

# Catherine A. Whiting

Associate Professor  
Department of Physical and  
Environmental Sciences  
Colorado Mesa University  
Email: cwhiting@coloradomesa.edu

## EDUCATION

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|---|------------------------------|
| <b>University of Iowa</b><br>Ph.D. in Physics<br>– Thesis: “Duality Symmetries in String-Inspired Supergravity: T-Dualities and the Gauge/Gravity Correspondence” | Iowa City, IA<br>2010 - 2015 |
| <b>University of Iowa</b><br>M.S. in Astronomy<br>– Thesis: “Considerations for Expanded Very Large Array Coronal Faraday Rotation Measurements”                  | Iowa City, IA<br>2008–2010   |
| <b>University of Iowa</b><br>B.S. in Physics, Astronomy, and Mathematics, with High Distinction   | Iowa City, IA<br>2004–2008   |

## APPOINTMENTS

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| <b>Colorado Mesa University</b><br>Associate Professor<br>Assistant Professor                               | Grand Junction, CO<br>Fall 2025 - present<br>Fall 2020 - Spring 2025 |
| <b>Bates College</b><br>Visiting Assistant Professor  | Lewiston, ME<br>2018-2020  |
| <b>University of the Witwatersrand</b><br>Postdoctoral Fellow at National Institute for Theoretical Physics | Johannesburg, South Africa<br>2015-2018                              |
| <b>University of the Witwatersrand</b><br>Sessional Lecturer, School of Physics                             | Johannesburg, South Africa<br>2017                                   |
| <b>University of Iowa</b><br>Graduate Teaching Assistant, Department of Physics and Astronomy               | Iowa City, IA<br>2009-2015   |
| <b>Grinnell College</b><br>Lecturer   | Grinnell, IA<br>2014   |
| <b>University of Iowa</b><br>Graduate Research Assistant, Department of Physics and Astronomy               | Iowa City, IA<br>2008-2009   |
| <b>University of Iowa</b><br>Undergraduate Research Assistant, Department of Physics and Astronomy          | Iowa City, IA<br>2005-2008   |
| <b>Institute for Astronomy, University of Hawaii</b><br>Summer REU Intern                                   | Honolulu, HI<br>2007   |
| <b>National Radio Astronomy Observatory, Array Operations Center</b><br>Summer REU Intern                   | Socorro, NM<br>2006  |
| <b>University of Iowa</b><br>Peer Tutor, TRiO Student Support Services                                      | Iowa City, IA<br>2008-2013   |

## TEACHING

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- **Assistant Professor** at Colorado Mesa University Fall 2020 - current
  - PHYS 101: Elementary Astronomy (Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024, Spring 2025, Fall 2025, Spring 2026, Fall 2026)*
  - PHYS 103: General Astronomy (Spring 2023, Fall 2023, Spring 2024, Fall 2024, Fall 2025, Spring 2026, Fall 2026)*
  - PHYS 103L: General Astronomy Lab (Spring 2023 (2 sections), Fall 2023 (2 sections), Spring 2024 (2 sections), Fall 2024 (2 sections), Fall 2025 (2 sections), Spring 2026 (2 sections), Fall 2026 (2 sections))*
  - PHYS 471: Computational Physics (Fall 2021, Fall 2023, Fall 2025)*
  - PHYS 132: Electromagnetism and Optics (Spring 2025)*
  - PHYS 132L: Electromagnetism and Optics Lab (Fall 2022, Spring 2025)*
  - PHYS 231: Modern Physics (Spring 2024, Spring 2025)*
  - PHYS 311: Electromagnetic Theory 1 (Fall 2024)*
  - PHYS 111L: General Physics Lab (Spring 2022 (2 sections), Spring 2023 (2 sections))*
  - PHYS 111: General Physics (Fall 2020 (2 sections), Spring 2021 (2 sections), Fall 2021, Spring 2022, Fall 2022 (2 sections))*
  - PHYS 372: General Relativity (Spring 2022)*
  - PHYS 494: Physics Seminar (Fall 2021, Spring 2022)*
  - PHYS 395: Independent Study (Fall 2021), supervised Nicholas Harshman in research*
- **Visiting Assistant Professor** at Bates College Fall 2018 - Winter 2020
  - PHYS 108: Introduction to Modern Physics (Winter 2020)*
  - PHYS 211: Newtonian Mechanics (Fall 2019)*
  - PHYS 107: Classical Physics (Fall 2019, Fall 2018)*
  - PHYS 107L: Classical Physics Lab (Fall 2019)*
  - ATPH 336: General Relativity (Winter 2019)*
  - PHYS 108L: Modern Physics Lab (Winter 2019)*
- **Sessional Lecturer** at University of the Witwatersrand, School of Physics 4th Teaching Block, 2017
  - PHYS4021A: Introduction to General Relativity, Undergraduate Honours Level, co-taught with Nilanjan Sircar*
- **Graduate Teaching Assistant** at University of Iowa Fall 2009 - Spring 2015
  - PHYS:1702: Physics II Lab (Spring 2015, Spring 2014)*
  - PHYS:1612: Introductory Physics I TIRE Discussion (Spring 2015)*
  - PHYS:7760: General Relativity and Cosmology (Spring 2015), graduate level, grader*
  - PHYS:7740: Quantum Field Theory (Fall 2014), graduate level, grader*
  - PHYS:1702: Physics I Lab (Fall 2014)*
  - PHYS:1611: Introductory Physics I Lab (Summer 2014)*
  - ASTR:1771: General Astronomy Lab (Fall 2013, Fall 2012, Fall 2010 (Lead TA))*
  - PHYS:1511: College Physics I Lab (Summer 2013)*
  - ASTR:1772: General Astronomy II Lab (Spring 2013, Spring 2012, Spring 2011, Spring 2010)*
  - ASTR:1070: Stars, Galaxies, and the Universe Lab (Spring 2013, Fall 2012, Summer 2012, Fall 2011, Fall 2010 (Lead TA), Fall 2009)*
  - ASTR:1079: Introductory Astronomy Lab (Spring 2013, Fall 2012, Summer 2012, Fall 2011, Fall 2009)*
  - ASTR:7775: Special Topics in Astrophysics (Fall 2012), graduate level, grader*
  - PHYS:1612: Introductory Physics II Lab (Spring 2011)*
  - Physics and Astronomy Department Drop-In Tutorial Room Tutor, Fall 2009-Spring 2015*
- **Lecturer** at Grinnell College Spring 2014
  - PHY:132 Lab: General Physics II Lab (Spring 2014)*

