Inaugural SouthWest Applied Mathematics (SWAM) conference

The inaugural Graduate Student SouthWest Applied Mathematics (SWAM) conference was held at UNM on the Halloween weekend of Oct 31-Nov 1, 2026. The conference was open to the full public and registration was free.

The SWAM conference showcased the work done by graduate students across the southwest in applied math and related fields. There were 22 talks presented by students from The University of Arizona, Arizona State University, New Mexico Tech, and our own institution. Welcoming remarks were given by Dr. Danny Dunlavy (the vice chair of the southwest section of SIAM[1]) and Dr. Cynthia Phillips (the president-elect of SIAM). Dr. Ojas Parekh of Sandia National Labs presented the keynote talk "Where are exponential quantum advantages for discrete optimization hiding?". The student chapter also organized a career panel session featuring the perspectives of professionals in academic and lab settings. There were more than 50 registered participants, including many students and faculty from our department. Breakfast and lunch were provided for the Saturday of the conference.



Photo 1. 2026 SWAM Group photo

[1]Society for Industrial and Applied Mathematics (SIAM) is a professional society dedicated to applied mathematics, computational science, and data science through research, publications, and community. SIAM is the world's largest scientific society devoted to applied mathematics, and roughly two-thirds of its membership resides within the United States. Founded in 1952, the organization began holding annual national meetings in 1954, and now hosts conferences, publishes books and scholarly journals, and engages in advocacy in issues of interest to its membership. Members include engineers, scientists, and mathematicians, both those employed in academia and those working in industry. SIAM supports educational institutions promoting applied mathematics.

SWAM was organized entirely by our own UNM SIAM student chapter, expertly led by Chief Organizer graduate student Jose Agudelo Vélez, and the Faculty Chapter Advisor Professor Jehanzeb Chaudhry. Seven other of our graduate students populated the Scientific, Organizing and Outreach committees: Adrian Ruiz Vasquez, Umair Ali Wani, Dane Laufer, Michael Brown, Md Al Amin Molla, Mimi Nguyen, and José García. They planned and organized everything, designed a beautiful webpage, secured funding, speakers, planned the schedule, and made sure to provide a welcoming, scientifically inspiring, and a fun weekend for all. They should be commended for a job well done!!!

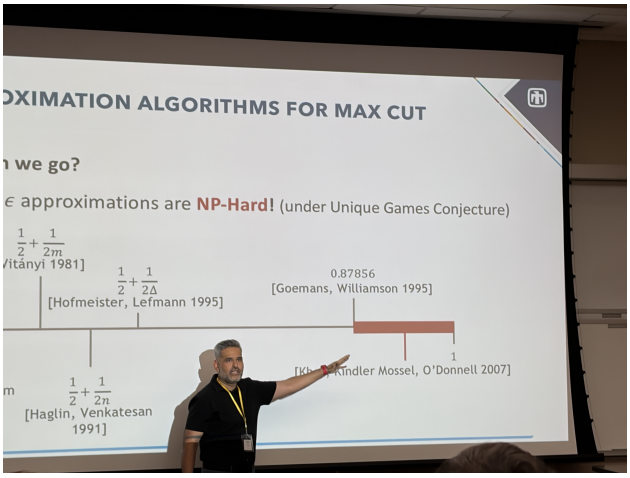


PHOTO 2. Keynote speaker Dr. Ojas Parekh (SNL).



PHOTO 3. Panel - from left Drs. Danny Dunlavy (SNL), Katherine Pearce (UNM), and Rosemary Renaut (ASU).

