AGN Broad Line Regions with Reverberation Mapping
- \$33,000: Hubble Space Telescope, General Observer Program 10181 (ended)
ACS/NICMOS Imaging of Bright Lyman Break Galaxy Candidates from SDSS
- Total to date: \$1,318,000**

RECENT AWARDS OF COMPETITIVE OBSERVING TIME

- 13.5 hrs: Gemini Observatory Semester 2015A
A Stellar Dynamical Black Hole Mass for the Nearby Seyfert Galaxy NGC5273 (Band 1)
- 4 nights: WIYN Telescope Semester 2015A (PI: M. Batiste)
Deconstructing Dynamics: Improving AGN σ_ Measurements for Calibration of the $M_{\text{BH}} - \sigma_*$ Relation*
- 14 orbits: Hubble Space Telescope Cycle 22 (2014-2015)
High-Resolution Imaging of Active Galaxies with Direct Black Hole Mass Measurements
- 179 orbits: Hubble Space Telescope Cycle 21 (2013-2014; PI: B. Peterson, OSU)
Mapping the AGN Broad Line Region by Reverberation

- 21.5 hrs: Gemini Observatory Semester 2013B
A Stellar Dynamical Black Hole Mass for the Reverberation-Mapped Active Galaxy NGC6814 (Band 1)
- 182.75 hrs: Green Bank Telescope Semester 2013A (PI: B. Ou-Yang)
HI Spectroscopy of Reverberation-Mapped AGN Host Galaxies
- 3 nights: WIYN Telescope Semester 2013A (PI: E. Manne-Nicholas)
The Black Hole Mass-Bulge Luminosity Relationship for Reverberation-Mapped AGNs in the Near-IR
- 19 orbits: Hubble Space Telescope Cycle 20 (2012-2013)
A Cepheid Distance to NGC6814
- 20 hrs: Gemini Observatory Semester 2012A
A Stellar Dynamical Black Hole Mass for the Reverberation-Mapped Active Galaxy NGC6814 (Band 3: did not execute)
- 23 hrs: LCOGT Faulkes Telescope South Semester 2012A
STARE: Testing Black Hole Mass Measurements
- 4 nights: WIYN Telescope Semester 2011B
The Black Hole Mass-Bulge Luminosity Relationship for Reverberation-Mapped AGNs in the Near-IR
- 24.1 hrs: LCOGT Faulkes Telescope South Semester 2011B
STARE: Testing Black Hole Mass Measurements in Active Galaxies
- 13 orbits: Hubble Space Telescope Cycle 17 (2009-2010)
Improving the Radius-Luminosity Relationship for Broad-Lined AGNs with a New Reverberation Sample
- 9 orbits: Hubble Space Telescope Cycle 17 (2009-2010)
The Black Hole Mass-Bulge Luminosity Relationship for the Nearest Reverberation-Mapped AGNs
- 18 orbits: Hubble Space Telescope Cycle 13 (2005-2006)
ACS/NICMOS Imaging of Bright Lyman Break Galaxy Candidates from SDSS

RECENT CONFERENCES AND COLLOQUIA

- Sep 2016: University of Alabama, Huntsville, AL
- May 2016: Contributed talk, *Great Lakes Quasar Symposium*, London, Ontario, Canada
- Apr 2016: Spelman College, Atlanta, GA
- Apr 2016: Mississippi State University, Starkville MS
- Jul 2015: Contributed talk, *AGN STORM Workshop*, Columbus, OH
- Jan 2015: Poster, *225th American Astronomical Society Meeting*, Seattle, WA
- Nov 2014: **Invited review talk**, *Astronomy at High Angular Resolution workshop*, ESO Headquarters, Garching, Germany
- Oct 2014: Wayne State University, Detroit, MI
- Oct 2014: University of Michigan, Ann Arbor, MI
- Jul 2014: University of Sheffield, South Yorkshire, United Kingdom
- May 2014: **Invited talk**, *Apache Point Observatory 25th Anniversary*, Sunspot, NM
- Mar 2014: Boston University, Boston, MA
- Jan 2014: NRC Herzberg Institute of Astrophysics, Victoria, British Columbia

