Dr. Mitchell Revalski

Professional Affiliation
Senior Staff Scientist, WFC3
Instruments Division (INS)
Space Telescope Science Institute
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Baltimore, MD 21218

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SELECTED HIGHLIGHTS

- DrizzlePac Software Help Desk lead and WFC3 Point Spread Function lead at STScI
- 50 peer-reviewed publications (8 first-authored, 42 co-authored) with $>$ 1170 citations
- Secured a total of $326,384 in competitive grant funding as the Primary Investigator
- Awarded 14 orbits with HST in Cycle 28 (Program ID 16246, PI: Revalski, $138,854)
- Completed $>$ 75 public outreach events for several thousand adults and K-12 students
- Highly proficient with python, jupyter, astropy, scipy, conda, github, source extractor

RESEARCH EXPERTISE

Galaxy evolution, active galactic nuclei (AGN), and supermassive black holes (SMBHs), including outflows, metallicity, emission line diagnostics, and photoionization modeling, using observations from the *Hubble Space Telescope* and integral field unit spectrographs.

EDUCATION

Ph.D. in Astronomy, Georgia State University — 2019
Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies

M.S. in Physics, Georgia State University — 2017
Astronomy Concentration

B.S. in Physics, The College of New Jersey — 2014
Astrophysics Concentration

RECENT EMPLOYMENT

Senior Staff Scientist on the WFC3 Team, Space Telescope Science Institute — 2026 - Present
Serve as DrizzlePac Help Desk lead and WFC3 Point Spread Function lead

Staff Scientist II on the WFC3 Team, Space Telescope Science Institute — 2023 - 2026
Member of the Wide Field Camera 3 Team for the Hubble Space Telescope

Postdoctoral Researcher, Space Telescope Science Institute — 2019 - 2023
Galaxy evolution studies using HST and MUSE with Dr. Marc Rafelski

NSF Graduate Research Fellow, Georgia State University — 2016 - 2019
Determining the Importance of Mass Outflows in Active Galactic Evolution

Graduate Teaching Assistant, Georgia State University — 2014 - 2016
Taught labs for introductory solar system and extragalactic astronomy courses

PROFESSIONAL AFFILIATIONS

International Astronomical Union (IAU) Junior Member	2020 - 2024
International Astronomical Union (IAU) Individual Member	2024 - Present
American Association for the Advancement of Science (AAAS)	2019 - 2022
Space Generation Advisory Council (SGAC)	2019 - Present
AAS Division on Dynamical Astronomy (DDA) Member	2019 - 2023
Golden Key International Honour Society	2017 - Present
American Institute of Aeronautics and Astronautics (AIAA)	2015 - 2019
AAS High Energy Astrophysics Division (HEAD) Member	2014 - 2024
American Astronomical Society (AAS) Member	2013 - Present
Sigma Pi Sigma National Physics Honors Society	2013 - Present
Society of Physics Students Member	2013 - Present

AWARDS & HONORS

STScI Bravo - Serving the Science Community - AAS Workshop	2025
Tie for First in Stellafane Optical Competition, Small Newtonian Class	2023
STScI Bravo - Serving the Science Community - Science Workshop	2022
New Jersey Astronomical Association Honorary Lifetime Membership	2019
GSU Advanced Graduate Student Award for Astronomy	2018
Tie for Best Poster at GSU High Performace Computing Day	2016
Best Poster Award at The Great Lakes Quasar Symposium	2016
National Science Foundation Graduate Research Fellowship Recipient	2016
Research Featured in TCNJ Journal of Student Scholarship	2015
GSU Second Century Initiative (2CI) Fellowship Recipient	2014
TCNJ Department of Physics, Departmental Service Award	2014
Young Scientist Honorable Mention, Sant Cugat Forum on Astrophysics	2014
Edward J. Bloustein Distinguished Scholar Scholarship	2010
California Technical Institute Signature Book Award	2009
Lebanon Township Schools Science Award	2006
New Jersey Earth Science Teachers Award	2004

LEADERSHIP POSITIONS

DrizzlePac Software Help Desk Lead at STScI	2024 - Present
WFC3 Point Spread Function Group Lead at STScI	2024 - Present
Member of the AAS Committee on Employment	2019 - 2022
AstroPAL (Peer Advising Leader), Georgia State University	2016 - 2019
Graduate Student Liaison, Georgia State University Astronomy Club	2015 - 2018
President, The College of New Jersey Astronomy Club	2013 - 2014
Transfer Student Peer Mentor, The College of New Jersey	2013 - 2014
Vice President, The College of New Jersey Physics Club	2012 - 2014
Vice President, The College of New Jersey Astronomy Club	2012 - 2013
Vice President, The College of New Jersey Society of Physics Students	2012 - 2013
President, The College of New Jersey Swing Dance Club	2011 - 2014
Research Team, The New Jersey Astronomical Association	2011 - Present
President, Voorhees High School Astronomy Club	2008 - 2010
Qualified Observer, The New Jersey Astronomical Association	2006 - Present

RESEARCH EXPERIENCE

Postdoctoral Fellow, Space Telescope Science Institute — 2019 - 2023
The MUSE Ultra Deep Field Program
Advisor: Dr. Marc Rafelski

NSF Graduate Research Fellow, Georgia State University — 2016 - 2019
Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies
Advisor: Dr. D. Michael Crenshaw

Second Century Initiative Fellow, Georgia State University — 2014 - 2016
Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies
Advisor: Dr. D. Michael Crenshaw

Undergraduate Thesis, The College of New Jersey — 2013 - 2013
Electromagnetic Radiation from Charges Accelerated by Gravitational Waves
Advisor: Dr. Thulsi Wickramasinghe

Mentored Undergraduate Summer Experience, The College of New Jersey — 2012 - 2013
Investigating Quasar Variability Utilizing Kepler
Advisor: Dr. Paul J. Wiita

TEACHING EXPERIENCE

Georgia State University Lab Instructor — 2014 - 2016
Taught a total of 12 introductory astronomy lab sections.

