
DAVID ROSS BALLANTYNE

Curriculum Vitae

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School of Physics,
Georgia Institute of Technology,
Atlanta, Georgia
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EDUCATION

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|--------------|--|------------------------------------|
| Ph.D. | Astronomy, Institute of Astronomy,
University of Cambridge , United Kingdom
Supervisor: Prof. A.C. Fabian
Thesis: "Ionized Accretion Disks Around Black Holes" | 10/2002 |
| M.Sc. | Astronomy & Physics,
University of Toronto , Canada
Supervisor: Dr. D. Johnstone | 09/1999 |
| B.Sc. | Honours Physics & Astronomy (Co-op),
University of Victoria , Canada | 05/1998
with distinction |

WORK EXPERIENCE

- **Associate Chair of Graduate Studies** 01/2017–present
School of Physics, Georgia Institute of Technology, Atlanta, U.S.A.
- **Associate Professor (with tenure)** 03/2014–present
*Center for Relativistic Astrophysics,
School of Physics, Georgia Institute of Technology, Atlanta, U.S.A.*
- **Assistant Professor** 08/2008–03/2014
*Center for Relativistic Astrophysics,
School of Physics, Georgia Institute of Technology, Atlanta, U.S.A.*
- **Prize Postdoctoral Fellow in Theoretical Astrophysics** 09/2005–08/2008
Theoretical Astrophysics Program, The University of Arizona, Tucson, U.S.A.
- **Postdoctoral Fellow** 09/2002–08/2005
Canadian Institute for Theoretical Astrophysics, Toronto, Canada
- **Student Researcher** 05/1997–08/1997
Canadian Institute for Theoretical Astrophysics, Toronto, Canada
Supervisors: Dr. J. Magorrian & Prof. S. Tremaine
- **Student Researcher** 09/1996–12/1996
Canadian Institute for Theoretical Astrophysics, Toronto, Canada
Supervisor: Prof. P. G. Martin

- **Student Researcher** 01/1996–04/1996
United Kingdom Infrared Telescope, Hilo, Hawaii, U.S.A.
 Supervisors: Dr. J. K. Davies & Dr. T. Hawarden
- **Student Researcher** 01/1995–04/1995
Dominion Radio Astrophysical Observatory, Penticton, Canada
 Supervisor: Dr. R. S. Roger

RESEARCH GRANTS AWARDED

1. *Connecting Star Formation, Galaxy Evolution and the Growth of Black Holes*
 PI: David R. Ballantyne
 Awarded by: NSF Extragalactic Astronomy and Cosmology Program
 Performance Period: September 2010-August 2015
 Budget: \$391,679
2. *Time-Resolved Reflection Modeling of the 4U 1636-53 Superburst*
 PI: David R. Ballantyne
 Awarded by: NASA Astrophysics Data Analysis Program
 Performance Period: July 2013-December 2014
 Budget: \$100,000
3. *Collaborative Research: The multi-scale physics of massive black hole formation, fueling and feedback*
 PI: Pablo Laguna (DRB is a co-PI)
 Awarded by: NSF Theoretical and Computational Astrophysics Networks
 Performance Period: September 2013-August 2017
 Budget: \$571,378
4. *Don't Try This in a Lab: Using Exploding Neutron Stars to Study the Physics of Gas Disks*
 PI: P. Chris Fragile (DRB is Co-I)
 Awarded by: South Carolina NASA EPSCoR Office
 Performance Period: 6/1/17 - 5/31/18
 Budget: \$23,286 (\$0 to GT)

HONORS & AWARDS

Name	Location of Tenure	Period Held/Received
NASA Group Achievement Award to <i>NuSTAR</i> Extragalactic Survey Team	Georgia Institute of Technology	2016
NASA Group Achievement Award to <i>NuSTAR</i> Science Team	Georgia Institute of Technology	2015
Nominated for a David and Lucile Packard Fellowship	Georgia Institute of Technology	2009
Theoretical Astrophysics Program Prize Fellowship	University of Arizona	2005-2008

