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Education


- 2019 –  **Ph.D. Candidate, Clemson University** in Astrophysics.
Research: *Study of long-term variability in blazars.*
- 2015 – 2018  **M.Sc., Tribhuvan University** in Physics.
Thesis title: *Interaction between IR loops and interstellar medium.*
- 2011 – 2015  **B.Sc., Tribhuvan University** in Physics

Employment History


- 2019 –  **Clemson University**, Teaching and Research assistant.
- 2013 – 2019  **Lecturer**, Part-time lecturer and tutor of high school-level mathematics and physics.


Research Publications

Journal Articles




- 1 S. Adhikari, P. Peñil, A. Domínguez, M. Ajello, S. Buson, and A. Rico, “Decade-long periodicity study of 2fhl blazars with historical optical data,” *Monthly Notices of the Royal Astronomical Society*, staf783, May 2025, ISSN: 0035-8711.  DOI: 10.1093/mnras/staf783.
- 2 P. Penil, S. Adhikari, A. Domínguez, M. Ajello, S. Buson, and A. Rico, “Extensive analysis of gamma-ray periodicity in jetted agn from the 4fgl catalog using fermi-lat observations,” *Monthly Notices of the Royal Astronomical Society (Submitted)*, 2025.
- 3 P. Penil, S. Adhikari, A. Domínguez, M. Ajello, S. Buson, and A. Rico, “Systematic search for long-term trends in fermi-lat jetted active galactic nuclei,” *The Astrophysical Journal*, vol. 980, no. 1, 2025.
- 4 P. Peñil, H. Zhang, J. Otero-Santos, *et al.*, “Search for kink events in variable fermi-lat blazars,” *The Astrophysical Journal*, vol. 985, no. 2, p. 199, 2025.
- 5 P. Peñil, N. Torres-Albà, A. Rico, M. Ajello, S. Buson, and S. Adhikari, “Distortions in periodicity analysis of blazars: The impact of flares,” *Monthly Notices of the Royal Astronomical Society*, vol. 539, no. 2, pp. 993–1014, 2025.
- 6 A. Rico, A. Domínguez, P. Peñil, *et al.*, “Singular spectrum analysis of fermi-lat blazar light curves: A systematic search for periodicity and trends in the time domain,” *Astronomy & Astrophysics*, vol. 697, A35, 2025.
- 7 S. Adhikari, P. Penil, J. Westernacher-Schneider, *et al.*, “Constraining the pg 1553+ 113 binary hypothesis: Interpreting hints of a new, 22 yr period,” *The Astrophysical Journal*, vol. 965, no. 2, p. 124, 2024.

Conference Proceedings








- 1 S. Adhikari, “Finding binary supermassive black holes with historical optical data; pg 1553+113 case study,” in *Meeting of Astronomers of South Carolina*, Florence, SC, USA, 2025.
- 2 S. Adhikari, “Decades long periodicity in 2fhl blazar pg 1553+113?” In *11th International Fermi Symposium*, Maryland, USA, 2024.  URL: <https://fermi.gsfc.nasa.gov/science/mtgs/symposia/eleveth/>.

- 3 A. R. S. A. et. al, "Analysis of fermi-lat blazar lightcurves in the time domain using singular spectrum analysis," in *International Conference on Time Series and Forecasting (ITISE-2023)*, Gran Canaria, Spain, 2023.
- 4 P. P. Sagar Adhikari, "Pg 1553+113: The case for a super-massive black hole binary," in *AAS/High Energy Astrophysics Division*, Hawaii, USA, 2023.  URL: <https://ui.adsabs.harvard.edu/abs/2023HEAD...2006A06P/abstract>.
- 5 S. Adhikari, "Biography of the earliest photons," in *Southampton IUCAA Training for Astronomical Research and Education (SITARE)*, Pune, India, 2019.
- 6 S. Adhikari, "Searching for transients using integral lightcurve," in *Southampton IUCAA Training for Astronomical Research and Education (SITARE Advanced)*, University of Southampton, United Kingdom, 2019.

Skills

Languages	 Strong reading, writing and speaking competencies in English and Nepalese.
Coding	 Python, \LaTeX , SQL, C, ...
Misc.	 Academic research, teaching, training.

Miscellaneous Experience

2025	 Third Frontiers in Nuclear Astrophysics Summer School , Awarded fully funded attendance.
	 Graduate WAC Fellow , Awarded the Writing Across the Curriculum fellowship.
2024	 Graduate Travel Grant , Awarded Clemson University Graduate Travel Grant (GTG) for the 11th International Fermi Symposium.
	 Clemson news article for notable research , Using a century of data, Clemson astrophysicists may have found a binary supermassive black hole. (link: https://news.clemson.edu/using-a-century-of-data-clemson-astrophysicists-may-have-found-a-binary-supermassive-black-hole/)
	 Open Access Publishing Fund , Granted Clemson University Library's open access publishing fund.
2020-2022	 Nepalese Student Association, Clemson University , Member and Secretary.
2019	 Top of the astrophysics workshop class , SITARE Advanced Workshop on Astrophysics, Tribhuvan University.

References

Prof Marco Ajello

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