- Jan 2014: Poster, *223rd American Astronomical Society Meeting*, Washington, DC
- Oct 2013: University of Kentucky, Lexington, KY
- Sep 2013: Clemson University, Clemson, SC
- Feb 2013: National Radio Astronomy Observatory, Green Bank, WV
- Oct 2012: **Invited keynote talk**, *Georgia Regional Astronomers Meeting*, Georgia Southern University, Statesboro, GA
- Aug 2012: **Invited talk**, *Xtreme Astrophysics* symposium at Georgia Institute of Technology, Atlanta, GA
- Jul 2012: **Invited review talk**, *Improving Black Hole Masses in AGN* workshop, Dark Cosmology Center, Niels Bohr Institute, Copenhagen, Denmark
- Jan 2012: Contributed talk, *219th American Astronomical Society Meeting*, Austin, TX
- Nov 2011: Contributed talk, *Georgia Regional Astronomers Meeting*, Agnes Scott College, Decatur, GA
- Nov 2011: North Georgia College and State University, Dahlonega, GA
- Sep 2011: **Invited talk**, Astromography Workshop at *IAU Symposium 285 — New Advances in Time Domain Astronomy*, University of Oxford, England
- Sep 2011: **Invited talk**, Light Echoes Workshop at *IAU Symposium 285 — New Advances in Time Domain Astronomy*, University of Oxford, England
- Aug 2011: **Invited review talk**, *Single and Double Black Holes in Galaxies* workshop, University of Michigan, Ann Arbor, MI
- May 2011: Dark Cosmology Center, Niels Bohr Institute, Copenhagen, Denmark
- Apr 2011: Contributed talk, *Narrow-Line Seyfert 1 Galaxies and Their Place in the Universe* conference, Milan, Italy
- Sep 2010: Georgia Institute of Technology, Atlanta, GA
- Apr 2010: Las Cumbres Observatory, Santa Barbara, CA
- Mar 2010: Georgia State University, Atlanta, GA
- Mar 2010: Spitzer Science Center/Infrared Processing and Analysis Center
- Mar 2010: Contributed talk, *Hubble Fellows Symposium*, Space Telescope Science Institute, Baltimore, MD
- Nov 2009: University of Washington, Seattle, WA
- Oct 2009: University of Arkansas, Fayetteville, AR
- Sep 2009: University of St. Andrews, Scotland
- Apr 2009: University of Michigan
- Apr 2009: Michigan State University
- Apr 2009: Contributed talk, *Intermediate-Mass Black Holes Workshop*, Irvine, CA
- Jan 2009: Contributed talk, *213th American Astronomical Society Meeting*, Long Beach, CA
- Nov 2008: University of California, Riverside
- Nov 2008: University of California, Santa Barbara

COURSES DEVELOPED AND TAUGHT

- PHYS1000/7000 “Gateway to Physics”, undergraduate major course cross-listed with graduate course, GSU (Fall 2013, 2014)
- ASTR8900 “Astronomy Seminar”, graduate course, GSU
- Spring 2013: Non-Academic Jobs for PhD Astronomers

ASTR4100/6100 “Astronomical Techniques and Instrumentation”, undergraduate major course cross-listed with graduate course, GSU (Spring 2012, 2014, 2015)

ASTR1000 “Introduction to the Universe”, undergraduate science elective, GSU (Fall 2010 – Fall 2011, Fall 2012 – Spring 2013)

“Algebra Review”, Columbus School for Girls (July 2003, July 2004)

“SAT Math Preparation”, Columbus School for Girls (July 2003, July 2004)

PEDAGOGY

Participant, “Physics and Astronomy New Faculty Workshop”, American Association of Physics Teachers and American Physical Society, Baltimore, MD, November 2011

POSTDOCS ADVISED

Dr. Merida Batiste (PhD: U. Maine), 2014-present

PHD STUDENTS ADVISED

Emily Manne-Nicholas, PhD student, GSU, expected degree date 2017

Benjamin Ou-Yang, PhD student, GSU, expected degree date 2017

Caroline Roberts, PhD student, GSU, expected degree date 2019

GRADUATE STUDENTS ADVISED

Daniel Horenstein, PhD student, GSU, 2014

Crystal Pope, PhD student, GSU, 2013

Robert Loewenthal, non-degree graduate student, GSU, 2012

Benjamin Williams, MS student, GSU, 2011

UNDERGRADUATE AND HIGH SCHOOL STUDENTS ADVISED

Francisco Martinez, BS student (physics), GSU, 2015-2016

James Seals, BS student (physics), GSU, 2015-2016

Bobby Jones, BS student (physics), GSU, 2015

Craig Bazhaw, BS student (physics), GSU, 2014

Kevin Lowery, BS student (physics), GSU, 2014

Gabriela Hernandez, BS student (math), GSU, 2013-2014

Sarah Katz, North Springs Charter High School, 2013-2014

Lawrence Coley, BS student (physics), GSU, 2013

Caroline Roberts, BS student (physics), Sewanee University, 2013

Ricardo Pedraza, BS student (physics), GSU, 2012

Jonathan Gardner, BS student (physics), GSU, 2011

Tyler Drake, BS student (physics), GSU, 2010-2011

DISSERTATION/THESIS COMMITTEES (MEMBER)

Cheuk-Ping Wong, MS, Physics, GSU, Nov 2016

Ganesh Chand, PhD, Physics, GSU, Nov 2015

Joe Eggen, PhD, Astronomy, GSU, July 2014

Jeremy Maune, PhD, Astronomy, GSU, July 2014

Daniel Lawther, MS, Astronomy, University of Copenhagen, May 2013

Laura Patel, PhD, Physics, GSU, Apr 2013

Abhisek Sen, PhD, Physics, GSU, Nov 2012

Travis Fischer, PhD, Astronomy, GSU, Jun 2012
Noel Richardson, PhD, Astronomy, GSU, Apr 2012
Robert Moore, MS, Physics, GSU, Apr 2012