Chief Organizer Jose Agudelo told us

> *"While SWAM offers a very obvious technical product of talks done by graduate students, the motivation to do this conference was always to build community between other departments and within our own. That's why we involved as many students as we could in the conference, even if they did not give talks. My hope is that the SWAM conference left enough of an impression amongst graduate students not only in our department but in the math departments across the southwest that it continues next year. This is defined by the first axiom of SWAM: SWAM n is a success iff SWAM $n+1$ occurs."*

Professor Zeb Chaudhry had this to say

> *"The students did an amazing job in organizing an exceptional conference. This was the first multi-institutional effort by the SIAM student chapter here at UNM, and required detailed planning, however the student team led by Jose Agudelo were up to the challenge. The conference was a success due to the students' hard work in reaching out to scientists, graduate students, postdocs and faculty across the southwest, setting up the website, schedule, ensuring food and drinks, organizing social events etc. I hope this becomes a model for SIAM chapters across the region."*

Our Chair Professor Monika Nitsche, who attended some of the session shared her impressions of the conference

> *Organized by UNMs graduate students, great organization! More than 50 students in pure and applied math from throughout the SW attended, interesting talks, engaged audience, great plenary talk, great website, good food, lots of energy overall!*

Funding for this conference was provided by the University of New Mexico Graduate and Professional Student Association and the UNM Mathematics and Statistics Department. A special thanks to the staff of the UNM Math and Stats department.

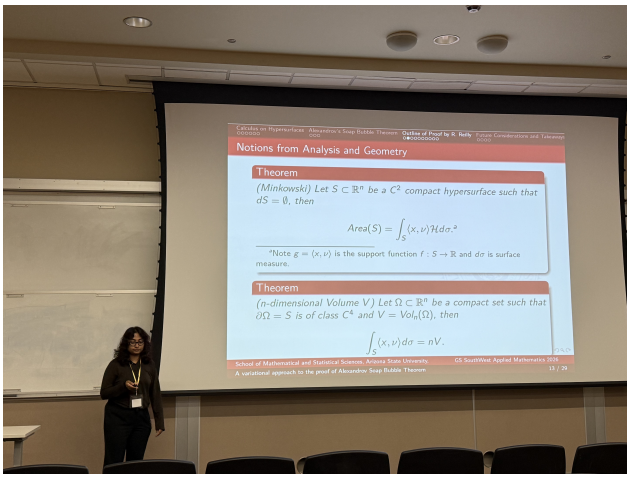


PHOTO 4. Nadia Kazi (ASU).

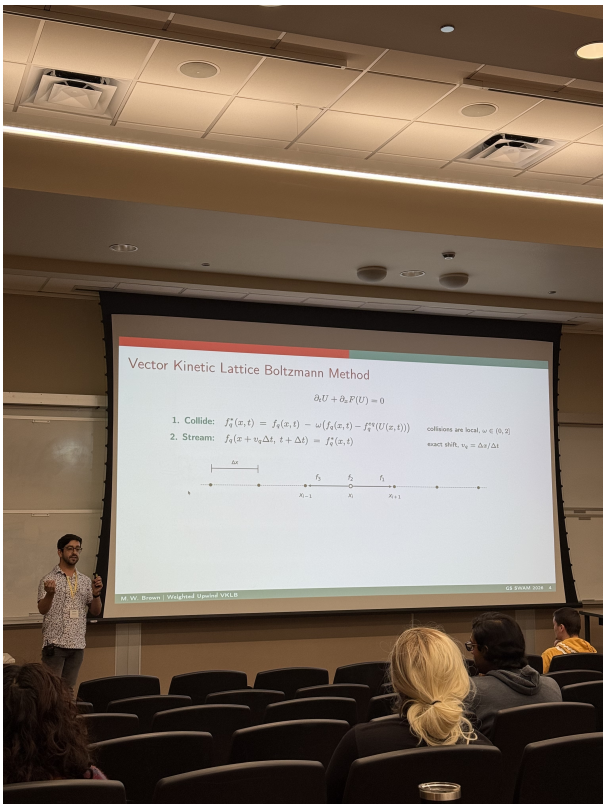


PHOTO 5. Michael Brown (UNM).



PHOTO 6. Md Al Amin Molla (UNM).



PHOTO 7. Sujata Ghimire (UNM).

The full conference schedule and speaker information may be found at
`https://gsswam2026.github.io/`.