Math Moments Newsletter

THE UNIVERSITY OF TENNESSEE CHATTANOOGA
Department of Mathematics

Fall 2023

Welcome to the Math Plaza Lupton Hall room 114!

The Math Plaza is your go-to destination for navigating the world of math. Immerse yourself in a supportive atmosphere where everyone has the chance to enhance their understanding of mathematics. We encourage collaborative learning among students while also addressing individual questions.

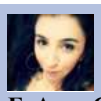
The Math Plaza has tutors available for the following courses: 1010, 1130, 1730, 1799, 1830, 1950, and 2100. While tutors may not be regularly available for courses not listed above, we're committed to addressing any questions for our students seeking help to the best of our ability.

Monday-Thursday 9- 7p.m., Friday 9- 5p.m.
Saturday and Sunday closed

Breaking New Ground: Celebrating Faculty and Staff for Service, Grant Awards, and for Innovative Research

Math research often involves tackling complex and unsolved problems, providing an intellectually stimulating and challenging environment. Mathematical concepts and theories developed through research have practical applications in various fields, including physics, engineering, computer science, economics, and more. Solving mathematical problems can lead to advancements in technology and improvements in real-world problem-solving. Discoveries made during research can lead to new theorems, algorithms, and techniques, advancing the understanding of fundamental principles and structures within mathematics. Engaging in math research can open various Career opportunities, both within academia and in industry. Faculty and students in the mathematics departments are committed to researching, enhancing, and exploring global challenges.

We would like to give a shout out to the following faculty for 2023: **Dr. Ossama Saleh** on his **35** years of service and **Trevor Thomas** on his **5** years of service. Big thanks to **Dr. Boris Belinskiy**, **Dr. Lakmali Weerasena,** and **Dr. Mohammad Khan** for their incredible support to MLIS 2023! They've earned honors for their outstanding presentation on the fascinating topic of 'Machine Learning Neural Networks for Accuracy Improvement of Acoustic Wave Propagation in an Ice-Covered Ocean' (Abstract ML1605). Continuing with the acknowledgment of research excellence in 2023, we extend a hearty congratulations to **John Graef, Lingju Kong**, and **Jin Wang** for their outstanding contributions. These esteemed individuals are recipients of Research Awards, and we give them a well-deserved shout-out for their exemplary work.



F. Ayça Çetinkaya
Associate Professor
Mersin University, Turkey
Title: An inverse problem for a Sturm—Liouville Operator: A quantum mechanical interpretation

Joseph Duhamel
UTC Graduate Student
Title:
Study abroad with the Universidad de Cádiz - Escula de Ingeniería in Cádiz, Spain.

Dr. Ziwei Ma
UTC Assistant Professor
Title: Estimation for Skew-normal based stochastic frontier model

Dr. Xiunan Wang,
UTC Assistant Professor
Title: From HIV to SARS-CoV-2: Mathematical Modeling of Viral Dynamics

Dr. David Walker
UTC Visiting Professor
Title: Mathematical topics in quantum computing

Stephanie Passmore, ASA and

JB Murphy, FSAJB
Blue Cross Blue Shield TN.
Title: Want to be an Actuary?

Dr. Satyan L. Devadoss
Professor
University of San Diego
Title: Unfolding Regular Polytopes

Dr. Thien Minh Le
UTC Assistant Professor
Title: Connecting Epidemics on Networks and mass-Action Models*

Dr. Yu Jin
Associate Professor
University of Nebraska-Lincoln
Title: Spatial population dynamics in Heterogeneous River Environments

Math Department Fall 2023 Colloquium

The Math Department Colloquiums is where attendees actively participate in enriching discussions, share their expertise, and collaboratively delve into the subject matter. This forum fosters an environment where critical thinking is not only encouraged but celebrated, cultivating a dynamic atmosphere of intellectual exploration. Essentially, a university colloquium serves as a platform for students and scholars alike to collectively augment their knowledge and make valuable contributions to the academic discourse. On behalf of the math department, we would like to extend our sincere gratitude for all the recent colloquium presentations. Your insights and expertise greatly enriched our understanding of the subject matter, and your engaging presentation style captivated the audience.

We truly appreciate the time and effort you invested in sharing your knowledge, contributing to the intellectual vibrancy of our colloquium series. The thought-provoking discussion that followed your presentation demonstrated the impact of your work on our academic community.

Once again, thank you for your valuable contribution. We look forward to the possibility of future collaborations and presentations.

MATH DEPARTMENT SPOTLLIGHTS

Collin Kilmer

Collin's academic journey began at Southern Adventist University, where he graduated Magna Cum Laude, donning the Silver Cord with an impressive GPA between 3.75-3.89. He earned his B.S. in Mathematics with a minor in History. Notably, Collin proudly boasts an eight-year residency in Chattanooga, contributing to his unique journey here. His inspiration stems from a Calculus II professor who introduced him to the captivating realm of pure mathematics and ongoing research.