## PUBLICATIONS

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- [1] M. Abdullah, C. Bavor, B. Chafamo, X. Jiang, M. H. Kalim, K. Stiffler, and C. A. Whiting, “Inflation from dynamical projective connections”, *Phys. Rev. D*, vol. 106, no. 8, p. 084049, 2022. arXiv: 2203.04435 [hep-th].

- [2] S. Brensinger, K. Heitritter, V. G. J. Rodgers, K. Stiffler, and C. A. Whiting, “Dark Energy From Dynamical Projective Connections”, *Class. Quant. Grav.*, vol. 37, no. 5, p. 055 003, 2020. arXiv: 1907.05334 [hep-th].
- [3] R. Terrisse, D. Tsimpis, and C. A. Whiting, “D-branes and non-Abelian T-duality”, *Nucl. Phys. B*, vol. 947, p. 114 733, 2019. arXiv: 1811.05800 [hep-th].
- [4] L. A. Pando Zayas, D. Tsimpis, and C. A. Whiting, “Supersymmetric IIB background with AdS<sub>4</sub> vacua from massive IIA supergravity”, *Phys. Rev. D*, vol. 96, no. 4, p. 046 013, 2017. arXiv: 1701.01643 [hep-th].
- [5] L. A. Pando Zayas, V. G. J. Rodgers, and C. A. Whiting, “Supergravity solutions with AdS<sub>4</sub> from non-Abelian T-dualities”, *JHEP*, vol. 02, p. 061, 2016. arXiv: 1511.05991 [hep-th].
- [6] N. T. Macpherson, C. Núñez, L. A. Pando Zayas, V. G. J. Rodgers, and C. A. Whiting, “Type IIB supergravity solutions with AdS<sub>5</sub> from Abelian and non-Abelian T dualities”, *JHEP*, vol. 02, p. 040, 2015. arXiv: 1410.2650 [hep-th].
- [7] B. K. Button, L. Rodriguez, C. A. Whiting, and T. Yildirim, “A Near Horizon CFT Dual for Kerr-Newman-AdS”, *Int. J. Mod. Phys. A*, vol. 26, pp. 3077–3090, 2011. arXiv: 1009.1661 [hep-th].
- [8] S. R. Spangler and C. A. Whiting, “Radio Remote Sensing of the Corona and the Solar Wind”, *IAU Symp.*, vol. 257, N. Gopalswamy and D. F. Webb, Eds., pp. 529–541, 2009. arXiv: 0809.4645 [astro-ph].
- [9] C. A. Whiting, S. R. Spangler, L. D. Ingleby, and L. M. Haffner, “Confirmation of a Faraday Rotation Measure Anomaly in Cygnus”, *Astrophys. J.*, vol. 694, pp. 1452–1463, 2009. arXiv: 0802.0481 [astro-ph].
- [10] L. D. Ingleby, S. R. Spangler, and C. A. Whiting, “Probing the Large Scale Plasma Structure of the Solar Corona with Faraday Rotation Measurements”, *Astrophys. J.*, vol. 668, pp. 520–532, 2007. arXiv: astro-ph/0701538.