Georgia State University Substitute Lecturer — 2014 - 2018
Taught two astronomy lectures as substitute instructor.

OBSERVING EXPERIENCE

200-inch Hale Telescope - Palomar Observatory, Palomar Mountain, CA — 2020
Optical IFU spectroscopy with PCWI

3.50m ARC Telescope - Apache Point Observatory, Sunspot, NM — 2015 - 2019
Optical long-slit spectroscopy and broadband imaging

0.66m NJAA Telescope - Paul Robinson Observatory, High Bridge, NJ — 2006 - Present
Broadband imaging and photometry

0.60m Miller Telescope - Hard Labor Creek Observatory, Rutledge, GA — 2014 - 2019
Imaging and photometric monitoring of AGN variability

ASTRONOMY SERVICE

Served as a referee for eight papers in *ApJ*, *MNRAS*, and *A&A* (*average report time of 11 ± 4 days*).
Served as a Chambliss Poster Judge at the 237th AAS Meeting.
Served as a leveler to ensure anonymity for HST and JWST TACs.
Served as co-organizer of STScI weekly Friday Science Coffees.
Piloted a Hands-on Hubble workshop at the 245th AAS meeting.
Currently serving as committee member for one doctoral student.

DEPARTMENTAL SERVICE

Served on the GSU Graduate Handbook Development Committee as student representative.
Wrote an Unofficial New Student Orientation Handbook for GSU Astronomy Program.
Provided orientation to incoming GSU students through Peer Advising Leaders program.
Wrote the Unofficial Student Handbook for TCNJ Physics Department *(click here)*.

STUDENT MENTORING

Provided guidance to three undergraduate students and three graduate students. Training on space and ground-based observing, spectroscopic and imaging data reduction and analysis, spectral diagnostics, database queries, and scientific presentation and writing development.

APPLICABLE SKILLS

High-Proficiency: Python, Astropy, DrizzlePac, Mathematica, DS9, Microsoft Office, LaTeX
Very-Proficient: Fortran, IDL, Linux, MacOS, Github, Conda, Anaconda, Scipy, SExtractor
Basic-Proficiency: C++, IRAF, MaximDL, Matlab, Blender, Perl, Bash Scripting
Analysis of *Hubble Space Telescope* and ground-based long-slit/IFU spectroscopy
Multi-component spectral fitting using Bayesian techniques
Photoionization modeling of ionized plasmas with the CLOUDY code
Computerized Numerical Control (CNC) machining and G/M type codes
Telescope mirror fabrication, Foucault, Ronchi, Auto Collimation, Ross Null tests
Laser safety trained for research in fluid dynamics lab
Comfortable with basic Spanish at the conversational level

GRANTS AS PRIMARY INVESTIGATOR

3. **$138,854**: "Are Narrow Line Region Outflows an Effective Mode of AGN Feedback?", Revalski, M. (Science P.I.), STScI, NASA, HST Cycle 28 Program ID 16246, 14 Orbits, 2020-2023 *(click here)*
2. **$45,530**: "The Energetic Role of Mass Outflows in Galaxy Evolution", Revalski, M. (Science P.I.), Rafelski, M. (Admin P.I.), STScI Directors Discretionary Research Fund Proposal 82490, 2019-2021
1. **$142,000**: "Determining the Importance of Mass Outflows in the Evolution of Active Galactic Nuclei", Revalski, M., National Science Foundation Graduate Research Fellowship Program, 2016-2020

⋆**Contributed as a co-investigator to 17 additional approved observing and archival proposals.**

PEER-REVIEWED PUBLICATIONS

Click here to see my publication record in the SAO/NASA ADS system:
https://ui.adsabs.harvard.edu/public-libraries/Gl1agqe-SzSPJwwB4aD3Xw

(50 publications: **8 first-author (bolded)**, 42 co-author, *h*-index = 21, *i*10-index = 33, citations = 1173)

50. "Hot, Photoionized X-Ray Gas in Two Luminous Type 2 Quasars: Chandra-HST Evidence for a Wind..." Anna Trindade Falcão, with 19 co-authors including Mitchell Revalski et al., 2026, ApJ, 1000, 242
49. "The MUSE Ultra Deep Field (MUDF): VIII. The cool gas distribution surrounding galaxies at..." Edoardo Santo, with 7 co-authors including Mitchell Revalski et al., 2026, A&A, 707A, 359

48. "Footprints in the Wind: Probing X-Ray Outflows in NGC 7469 Using Near-infrared Emission Lines"
Léa Feuillet, with 9 co-authors including Mitchell Revalski et al., 2026, ApJ, 997, 287

47. "An Analysis of Active Galactic Nucleus Feedback in the Compact Galaxy Group Stephan's Quintet"
Maura Shea, with 9 co-authors including Mitchell Revalski et al., 2026, ApJ, 997, 208

46. "Spatially Resolved, Multiphase Mass Outflows of the Seyfert 1 Galaxy NGC 3227"
Julia Falcone, with 8 co-authors including Mitchell Revalski et al., 2026, ApJ, 997, 68