NSERC PDF Award	CITA	2002-2004
NSERC PGS B Award	University of Cambridge	2000-2002
Commonwealth Fellowship	University of Cambridge	1999-2002
Isaac Newton Studentship	University of Cambridge	1999-2002 (declined)
CITA Theoretical Astrophysics Fellowship	University of Toronto	1999
NSERC PGS A Award	University of Toronto & University of Cambridge	1998-2000
RASC Victoria Centre Book Prize	University of Victoria	1998
Co-op Work Term Report Award	University of Victoria	1997
Robert S. Evans Scholarship in Astronomy	University of Victoria	1997
Don Ingham Scholarship in Astronomy	University of Victoria	1996
Hazel T. Knox Memorial Scholarship	University of Victoria	1996
President's Scholarship	University of Victoria	1995
Canada Scholars Award	University of Victoria	1993-1997

PRESENTATIONS

I. INVITED SEMINARS & COLLOQUIA

1. Department of Astronomy
University of Massachusetts, Amherst 10/2018
2. Department of Physics
Clark Atlanta University, U.S.A. 04/2018
3. Department of Physics and Astronomy
Clemson University, U.S.A. 03/2015
4. Center for Astrophysics
Harvard University, U.S.A. 02/2015
5. Department of Physics and Astronomy
College of Charleston, U.S.A. 10/2014
6. Department of Physics and Astronomy
Georgia State University, U.S.A. 10/2014
7. Department of Physics and Astronomy 05/2013

- Dartmouth College, U.S.A
8. Department of Physics and Astronomy
University of Kentucky, U.S.A. 09/2011
 9. Department of Physics and Astronomy
University of Georgia, U.S.A. 03/2011
 10. Department of Astronomy
University of California at Berkeley, U.S.A. 10/2010
 11. Department of Astronomy
University of Texas at Austin, U.S.A. 09/2010
 12. Department of Astronomy & Astrophysics
Pennsylvania State University, U.S.A. 09/2010
 13. Department of Physics and Astronomy
Georgia State University, U.S.A. 11/2008
 14. School of Physics
Georgia Institute of Technology, U.S.A. 01/2008
 15. Kavli Institute for Particle Astrophysics and Cosmology
Stanford, California, U.S.A. 11/2007
 16. Astrophysics Group, Department of Physics
Imperial College, United Kingdom 09/2007
 17. Carnegie Observatories
Pasadena, California, U.S.A. 11/2006
 18. Department of Physics & Astronomy
University of Calgary, Canada 10/2006
 19. Department of Astronomy & Physics
St. Mary's University, Canada 03/2006
 20. NASA/Goddard Space Flight Center
Greenbelt, Maryland, U.S.A. 12/2005
 21. Steward Observatory
The University of Arizona, U.S.A. 09/2005
 22. Department of Physics
McGill University, Canada 07/2005
 23. Steward Observatory
The University of Arizona, U.S.A. 07/2005
 24. Yale Center for Astronomy & Astrophysics
Yale University, U.S.A. 04/2005

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| 25. Department of Physics & Astronomy
Clemson University, U.S.A. | 03/2005 |
| 26. Department of Physics
University of Alabama at Huntsville, U.S.A. | 03/2005 |
| 27. Department of Physics & Astronomy
Washington State University, U.S.A. | 02/2005 |
| 28. Department of Astronomy & Physics
St. Mary's University, Canada | 10/2004 |
| 29. Department of Physics & Center for Space Research
MIT, U.S.A. | 09/2004 |
| 30. Kavli Institute for Theoretical Physics
University of California, Santa Barbara, U.S.A. | 06/2003 |
| 31. Herzberg Institute for Astrophysics
Victoria, British Columbia, Canada | 04/2003 |
| 32. Department of Physics and Astronomy
University of Calgary, Canada | 05/2002 |
| 33. Department of Physics and Astronomy
University of Western Ontario, Canada | 10/2001 |
| 34. Department of Physics and Astronomy
University of Leicester, United Kingdom | 10/2001 |
| II. CONFERENCE PRESENTATIONS (<i>INVITED TALKS</i>) | |
| 35. <i>Bursting the Bubble: Connecting Thermonuclear Burst Research to a Wider Community</i> , Leiden, The Netherlands | 06/2019 |
| 36. High Energy Astrophysics Division of the American Astronomical Society
Monterey, U.S.A. | 03/2019 |
| 37. Meeting of the American Astronomical Society
Washington, D.C. | 01/2018 |
| 38. <i>The Radio Synchrotron Background Workshop</i>
Richmond, U.S.A. | 07/2017 |
| 39. <i>Athena/SKA Synergy Meeting</i>
Manchester, U.K. | 04/2017 |
| 40. Meeting of the American Astronomical Society
Grapevine, U.S.A. | 01/2017 |
| 41. High Energy Astrophysics Division of the American Astronomical Society
Naples, U.S.A. | 04/2016 |