## TECHNICAL REPORTS

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- Expanded Very Large Array Memorandum, Catherine A. Whiting and Steven R. Spangler, *EVLA Measurements Close to the Sun: Elevated System Temperatures*, 2009, EVLA Memo # 136

## GRANTS

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- **PI, NASA COMPASS Grant**, NASA ROSES 2026 2027 - 2028  
Under Review, Title: *The EXO-STARS (EXOplanet and STellar Activity Research with Students) Project, with Co-I's at NASA's Exoplanet Watch, CUNY LaGuardia, Western Colorado University, SUNY Oneonta, and Grand Mesa Observatory, \$398,127.46 to fund student research positions, equipment, travel and faculty support.*
- **PI, NASA MOSAICS Seed Grant**, NASA ROSES 2024 2025 - 2027  
Selected, Title: *The EXO-ASTRO (EXOplanet Observations to Advance Student Training and Research Opportunities) Project, with Co-I's at NASA's Exoplanet Watch, CUNY LaGuardia, Western Colorado University, and Grand Mesa Observatory, \$300,204.18 to fund student research positions, equipment, travel and faculty support.*
- **Faculty Professional Development Grant**, Colorado Mesa University 2025 - 2026  
Awarded \$895 for travel to the 247th American Astronomical Society Conference in Phoenix, Arizona, USA from January 3-812, 2026
- **Faculty Professional Development Grant**, Colorado Mesa University 2024 - 2025  
Awarded \$2721 for travel to the 246th American Astronomical Society Conference in Anchorage, Alaska, USA from June 8-12, 2025
- **CMU Maverick Open Resource Educators Grant**, Colorado Mesa University 2024 - 2025

*Awarded \$1500 to adopt OpenStax University Physics Volume 2 and 3 in PHYS 132: Electromagnetism Optics*

- **Faculty Professional Development Grant**, Colorado Mesa University 2023 - 2024  
*Awarded \$1000 towards purchase of a Samsung tablet used primarily to control the Physics Program's telescopes, but also to be used in teaching and research activities*
- **CMU Maverick Open Resource Educators Grant**, Colorado Mesa University 2023 - 2024  
*Awarded \$3500 to create custom readings of the OpenStax Astronomy 2e textbook for PHYS 103*
- **Faculty Professional Development Grant**, Colorado Mesa University 2022 - 2023  
*Awarded \$1660 for travel to the 242nd American Astronomical Society Conference in Albuquerque, NM, USA from June 4 - 9, 2023*
- **CMU Maverick Open Resource Educators Grant**, Colorado Mesa University 2022 - 2023  
*Awarded \$3500 to convert PHYS 101 to using the OpenStax Astronomy 2e textbook*
- **Faculty Professional Development Grant**, Colorado Mesa University 2021 - 2022  
*Awarded \$2320 for travel to the XV International Conference on Interconnections between Particle Physics and Cosmology from June 6-10, 2022 in St. Louis, MO, USA and the 240th American Astronomical Society Meeting from June 12-16, 2022 in Pasadena, CA, USA*
- **OER Grant Program 2021-22**, Colorado Department of Higher Education 2021 - 2022  
*Developing and Implementing Open Education Resources (OER) Materials for GT-Pathways Introductory Physics Courses (PHYS 111, 112, 131, 132) at Colorado Mesa University  
Dr. Youngmin Kim (PI), Dr. Brian Hosterman (Co-PI), and Dr. Catherine Whiting (Co-PI)  
Awarded \$9600 (split evenly) to produce reading quizzes and active learning in-class materials for the OpenStax College Physics textbook for PHYS 111*
- **Summer Research Apprenticeship Grant**, Bates College Faculty Scholarship Committee Summer 2020  
*Awarded to Muhammad Abdullah and Muhammed Hamza Kalim for summer research stipend*
- **Summer Research Apprenticeship Grant**, Bates College Faculty Scholarship Committee Summer 2019  
*Awarded to Yehe Yan for summer research stipend*

## INVITED TALKS

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- **Encouraging Every Student's Voice: Facilitating Equitable Group Work in Large Introductory Astronomy Classes** January 2026  
*247th American Astronomical Society Meeting, Phoenix, AZ*
- **James Webb: Our Origins** October 2020  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University*
- **Cosmological Inflation from Projective Gravity** September 2020  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University*
- **D2 Brane Solutions of Supergravity and non-Abelian T-duality** April 2018  
*Nuclear and Particle Physics Seminar, Department of Physics and Astronomy, University of Iowa*
- **New AdS Supergravity Backgrounds from non-Abelian T-dualities** July 2016  
*Latin American Conference on High Energy Physics: Particles and Strings II, Havana, Cuba*
- **Non-Abelian T-duality and AdS/CFT** April 2016  
*Mandelstam Institute for Theoretical Physics Seminar, University of the Witwatersrand, South Africa*
- **Type IIB Supergravity Backgrounds via Non-Abelian and Abelian T-Dualities** June 2014  
*Mexicuerdas, Universidad de Colima, Colima, Mexico*
- **Non-Abelian T-duality and String Theory** April 2014  
*Grinnell College Physics Seminar, Grinnell College, IA*