45. "The Shape of AGN-Driven Winds in the Seyfert Galaxy NGC 3516"
Jacob Tutterow, with 9 co-authors including Mitchell Revalski et al., 2025, ApJ, 990, 126

44. "Challenging the LyC-Lyα relation: strong Lyα emitters without LyC leakage at z $\sim$ 2.3"
Annalisa Citro, with 5 co-authors including Mitchell Revalski et al., 2024, ApJ, 986, 184

43. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. V. The ..."
Mitchell Revalski, as the first author with 10 co-authors, 2025, ApJ, 984, 32

42. "High-definition imaging of a filamentary connection between a close quasar pair at z = 3"
Davide Tornotti, with 18 co-authors including Mitchell Revalski et al., 2025, Nature Astronomy, 40

41. "The MUSE Ultra Deep Field (MUDF) VII. Probing high-redshift gas structures in the surroundings ..."
Antonio Pensabene, with 14 co-authors including Mitchell Revalski et al., 2025, A&A, 696, 33

40. "The MUSE Ultra Deep Field: A 5 Mpc Stretch of the z $\approx$ 4 Cosmic Web Revealed in Emission"
Davide Tornotti, with 9 co-authors including Mitchell Revalski et al., 2025, ApJ, 980L, 43

39. "Hubble Space Telescope observations of nearby type 1 quasars. I. Characterization of the extended ..."
Anna Trindade Falcão, with 15 co-authors including Mitchell Revalski et al., 2024, MNRAS, 535, 621

38. "Determining the Extents, Geometries, and Kinematics of Narrow-Line Region Outflows in Nearby ..."
Garrett E. Polack, with 7 co-authors including Mitchell Revalski et al., 2024, ApJ, 975, 129 [webpage]

37. "Metal line emission around z $<$ 1 galaxies"
Rajeshwari Dutta, with 9 co-authors including Mitchell Revalski et al., 2024, A&A, 691, 236

36. "The stellar population of a z $\sim$3.25 Lyα emitting group associated with a damped Lyα absorber"
Giulia Pruto, with 6 co-authors including Mitchell Revalski et al., 2024, A&A, 691, 222

35. "The MUSE Ultra Deep Field (MUDF). VI. The relationship between galaxy properties and metals ..."
Alexander Beckett, with 12 co-authors including Mitchell Revalski et al., 2024, ApJ, 974, 256

34. "An Analysis of AGN-Driven Outflows in the Seyfert 1 Galaxy NGC 3227"
Julia Falcone, with 10 co-authors including Mitchell Revalski et al., 2024, ApJ, 971, 17

33. "UVCANDELS: The role of dust on the stellar mass–size relation of disk galaxies at 0.5 $\leq$ z $\leq$ 3.0"
Kalina V. Nedkova, with 32 co-authors including Mitchell Revalski et al., 2024, ApJ, 970, 188

32. "The MUSE Ultra Deep Field (MUDF). V. Characterizing the Mass-Metallicity Relation for Low ..."
Mitchell Revalski, as the first author with 15 co-authors, 2024, ApJ, 966, 228

31. "Constraints on the densities and temperature of the Seyfert 2 narrow line region"
Luc Binette, with 9 co-authors including Mitchell Revalski et al., 2024, A&A, 684A, 53

30. "The MUSE Ultra Deep Field (MUDF). IV. A pair of X-ray weak quasars at the heart of two ..."
Elisabeta Lusso, with 12 co-authors including Mitchell Revalski et al., 2023, MNRAS, 525, 4388

29. “Complex AGN feedback in the Teacup galaxy. A powerful ionised galactic outflow, jet-ISM ...”
Giacomo Venturi, with 12 co-authors including Mitchell Revalski et al., 2023, A&A, 678, 127

28. “Metal line emission from galaxy haloes at z $\approx$ 1”
Rajeshwari Dutta, with 14 co-authors including Mitchell Revalski et al., 2023, MNRAS, 522, 535

27. “Chemical abundances in Seyfert galaxies - X. Sulphur abundance estimates”
Oli Dors, with 14 co-authors including Mitchell Revalski et al., 2023, MNRAS, 521, 1969

26. “The AGNIFS survey: spatially resolved observations of hot molecular and ionised outflows in ...”
Rogemar A. Riffel, with 19 co-authors including Mitchell Revalski et al., 2023, MNRAS, 521, 1832

25. “The MUSE Ultra Deep Field (MUDF). III. Hubble Space Telescope WFC3 Grism Spectroscopy ...”
Mitchell Revalski, as the first author with 20 co-authors, 2023, ApJS, 265, 40

24. “A Catalog of 71 Coronal Line Galaxies in MaNGA: [Ne V] is an Effective AGN Tracer”
James Negus, with 7 co-authors including Mitchell Revalski et al., 2023, ApJ, 945, 127

23. “Investigating the Narrow Line Region Dynamics in Nearby Active Galaxies”
Beena Meena, with 9 co-authors including Mitchell Revalski et al., 2023, ApJ, 943, 98

22. “Hubble Space Telescope Observations of Tadpole Galaxies Kiso 3867, SBS0, SBS1, and UM461”
Debra M. Elmegreen, with 10 co-authors including Mitchell Revalski et al., 2022, ApJ, 941, 157

21. “A Massive, Dusty, HI Absorption-Selected Galaxy at z $\approx$ 2.46 Identified in a CO Emission Survey”
Balpreet Kaur, with 6 co-authors including Mitchell Revalski et al., 2022, ApJ, 934, 87

20. “Jansky Very Large Array Detections of CO(1-0) Emission in HI-absorption-selected Galaxies at $z \gtrsim 2$”
Balpreet Kaur, with 5 co-authors including Mitchell Revalski et al., 2022, ApJL, 933L, 42

