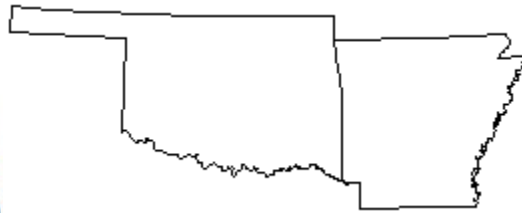


2023 Oklahoma-Arkansas Newsletter



Department News

The following newsletter submissions were submitted to the communications director on or before March 20, 2023. If you would like to submit a summary of the fantastic things that your department and department members have been doing, contact csauer@cameron.edu.

Cameron University

Christopher Sauer

In 2022, the Department of Mathematical Science merged with the Department of Computing and Technology. The new department is named the Department of Computing and Mathematical Sciences, and **Dr. Muhammad Javed** was formally named chair of the combined department. The combined department consists of seven full professors, four associate professors, six instructors, and several adjuncts. The department provides courses for the following degree programs: Associate in Applied Science in Information Technology, Bachelor of Arts in Mathematics, Bachelor of Science in Information Technology, and Bachelor of Science in Computer Science.

Throughout 2022, **Dr. Argyros** continued his prolific research output. He published 32 papers, two books, and one chapter in a book written by another colleague. For a complete listing of his academic accomplishments, [click here](#).

In 2022, **Dr. Li** published a paper entitled "Robust Binary Logistic Regression Methods" in *Advances and Applications in Statistics*.

Mr. Christopher Sauer was promoted to Director of Gateway Mathematics Courses. In this new position, he is responsible for assessing remedial and Gen Ed classes and assisting the department chair with scheduling of these courses.

Finally, we were sad to lose two colleagues. **Dr. James Dover** accepted a position at the University of North Georgia, Dahlonega Campus. **Dr. Janak Joshi** accepted a position at Dallas Community College, Brookhaven Campus. We wish them the best.

Northeastern State University

Martha Parrott

Student Recognition:

The Oklahoma DaVinci Institute, DaVinci Scholar Award is designed to honor pre-service teachers whose academic accomplishments and service to the university are deemed most notable. Nominees will demonstrate the ability to integrate content into relevant applications through a service-learning proposal. The proposal should exemplify scholarship, creativity, inventiveness, sound teaching techniques, and a keen sense of responsibility. Eligible applicants for this award must be in their final two years in a teacher preparation program. For 2022, **Ashley Titsworth** was recognized as a DaVinci Scholar and recently accepted a mathematics teaching position with Union Public Schools. For 2023, **Alessandra Criscione** has been named a DaVinci Scholar. She also plans to teach mathematics in secondary schools in Oklahoma upon graduation.

Grant Awarded: National Science Foundation *Increasing and Inspiring Highly Effective Secondary STEM Teachers for High-Need, Culturally Diverse School Districts*.

Dr. Martha Parrott (PI and Professor of Mathematics), **Dr. Spence Pilcher** (Co-PI and Professor of Chemistry), Dr. Luke Foster (Co-PI and Associate Professor of Mathematics), and **Dr. Stephan Sargent** (Co-PI and Professor of Reading) have been awarded a National Science Foundation grant to support the preparation of STEM majors who will prepare to teach middle school or high school mathematics or science. This program will provide much-needed scholarships and unique educational opportunities to prepare STEM teachers who will serve students in our high-need areas as well as our high percentage of socially disadvantaged minority students in the Oklahoma Reservation areas. NSU's Gregg Wadley College of Science and Health Professions has collaborated with the College of Education in the development of these program experiences. The intended award amount is \$1,173,385 (Yr 1-5), with years 4 and 5 contingent upon the availability of funding.

Grant Awarded: National Science Foundation *Investigation of Faculty Perceptions of Course-based Undergraduate Research Experiences and Barriers to Their Implementation*.