## CONTRIBUTED TALKS

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- **Probing Cosmic Magnetic Fields with Faraday Rotation** February 2026  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University, Grand Junction, CO*
- **Black Holes: Science Fiction vs Reality** March 2024  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University, Grand Junction, CO*
- **Solar Eclipses** October 2023  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University, Grand Junction, CO*
- **Inflation from a New Gravitational Model** June 2022  
*240th American Astronomical Society Meeting, Pasadena, CA*
- **Inflation from Dynamical Projective Connections** June 2022  
*XV International Conference on the Interconnections Between Particle Physics and Cosmology, Washington University in St. Louis, MO*
- **Astronomy at CMU and Western Colorado** September 2021  
*Physics Seminar, Department of Physical and Environmental Sciences, Colorado Mesa University, Grand Junction, CO*
- **A New Supersymmetric IIB Background with AdS4 from Massive IIA** January 2017  
*The First Mandelstam Theoretical Physics School and Workshop: Recent Advances in AdS/CFT, Durban, South Africa*
- **NS5 Branes on the Resolved Cone Over  $Y^{p,q}$**  April 2013  
*American Physical Society April Meeting, Denver, CO*
- **‘Confining’ Geometries Dual to Strongly Coupled Field Theories** December 2012  
*Miami 2012 Conference, Ft. Lauderdale, FL*
- **NS5 Branes on the Resolved Cone Over  $Y^{p,q}$**  September 2012  
*Midwest Theory Get Together Conference, Argonne National Lab*

## POSTER PRESENTATIONS

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- **Exoplanet TOI Transit Observations at the Grand Mesa Observatory for Undergraduate Research** 2025  
*Catherine Whiting, 246th Meeting of the American Astronomical Society, Anchorage, AK*
- **Inflation from a New Gravitational Model** 2023  
*Catherine Whiting, Kory Stiffler, Calvin Bavor, Xiaole Jiang, Muhammad Abdullah, Muhammad Hamza Kalim, and Biruk Chafamo, 242nd Meeting of the American Astronomical Society, Albuquerque, NM*
- **NS5 Branes on the Resolved Cone over  $Y^{p,q}$**  2011  
*Catherine Whiting, V.G.J. Rodgers, E. Caceres, L. Pando Zayas, L. Rodriguez, Meeting of the Division of Particles and Fields of the American Physical Society, Brown University, Providence, RI*
- **Radio Remote Sensing of the Solar Corona with the EVLA** 2010  
*Catherine Whiting and S.R. Spangler, 215th American Astronomical Society Meeting, Washington, DC*
- **Faraday Rotation Measure Anomaly due to the Cygnus OB1 Association** 2008  
*Catherine Whiting, S.R. Spangler, L.D. Ingleby, M.L. Haffner, 211th American Astronomical Society Meeting, Austin, TX*
- **VLA Imaging of Cygnus X-3 Jets at 8.5 GHZ** 2007  
*Whiting, Catherine A., Rupen, M., Mioduszewski, A., 209th American Astronomical Society Meeting, Seattle, WA*

## PUBLIC LECTURES

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- **Magnetic Fields: Invisible Threads of the Universe** December 2, 2025  
*Meeting of the Western Colorado Astronomy Club*
- **Telescopes: Seeing the Universe for Pleasure, Astrophotography, and Science** October 15, 2025  
*New Dimensions in Learning Course*
- **Electronically Assisted Astronomy Show and Tell** November 5, 2024  
*Joint presentation with Scott Perrin and Terry Hancock for the Meeting of the Western Colorado Astronomy Club*
- **Observing the Night Sky Lecture** October 25, 2024  
*New Dimensions in Learning Course*
- **James Webb's First 2 Years** August 17, 2024  
*Gunnison Valley Observatory, Gunnison, CO*
- **The James Webb Space Telescope's First 2 Years** July 2, 2024  
*Meeting of the Western Colorado Astronomy Club*
- **Detecting Exoplanets: The challenges and joys of searching for other worlds** June 20, 2024  
*Meeting of the Black Canyon Astronomical Society*
- **Searching for Earth 2.0 in Western Colorado** May 24, 2024  
*Science Uncorked, Whitewater Hill Vineyards*
- **Solar Eclipses and the Sun** April 2, 2024  
*Meeting of the Western Colorado Astronomy Club*
- **Black Holes and General Relativity** March 20, 2024  
*New Dimensions in Learning Course*
- **Eclipses and the Sun** October 4, 2023  
*New Dimensions in Learning Course*
- **Planetary Formation** August 10, 2023  
*Midday with New Dimensions Lecture Series, Mesa County Public Library*
- **Planetary Formation** March 8, 2023  
*New Dimensions in Learning Course*
- **Planetary Formation** November 1, 2022  
*Joint Meeting of the Western Colorado Astronomy Club and the CMU Astronomy Club*
- **James Webb: Our Origins** September 16, 2022  
*NASA Webb Event, Arches National Park Keynote Presentation*
- **Black Holes and General Relativity** January 11, 2022  
*Joint Meeting of the Western Colorado Astronomy Club and the Black Canyon Astronomical Society*
- **Black Holes** April 2014  
*Café Scientifique of Iowa City*
- **Dark Matter** July 2013  
*Eastern Iowa Observatory and Learning Center*
- **Big Bang! A History of the Universe** Summer 2013  
*University of Iowa Lifetime Enrichment Adult Program (LEAP) Course Instructor*
- **Black Holes** August 2012  
*Eastern Iowa Observatory and Learning Center*

