

Aakash Gurung

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SKILLS

C++, Java, SQL, Python, LaTeX, HTML, CSS, Matlab

HONORS AND AWARDS

International Olympiad on Astronomy and Astrophysics (IOAA), 2020
Nepal Mathematics Olympiad 2020, finalist.
USA Astronomy and Astrophysics Competition, National round qualifier
Nepal Astronomy Olympiad Absolute Winner 2020
CUNY Undergrad Research Day, Awarded best poster out of 200+.

EDUCATION

The University of Alabama <i>BS+MA, Mathematics</i>	May 2027 <i>Tuscaloosa, AL</i>
Juniata College <i>Mathematics and Computer Science</i>	May 2023 <i>Huntingdon, Pennsylvania</i>
• Samuel J. Steinberger, Jr. Memorial Award	

EXPERIENCE

Student Technology Assistant <i>Student Center, University of Alabama</i>	January 2024 – Present <i>Tuscaloosa, AL</i>
• Assist with technology related issues for events associated with the Student Center.	
Peer Tutor <i>Mathematics Technology Learning Center</i>	October 2024 – Present <i>Tuscaloosa, AL</i>
• Drop in tutor for Calculus 1,2 and 3. Assisted in tutoring recitation classes for Calculus 1.	
Junior Member and Outreach Coordinator <i>Nepal Astronomical Society</i>	November 2020 – July 2022 <i>Kathmandu, Central</i>
• Organized the 2022 National Astronomy Olympiad and taught classes on Practical Astronomy and the Nature of Light	
• Initiated outreach activities in 16+ schools where students were taught telescope handling, navigating the night sky, sundial construction, and mysteries of the Universe	
Content Department and Outreach Department Head <i>Mathematics Initiatives in Nepal</i>	August 2020 – April 2022 <i>Lalitpur, Bagmati</i>
• Created 20+ articles using LaTeX and explanatory videos using Manim and PowerPoint	
• Organized 1st(2021) and 2nd(2022) Junior Math Olympiad camps in Nepal and took the role of Combinatorics and Algebra tutor and led the team. Assisted in tutoring Combinatorics in 4th iteration (2024).	

RESEARCH EXPERIENCES AND CONFERENCES

- (May 2025- present) Developing and analyzing compartmental models with a focus on stability analysis and disease control strategies in a summer REU project with 4 others under professor Chuntian Wang's group.
- (Jan 2025- present) Working on the combinatorial nature of q,t Catalan polynomials under the guidance of Professor Kyungyong Lee.
- Aakash Gurung and Cheng-Han Pan, Continued Fractions, a -Fibonacci numbers, and the middle b -noise, Mathematics Exchange 18 (2024), no. 1, 77–87, <https://doi.org/10.33043/r6a225bc>.
- Aakash Gurung. "Game of Cycles on Maximal Plane Graphs." Presented at CUNY Undergraduate Research Day 2024 and MathFest 2024.
- PolyMath Jr under Dr. Victor H. Moll. The integrals in Gradshteyn and Ryzhik. Part 34: Bessel functions. Published in Scientia Series A: Mathematical Sciences, Volume 34, March 19, 2024. Presented at JMM 2024.