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| 42. <i>40 Years of X-ray Bursts: Extreme Explosions in Dense Environments</i>
ESAC, Madrid, Spain | 06/2015 |
| 43. High Energy Astrophysics Division of the American Astronomical Society
Chicago, U.S.A. | 08/2014 |
| 44. <i>Astro-GR@Atlanta 2013</i>
Atlanta, U.S.A. | 11/2013 |
| 45. Massive Black Holes: Birth, Growth and Impact
Santa Barbara, U.S.A. | 08/2013 |
| 46. High Energy Astrophysics Division of the American Astronomical Society
Monterey, U.S.A. | 04/2013 |
| 47. Black Hole Feedback 2012
Dartmouth College, Hanover, USA | 08/2012 |
| 48. <i>Radio Meets Hard X-ray: Two Skies in Comparison</i>
39 th COSPAR Scientific Assembly, Mysore, India (unable to attend) | 07/2012 |
| 49. <i>Black Holes by the Black Sea</i>
Istanbul, Turkey | 06/2012 |
| 50. Energetic Astronomy
Annapolis, USA | 06/2012 |
| 51. <i>Outflows, Winds and Jets: From Young Stars to Supermassive Black Holes</i>
Charlottesville, USA (invited panelist) | 03/2012 |
| 52. <i>The Emerging, Multiwavelength Picture of the Galactic Centre Environment</i>
Heidelberg, Germany | 10/2011 |
| 53. High Energy Astrophysics Division of the American Astronomical Society
Newport, USA | 09/2011 |
| 54. <i>Unveiling the Far-IR and Sub-mm Extragalactic Universe:
Herschel, ALMA, CCAT, SPICA, and Beyond</i>
Irvine, USA | 05/2011 |
| 55. <i>CITA@25/Bond@60: The Theory of the Universe and Everything in It</i>
Toronto, Canada | 05/2010 |
| 56. Probing Strong Gravity Near Black Holes
Prague, Czech Republic | 02/2010 |
| 57. Meeting of the Canadian Astronomical Society
Toronto, Canada | 05/2009 |
| 58. Multi-Messenger Relativistic Astrophysics 2009
Atlanta, USA | 05/2009 |

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| 59. The EVLA Vision: Galaxies through Cosmic Time
Socorro, USA | 12/2008 |
| 60. <i>Putting Gravity to Work: From Black Holes to Galaxy Clusters</i>
Cambridge, UK | 07/2008 |
| 61. High Energy Astrophysics Division of the American Astronomical Society
Los Angeles, USA | 04/2008 |
| 62. Meeting of the American Astronomical Society
Austin, USA | 01/2008 |
| 63. Galaxy and Black Hole Evolution: Towards a Unified View
Tucson, USA | 11/2007 |
| 64. Meeting of Canadian Astronomical Society
Kingston, Canada | 06/2007 |
| 65. High Energy Astrophysics Division of the American Astronomical Society
San Francisco, USA | 10/2006 |
| 66. Physics and Astrophysics of Supermassive Black Holes
Santa Fe, USA | 07/2006 |
| 67. Meeting of the American Astronomical Society
Calgary, Canada | 06/2006 |
| 68. Meeting of Canadian Astronomical Society
Calgary, Canada | 06/2006 |
| 69. Six Years of Science with Chandra Symposium
Boston, USA | 11/2005 |
| 70. Physics of Astrophysical Outflows and Accretion Disks
Santa Barbara, USA | 05/2005 |
| 71. Meeting of Canadian Astronomical Society
Montreal, Canada | 05/2005 |
| 72. High Energy Astrophysics Division of the American Astronomical Society
New Orleans, USA | 09/2004 |
| 73. Meeting of Canadian Astronomical Society
Winnipeg, Canada | 06/2004 |
| 74. The Restless High-Energy Universe
Amsterdam, The Netherlands | 05/2003 |
| 75. High Energy Astrophysics Division of the American Astronomical Society
Mt. Tremblant, Canada | 03/2003 |