## PRESENTATIONS AT PEDAGOGICAL WORKSHOPS OR SESSIONS

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- **Strategies to Facilitate Group Work and Encourage Student Participation in Class** April 18, 2025  
*Teacher 2 Teacher Event, Colorado Mesa University*
- **OERs in CMU courses** December 3, 2021  
*Teacher 2 Teacher Event, Colorado Mesa University*
- **Look Who's Talking: Speaking Across the Disciplines** October 27, 2021  
*Teacher 2 Teacher Event, Colorado Mesa University on assessing and evaluating student speaking*
- **Teaching Techniques: How to be Effective in Front of the Classroom** August 2014  
*New T.A. Training, University of Iowa, Department of Physics and Astronomy*
- **Best Practices in Tutoring** August 2012  
*Campus Tutor Training Workshop, TRiO Student Support Services, University of Iowa*

## PARTICIPATION AT PEDAGOGICAL WORKSHOPS

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- **Teaching Strategies that Work: FTI Workshop for Astronomy and Physics Educators, 247th American Astronomical Society Meeting** January 3, 2026  
*Phoenix, AZ*
- **CMU Teaching Showcase** April 18, 2025  
*Colorado Mesa University*
- **CMU Faculty Professional Development Workshop** September 23, 2022  
*Colorado Mesa University*
- **CMU Faculty Professional Development Workshop** January 21, 2022  
*Colorado Mesa University*
- **CMU Faculty Professional Development Workshop** August 20, 2021  
*Colorado Mesa University*
- **American Association of Physics Teachers 2021 New Faculty Workshop** June 28 - July 21 2021  
*held virtually*
- **Pedagogy Nuts & Bolts Workshops for new faculty** September - October 2019  
*Bates College*
- **Pedagogy Matters Conference** August 23, 2019  
*Bates College*
- **Let One Idea Spark Another: The Pedagogy of the Seminar** May 10, 2019  
*May Conference, Bates College*
- **Development and Use of Open Educational Resources in Higher Education** April 26, 2019  
*April Conference, Bates College*
- **CUREs (Course-Based Undergraduate Research Experiences) Workshops** January - March 2019  
*Bates College*
- **First ISLS (International Society of the Learning Sciences) Workshop** February 12-13, 2018  
*University of the Witwatersrand, Johannesburg, South Africa*

## RESEARCH ADVISING

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- **Lizzie Ballard**, senior undergraduate, Colorado Mesa University August 2025 - present  
*Senior research Fall 2025 - Spring 2026*
- **Campbell Kramer**, postbaccalaureate, University of Texas, Austin May 2025 - present  
*Informal research student*