19. “Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. IV. The ...”
Mitchell Revalski, as the first author with 11 co-authors, 2022, ApJ, 930, 14

18. “Tracking X-ray Outflows with Optical/IR Footprint Lines”
Anna Trindade Falcão, with 7 co-authors including Mitchell Revalski et al., 2022, MNRAS, 511, 1420

17. “Lyman Continuum Galaxy Candidates in COSMOS”
Laura J. Prichard, with 13 co-authors including Mitchell Revalski et al., 2022, ApJ, 924, 14

16. “The nature of HI-absorption-selected galaxies at $z \approx 4$”
Balpreet Kaur, with 5 co-authors including Mitchell Revalski et al., 2021, ApJ, 921, 68

15. “Hubble Space Telescope [O III] Emission-Line Kinematics in Two Nearby QSO2s: A Case for ...”
Anna Trindade Falcão, with 17 co-authors including Mitchell Revalski et al., 2021, MNRAS, 505, 3054

14. “Radiative Driving of the AGN Outflows in the Narrow-Line Seyfert 1 Galaxy NGC 4051”
Beena Meena, with 7 co-authors including Mitchell Revalski et al., 2021, ApJ, 916, 31

13. “Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. III. Results ...”
Mitchell Revalski, as the first author with 11 co-authors, 2020, ApJ, 910, 139

12. “Hubble Space Telescope Observations of [O III] Emission in Nearby QSO2s: Physical Properties ...”
Anna Trindade Falcão, with 16 co-authors including Mitchell Revalski et al., 2021, MNRAS, 500, 1491

11. “Mass Outflow of the X-ray Emission Line Gas in NGC 4151”
Steven B. Kraemer, with 6 co-authors including Mitchell Revalski et al., 2020, MNRAS, 493, 3893

10. "Gemini Near Infrared Field Spectrograph Observations of the Seyfert 2 Galaxy Mrk 3: Feeding ..."
Crystal L. Gnilka, with 12 co-authors including Mitchell Revalski et al., 2020, ApJ, 893, 80

9. "Multicomponent power-density spectra of Kepler AGNs, an instrumental artefact or a physical origin?"
Andrej Dobrotka, with 3 co-authors including Mitchell Revalski et al., 2019, MNRAS, 483, 38

8. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. II. Spatially ..."
Mitchell Revalski, as the first author with 12 co-authors, 2018, ApJ, 867, 88

7. "Challenges and Techniques for Simulating Line Emission"
Karen P. Olsen, with 11 co-authors including Mitchell Revalski et al., 2018, Galaxies, 6, 100

6. "Hubble Space Telescope Observations of Extended [O III] λ5007 Emission In Nearby QSO2S: ..."
Travis C. Fischer, with 17 co-authors including Mitchell Revalski et al., 2018, ApJ, 856, 102

5. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. I. Spatially ..."
Mitchell Revalski, as the first author with 5 co-authors, 2018, ApJ, 856, 46

4. "Gemini Near Infrared Field Spectrograph Observations of the Seyfert 2 Galaxy Mrk 573: In Situ ..."
Travis C. Fischer, with 11 co-authors including Mitchell Revalski et al., 2017, ApJ, 834, 30

3. "A Low-Mass Black Hole in the Nearby Seyfert Galaxy UGC 06728"
Misty C. Bentz, with 16 co-authors including Mitchell Revalski et al., 2016, ApJ, 831, 2

2. "Investigating the Variability of Active Galactic Nuclei Using Combined Multi-Quarter Kepler Data"
Mitchell Revalski, as the first author with 4 co-authors, 2014, ApJ, 785, 60

1. "Kepler Photometry of Four Radio-Loud Active Galactic Nuclei in 2010-2012"
Ann E. Wehrle, with 6 co-authors including Mitchell Revalski et al., 2013, ApJ, 773, 89

INVITED TALKS, COLLOQUIA, SEMINARS

20. "A Tale of Three Telescopes: Advancing Astronomy with Hubble, Webb, and Roman"
The Catholic University of America, Department of Physics Colloquium, April 8, 2026

19. "A Space Telescope Trifecta: Science in the Era of Hubble, Webb, and Roman"
Georgia State University, Department of Physics and Astronomy Colloquium, March 26, 2026

18. "Unlocking Precise AGN Outflow Energetics with Spatially Resolved Modeling"
247th AAS Meeting, NASA AGN SIG Splinter Session, January 6, 2026 (*click for recording*)

17. "Getting to the Point: A Jupyter Notebook for HST PSF Modeling"
The Space Telescope Science Institute, HotSci Colloquium Series, August 21, 2024 (*click for abstract*)

16. "Revealing the Chemical Evolution of Galaxies Across Cosmic Time"
The College of New Jersey, Department of Physics Colloquium, September 20, 2024

15. "Connecting Gas and Galaxies over Cosmic Time in the MUSE Ultra Deep Field"
Universitá degli Studi di Milano-Bicocca, Physics Colloquium Series, September 21, 2023

14. "How Supermassive Black Hole Winds Shape Galaxies in the Local Universe"
The University of Maryland Baltimore County, Physics Colloquium Series, September 13, 2023

13. "The Energetic Impact of Ionized Winds in Nearby Active Galaxies"
University of Sheffield, Sheffield Astrophysics Group, Invited Virtual Seminar, July 12, 2023

12. "How Galaxies are Shaped by Supermassive Black Hole Winds"
Troy University, Department of Physics Colloquium Series, October 21, 2022 *(click for recording)*