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| 76. Meeting of the American Astronomical Society
Seattle, USA | 01/2003 |
| 77. Active Galactic Nuclei: from Central Engine to Host Galaxy
Paris, France | 07/2002 |
| 78. Making Light of Gravity
Cambridge, UK | 07/2002 |
| 79. National Astronomy Meeting
Bristol, UK | 03/2002 |
| 80. Frontiers of X-ray Astronomy (Royal Society Discussion Meeting)
London, UK | 02/2002 |
| 81. X-ray Spectroscopy of Active Galactic Nuclei with Chandra and XMM-Newton
Garching, Germany | 12/2001 |
| 82. Two Years of Science with Chandra
Washington, D.C., USA | 09/2001 |
| 83. X-Ray Emission from Accretion onto Black Holes
Baltimore, USA | 06/2001 |
| 84. National Astronomy Meeting
Cambridge, UK | 04/2001 |
| 85. Mass Outflow in Active Galactic Nuclei: New Perspectives
Washington, D.C., USA | 03/2001 |
| 86. First Science Results from the XMM/Newton and Chandra X-ray Observatories
London, UK | 02/2001 |
| 87. Spectroscopy Challenge of Photoionized Plasmas
Lexington, USA | 11/2000 |
| 88. High Energy Astrophysics Division of the American Astronomical Society
Honolulu, USA | 11/2000 |
| 89. 30th SAAS FEE Advanced Course: High-Energy Spectroscopic Astrophysics
Les Diablerets, Switzerland | 04/2000 |
| 90. Observational and Theoretical Progress in the Study of
Narrow-line Seyfert 1 Galaxies; Bad Honnef, Germany | 12/1999 |
| 91. New Perspectives on the Interstellar Medium
Naramata, Canada | 08/1998 |
| III. OTHER SEMINARS | |
| 92. Department of Physics
Mt. Holyoke College, Massachusetts, U.S.A | 10/2018 |

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| 93. Department of Physics
Smith College, Massachusetts, U.S.A. | 10/2018 |
| 94. Department of Physics and Astronomy
University of Victoria, Canada | 05/2007 |
| 95. Department of Physics and Astronomy
University of Victoria, Canada | 04/2005 |
| 96. Institute for Advanced Study
Princeton, New Jersey, U.S.A. | 09/2004 |
| 97. Harvard-Smithsonian Center for Astrophysics
Cambridge, Massachusetts, U.S.A. | 09/2004 |
| 98. Canadian Institute for Theoretical Astrophysics
Toronto, Canada | 02/2004 |
| 99. Department of Physics and Astronomy
University of British Columbia, Canada | 05/2002 |
| 100. Department of Physics and Astronomy
05/2002
University of Victoria, Canada | |
| 101. NASA/Goddard Space Flight Center
Greenbelt, Maryland, U.S.A. | 03/2001 |
| 102. Department of Astronomy
03/2001
University of Maryland, U.S.A. | |
| 103. Canadian Institute for Theoretical Astrophysics
Toronto, Canada | 11/2000 |

AWARDED NATIONAL & INTERNATIONAL PROPOSALS FOR MEETINGS

- Invited to join International Space Science Institute (ISSI) proposal for an International Team to study 'Corona of X-ray Binaries'. Successfully awarded 05/2014 to support 2 meetings in Beijing (2015/16).

PROFESSIONAL SERVICE

1. JOURNAL REFEREE

- *The Astrophysical Journal* 2003–2007, 2009, 2010, 2013, 2015–2016, 2018
- *The Astrophysical Journal Letters* 2004–2005, 2007–2008, 2011, 2019
- *Astronomy & Astrophysics* 2004, 2006, 2012, 2014–2015, 2018
- *Monthly Notices of the Royal Astronomical Society* 2003–2004, 2006, 2011, 2013–2018

2. BOOK REVIEWS

- *Physics Today* 2010
Reviewed "Cracking the Einstein Code: Relativity and the Birth of Black Hole Physics"
by Fulvio Melia