ASTRONOMY SERVICE

National Science Foundation, proposal review panel member, October 2015
Hubble Space Telescope Cycle 22, proposal review panel member, June 2014
National Science Foundation, proposal review panel member, November 2013
NASA Astrophysics Roadmap Committee Member, 2013
Israel Science Foundation, proposal reviewer, April 2013
Scientific Organizing Committee, July 2012 DARK Cosmology Center Workshop,
Niels Bohr Institute, University of Copenhagen, Denmark
Kepler Space Telescope Cycle 4, proposal review panel member, April 2012
Estonian Science Foundation Mobilitas Top Researcher Program, proposal reviewer
December 2011
Hubble Space Telescope Cycle 18, proposal review panel member, May 2010
Chandra X-ray Observatory Cycle 11, proposal review panel member, June 2009
Scientific Organizing Committee, 5th UC Irvine Center for Cosmology Workshop,
Intermediate-Mass Black Holes: from First Light to Galactic Nuclei, April 2009
Referee for *Nature*, *ApJ*, *AJ*, *PASP*, *MNRAS*, and *Advances in Astronomy*

UNIVERSITY SERVICE

GSU Urban Astronomy Center and Planetarium project co-lead, 2012–present
Astronomy Undergraduate Advisor, GSU, 2012–2016
Society of Physics Students Faculty Advisor, GSU, 2012–2016

COLLEGE SERVICE

Department representative for Clare Booth Luce Foundation grant proposal planning,
2016–present
Department representative for NSF ADVANCE grant proposal planning, 2015–present
Panelist for NSF CAREER Award Seminar, presented by GSU URSA, Feb 2015

DEPARTMENTAL SERVICE

Physics and Astronomy Promotion Committee, GSU, 2016–present
Physics and Astronomy Executive Committee, GSU, 2016–present
Astronomy Faculty Hiring Committee (solar/stellar), GSU, 2016–present
PI, Next Generation Faculty Proposal, GSU, 2015–present
Physics and Astronomy Faculty Director of Development, GSU, 2015–present
Physics and Astronomy Department Publicity Committee, GSU, 2013–present
Summer Student Program in Astronomy organizer, GSU, 2013–2015
Physics and Astronomy Department Honors Celebration organizer, GSU, 2013–2016
Chair, Astronomy Faculty Hiring Committee (extragalactic), GSU, 2011–2012
Astronomy Faculty Hiring Committee (stellar), GSU, 2011–2012
Physics and Astronomy Department Chair Selection Committee, GSU 2012
Astronomy 2CI Faculty Hiring Committee, GSU, 2011–present
Astronomy Graduate Student Candidacy Exam Committee, GSU, 2011–present
Astronomy Graduate Student Admissions Committee, GSU, 2011–present

Physics and Astronomy Civility Team (PACT) founding member, GSU, 2012–present
Dept. of Physics and Astronomy Website Committee, GSU, 2011–2012
AGN Lunch founder and organizer, GSU, 2010–2012
Women in Physics Lunch founder and organizer, GSU, 2010–2012
Astrophysics Seminar co-organizer, U. of CA, Irvine, 2008–2009
Astrophysics Graduate Seminar organizer, U. of CA, Irvine, 2007–2008

COMMUNITY SERVICE

Introduced Dr. Priyamvada Natarajan and her book, “Mapping the Heavens: The Radical Scientific Ideas that Reveal the Cosmos”, Decatur Book Festival, Sep 2016
Invited public lecture, Atlanta Astronomy Club, May 2016
Invited public lecture, Augusta University, Apr 2016
Co-organizer, Atlanta Science Festival presents Starry Starry Night at Hard Labor Creek Observatory, Mar 2016
Public lecture co-participant, Ebrik Coffee House, Atlanta, GA, Mar 2016
Invited public lecture, Charlie Elliott Astronomy Club, May 2014
Creator and organizer, Astronomy Workshops for Girl Scouts at Georgia State University, partnership with Girl Scouts of Greater Atlanta, 2012–present
Faculty volunteer, Hard Labor Creek Observatory public observing nights, 2011–present
Science Olympiad Middle School Regional Competition, faculty volunteer, 2011–2015

MISCELLANEOUS

69 refereed publications, cited > 3800 times to date, h -index = 34, g -index = 62
18 first-author refereed publications, cited > 1500 times to date, h -index = 14, g -index = 18
9 refereed publications with > 100 citations each (5 as first author, 1 as second author)
Creator and curator for the *AGN Black Hole Mass Database*, which has had more than 5700 visitors from 97 countries to date
Blog post describing “Phynd the Physicist” game written for Women in Astronomy Blog, and republished on Times Higher Education
Inspired the parody article “Metallica’s James Hetfield Celebrates a PhD in Astrophysics”
Article describing my research chosen as #3 in the Top 10 GSU Website Stories, 2015
Private pilot license, single engine, visual flight rules, July 2010
Composed *Fantasy on AGNs*, a three-part musical piece in four movements from scientific data. As a member of the Orange County Flute Ensemble, co-organized and performed in a multimedia concert at the U. of CA Irvine Observatory in April 2010 that included the world premiere performance of *Fantasy on AGNs*.

Updated 25 Jan 2017