Gregory Simonian

827 N. Elmwood Ave – Olin Hall 007 – Peoria, IL 61606

+1 (323) 470 3892 • gsimonian@fsmail.bradley.edu
gregosimo.github.io • gregosimo

Education

The Ohio State University **Columbus, OH**
Ph.D Astronomy, Advisor: Prof. Marc Pinsonneault *2013–2019*
Thesis: *Double Trouble: The Impact of Binarity on Large Stellar Rotation Datasets*

California Institute of Technology **Pasadena, CA**
B.S. Astronomy, Cum Laude *2009-2013*

Professional Appointments

Bradley University **Peoria, IL**
Assistant Professor of Physics in Residence *2021–present*

Concord University **Athens, WV**
Assistant Professor of Astronomy and Physics *2019–2021*

Teaching Experience

Bradley University **Peoria, IL**
Assistant Professor of Physics in Residence *2021–present*
Courses Taught:
- University Physics with Calculus, Part 1 (**Spring 2024**; Face to Face)
- University Physics with Calculus, Part 2 (**Fall 2023**; Face to Face)
- University Physics with Calculus, Part 1 (**Spring 2023**; Face to Face)
- Special Problems in Physics (**Spring 2023**; Face to Face)
- University Physics with Calculus, Part 2 (**Fall 2022**; Face to Face)
- Special Problems in Physics (**Fall 2022**; Face to Face)
- University Physics with Calculus, Part 1 (**Spring 2022**; Face to Face)
- University Physics with Calculus, Part 2 (**Fall 2021**; Face to Face)

Concord University **Athens, WV**
Assistant Professor of Astronomy and Physics *2019–2021*
Courses Taught:
- University Physics with Calculus, Part 1 (**Spring 2021**; Lab; Hybrid)
- Introductory Astronomy (Spring 2021; Lecture + Lab; Hybrid)
- University Physics with Calculus, Part 2 (**Fall 2020**; Lecture + Lab; Hybrid)
- Concepts in Physical Science: Physics/Chemistry (Fall 2020; Lecture + Lab; Hybrid)
- Concepts in Physical Science: Earth/Space Sciences (Fall 2020; Lecture + Lab; Hybrid)
- Introductory Astronomy (Fall 2020; Lab; Hybrid)
- University Physics with Calculus, Part 1 (**Spring 2020**; Lab; Hybrid)
- Concepts in Physical Science: Physics/Chemistry (Spring 2020; Lecture + Lab; Hybrid)
- Introductory Astronomy (Spring 2020; Lecture + Lab; Hybrid)
- University Physics with Calculus, Part 2 (**Fall 2019**; Lab; Face to Face)
- Introductory Astronomy (Fall 2019; Lecture + Lab; Hybrid)

The Ohio State University **Columbus, OH**
Graduate Teaching Assistant *2013–2019*
Courses Taught:
- From Planets to the Cosmos (Instructor of Record; **Summer 2019**; Online)
- Planets and the Solar System (Instructor of Record; **Spring 2019**; Face to Face)
- From Planets to the Cosmos (2 times; Lab)
- Planets and the Solar System (1 time; Lecture)
- Life in the Universe (2 times; Lecture)
- Black Holes (1 time; Lecture)
- Stars, Galaxies, and the Universe (2 times; Lecture)
- Stellar, Galactic, and Extragalactic Astronomy and Astrophysics (1 time; Lecture)

Seminars

Invited

Double Trouble: The Need for Binarity in Large Data Samples **Athens, WV**
Concord University *June 2019*

Double Trouble: The Need for Binarity in Large Data Samples **Nashville, TN**
Vanderbilt University *March 2018*

National

Double Trouble: Biases Caused by Binaries in Large Rotation Datasets **Saint Louis, MO**
234th Conference of the American Astronomical Society *June 2019*

Double Trouble: The Impact of Binarity in Large Rotation Datasets **Columbus, OH**
National Society for Black Physicists Conference *November 2018*