11. "Modeling the Dynamics of AGN-Driven Outflows in Nearby Galaxies"
NASA Goddard X-ray Astrophysics Laboratory AGN Seminar Series, February 3, 2022

10. "The Dynamics of Radiatively Driven Outflows in Nearby Active Galaxies"
International AGN Seminar Series, January 18, 2022 *(click for recording)*

9. "Measuring the Mass-Metallicity Relation for Low Mass Galaxies in the MUSE Ultra Deep Field"
The Space Telescope Science Institute, HotSci Colloquium Series, July 27, 2022 *(click for recording)*

8. "The Densities and Dynamics of AGN-Driven Outflows in Nearby Galaxies"
Multiphase AGN Feeding and Feedback II Conference, Sesto, Italy, June 20, 2022 *(click for slides)*

7. "Modeling the Dynamics of AGN-Driven Outflows in Nearby Galaxies"
STScI Postdoctoral Discovery Seminar Series, April 19, 2022 *(click for recording)*

6. "Modeling the Physical Conditions of Photoionized Outflows in Nearby Active Galaxies"
University of Nevada, Las Vegas, Astronomy Colloquium, November 15, 2019

5. "Measuring the Impact of Mass Outflows in Nearby Active Galaxies"
Harvard-Smithsonian Center for Astrophysics "Quasar Tea Talk", October 23, 2018

4. "Supermassive Black Hole Winds: Can They Influence Galaxy Evolution?"
The College of New Jersey, Department of Physics Colloquium, October 19, 2018

3. "The Energetics of Narrow Line Region Mass Outflows in Nearby AGN"
NASA's Goddard Space Flight Center (GSFC), October 17, 2018

2. "Characterizing Mass Outflows in Nearby Active Galaxies with Hubble"
U.S. Naval Research Laboratory (NRL), October 16, 2018

1. "Probing Feedback from Outflows in the Narrow Line Region"
Multiphase AGN Feeding and Feedback Conference, Sesto, Italy, July 13, 2018

INFORMAL TALKS

13. "Hands-on Hubble: A New Video Tutorial Series"
Space Telescope Science Institute, Instruments Division Meeting, March 19, 2026

12. "How the New HST WFC3/UVIS Saturation Map Can Help Your Science"
Johns Hopkins University, Astrocoffee, September 29, 2025

11. "Updating the WFC3/UVIS Saturation Map"
Space Telescope Science Institute, Telescope and Instruments Performance Summary, July 17, 2025

10. "Using Hubble to Resolve Supermassive Black Hole Winds in Nearby Galaxies"
Space Telescope Science Institute, IN-Science Lunch Talk Series, June 18, 2025

9. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies. V. The Exp..."
Johns Hopkins University, Science Coffee, April 7, 2025

8. "Characterizing the Mass-Metallicity Relation for Low Mass Galaxies at $z = 1-2$"
Johns Hopkins University, Galaxies and AGN Journal Club, March 12, 2024

7. "The Metallicities of Galaxies in the MUSE Ultra Deep Field"
   Space Telescope Science Institute, CoolSci Mixer, January 24, 2024 (*click for recording*)

6. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies"
   Johns Hopkins University, Science Coffee, May 16, 2022

5. "Measuring the Spatially-Resolved Energetics of AGN-Driven Outflows in Nearby Active Galaxies"
   Space Telescope Science Institute, Friday Science Coffee, January 26, 2021

4. "How Do Supermassive Black Hole Winds Affect Galaxy Evolution?"
   Space Telescope Science Institute, Virtual STScI/JHU Intern Lecture Series, July 21, 2020

3. "Quantifying Feedback from Narrow Line Region Outflows in Nearby Active Galaxies"
   Johns Hopkins University, Astrocoffee, July 30, 2020

2. "How massive are AGN-driven outflows in local galaxies?"
   Durham University, Friday Lunch Astronomy Talk (FLAT), November 22, 2019

1. "How Powerful Are Outflows in Nearby Active Galaxies?"
   Space Telescope Science Institute, Friday Science Coffee, November 1, 2019

CONFERENCE PROCEEDINGS

5. "Observations of AGN feeding and feedback on Nuclear, Galactic, and Extragalactic Scales",
   D. Michael Crenshaw, with 12 co-authors including Mitchell Revalski et al., 2021, IAU, 359, 318

4. "Identifying the extent of AGN outflows using spatially resolved gas kinematics",
   Beena Meena, with 5 co-authors including Mitchell Revalski et al., 2021, IAU, 359, 285

3. "HST observations of [O III] emission in nearby QSO2s: Physical properties of the outflows",
   Anna Trindade Falcão, with 5 co-authors including Mitchell Revalski et al., 2021, IAU, 359, 269

2. "The Emission of Electromagnetic Radiation from Charges Accelerated by Gravitational Waves and ...",
   Mitchell Revalski, as the first author with 2 co-authors, 2015, ASSP, 40, 301

1. "Interaction of Gravitational Waves with Charged Particles",
   Thulsi Wickramasinghe, with 2 co-authors including Mitchell Revalski et al., 2015, ASSP, 40, 295

CONFERENCE TALKS

16. "Connecting Mass, Metallicity, and Star-formation Rate for the Lowest Mass Galaxies at Cosmic Noon"
    Recipes to Regulate Star Formation at All Scales Conference, April 16, 2024 (*click for recording*)

15. "Measuring the Mass-Metallicity Relation of Low Mass Galaxies at Redshifts 1-2"
    Charting the Metallicity Evolution History of the Universe Conference, September 19, 2022