3. REVIEW PANELS

- Expert Reviewer for NASA Postdoctoral Program (NPP) 2016-present
- External reviewer for The Fund for Scientific Research-FNRS, Belgium 2019
- *Chandra* Cycle 20 Peer Review 2018
Panel Chair: "AGNs and Extragalactic Surveys"
- NSF Division of Astronomical Sciences CAREER Proposals 2017
- External Reviewer for the Canadian Time Allocation Committee (*ASTROSAT*) 2016
- *Chandra* Cycle 18 Peer Review 2016
- Expert Reviewer for a NSF EPSCoR RII Track-2 Proposal 2015
- *Chandra* Cycle 15 Peer Review 2013
- External reviewer for the Polish National Science Center 2013
- External reviewer for the Swiss Supercomputing Center 2012
- NSF Astronomy & Astrophysics Grants Review Panel on "AGN Hosts & Feedback" 2011
- External reviewer for the Netherlands Organisation for Scientific Research 2010, 2011
- *Rossi X-ray Timing Explorer* Cycle 13 Peer Review 2008
- *Suzaku* Cycle 1 Peer Review 2006
- External Reviewer for the Canadian Time Allocation Committee (Gemini) 2005
- *Chandra* Cycle 5 Peer Review 2003
- *Rossi X-ray Timing Explorer* Cycle 9 Peer Review 2003

4. CONFERENCE CHAIR/CO-CHAIR

- Co-organizer of conference "Multi-Messenger Relativistic Astrophysics", 2009
Georgia Institute of Technology
- Co-organizer of conference "Galaxy and Black Hole Evolution: 2007
Towards a Unified View", The University of Arizona

5. ADMINISTRATION

- Associate Chair for Graduate Studies 2017-present
School of Physics, Georgia Institute of Technology
- Elected Member of the Institute Graduate Curriculum Committee 2017-present
Georgia Institute of Technology
- Physics Advisor 2016-present
School of Physics, Georgia Institute of Technology
- Member of Faculty Council 2013-present
Center for Space Technology and Research, Georgia Institute of Technology

- Member of Astrophysics Major Committee 2013-present
School of Physics, Georgia Institute of Technology
- Member of Graduate Committee 2009-present
School of Physics, Georgia Institute of Technology
- Elected Member of the Academic Faculty Senate 2016-2018
Georgia Institute of Technology
- Member of Promotion and Tenure Committee 2015-2017
School of Physics, Georgia Institute of Technology
- Member of Georgia Tech Library Faculty Advisory Board 2016-2017
Georgia Institute of Technology
- Member of Colloquium Committee 2014-2015
School of Physics, Georgia Institute of Technology
- Astrophysics Search Committee 2009-2011, 2013-2014
School of Physics, Georgia Institute of Technology
- Member of Undergraduate Committee 2013-2014
School of Physics, Georgia Institute of Technology
- Seminar Chair 2008-2009
Center for Relativistic Astrophysics, Georgia Institute of Technology
- Member of Comprehensive Exam Committee 2008-2009
School of Physics, Georgia Institute of Technology
- Canadian Institute for Theoretical Astrophysics seminar committee 2003–2005
- Canadian Institute for Theoretical Astrophysics computer committee 2003–2004

6. PROFESSIONAL MEMBERSHIPS

- Member of American Astronomical Society (also of High Energy Division) 2001–present
- Member of Canadian Astronomical Society 2001–2014

7. SCIENTIFIC COMMITTEES

- Invited member of *STROBE-X* Scientific Steering Committee 2017-present
- Member of *enhanced X-ray Timing and Polarimetry (eXTP)* working group on observatory science 2017-present
- Member of *Lynx/X-ray Surveyor* Working Group on Evolution of Structure and AGN populations 2016-present
- NASA-nominated member of *Athena* Study Science Team Working Group on Supermassive Black Hole Evolution 2015-present
- Member of *Nuclear Spectroscopic Telescope Array* Education & Public Committee 2009–present
- Member of *Nuclear Spectroscopic Telescope Array* Science Team 2007–present
- Member of Large Synoptic Survey Telescope Science Collaboration on Active Galactic Nuclei 2006–present
- Member of *Large Observatory for X-ray Timing* Collaboration and Science Working Group on Type I X-ray Bursts 2014-2015
- Member of *International X-ray Observatory/Athena* Task Force on “Black Hole Surveys and Obscured Growth of SMBHs” 2008–2012