Dr. Jessica Martin, PI and Professor of Chemistry, and **Dr. Martha Parrott**, Co-PI and Professor of Mathematics, have been awarded a National Science Foundation grant (\$287,614) to support Course-based Undergraduate Research Experiences also known as CUREs. CUREs are learning experiences in which all students in a class address a research question or problem as a group.

Students derive similar benefits from CUREs as from traditional research experiences such as increases in self-efficacy, skills, and persistence. These experiential learning opportunities can introduce students to research earlier and are also more inclusive since every student is able to participate. The grant award will make possible opportunities for all faculty in all disciplines to learn about CUREs. Additionally, our funding provides opportunities for faculty in NSF fundable fields (natural sciences, mathematics, and computer science) to develop these exciting experiences for our students with an opportunity to be paid to develop a CURE in their courses.

Oklahoma Baptist University

Sarah Marsh

In October, OBU hosted its second STEM Day as a way to give back to our community and to inspire students toward STEM fields. Local high school students attended three hands-on STEM breakout sessions, toured the campus, and enjoyed an included lunch during their day on our campus.

OBU's Hurley School of Science and Mathematics is preparing for a Fall 2023 launch of three new engineering programs – Bachelor of Science in Electrical Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Systems Engineering. We are excited to welcome these students into our mathematics courses!

University of Oklahoma

Nikola Petrova

RECENT ADDITIONS

András Lorincz joined the department as a tenure-track Assistant Professor. He is an expert in algebraic geometry, representation theory, and commutative algebra. András holds a Ph.D. from the University of Connecticut, and he was a Golomb Visiting Assistant Professor at Purdue University, a postdoc at the Max Planck Institute for Mathematics in the Sciences (Dresden), and a Dirichlet Postdoctoral Fellow at the Humboldt-Universität (Berlin).

Nicholas Miller is a new tenure-track Assistant Professor. He earned a doctorate from Purdue University, and he was a Zorn Postdoctoral Fellow at Indiana University, McDuff Postdoctoral Fellow at the MSRI, and a Morrey Visiting Assistant Professor at UC Berkeley. Nick's research interests include hyperbolic geometry, low dimensional topology, arithmetic lattices, and homogeneous dynamics.

Jack Arbunich is a new postdoc in our department. Jack earned a Ph.D. from the University of Illinois at Chicago and spent three years as a postdoc at the University of Toronto. His general interests are in mathematical physics and PDEs; his mentor will be **John Albert**.

Gary Moon is a new postdoc in the department who will be mentored by **Allen Wu**. He holds a Ph.D. from the University of North Carolina at Chapel Hill. Gary's interests are in PDEs and their applications to fluid dynamics and mathematical finance.

Malva Asaad is a new renewable-term faculty. She holds a doctorate from the University of Connecticut and has worked as a postdoc at the University of Georgia. Her area of research is geometric analysis and probability theory.

Nirjal Sapkota is a new one-year lecturer. He arrived from UT-Dallas, where he earned a Ph.D. in applied PDEs. Prior to that, he worked as Content Specialist in Physics for WebAssign in Raleigh, NC.

Elizabeth Pacheco is our new Undergraduate Advisor. She earned a doctorate in algebraic topology at OU under the direction of **Murad Özaydin**.

SPECIAL EVENTS/ACHIEVEMENTS

In the summer of 2022, the department received a significant gift from the estate of **David and Judi Proctor**. As a gesture of gratitude for the generous donation, the regular faculty voted to endorse the renaming of the department to David and Judi Proctor Department of Mathematics.

Born in Seminole, OK, David earned a BA in Math from OU in 1962 and pursued graduate studies at Stanford University. He went on to have an outstanding career in the aerospace and computer industries. He coded the lunar descent maneuvers for the Apollo 11 and Apollo 13 missions. He and his team earned the Presidential Medal of Freedom for ensuring the safe return of the Apollo 13 astronauts. **Judi Proctor** also worked at IBM, and while she is not an OU alumna, she shares David's passion for the university.

