

2024 Alice T. Schafer Mathematics Prize Winners Announced

The Association for Women in Mathematics (AWM) will award the 34th Annual Alice T. Schafer Prizes for excellence in Mathematics by an Undergraduate Woman to **Zoë Batterman**, a senior mathematics and statistics major at Pomona College and **Arianna Meenakshi (Meenakshi) McNamara**, a senior mathematics and physics major at Purdue University. **Mattie Ji**, a senior at Brown University majoring in Mathematics-Computer Science and Applied Mathematics has been named as Runner-up. The 2024 AWM Alice T. Schafer Prizes will be presented during the Joint Prize Session at the 2024 Joint Mathematics Meetings in San Francisco, CA.

Zoë Batterman is a mathematics major at Pomona College. She has participated in two summer research experiences. In Summer 2022, she participated in the PRiME REU at Pomona College. Her mentor praised her knowledge and ability to ask questions and write up rigorous proofs of her conjectures. In Summer 2023, she participated in the SMALL REU at Williams College. She



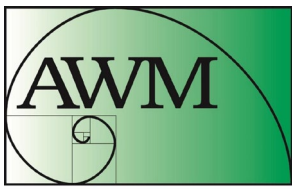
was a key contributor to 3 research projects, which led to four preprints with two more papers in preparation. Her mentor complimented the quality of her work, which has attracted the attention of experts in the area. In addition to these summer projects, Zoë has sought out research experiences during the academic year and has a paper in preparation with faculty at Pomona College. Zoë has received multiple scholarships and awards and received Honourable Mention for Outstanding Poster at MAA MathFest and won an Award for Outstanding Poster, MAA SoCal-Nevada Section. She has been named a Goldwater Scholar and a Pomona College Scholar.

Zoë's mentors are very enthusiastic about her potential and skills in mathematics. Beyond her ability to produce excellent research, they spoke highly of her presentation skills and aptitude for learning mathematics at a graduate level.

Arianna Meenakshi McNamara is a mathematics and physics major (with honors in both) at Purdue University. She has carried out research in graph theory at Purdue and has participated in REUs in topology and discrete math at Carnegie Mellon University and in mathematical physics at Louisiana State University. Meenakshi is interested in a variety of mathematical research topics including quantum graphs, operator algebras, and topology. Her research work led to two papers that are already published and several in-prep works. Her work was described as strong and independent by all of her mentors, and she received numerous awards for her scholarship, including a Goldwater Scholarship, an Astronaut Scholarship, and a National Merit Scholarship. She has also presented her research at various national conferences and seminars.



Meenakshi has also excelled in undergraduate honors courses as well as graduate core and advanced topics courses in mathematics and physics, on topics such as analytic number theory and category theory. Her mentors praised her curiosity and maturity in mathematical research and some mentioned that working with her broadened their own research goals. In addition, Meenakshi has made significant contributions to the mathematical community, through leadership roles in her AWM and Women in



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Physics chapters, and through starting a mentoring program as president of the Purdue Math Club.

Mattie Ji is a senior at Brown University majoring in Mathematics-Computer Science and Applied Mathematics. She has participated in several REUs where she has displayed her natural aptitude for algebraic geometry and topology. Mattie has an extremely wide knowledge base, allowing her to significantly contribute to several different projects, including an investigation into the relationship between the concepts of Euler characteristic transform (ECT) and smooth ECT, fake



projective planes, and the study of a class of conic bundle threefolds.

She has a keen interest in coding complex problems and has a fantastic repository set up on GitHub displaying her work. She is consistently described as an outstanding student with the initiative to develop her knowledge and understanding and has an infectious passion for mathematics, with a remarkable record of co-authored papers and conference presentations.

Full citations and responses from the winners are available here:

<https://awm-math.org/awards/schafer-prize-for-undergraduates/schafer-prize-2024/>

In 1990, the Executive Committee of the AWM established the annual Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman. The prize is named for Alice T. Schafer (1915–2009), one of the founders of AWM and its second president, who contributed greatly to women in mathematics throughout her career.