Local

Climate Science Discussion Panel **Peoria, IL**
Climate Justice Teach-in *March 2022*

Two's Company: How Binary Stars Impact Stellar Spin **Athens, WV**
Concord University Faculty Seminar Series *February 2020*

The Leaky STEM Pipeline: Middle and High School **Columbus, OH**
OSU Diversity Journal Club *May 2014*

Service

Professional

Congressional Visit Day **Kingsport, TN**
American Astronomical Society *March 2021*

Peer Reviewer **Athens, WV**
The Astrophysical Journal *2019-2020*

University

Seminar Organizer **Peoria, IL**
Bradley University *2022-present*

Department Action Team **Peoria, IL**
Bradley University *2022-2024*

Guide for a Night Under the Stars — **Peoria, IL**
Bradley University — *September 2023*

Physics Recruitment and Retention Committee — **Peoria, IL**
Bradley University — *2021-2022*

Academic Policy Council — **Athens, WV**
Concord University — *2020-2021*

Pre-Health Advisory Committee — **Athens, WV**
Concord University — *2019-2021*

Community

Central IL Citizen's Climate Lobby — **Peoria, IL**
Liasion for Congressional District IL-17/IL-18 — *2021–present*

Newspaper Interview — **Bluefield, WV**
Bluefield Daily Telegraph — *April 2021*

Television Interview — **Bluefield, WV**
WVVA News — *February 2021*

Planetarium Presenter — **Columbus, OH**
The Ohio State University — *2014–2019*

Science Olympiad — **Columbus, OH**
The Ohio State University — *April 2019*

State Science Day — **Columbus, OH**
The Ohio Academy of Sciences — *May 2018*

Armenian Students Association — **Columbus, OH**
The Ohio State University — *2014-2018*
President/Treasurer

Professional Development

Classes

American Association of Physics Teachers: Faculty Teaching Institute — *June 2023*

Jump Simulation Center: Grant Writing Workshop — *January-March 2022*

Quality Matters: Applying the Quality Matters Rubric — *December 2019*

Conferences

Citizen's Climate Lobby: CCL June Conference — *June 2022*

Astronomers for Planet Earth: Climate Change Summer Symposium — *August 2021*

American Astronomical Society: 237th Conference of the AAS — *January 2021*

National Science Teaching Association: Engage Fall20 Conference — *November 2020*

Blackboard: BBWorld 20 — *August 2020*

WV Network for Educational Telecomputing: Professional Development Week — *July 2020*

SciAccess: Conference — *June 2019*

Professional Organizations

American Association of Physics Teachers *2021-present*

American Astronomical Society *2018-present*

American Association for the Advancement of Science *2020-2021*

Student Mentees

Research

Christian Palomares: Modeling Observations of Binary Systems *Summer 2022–Spring 2023*

Heather Martin: Analyzing Radial Velocities with PypeIt *Summer 2022*

Proposals

PI: "Tidally-synchronized binaries in the *Kepler* Field" Observing Proposal
APOGEE Ancillary, 61 targets observed in Summer 2019

PI: "Tidally-synchronized binaries in the *Kepler* Field" Observing Proposal
MDM 2.4-meter telescope, 14 nights observed in 2017B.

Observing Experience

MDM 2.4-meter Hiltner Telescope **14 nights**
Optical Spectroscopy *Summer 2017*
Part of thesis project to detect RV variability in *Kepler* rapid rotators

MDM 2.4-meter Hiltner Telescope **5 nights**
Optical Spectroscopy and Photometry *Winter 2017*
Queue Observing

Large Binocular Telescope **19 nights**
Optical Spectroscopy and Photometry *Summer 2014*
Queue Observing

MDM 1.3-meter McGraw-Hill Telescope **9 nights**
Optical Spectroscopy *Winter 2014*
Reverberation Mapping Campaign

MDM 2.4-meter Hiltner Telescope **9 nights**
Optical Spectroscopy and Photometry *Autumn 2013*
DES Quasars