- **Eli Monyek**, postbaccalaureate, University of Colorado, Boulder August 2024 - present  
*Informal research student*
- **Whitney Walker**, sophomore undergraduate, Colorado Mesa University February 2026 - present  
*Informal research student*
- **Joseph Thomas**, sophomore undergraduate, Colorado Mesa University December 2025 - present  
*Informal research student*
- **Sierra Richens**, freshman undergraduate, Colorado Mesa University September 2025 - present  
*Informal research student*
- **Shane Miller**, sophomore undergraduate, Colorado Mesa University September 2025 - present  
*Informal research student*
- **Hunter Huie**, junior undergraduate, Colorado Mesa University November 2023 - May 2025  
*Senior research Fall 2024 - Spring 2025, General Relativity training November 2023 - August 2024*  
*Currently a physicist at Vescent Technologies*
- **Nancy Heeney**, undergraduate, Colorado Mesa University September 2024 - January 2025  
*Informal research student*
- **Derric Lloya**, sophomore undergraduate, Colorado Mesa University August 2023 - August 2024  
*Informal research student*  
*Currently an astrophysics Ph.D. student at University of Colorado, Boulder*
- **Victoria Jackson**, senior undergraduate, Colorado Mesa University August 2023 - May 2024  
*Senior research Fall 2023 - Spring 2024*  
*Currently a Quantum Engineering Masters student at Colorado School of Mines*
- **Ian Stover**, senior undergraduate, Colorado Mesa University January 2023 - December 2023  
*Senior research Spring 2023 - Fall 2023*
- **Justin Darr**, senior undergraduate, University of Colorado Boulder Engineering May 2022 - August 2023  
*Informal research student*  
*Currently an engineer at DISH Network*
- **Calvin Bavor**, senior undergraduate, Colorado Mesa University May 2021 - May 2022  
*Summer research 2021, Senior research Fall 2021 - Spring 2022*  
*Currently a physics Ph.D. student at Colorado School of Mines*
- **Nicholas Harshman**, senior undergraduate, Colorado Mesa University August 2020 - August 2021  
*Senior research project Fall 2020 - Spring 2021, Summer research 2021 and independent study Fall 2021*  
*Currently a M.S. student at University of Iowa*
- **Eisho Takatsuji**, junior undergraduate, Bates College May - July 2020  
*Hoffman Fellowship, Summer research*  
*Currently a graduate student in economics at Northwestern University*
- **Muhammed Hamza Kalim**, Bates College, freshman undergraduate May - July 2020  
*Summer Research 2020*  
*Currently a Ph.D. student at University of Pittsburg*
- **Muhammad Abdullah**, sophomore undergraduate, Bates College May - July 2020  
*Summer research*  
*Currently an engineering graduate student at Penn State*
- **Yehe Yan**, junior undergraduate, Bates College June - December 2019  
*Summer Research Apprentice 2019, Senior Thesis Fall 2019*  
*Received M.S. in physics from University of Edinburgh*
- **Biruk Chafamo**, freshman undergraduate, Bates College June - August 2019  
*Summer Research Fellow*
- **Xiaole Jiang**, sophomore undergraduate, Bates College May - July 2019

Summer Research Fellow  
Currently a physics Ph.D. student at CUNY

- **Godefroy Griva Bissouta**, Master's student, AIMS Cameroon April - May 2018  
*African Institute for Mathematical Sciences (AIMS) Cameroon, Virtual Advisor*  
*Masters Essay: 'Tests of General Relativity with Gravitational Waves Observations'*

## PROFESSIONAL SERVICE

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- **Chair of Doxsey Travel Prize Committee** 2024–2025  
*American Astronomical Society*  
*Organize meetings, make executive committee decisions, review and score 100+ abstracts*
- **Member of Doxsey Travel Prize Committee** 2022–2024  
*American Astronomical Society*  
*Reviewed and scored 100+ abstracts bi-annually, Participated in committee meetings*
- **CMU Team Leader of Dynamic Eclipse Broadcast Initiative** 2023–2024  
*Citizen Science project to collect simultaneous data of the Sun to study phenomena in the solar corona*
- **Preliminary Reviewer** 2024  
*Wiley Publishing, Proposal for textbook on Computational Physics*
- **Reviewer for Harris Fellowship** 2023  
*Provided Content Review of proposal for 1 year pre-tenure leave fellowship at Grinnell College for Dr. Shanshan Rodriguez, awarded*
- **Reviewer** 2018  
*American Journal of Physics, 1 article*
- **External Examiner** 2016  
*Undergraduate Honours Physics Project (PHY 700)*  
*Department of Physics, University of Pretoria, Pretoria, South Africa*

## UNIVERSITY SERVICE

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- **Faculty Advisor** 2022–present  
*Astronomy Club, Colorado Mesa University Student Club*
- **Faculty Advisor** 2022–present  
*Girl Gains Club, Colorado Mesa University Student Club*
- **Chair of CMU Distinguished Faculty Award Committee** 2026  
*Colorado Mesa University*  
*Organized and led meetings, Created scoring rubrics, reviewed applicants for 6 awards*
- **Panelist** 2024  
*New to CMU Discussion on Faculty Professional Development Grants and External Grants*
- **Member of Student Showcase Committee** 2020–2023  
*Colorado Mesa University*  
*PES Representative: participated in committee meetings, organized PES abstracts into tracks, answered student/faculty emails, organized Judging, distributed awards*
- **Member of Graduate Curriculum Committee** 2021 –2023  
*Colorado Mesa University*  
*PES Representative: participated in committee meetings, reviewed curriculum proposals and changes*
- **Member of 2020 TRiO STEM Navigator Hiring Committee** 2020  
*Colorado Mesa University*  
*Reviewed applications, participated in committee meetings, Zoom interviews*