14. "Connecting Gas and Galaxies with HST Grism Spectroscopy of the MUSE Ultra Deep Field"
    What Matter(s) around Galaxies 2022 Conference, September 15, 2022

13. "Measuring the Spatially Resolved Mass Outflow Rates of Ionized Gas in Nearby AGN"
    Young Astronomers on Galactic Nuclei (YAGN) Conference, August 26, 2021 (*click for recording*)

12. "Early Science Results from the MUSE Ultra Deep Field Program"
    237th AAS Meeting, Abstract 308.05, January 11-15, 2021

11. "90 Orbits of *HST* WFC3 Grism Spectroscopy of the MUSE Ultra Deep Field"
236th AAS Meeting, Abstract 307.07, June 1-3, 2020

10. "Spatially Resolved Mass Outflow Rates for Six Nearby AGN Using Photoionization Modeling"
235th AAS Meeting, Abstract 436.06, January 4-8, 2020

9. "Feedback in Nearby Active Galaxies: Quantifying the Impact of Narrow Line Region Outflows"
233rd AAS Meeting, Abstract 306.03D, January 6-10, 2019

8. "Comparison of Techniques for Determining Mass Outflow Rates in the Type 2 Quasar Markarian 34"
232nd AAS Meeting, Abstract 401.05, June 3-7, 2018

7. "Using Photoionization Modeling and Line Diagnostics to Quantify Feedback from AGN Driven Out..."
Walking the Line 2018 Conference, March 14-16, 2018 (*click for recording*)

6. "How Do Supermassive Black Holes Grow? Measuring the Powerful Winds in Active Galactic Nuclei"
5th Perimeter Astronomy Conference (PAC), October 25, 2017 (*click for recording*)

5. "A Spatially Resolved Mass Outflow Rate for Markarian 573: In-Situ Radiative Driving of the Narrow..."
AGN Winds on the Georgia Coast, June 28, 2017

4. "The Spatially Resolved Mass Outflow Rate in Markarian 573"
229th AAS Meeting, Abstract 302.04, January 3-7, 2017

3. "Determining the Spatially Resolved Mass Outflow Rate in Markarian 573"
Georgia Regional Astronomers Meeting (GRAM), October 29, 2016

2. "Using Cloudy Models to Determine Spatially-Resolved Mass Outflow Rates in Nearby Active Gala..."
Brief Graduate Talk at the Cloudy: Emission Lines in Astrophysics Conference, August 8-12, 2016

1. "The Emission of Electromagnetic Radiation from Charges Accelerated by Gravitational Waves and..."
The 3rd Sant Cugat Forum on Astrophysics, April 22-25, 2014

⋆**Contributed as a co-author to 6 additional oral presentations at major conferences.**

CONFERENCE POSTERS

11. "The Dynamical Evolution of a Shock-Cloud Interaction in the Cygnus Loop from 1994 to 2024 via..."
Mitchell Revalski, with 3 co-authors, iPoster 287.03, 247th AAS Meeting, January 4-8, 2026

10. "New Tools for Modeling the Point Spread Function of Wide Field Camera 3"
Mitchell Revalski, with 3 co-authors, iPoster 203.07, 245th AAS Meeting, January 12-16, 2025

9. "Hubble Space Telescope Grism Spectroscopy of the MUSE Ultra Deep Field"
Mitchell Revalski, with 7 co-authors, Multi-object Spectroscopy for Statistical Measures of Galaxy Evolution at STScI, May 17, 2021

8. "Spatially Resolved Mass Outflows in the Narrow Line Region of Markarian 34"
Mitchell Revalski, with 6 co-authors, Poster 250.48, 231st AAS Meeting, January 8-12, 2018

7. "Maximizing the Impact of JWST: Developing Diagnostics to Quantify Mass Outflow Rates in Nearby..."
Mitchell Revalski, Spectral Diagnostics to Explore the Cosmic Dawn With JWST, August 1, 2017

6. “Cloudy Model Visualization to Determine Spatially-Resolved Mass Outflow Rates in Nearby Active...”
Mitchell Revalski with 4 co-authors, GSU Scientific Computing Day

5. “Using Cloudy Models to Determine Spatially-Resolved Mass Outflow Rates in Nearby Active...”
Mitchell Revalski, with 4 co-authors, Cloudy: Emission Lines in Astrophysics, 2016

4. “Characterizing the Narrow Line Region Outflows in Markarian 573”
Mitchell Revalski, with 4 co-authors, The Great Lakes Quasar Symposium, 2016

3. “Mass Outflow in the Narrow Line Region of Markarian 573”
Mitchell Revalski, with 4 co-authors, Poster 243.06, 227th AAS Meeting, January 4-8, 2016

2. “Investigating AGN Variability Using Combined Multi-Quarter Kepler Data”
Mitchell Revalski, with 4 co-authors, Poster 250.02, 223rd AAS Meeting, January 5-9, 2014

1. “Exploiting Kepler to Study Quasar Variability”
Mitchell Revalski, with 5 co-authors, Poster 339.02, 221st AAS Meeting, January 6-10, 2013

***Contributed as a co-author to 32 additional poster presentations at major conferences.**

STSCI REPORTS & NEWSLETTERS

9. “Hands-on Hubble: A New Video Tutorial Series for WFC3”
Mitchell Revalski, STScI Newsletter 2026, Volume 43, Issue 01

8. “New Video Tutorials Now Available for WFC3”
Mitchell Revalski, WFC3 STAN Issue 51, March 2026

7. “Major Upgrades to HST Notebooks within the STScI Notebook Ecosystem”
Mitchell Revalski, A. Guzman, et al., STScI Newsletter 2025, Volume 42, Issue 02