Palomar 200“ **3 nights**
Optical Spectroscopy *Spring 2011*
Time-Resolved Spectroscopy of CR Boo for Senior Thesis

Languages

Armenian: Conversational

First Author Publications

[3] Gregory V. A. Simonian et al. "Rapid Rotation of Kepler Field Dwarfs and Subgiants: Spectroscopic v sin i from APOGEE". In: *ApJ* 898.1, 76 (July 2020), p. 76. DOI: 10.3847/1538-4357/ab9a43. arXiv: 2006.14642 [astro-ph.SR].

[2] Gregory V. A. Simonian, Marc H. Pinsonneault, and Donald M. Terndrup. "Rapid Rotation in the Kepler Field: Not a Single Star Phenomenon". In: *ApJ* 871.2, 174 (Feb. 2019), p. 174. DOI: 10.3847/1538-4357/aaf97c. arXiv: 1809.02141 [astro-ph.SR].

[1] Gregory V. Simonian and Paul Martini. "Circumstellar dust, PAHs and stellar populations in early-type galaxies: insights from GALEX and WISE". In: *MNRAS* 464.4 (Feb. 2017), pp. 3920–3936. DOI: 10.1093/mnras/stw2623. arXiv: 1603.09345 [astro-ph.GA].

Co-Authored Publications

[21] Rachael L. Beaton et al. "Final Targeting Strategy for the Sloan Digital Sky Survey IV Apache Point Observatory Galactic Evolution Experiment 2 North Survey". In: *AJ* 162.6, 302 (Dec. 2021), p. 302. DOI: 10.3847/1538-3881/ac260c. arXiv: 2108.11907 [astro-ph.GA].

[20] Keith Horne et al. "Space Telescope and Optical Reverberation Mapping Project. IX. Velocity-Delay Maps for Broad Emission Lines in NGC 5548". In: *ApJ* 907.2, 76 (Feb. 2021), p. 76. DOI: 10.3847/1538-4357/abce60. arXiv: 2003.01448 [astro-ph.GA].

[19] P. R. Williams et al. "Space Telescope and Optical Reverberation Mapping Project. XII. Broad-line Region Modeling of NGC 5548". In: *ApJ* 902.1, 74 (Oct. 2020), p. 74. DOI: 10.3847/1538-4357/abbad7. arXiv: 2010.00594 [astro-ph.GA].

[18] D. S. Aguado et al. "The Fifteenth Data Release of the Sloan Digital Sky Surveys: First Release of MaNGA-derived Quantities, Data Visualization Tools, and Stellar Library". In: *ApJS* 240.2, 23 (Feb. 2019), p. 23. DOI: 10.3847/1538-4365/aaf651. arXiv: 1812.02759 [astro-ph.IM].

[17] G. A. Kriss et al. "Space Telescope and Optical Reverberation Mapping Project. VIII. Time Variability of Emission and Absorption in NGC 5548 Based on Modeling the Ultraviolet Spectrum". In: *ApJ* 881.2, 153 (Aug. 2019), p. 153. DOI: 10.3847/1538-4357/ab3049. arXiv: 1907.03874 [astro-ph.GA].

[16] A. R. G. Santos et al. "Surface Rotation and Photometric Activity for Kepler Targets. I. M and K Main-sequence Stars". In: *ApJS* 244.1, 21 (Sept. 2019), p. 21. DOI: 10.3847/1538-4365/ab3b56. arXiv: 1908.05222 [astro-ph.SR].

[15] Sarah J. Schmidt et al. "The Largest M Dwarf Flares from ASAS-SN". In: *ApJ* 876.2, 115 (May 2019), p. 115. DOI: 10.3847/1538-4357/ab148d. arXiv: 1809.04510 [astro-ph.SR].