## DEPARTMENTAL SERVICE

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- **Member of 2026 PES Scholarship Committee** 2026  
*Colorado Mesa University*
- **Member of 2026 Physics Instructor Search Committee** 2026  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2025 Chemistry Tenure Track Search Committee** 2025  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2024 Chemistry Tenure Track Search Committee** 2024  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2023-2024 Physics Tenure Track Search Committee** 2023-2024  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2023 Physics Visiting Instructor Search Committee** 2023  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2022 Chemistry Instructor Search Committee** 2021–2022  
*Colorado Mesa University*  
*Reviewed Applications, Participated in committee meetings, Zoom Interviews, in-person interviews*
- **Member of 2020-2021 Chemistry Tenure Track Search Committee** 2020 –2021  
*Colorado Mesa University*  
*Reviewed applications, participated in committee meetings, Zoom interviews, in-person interviews*
- **Theory group Journal Club Organizer** 2016-2018  
*School of Physics, University of the Witwatersrand, South Africa*

## COMMUNITY SERVICE

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- **Coordinator**, Western Slope Skies, KVNF Radio 2025 - present  
*Manage schedule, recruit contributors, edit scripts and submit to KVNF for biweekly airings*
- **Consultant/ Expert Advisor**, Grand Valley Dark Sky Initiative 2026 - present  
*Review Committee Meeting Minutes and offer guidance on local Dark Sky initiatives*
- **Volunteer**, Western Slope Skies, KVNF Radio 2021 - present  
*Regularly supervise CMU student segments (4-8/yr)*
- **Volunteer**, Western Colorado Astronomy Club Public Observing Night December 12, 2025  
*Bookcliff Vineyards,*  
*Controlled two telescopes, talked to guests, answered questions*
- **Volunteer**, Western Colorado Astronomy Club Public Observing Night November 8, 2025  
*Restoration Vineyards,*  
*Controlled two telescopes, talked to guests, answered questions*
- **Volunteer**, Western Colorado Astronomy Club Public Observing Night July 13, 2025  
*Restoration Vineyards,*  
*Controlled two telescopes, talked to guests, answered questions*
- **Volunteer**, Palisade Riverbend Park Observing Night March 8, 2025  
*Riverbend Park,*  
*Controlled two telescopes, talked to the public, answered questions, advocated for Dark Sky policies in Palisade*

- **Event Organizer**, Knowledge on Tap Grand Junction 2024  
*Co-founder of talk/trivia series that raised money for CMU scholarships, 6 events in 2024*
- **Volunteer**, Neil de Grasse Tyson at Asteria Theater November 11, 2024  
*Organized and assisted CMU Astronomy Club in setting up telescopes at Asteria prior to the event*
- **Course Instructor**, New Dimensions in Learning October 25, 2024  
*Gave tour and held telescope observing at Grand Mesa Observatory*
- **Volunteer**, Western Colorado Astronomy Club Public Observing Night Sep 6, 2024  
*Highline Lake State Park,  
Controlled a telescope, talked to the public, answered questions*
- **Astronomy Guide**, Colorado Canyons Association Backpacking Trip June 7-8, 2024  
*Carried and set up a small telescope for nighttime and solar viewing, took Dark Sky Quality Meter readings to assist Gunnison Gorge National Conservation Area with attaining Dark Sky Place certification*
- **Organizer**, Solar Eclipse Viewing Event April 8, 2024  
*Held weekly meetings with CMU Astronomy Club, ordered and reserved equipment, participated in media interviews, talked with attendees, controlled telescopes, 500 attendees*
- **Astronomy Guide**, Colorado National Monument December 9, 2023  
*Set up telescopes and gave night sky tour to journalist Bailey Freeman for a story on Grand Junction*
- **Organizer**, Solar Eclipse Viewing Event October 14, 2023  
*Held weekly meetings with CMU Astronomy Club, coordinated an event sponsor, ordered and reserved equipment and refreshments, created posters, participated in media interviews, talked with attendees, controlled telescope, 250-300 attendees*
- **Walk and Talk Guide**, Colorado National Monument September 29, 2023  
*Gave night sky talk and tour while hiking Serpent's trail*
- **Volunteer**, Curecanti National Recreation Area September 16, 2023  
*Set up telescopes and talked with visitors for the 2023 AstroFest*
- **Volunteer**, Black Canyon National Park September 16, 2023  
*Set up solar telescopes and talked with visitors for the 2023 AstroFest*
- **Astronomy Guide**, Sleeping Indian Ranch July 12, 2023  
*Gave night sky tour and solar observing presentations with a telescope, operated Observatory's telescope*
- **Volunteer**, Western Colorado Astronomy Club Public Observing Night July 14, 2023  
*Colorado National Monument  
Controlled a telescope, talked to the public, answered questions*
- **Astronomy Guide**, Centennial Canoe trips July 15 - 17, 2023, June 17 - 19, 2023, June 25 - 27, 2022  
*Gave night sky tour and solar observing presentations with a telescope*
- **Volunteer**, Stargazing on the Monument July - September 2022  
*Colorado National Monument  
Controlled a telescope, talked to the public, answered questions*
- **Contributor**, Western Slope Skies, KVNF Radio June 10, 2022  
*Wrote and recorded radio segment 'Olbers' Paradox'*
- **Summer Camp Lesson Coordinator**, Eureka! Science Museum May 31, 2022  
*Aerospace Engineering and Astronomy Summer Camp  
Coordinated lessons with CMU student Collin Stout*
- **Summer Camp Lesson Instructor**, Eureka! Science Museum July 29, 2021  
*Aerospace Engineering and Astronomy Summer Camp  
Designed and taught lessons*
- **Guest Speaker**, Grand Junction Tiger Cub Scouts January 27, 2021  
*Virtual Astronomy 'The Sky is the Limit' Meeting*