6. “Improvements to the WFC3/UVIS Saturation Map”
Mitchell Revalski, I. Rivera, V. Bajaj, F. Dauphin, WFC3 STAN Issue 50, October 2025

5. “Updates to the WFC3/UVIS Saturation Map”
Mitchell Revalski, I. Rivera, V. Bajaj, F. Dauphin, WFC3 ISR 2025-06

4. “The DrizzlePac Handbook, Version 3.0”
Gagandeep Anand and 6 co-authors including Mitchell Revalski, The DrizzlePac Handbook

3. “AAS Meeting Workshop Hands-on Hubble: How to Access, Align, Drizzle, and PSF Model HST...”
Mitchell Revalski, WFC3 STAN Issue 47, October 2024

2. “A New Notebook for Point Spread Function Modeling”
Mitchell Revalski, F. Dauphin, V. Bajaj, J. Anderson, WFC3 STAN Issue 46, June 2024

1. “Updates to DrizzlePac’s Readthedocs”
Mitchell Revalski, J. Mack, S. Goldman, et al., WFC3 STAN Issue 45, March 2024

COMMUNITY WHITE PAPERS

2. “Astronomy-driven Careers in the 2020’s”, Kamenetzky, J. and 11 co-authors including Mitchell Revalski, 2019, An Astro2020 Decadal Survey State of the Profession Consideration

1. "The Physics and Astrophysics of X-ray Outflows from Active Galactic Nuclei", Laha, S. and 22 co-authors including Mitchell Revalski, 2019, National Academies of Science, Engineering, and Medicine's Call to the Astronomy and Astrophysics Community for Science White Papers

ORGANIZING COMMITTEES

7. IV Workshop Chemical Abundances in Gaseous Nebulae 2024
   Served on the SOC organizing conference logistics.

6. AGN Winds on the Chesapeake 2023
   Served on the SOC and LOC organizing conference logistics.

5. "How to Give Great Presentations: A Scientists Guide to Effective Communication" 2022
   Developed materials for workshop at the 240th AAS meeting.

4. Large-Volume Spectroscopic Analyses of AGN and Star Forming Galaxies in the Era of JWST 2022
   Abstract submission and sorting, panel moderator.

3. AGN Winds on the Georgia Coast 2017
   Announcements, abstract submission and sorting.

2. White House Astronomy Night Satellite Event: GSU Astronomy Night 2015
   Assisted with "Ask an Astronomer" panel discussion for public outreach.

1. IAU Symposium 314: Young Stars and Planets Near the Sun 2015
   Managed volunteers, created name badges, and organized poster competition.

OUTREACH TALKS

12. "A Space Telescope Trifecta: Science in the Era of Hubble, Webb, and Roman"
    Virtually for the Astronomical Society of Long Island, March 11, 2025

11. "A Space Telescope Trifecta: Science with Hubble, Webb, and Roman"
    The Hartness House Workshop at Stellafane, July 24, 2025

10. "A Tale of Three Telescopes: Hubble, Webb, and Roman"
    Virtually for the Princeton COSMO astronomy group, May 1, 2025

9. "Heavy Metal: How the smallest galaxies rock the life cycle of elements in our Universe"
   Virtually for the Society of Telescopy, Astronomy, and Radio (STAR), September 5, 2024

8. "From Grinding Mirrors to Working on Hubble and the Value of Pro-Am Research"
   88th Stellafane Convention of the Springfield Telescope Makers, August 2, 2024 (*click for recording*)

7. "Heavy Metal: How the smallest galaxies rock the life cycle of elements in our Universe"
   The New Jersey Astronomical Association, October 28, 2023 (*click for recording*)

6. "Shaping Galaxies with Supermassive Black Hole Winds"
   The Space Telescope Science Institute Public Lecture Series, December 1, 2020 (*click for recording*)

5. "Mass Outflows in Active Galaxies: Part II - The Conclusion"
   The New Jersey Astronomical Association, November 30, 2019 (*click for recording*)

4. "Supermassive Black Holes and Extragalactic Outflows"
   The Charlie Elliott Astronomy Club, January 28, 2017

3. "Mass Outflows in Active Galaxies: What are they and how do they affect galaxy evolution?"
   The New Jersey Astronomical Association, November 28, 2015 (*click for recording*)

2. "An Introduction to Gravitational Wave Astronomy & Undergraduate Research Results"
   The New Jersey Astronomical Association, June 13, 2014 (*click for recording*)

1. "Exploring Active Galactic Nuclei Utilizing the Kepler Satellite"
   The New Jersey Astronomical Association, September 22, 2012

OUTREACH PROGRAMS

6. Presentations of Science Public Outreach Team (SPOT) Resources — 2018 - 2019
   Presentations of Astronomy and STEM topics for K-12.

5. Hard Labor Creek Observatory Volunteer — 2014 - 2019
   Operate telescopes & direct public during open houses.

4. Girl Scouts of America — 2014 - 2019
   Assist with hands-on astronomy programs directed by Dr. Misty Bentz.

3. Urban Life Observatory Volunteer — 2014 - 2016
   Operated telescopes from GSU campus for students in the city.

2. New Jersey Astronomical Association Qualified Observer — 2006 - 2014
   Team member that hosted 25+ public nights at the observatory, including observing, youth education, and STEM career awareness.

1. Elementary School Planetarium Shows — 2006 - 2010
   Portable planetarium shows and crafts for K-6 students at three schools.

OUTREACH EVENTS (after 2014)

31. CoffeeBar Bel Air "Ask an Astronomer" Night — Apr 2026
    Discussed Science in the Era of Hubble, Webb, and Roman

30. Riverside Elementary School Activity Day — Dec 2025
    Conducted "what would you bring to the moon" activity.

29. Riverside Elementary STEAM Night — Apr 2025
    Setup binoculars, telescope, and HST trifold for students.

28. Hybrid Q&A About Careers in Astronomy — Aug 2023
    Discussed STEM careers with summer REU students at GSU.

27. Riverside Elementary School Activity Day — Dec 2023
    Created scale models of the solar system with three 5th grade classes.

26. Cove Road Elementary Zoom Q&A — Apr 2023
    Zoomed with two 5th grade classes to discuss planets and stars.

25. Warner Elementary School "Space Day" Kick-Off Event — Nov 2021
Discussed careers, telescopes, and JWST virtually for >100 5th graders.

24. Alumni Panel at The College of New Jersey — Oct 2021
Career Panel Q&A for ∼40 undergraduate physics majors.

23. Lucy V. Barnsley Elementary Zoom Q&A — Apr 2021
Zoomed with 5th grade class to answer their astronomy questions.

22. Latino Organization of Graduate Students (LOGRAS) Postdoc Panel — Oct 2020
Answered GT graduate student questions on postdoc application process.

21. Graduate Student Fellowship Application Panel — Sep 2020
Answered JHU graduate student questions about fellowship applications.

20. Annual Roland Park Middle School Science Fair — Mar 2020
Judged projects based on implementation of the scientific method.

19. Graduate Student Panel for Neuro Summer Program at GSU — Jun 2019
Panel member providing advice on graduate school applications.

18. Physics Graduate Student Association HLCO Night — Mar 2019
Operated HLCO telescopes for PGSA Student Star Party.

17. Trip Elementary School STEM Night — Jan 2019
Had students build model refracting telescopes and discussed optics.

16. Maynard Holbrook Jackson High School — Jan 2019
Astronomy trivia game and discussed jobs in STEM fields.

15. Voorhees High School: "Astronomy Smorgasbord" — Oct 2018
Gave talk on research, jobs in STEM, and graduate school information.

14. Cristo Rey High School Astronomy Jeopardy — Sep 2018
Had student teams compete in astronomy trivia game.

13. Trip Elementary School STEM Night — Jan 2018
Operated telescope and answered questions for several hundred students.

12. Raritan Valley Elementary School Q&A — Jan 2018
Answered solar system and star questions for 4th grade class.

11. Student Summer Camp Solar Observing — Jul 2017
Operated solar telescope for STEM campers ages 7-10.

10. Voorhees High School: "Astronomy Smorgasbord" — May 2017
Gave talk on research, jobs in STEM, and graduate school information.

9. Voorhees High School Talk and Q&A — Dec 2016
Talk on research, applying to colleges, and astronomy Q&A.

8. Middle School Astronomy Skype Q&A — Nov 2016
Skyped with 4th grade class to answer their astronomy questions.

7. GSU Astronomy Night in Grant Park — Nov 2016
Gave constellation tour for over 100 elementary school families.

6. Student Shadowing — Sep 2016
   Organized high school student shadowing for their senior project.

5. GSU Astronomy Club Talk — Sep 2016
   Gave opening semester talk to club about black holes.

4. Planet X: Fact or Fiction? Public Debate — Sep 2016
   Held observing session following public debate.

3. Georgia Buddhist Summer Camp Star Party — Jun 2016
   Operated HLCO telescopes for 100 adults and children.

2. Voorhees High School Talk: "Astronomy Smorgasbord" — Jun 2016
   Gave talk on research, graduate school information, and trivia game.

1. Ethel Mcknight Elementary School "Astronomer Q&A" — May 2015
   Answered student questions about stellar evolution.

***Completed over a dozen outreach events as a middle and high school student prior to 2014.**

SCIENCE POLICY

2. Citizens for Space Exploration New Jersey Student Representative — 2013 - 2017
   Conducted 10 days of office meetings in Washington D.C. to promote support from representatives and senators for NASA funding. Served on student training panel.

1. Graduate Student NSF Information Session — 2016 - 2018
   Three Q&A sessions about applying for NSF GRFP with school of graduate studies.

MEDIA

"Astronomers capture first direct image of the cosmic web that binds the Universe" — 2025 (*click here*)
"New & Updated HLSPs for August" — 2024 (*click here*)
"Shine On You Crazy Outflow!" — 2021 (*click here*)
"Recent Grad Dr. Mitchell Revalski Achieves Rare Feat" — 2020 (*click here*)
"NJAA Awards Lifetime Member Status to Mitchell Revalski" — 2019 (*click here*)
"GSU Graduate Student Profile" — 2018 (*click here*)
"Graduate Student Awarded NSF Fellowship" — 2016 (*click here*)
"TCNJ Physics Alumnus Wins National Science Foundation Fellowship" — 2016 (*click here*)
"Research Featured in TCNJ Journal of Student Scholarship" — 2015 (*click here*)
"A Force to Be Reckoned With" — 2014 (*click here*)
"TCNJ Researchers Are Headed Overseas to Present Their ... Research" — 2014 (*click here*)
"Woodglen School Teacher Hosts Star Party for Students and Their Families" — 2013 (*click here*)
"TCNJ My Way" Profile: Mitchell Revalski — 2013 (*click here*)
"MUSE Program Kick-Starts Student Research" — 2013 (*click here*)
"Kepler Satellite Lecture Held in High Bridge" — 2012 (*click here*)

Mitchell Revalski – April 28, 2026