[14] G. De Rosa et al. "Velocity-resolved Reverberation Mapping of Five Bright Seyfert 1 Galaxies". In: *ApJ* 866, 133 (Oct. 2018), p. 133. DOI: 10.3847/1538-4357/aadd11.

[13] M. M. Fausnaugh et al. "Continuum Reverberation Mapping of the Accretion Disks in Two Seyfert 1 Galaxies". In: *ApJ* 854, 107 (Feb. 2018), p. 107. DOI: 10.3847/1538-4357/aaaa2b.

[12] M. M. Fausnaugh et al. "Reverberation Mapping of Optical Emission Lines in Five Active Galaxies". In: *ApJ* 840.2, 97 (May 2017), p. 97. DOI: 10.3847/1538-4357/aa6d52. arXiv: 1610.00008 [astro-ph.GA].

[11] T. W. -S. Holoien et al. "The ASAS-SN bright supernova catalogue - I. 2013-2014". In: *MNRAS* 464 (Jan. 2017), pp. 2672–2686. DOI: 10.1093/mnras/stw2273.

[10] T. W. -S. Holoien et al. "The ASAS-SN bright supernova catalogue - II. 2015". In: *MNRAS* 467.1 (May 2017), pp. 1098–1111. DOI: 10.1093/mnras/stx057. arXiv: 1610.03061 [astro-ph.HE].

[9] S. Mathur et al. "Space Telescope and Optical Reverberation Mapping Project. VII. Understanding the Ultraviolet Anomaly in NGC 5548 with X-Ray Spectroscopy". In: *ApJ* 846, 55 (Sept. 2017), p. 55. DOI: 10.3847/1538-4357/aa832b.

[8] L. Pei et al. "Space Telescope and Optical Reverberation Mapping Project. V. Optical Spectroscopic Campaign and Emission-line Analysis for NGC 5548". In: *ApJ* 837.2, 131 (Mar. 2017), p. 131. DOI: 10.3847/1538-4357/aa5eb1. arXiv: 1702.01177 [astro-ph.GA].

[7] Samuel J. Swihart et al. "2FGL J0846.0+2820: A New Neutron Star Binary with a Giant Secondary and Variable γ-Ray Emission". In: *ApJ* 851, 31 (Dec. 2017), p. 31. DOI: 10.3847/1538-4357/aa9937.

[6] Subo Dong et al. "ASASSN-15lh: A highly super-luminous supernova". In: *Science* 351 (Jan. 2016), pp. 257–260. DOI: 10.1126/science.aac9613.

[5] T. W. -S. Holoien et al. "Six months of multiwavelength follow-up of the tidal disruption candidate ASASSN-14li and implied TDE rates from ASAS-SN". In: *MNRAS* 455 (Jan. 2016), pp. 2918–2935. DOI: 10.1093/mnras/stv2486.

[4] B. J. Shappee et al. "The Young and Bright Type Ia Supernova ASASSN-14lp: Discovery, Early-time Observations, First-light Time, Distance to NGC 4666, and Progenitor Constraints". In: *ApJ* 826, 144 (Aug. 2016), p. 144. DOI: 10.3847/0004-637X/826/2/144.

[3] H. C. Campbell et al. "Total eclipse of the heart: the AM CVn Gaia14aae/ASSASN-14cn". In: *MNRAS* 452 (Sept. 2015), pp. 1060–1067. DOI: 10.1093/mnras/stv1224.

[2] A. Pastorello et al. "Massive stars exploding in a He-rich circumstellar medium - VII. The metamorphosis of ASASSN-15ed from a narrow line Type Ibn to a normal Type Ib Supernova". In: *MNRAS* 453 (Nov. 2015), pp. 3649–3661. DOI: 10.1093/mnras/stv1812.

[1] David Levitan et al. "Five new outbursting AM CVn systems discovered by the Palomar Transient Factory". In: *MNRAS* 430 (Apr. 2013), pp. 996–1007. DOI: 10.1093/mnras/sts672. arXiv: 1212.5312 [astro-ph.SR].