

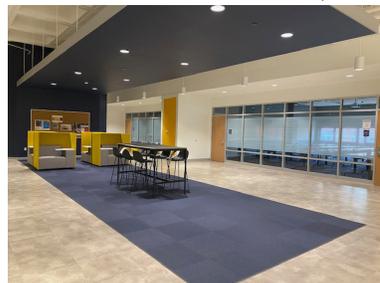


Department of Mathematics Makes Big Move to Lupton Hall



The Math Department has moved to Lupton Hall.

Over the summer, the Department of Mathematics was one of several departments on campus to make the move to the newly renovated Lupton Hall. Because of its relationship with multiple majors as well as the University's General Education Program, this ensures that the department has a centralized location on campus.



The third floor offers study space for students.

The Math Department is located on the third floor of Lupton Hall. This floor also includes state-of-the-art classrooms and

study and meeting spaces for students. It also includes the Department of English and the College of Arts and Sciences Dean's Suite.

The Department of Mathematics office is in room 304A on the third floor of Lupton Hall. The new office space brings the Mathematics faculty together on one floor.



The Math Office is located in Lupton 304A.

Be sure to stop by and check out the new space and say hello!

Technology Upgrades Completed for Math Plaza

After 8 years of continuous use, the technology in the Math Plaza has been upgraded. One hundred and two computers were ordered and installed in the lab this past July. Many of the computers were showing their age. And approximately 20 were no longer usable. With the new computers, the Math Plaza will be able to offer better computers taking up less space for when students come in and get help.



Technology has been upgraded in the Math Plaza.

Several software upgrades have been implemented on the new computers. The tracking software that was used on the old computers, AccuSQL 2014, has been replaced by AccuSQL 2019. Other new software includes R Studio, MATLAB, SPSS, Maple, MikTeX (LaTeX), and Hawkes Statistics.

Note From the Department Head

Dr. Chris Cox | Department Head



From the Department Head:

If I were to encapsulate the Year 2020 in one word, it might be “Zoom,” a word that has a very different connotation now than it had a few years ago. Whereas once it meant to go fast (and was central to a Mazda commercial), now Zoom is a form of online communication that we, by necessity, have become very familiar with.

In a time of upheaval due to circumstances beyond our control, the UTC Math faculty rose to the challenge and “Zoomed” through the latter half of the Spring semester. The department rallied during the extended Spring Break, having been granted a second week to prepare for the switch to online delivery of our courses. Those well-versed in online teaching provided one-on-one help, documentation, and recorded tutorials that brought the rest of us up to speed. The collective sigh of relief when final grades were entered in May was particularly heartfelt. That same sense of “glad we made it through” is just a week away now as the Fall semester is about to conclude.

The Department accomplished many things this year – both BP (before the pandemic) and DP (during the pandemic). Here are highlights:

- BP: We interviewed 7 candidates for 2 assistant professor positions and were successful in filling both positions. Because of the U.S. government’s H1-B visa ban, one of the new hires Dr. Xiunan Wang, remains in Canada in a postdoc position. We are looking forward to having Dr. Wang join us in August 2021. We were able to welcome Dr. Ziwei Ma to our department in Summer 2020. More information about Dr. Ma is in an article in this newsletter.
- BP & DP: We recruited a strong cohort of master’s students for Fall 2020, thanks to diligent work by our Graduate Program Director Dr. Andrew Ledoan, and found creative avenues to provide financial aid. In August, Andrew passed the directorship baton to Dr. Lingju Kong, who is leading the program in very capable fashion.
- DP: We packed up everything in the EMCS building and relocated to the third floor of newly-renovated Lupton Hall in early August. Kudos to our Administration Specialist Heather Heinlein for overseeing packing and discarding a large amount of miscellaneous items, including a near-avalanche of materials for shredding that piled up in the conference room. With apologies to Monty Python, “Bring out your old computers” seemed to be the rallying cry at one point. Monitors and CPUs destined for surplus lined the hallway

just before the move took place.

- The Math Department was prominent in the College of Arts and Sciences 2019-2020 “Virtual Awards” that was published on May 20.
 - Dr. Eleni Panagiotou was named “New Grants Person of the Year” and Dr. Jin Wang was named “Grants Person of the Year.”
 - Dr. Lucas Van der Merwe was honored as one of the CAS faculty members who retired this year (effective June 30th). This evokes in us a strong sense of gratitude for Lucas’s many contributions over the years, along with a tinge of sadness at the thought of not seeing him here each day. Lucas was granted emeritus status.
 - The CAS awards also included Math being named as one of two “Departments of the Year” along with the Department of Communication.
 - You can view the awards video at <https://www.youtube.com/watch?v=PtRHlJMg7NE&feature=youtu.be>

Please help me congratulate:

- Andrew Ledoan for being promoted to Full Professor
- John Graef for achieving the milestone of 50 years in the professorate (PhD: SIU, 1970).

Upon further thought with respect to how I opened this note, for me the word that encapsulates the year, more than “Zoom,” is “Proud.” I’m proud of my colleagues for putting students first by taking the steps necessary to assure continuity of instruction when our face-to-face classes went virtual, even though the learning curve to go online was quite steep. Dr. Francesco Barioli, Associate Professor and Associate Department Head for Undergraduate Studies and Scheduling, fully completed the daunting task of scheduling classes in a variety of modes: social-distanced face-to-face, hybrid F2F/online, and fully online. At the University’s request we developed an online placement exam for MATH 1130 and two other courses at a similar level. (As my wife would remind me, I’m using the “Royal We” there – the test was set up and is being maintained by Tracy Hughes with help from Meg Kiessling).

Reflecting on the year makes me confident that we’ll continue to work together to meet the instructional needs of our students in whatever form the circumstances dictate.

Here’s hoping that the next newsletter contains the acronym AP (after the pandemic!)

-Chris

Math Department Welcomes New Faculty Members

Dr. Ziwei Ma and Dr. Qiao Zhuang join the Department of Mathematics faculty and staff in fall 2020

Two new faculty members joined The University of Tennessee at Chattanooga Department of Mathematics in August 2020.



Dr. Ziwei Ma joins the Department of Mathematics from New Mexico State University.

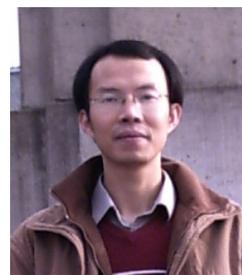
Dr. