

# Rebecca J. Nevin

## Curriculum Vitae

Doctoral Candidate  
Department of Astrophysical and Planetary Sciences  
University of Colorado Boulder  
Boulder, CO, 80309

[http://casa.colorado.edu/~rene3152/  
rebecca.nevin@colorado.edu](http://casa.colorado.edu/~rene3152/rebecca.nevin@colorado.edu)

## Education

---

|   |           |
|---|-----------|
| Ph.D. in Astrophysics, University of Colorado | May, 2019 |
| M.S. in Astrophysics, University of Colorado  | Nov, 2015 |
| B.A. in Astrophysics, Whitman College         | May, 2013 |

## Fellowships & Awards

---

|   |             |
|---|-------------|
| Early Career Scientist Decadal Survey Participant | Oct, 2018   |
| PEO Scholar Award Alternate                       | Apr, 2018   |
| 3 Minute Thesis Competition - 2nd Place           | Feb, 2018   |
| Ray Mace Smith Graduate Fellowship                | Apr, 2016   |
| High Pass on Master's Exam                        | Nov, 2015   |
| NSF Graduate Fellow                               | 2014 - 2017 |
| Graduated Summa Cum Laude, Whitman College        | May, 2013   |
| Phi Beta Kappa                                    | May, 2013   |
| Sigma Xi  | Mar, 2013   |

## Research Experience

---

|   |                |
|---|----------------|
| <b>Graduate Research Assistant,</b><br><b>Simulated Galaxy Imaging and Kinematics</b> | 2017 - present |
|---|----------------|

*University of Colorado*

Advisor: Julie Comerford and Laura Blecha

Used mockup spectra and images from SUNRISE hydrodynamics simulations of galaxy mergers to create a classification with Linear Discriminant Analysis to identify galaxy mergers in SDSS.

---

|  |             |
|--|-------------|
| <b>Graduate Research Assistant,</b><br><b>Active Galactic Nuclei (AGN) Kinematics and Outflows</b> | 2013 - 2016 |
|--|-------------|

University of Colorado

Advisor: Julie Comerford

Developed a kinematic classification scheme to identify the origin of emission lines. Implemented MCMC to constrain the energy of AGN-driven outflows.

**Undergraduate Research Assistant,  
Recoiling Supermassive Black Holes**

Summer 2012

Harvard-Smithsonian Center for Astrophysics

Advisor: Francesca Civano

Developed an imaging method to search for recoiling SMBHs in the COSMOS survey. Applied imaging decomposition (GALFIT) to identify offset stellar bulges.

2011 - 2012

**Undergraduate Research Assistant,  
Globular Cluster Stellar Populations**

Whitman College

Advisor: Nathaniel Paust

Summer 2011

**Undergraduate Research Assistant,  
Spectropolarimeter Characterization**

Institute for Astronomy, Maui

Advisor: David Harrington

## Refereed Publications

---

[8] [\*“Accurate Identifications of Galaxy Mergers with Imaging”\*](#)

**Nevin, R.**, Blecha, L., Comerford, J. & Greene, J., 2018, ApJ submitted

[7] *“The Origin of Double-Peaked Narrow Lines in Active Galactic Nuclei IV: Association with Galaxy Mergers”*

Comerford, J., **Nevin, R.**, Stemo, A., Müller-Sánchez, F., Barrows, R., Cooper, M. & Newman, J., 2018, ApJ, 867, 66

[6] *“Two Separate Outflows in the Dual Supermassive Black Hole System NGC 6240”*

Müller-Sánchez, F., **Nevin, R.**, Comerford, J., Davies, R., Privon, G. & Treister, E., 2018, Nature, 556, 345

[5] *“The Origin of Double-Peaked Narrow Lines in Active Galactic Nuclei III: Feedback from Biconical AGN Outflows”*

**Nevin, R.**, Comerford, J., Müller-Sánchez, F., Barrows, R. & Cooper, M., 2018, MNRAS, 473, 2160

[4] *“An Active Galactic Nucleus Caught in the Act of Turning Off and On”*

Comerford, J., Barrows, R., Müller-Sánchez, F., **Nevin, R.**, Greene, J., Pooley, D., Stern, D. & Harrison, F., 2017, ApJ, 849, 102

[3] *“The Origin of Double-Peaked Narrow Lines in Active Galactic Nuclei II: Kinematic Classifications for the Population at  $z < 0.1$ ”*

**Nevin, R.**, Comerford, J., Müller-Sánchez, F., Barrows, R. & Cooper, M., 2016, ApJ, 832, 67

[2] “*The Origin of Double-Peaked Narrow Lines in Active Galactic Nuclei I: Very Large Array Detections of Dual AGNs and AGN Outflows*”  
Müller-Sánchez, F., Comerford, J., **Nevin, R.**, Barrows, R., Cooper, M. & Greene, J., 2015, ApJ, 813, 2

[1] “*Calibrating and Stabilizing Spectropolarimeters with Charge Shuffling and Daytime Sky Measurements*”  
Harrington, D., Kuhn, J. & **Nevin, R.**, 2015, Astronomy & Astrophysics, 578, 126

## Other Publications

---

[1] “*This Father’s Day is One of the Longest Days in the History of the Earth - Here’s Why*”  
**Nevin, R.**, 2015, Universe Today

[2] “*Going Above & Beyond: A Cross-Disciplinary Planetarium Program*”  
Rehnberg, M. & **Nevin, R.**, 2016, AAS Education Task Force White Paper

## Invited Colloquia

---

|                       |              |
|-----------------------|--------------|
| University of Wyoming | Sep 28, 2018 |
|-----------------------|--------------|