- **Job Shadowing Mentor**, High School Student July 2017  
*National Institute for Theoretical Physics, University of the Witwatersrand, South Africa*
- **Volunteer**, Hawkeyes on Science 2007 - 2015  
*University of Iowa Physics Department outreach group, numerous events*
- **Volunteer and Designer** 2007 - 2015  
*University of Iowa Department of Physics and Astronomy Public Demonstration Shows held yearly*
- **Volunteer**, North Tama Elementary School February 2012  
*Mars Rover STEM Day, North Tama, IA*

## MEDIA INTERVIEWS

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- **KREX News**, Colorado Mesa University October 22, 2025  
*Video interview to discuss meteor showers and 2 comets*
- **KKCO 11 and KJCT 8 News**, Colorado Mesa University October 10, 2025  
*Video interview to discuss meteor showers and 2 comets*
- **GJ Sentinel**, Colorado Mesa University August 18, 2025  
*Phone interview to discuss planetary parade*
- **KKCO 11 and KJCT 8 News**, Colorado Mesa University July 16, 2025  
*Zoom interview to discuss meteor showers and upcoming observing highlights*
- **CMU Maverick Magazine**, Colorado Mesa University September 24, 2024  
*Interview to discuss the Neil de Grasse Tyson event at Asteria Theater*
- **KKCO 11 and KJCT 8 News**, Colorado Mesa University April 8, 2024  
*Video interview to discuss the Solar eclipse event held on CMU's campus on April 8 and the CMU Astronomy Club's involvement*
- **CMU Maverick Magazine**, Colorado Mesa University January 11, 2024  
*Phone interview to discuss CMU's connections with the Falcon Telescope Network*
- **KKCO 11 and KJCT 8 News**, Grand Mesa Observatory November 10, 2023  
*Video interview to highlight the research telescopes at the observatory and CMU's involvement*
- **KKCO 11 and KJCT 8 News**, Colorado Mesa University October 11, 2023  
*Video interview to discuss the Solar eclipse event held on CMU's campus on October 14 and the CMU Astronomy Club's involvement*
- **Grand Junction Daily Sentinel**, Colorado Mesa University October 9, 2023  
*Phone interview to discuss the Solar eclipse event held on CMU's campus on October 14 and the CMU Astronomy Club's involvement*
- **CMUnow Podcast**, Colorado Mesa University May 10, 2023  
*Podcast interview to discuss background and astronomy research at CMU*

## MEMBERSHIPS

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- **American Astronomical Society** 2022 - current  
*Full Member*
- **American Astronomical Society Division of Planetary Sciences** 2025 - current  
*Full Member*
- **NASA Exoplanet Watch Team** 2025 - current  
*Full Member*
- **Western Colorado Astronomy Club** 2020 - current  
*Honorary Member*

- **Black Canyon Astronomical Society** 2020 - current  
*Honorary Member*
- **Dark Sky International** 2022 - current  
*Member*

## AWARDS AND SCHOLARSHIPS

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- **Early Career Distinguished Faculty Award** May 6, 2025  
*Colorado Mesa University*
- **Bates College Stipend** 2019-2020  
*Assisted development of introductory physics course aimed at physics majors  
Bates College, Howard Hughes Medical Institute (HHMI) Inclusive Excellence Grant*
- **Outstanding Teaching Assistant Award** 2013  
*University of Iowa*
- **Meshkov Award** 2012  
*Miami 2012 Conference Software Award  
Awarded a student Mathematica license for best graduate student talk*
- **Best theory poster** 2011  
*2011 Meeting of the Division of Particles and Fields of the American Physical Society*
- **Gates Cambridge Scholarship, Semi-finalist** 2008  
*International*
- **Barry M. Goldwater Scholarship** 2007  
*Nationwide*
- **Bill and John Fenton Scholarship** 2006  
*University of Iowa*
- **Myrtle K. Maier Scholarship in Physics and Astronomy** 2006, renewal 2007  
*University of Iowa*
- **Strayer-Rairden Scholarship in Physics and Astronomy** 2004-2008, annually  
*University of Iowa*

## PERSONAL ACHIEVEMENTS

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- **2024 CrossFit Games Quarterfinals Individual and Age Group (Women 35-39) Qualifier** March 2024
- **Moab Trail Marathon Finisher** November 2023