MISSION/CONCEPT PROPOSALS

In 2016 NASA announced a call for probe-class mission concepts from which they would select 5-8 for further study that would then be presented to the next decadal survey. I was invited to be on three (out of 27) submitted concepts:

- *STROBE-X*: X-ray Timing and Spectroscopy (**selected**)
- *XPP*: X-ray Polarimetry Probe
- *HEX-P*: High-Energy X-ray Probe

AWARDED OBSERVING TIME (AS PI)

• <i>Suzaku</i> , AO2	2007
• <i>XMM-Newton</i> , AO5	2006
• <i>XMM-Newton</i> , AO3	2004
• <i>XMM-Newton</i> , AO2	2003
• <i>RXTE</i> , Cycle 8	2003
• VLA	2000

TEACHING AND MENTORING

1. POSTDOCTORAL FELLOWS SUPERVISED

- | | |
|---|-----------|
| • Dr. Laurens Keek
School of Physics, Georgia Institute of Technology
Present Position: unknown title, Cosine High-Energy Optics, Netherlands | 2013-2015 |
| • Dr. Christina Pierce
School of Physics, Georgia Institute of Technology
Present Position: left academia | 2009–2011 |

2. GRADUATE STUDENTS SUPERVISED

- | | |
|---|--------------|
| • Kunyang Li, Ph.D. Student
School of Physics, Georgia Institute of Technology | 2017-present |
| • Astraea Hegman, MS Awarded
School of Physics, Georgia Institute of Technology | 2019 |
| • Raj Gohil, Ph.D. Awarded
School of Physics, Georgia Institute of Technology
Thesis: “ <i>Computational Modeling of Dusty Nuclear Starburst Disks and its Consequences on Observables</i> ”
Present position: Software Systems Engineer, The Aerospace Corporation | 2014-2018 |
| • Rachel Grissom, MS Awarded
School of Physics, Georgia Institute of Technology
Present position: Staff Scientist, Johns Hopkins Applied Physics Lab | 2013 |
| • Aden Draper, Ph.D. Awarded
School of Physics, Georgia Institute of Technology
Ph.D. Thesis : “ <i>Understanding the Connection Between Active Galactic Nuclei and Host Star Formation Through Multi-Wavelength Population Synthesis Modeling</i> ”
Present position: Patent Agent, Alston & Bird, LLP, Atlanta, GA | 2009–2012 |
| • Jonathan Armour, MS Awarded
School of Physics, Georgia Institute of Technology
Present position: left academia | 2011–2012 |

- Ravi Pallentla in PHYS 8901 Special Problems 2012
School of Physics, Georgia Institute of Technology

3. UNDERGRADUATE STUDENTS SUPERVISED

- M. Avirett-Mackenzie in PHYS 4699 Undergraduate Research 2016-2019
School of Physics, Georgia Institute of Technology
Winner of PURA Salary Award Spring 2018 and Travel Award Winter 2019
Winner of College of Sciences' A. Joyce Nickelson and John C. Sutherland Prize (2019)
- C. Lin in PHYS 4699 Undergraduate Research 2019
School of Physics, Georgia Institute of Technology
- R. Glefke in PHYS 2699 Undergraduate Research 2018
School of Physics, Georgia Institute of Technology
- L. Isbill in PHYS 4699 Undergraduate Research 2017-2018
School of Physics, Georgia Institute of Technology
- A. Hegeman (Summer REU student from Florida Inst. of Tech.) 2017
- E. Hollingworth in PHYS 2699 Undergraduate Research 2016-2017
School of Physics, Georgia Institute of Technology
- R. Wolf in PHYS 4699 Undergraduate Research 2014-2016
School of Physics, Georgia Institute of Technology
- G. Alvarez in PHYS 4699 Undergraduate Research 2014
School of Physics, Georgia Institute of Technology
- J. Bollenbacher in PHYS 4699 Undergraduate Research 2013
School of Physics, Georgia Institute of Technology
- A. Karsai as a paid undergraduate research assistant 2013
School of Physics, Georgia Institute of Technology
- E. Martin as a paid undergraduate research assistant 2013
School of Physics, Georgia Institute of Technology
- S.A. Agrawal in PHYS 4699 Undergraduate Research 2013
School of Physics, Georgia Institute of Technology
- J. Indergaard in PHYS 4699 Undergraduate Research 2012
School of Physics, Georgia Institute of Technology
- R. Strausbaugh in PHYS 4699 Undergraduate Research 2011
School of Physics, Georgia Institute of Technology
- S. Northcott in PHYS 4699 Undergraduate Research 2011
School of Physics, Georgia Institute of Technology
- J.D. Purvis in PHYS 4699 Undergraduate Research 2011
School of Physics, Georgia Institute of Technology
- J. McDuffie in PHYS 4699 Undergraduate Research 2010
School of Physics, Georgia Institute of Technology
- M. Schumann in PHYS 2699 Undergraduate Research 2010
School of Physics, Georgia Institute of Technology
- B. Ford in PHYS 4699 Undergraduate Research 2009
School of Physics, Georgia Institute of Technology