## Seminars & Conference Talks

---

|  |              |
|--|--------------|
| AAS 233 Winter Meeting, Seattle, WA                    | Jan, 2019    |
| Seminar, Carnegie Observatories                        | Oct 26, 2018 |
| Seminar, Space Telescope Science Institute             | Oct 12, 2018 |
| Seminar, Princeton University                          | Oct 10, 2018 |
| AAS 232 Summer Meeting, Denver, CO                     | Jun 5, 2018  |
| Seminar, University of Florida                         | Mar 28, 2018 |
| CASA/JILA Seminar, University of Colorado              | Mar 22, 2018 |
| SDSS-IV/MaNGA Meeting and Workshop, Campeche, Mexico   | Dec 7, 2017  |
| AGN Winds on the Georgia Coast, Jekyll Island, Georgia | Jun 28, 2017 |
| CASA/JILA Seminar, University of Colorado              | Jun 16, 2017 |
| Great Lakes Quasar Symposium, London, Ontario          | May 4, 2016  |

## Supercomputing Allocations

---

|  |          |
|--|----------|
| <b>Co-PI of XSEDE Supercomputer Allocation, NSF</b>                            | 2018     |
| Allocated 1242000 CPU-hours  |          |
| <br><b>PI of JANUS/Summit Supercomputer Allocation, University of Colorado</b> | <br>2015 |
| Allocated 200000 CPU-hours   |          |

## Observing Experience

---

|  |             |
|--|-------------|
| <b>PI of six successful Apache Point Observatory Proposals</b><br>Dual Imaging Spectrograph, 3.5m ARC Telescope<br>Observed 34.5 half nights | 2014 - 2016 |
| <b>Co-PI of MDM Observatory (Kitt Peak) Research</b><br>Observed five nights   | 2012        |

## Teaching Experience

---

|   |             |
|---|-------------|
| <b>Instructor of Record, ASTR-1000</b><br>University of Colorado<br>Developed and taught a 25 student course. Designed inquiry-based activities.  | Summer 2017 |
| <b>Professional Development Program (PDP)</b><br>Institute for Scientists & Engineer Educators, University of California<br>Developed an inquiry-based exoplanet lab for a program for first generation college students. | 2016        |
| <b>Teaching Assistant</b><br>University of Colorado<br>Taught lab courses (30 students) and assisted with interactive learning techniques for the large introductory classes.   | 2013 - 2014 |
| <b>Undergraduate Teaching Assistant and Tutor</b><br>Whitman College<br>Guided student telescope labs and indoor physics tutorials, led community outreach telescope nights, and gave planetarium shows to local schools  | 2011 - 2013 |

## Professional Development

---

|  |                |
|--|----------------|
| Statistical Learning, Stanford Online                                | 2018 - present |
| Mentorship Training, University of Colorado                          | Aug 2018       |
| Rethinking Scientific Presentations: The Assertion-Evidence Approach | Jan 2018       |
| Running Singularity Containers on SDSC's Comet Supercomputer         | Jun 2018       |
| Managing Research Workflows with Singularity Containers              | Apr 2018       |
| Software Carpentry Workshop, Research Computing                      | Mar 2017       |
| Science Writing Course, University of Colorado                       | 2016           |
| Elected Comps I Committee Member, University of Colorado             | Fall 2015      |
| Astrostatistics Summer School, Penn State                            | Jun 2015       |
| Faculty Hiring Committee Member, University of Colorado              | Jan 2014       |

## Outreach and Communication

---

|  |                |
|--|----------------|
| <b>Supermassive Black Hole Documentary Film</b><br>Writing and developing an educational movie about supermassive black holes and galaxy mergers in partnership with the Fiske Planetarium.  | 2018 - present |
| <b>Science Speak-Easy: Science Communication Workshop</b><br>Organized and facilitated an annual workshop for graduate students and postdocs at University of Colorado on giving public and scientific talks.  | 2018 - present |
| <b>The Science of Sci Fi</b><br>Developed and ran this talk series at Fiske Planetarium, aimed at engaging the public with popular sci fi works.<br>My talk: <i>Zombie Pathology: A Survival Guide for Pandemics in the 21st Century</i>   | 2017 - present |
| <b>Science and Society</b><br>Ran this talk series at Fiske Planetarium, helped graduate students and postdocs develop talks<br>My talks: <i>It Came from Space! The Solar System's Ultimate Weapon and How we Hope to Stop it</i> , <i>Galactic Getaways: Life from a Different Perspective</i> | 2014 - present |
| <b>Promoting an Inclusive Community in Astronomy (PICA)</b><br>Organized and led discussions of this graduate-student run diversity group  | 2013 - present |
| <b>Astronomy on Tap: Colorado</b><br>My talks: <i>Gravitational Waves</i> , <i>The Dino's Demise</i>   | 2016 - 2017    |
| <b>Science Writer</b><br>Wrote for the blog <i>Cosmic Conversations</i> , communicated a wide range of popular science topics  | 2013 - 2017    |
| <b>PhD Comics</b><br>Research group featured in <i>Supermassive Black Holes Explained</i> ( <a href="http://www.phdcomics.com/comics.php?f=1864">http://www.phdcomics.com/comics.php?f=1864</a> )  | 2016           |
| <b>ComSciCon</b><br>Attended this science communication conference preparing today's scientists to better communicate their science to a broader audience  | June 2015      |
| <b>Earth Explorers</b><br>Worked with a group of underserved middle schoolers in Longmont, CO to develop a movie about black holes   | 2014 - 2015    |