Roi Docampo was granted tenure and was promoted to Associate Professor.

Sepideh Stewart, Jing Tao, and Ying Wang were promoted to Full Professors.

Jon Kujawa was awarded the Nancy Scofield Hester Presidential Professorship in 2022.

Sepideh Stewart received the Nancy L. Mergler Faculty Mentor Award for Undergraduate Research in 2022.

Deborah Moore-Russo was a recipient of the 2023 James and JoAnn Holden Faculty Award for excellence in teaching at the freshman or sophomore level, influential scholarship, and excellent leadership in research.

Ravi Shankar, Professor in the Math Department, resigned from OU and accepted a position as the Chair of the Mathematics Department at James Madison University.

Ashley Berger, a renewable term faculty and Associate Director of our Math Center, accepted a tenure-track position at the Math Department at Oklahoma City University.

Kimball Martin received an Invitational Fellowship from the Japan Society for the Promotion of Science.

Peter Patzt received a Simons Collaboration Grant.

Ameya Pitale, together with **Martin Dickson** (King's College London), **Abhishek Saha** (Queen Mary Univ of London), and **Ralf Schmidt** (Univ of North Texas), won the 2021 *Journal of Mathematical Society of Japan* Outstanding Paper Prize for their article "Explicit Refinements of Bocherer's Conjecture for Siegel Modular Forms of Squarefree Level."

Keri Kornelson is part of an OU team that was awarded a large 5-year NSF grant for a project on improving the process of faculty evaluations and workload distributions.

Miloš Savić is a Senior Personnel for an NSF conference grant titled *The Chemistry and Mathematics Introductory Large-Enrollment Courses Forum*.

Mike Hillerby received a Distinguished Performance Award from the Staff Senate and has been selected as one of the 2022 College of Arts and Sciences Outstanding Staff Award Winners.

The **2022 Math Day**, held on November 10, 2022, was attended by 446 high school students from Oklahoma and North Texas. The invited lecture, *Mathematics and the Art of the Rubik cube*, was delivered by our former postdoc **David Plaxco**, presently faculty at Clayton State University. **Greg Muller** chaired the Math Day Organizing Committee.

Tomasz Przebinda was a co-Chair of the Organizing Committee of the conference *Representations and Characters: Revisiting the Works of Harish Chandra and André Weil*, a satellite conference of the virtual International Congress of Mathematicians in July 2022.

Javier Alejandro, Chávez Domínguez, Keri Kornelson, and Miro Kramár offered a Presidential Dream Course *The Mathematics of Data* in Spring 2022. Three prominent experts delivered invited lectures: **Akram Aldroubi** (Vanderbilt University), **Konstantin Mischaikow** (Rutgers University), and **Christopher Moore** (Santa Fe Institute).

Michelle Chu (Minnesota), **Nick Miller** (OU), and **Franco Vargas-Pallete** (Yale) organized an intensive week-long Log Cabin Workshop *Surfaces in 3-manifolds*, held on the outskirts of Tonto National Forest near Young, AZ. The workshop was sponsored entirely by **Jing Tao's** NSF CAREER Award. It created an immersive experience for 19 early career mathematicians who learned about topics at the cutting edge of research while simultaneously fostering an atmosphere of camaraderie and inclusivity.

The **2023 Redbud Topology Conference** will be held at OU on March 31-April 2, 2023.

Karen Gaddis was one of the College of Arts and Sciences Distinguished Alumni Award Winners in 2022. She received BS in Math in 1971 and a MA in Math Education in 1974 from OU. After graduation, she spent 38 years with the Tulsa Public School system. She was a three-time finalist for Tulsa Teacher of the Year. In 1991, she was honored with the Point of Light Award from President George H.W. Bush for creating a class for parents called "Algebra I for Parents." After retiring from teaching in 2011, she focused on the state's lack of funding for public education. She was elected to the Oklahoma House of Representatives in 2016 and helped lead the charge to increase public education funding.