Collin advocates for flexibility in academic paths, urging students to pursue degrees aligned with their passions, even if adjustments are necessary. Collin exemplifies this philosophy by successfully transitioning from chemistry to mathematics.

Beyond academia, Collin showcases an undisclosed skill his proficiency in operating skid steers and other heavy equipment loaders. His favorites, coupled with his love for mathematics, include the movie "No Country for Old Men," the color green, the sports team Scuderia Ferrari in F1, and the album "Wish You Were Here" by Pink Floyd. Sushi stands out as his favored culinary choice. To relax, Collin takes comfort in lifting weights, appreciating the balance of simplicity and complexity in resistance training, which helps him sleep better.

"Now is the time to change things up if that's what you think is best. If you want to switch your degree, getting a bit behind in college is way better than ending up in a career you don't enjoy."

Israel Adikah

Israel a young man hailing from the beautiful country of Ghana in West Africa. He graduated this Fall 2023 with a M.S. in Applied Statistics. With a robust educational background, encompassing a master's degree in economics from Zhejiang University of Science and Technology and a B.S. in Actuarial Science from Kwame Nkrumah University of Science and Technology, Israel is propelled by a mission to bridge the gap between academia and industry. He has also earned a B.S. from Kwame Nkrumah University of Science and Technology in Ghana.

Inspired by his parents and fueled by a personal drive for excellence, Israel emphasizes the significance of prioritizing God and being intentional in the pursuit of one's dreams. Despite the challenges faced as an international student, Israel remains unwavering, achieving remarkable success at each stage of his three academic journeys.

Israel showcases his technological expertise, displaying musical talents by playing the piano and drums at church, and contributing to the media department's endeavors in sound and video. When asked about unwinding after a challenging day, Israel keeps it simple – a good night's sleep does the trick. Additionally, he extends guidance, motivation, emotional support, and serves as a role model not only to fellow international students from Ghana but to everyone he encounters.

"I would like to thank God for my beautiful wife, acquiring a car, and securing a high teacher position."

Xiaoshu Sun

Xiaoshu holds the position of a postdoctoral research student. Her academic journey is nothing short of impressive, with a bachelor's degree in applied mathematics from Xi'an Jiao Tong-Liverpool University and the University of Liverpool, a master's in applied mathematics from the prestigious University of Cambridge, and a triumphant ascent to a PhD in Computational Mathematics from University College London.

Xiaoshu's deep passion for mathematics has indeed driven her to pursue a college degree, culminating in a Doctor of Philosophy (PhD) in Mathematics. Overcoming the challenges of completing a PhD, including the rigorous thesis and dissertation defense, is a significant achievement and demonstrates her commitment to the field.

Xiaoshu's has dazzled the world of Quantum Physics with her publication, 'Numerical Aspects of Casimir Energy Computation in Acoustic Scattering.' In addition to her academic pursuits, she has a hidden talent—playing the ukulele and having a beautiful singing voice. Her musical abilities add a creative and artistic dimension to her impressive mathematical expertise. It's also worth noting that her favorite movie is "Pixar's Soul," and favorite song is "Tiny Dancer" by Elton John

"I relax by delving into mystery fiction with the phone switched off."

"My passion is to keep pursing a math degree one-by-one."

SPECIAL EVENTS

Math Clubs Events 2023
The purpose of UTC Math Club is to organize and facilitate both academic and social events for students interested in mathematics and related subjects. Through these events, we hope to create community in the math department. **2024 Tentative Math Clubs Events**

- Board Game Nigh
- Community Event
- Math Club Social
- Graduate School Panel
- Pi the Professor
- Integral Bee

AWM Events 2023
The purpose of the Association for Women in Mathematics (AWM) is to create a community in which women and girls can thrive in their mathematical endeavors, and to promote equitable opportunity and treatment of women and others of marginalized genders and gender identities across the mathematical sciences.

Pi Mu Epsilon Events 2023
The purpose of the Pi Mu Epsilon aims to recognize and honor students who have excelled in their mathematical studies. Membership is typically extended to undergraduate and graduate students who have demonstrated exceptional mathematical ability and performance.

Pi Mu Epsilon

Organization Mathematics Links

- American Mathematical Society
- Association for Women in Mathematics
- Casualty Actuarial Society
- Math Sci Net
- Mathematical Association of America
- Pi Mu Epsilon
- National Council of Teachers in Mathematics
- Society for Industrial and Applied Mathematics
- Society of Actuaries

Math Poster Competition - Find more information here
- March 19, 2023 from 9 am – 12 noon

Tennessee Mathematics Teacher's Association (TMTA) High School Math Competition
- April 2, 2024 from 9 am – 12 noon

Incoming Freshmen Scholarship Applications
- The Majorie Watson Scholarship application is now available.
  - Application Deadline is Mar. 15, 2024 by 5:00PM EST.
- The Dorothy Dean Shelton Scholarship application is now available.
  - Application Deadline is Mar. 15, 2024 by 5:00PM EST.
- For more information on the Math Department's Scholarships and Awards, click here.