4. CLASSROOM TEACHING

- Lectured and developed PHYS 3201 Classical Mechanics I 2019
School of Physics, Georgia Institute of Technology
- Lectured and developed PHYS 4247 Cosmology 2014-2017
School of Physics, Georgia Institute of Technology
- Lectured and developed PHYS 8803 High-Energy Astrophysics 2011, 2016, 2018
School of Physics, Georgia Institute of Technology
- Lectured and developed PHYS 2212 Introductory Physics II 2009-2010, 2012-2015
School of Physics, Georgia Institute of Technology
Awarded 5 "Thank a Teacher" Certificates
- Lectured and developed PHYS 3123 Electrodynamics 2009-2010, 2013, 2017, 2019
School of Physics, Georgia Institute of Technology
Awarded 3 "Thank a Teacher" Certificates
- Guest lecturer for AST 596G ("Active Galactic Nuclei") 2007
Department of Astronomy, The University of Arizona
- Teaching assistant for AST 101 at University of Toronto 1998–1999

OUTREACH

- Member of STEM Advisory Committee at Tritt Elementary School 2015-present
- Invited Faculty Panelist for Georgia Tech FASET Presentation 2016, 2017
- Physics Frontier Lecture on "The Astrophysics of Supermassive Black Holes" 2012 & 2014
School of Physics, Georgia Institute of Technology
- Participant in the Georgia Tech Direct-to-Discovery Program 2009-2012
- Invited presenter & panelist for inaugural Blended Research@The Library 03/2011
Main Library, Georgia Institute of Technology

MEDIA COVERAGE

- "NuSTAR Provides New Look at Black Holes"**
Georgia Institute of Technology Media Release 6/2012
Coverage included: Atlanta Business Chronicle
Interviews given (invited): WABE Radio (Atlanta NPR affiliate), 106.7FM Radio
- "Astrophysicists Use X-ray Fingerprints to Study Massive Black Holes"**
Georgia Institute of Technology Media Release 6/2011
Coverage included: Scientific Computing, SpaceDaily, R&D Magazine
LabSpaces, Futurity.org
Interviews given (invited): COSMOS Magazine Online
- Interview for article titled 'Supermassive black holes not so big after all' 2/2011
COSMOS Magazine Online
- Interview for article titled 'Black holes are the ultimate particle smashers' 9/2009
New Scientist, Magazine issue 2725
- Interview on WPCH morning show regarding the Large Hadron Collider 9/10/2008
- "Milky Way Black Hole May Be a Colossal 'Particle Accelerator' "**

The University of Arizona Media Release 2/2007

Coverage included: MSNBC.com, Yahoo.com, New Scientist, Science, Slashdot.org

Interviews given (invited): Space.com, CBC News Online, BBC Radio 4 (Frontiers, broadcast 16 May 2007)

● **“Scientists watch “movie” of neutron star explosion”**

NASA Media Release 2/2004

University of Toronto Media Release 2/2004

Coverage included: CNN.com, USA Today, MSNBC.com, Discovery Channel, Yahoo.com, Slashdot.org

Interviews given (invited): Space.com, Space TV, Varsity Newspaper, CIUT 89.5FM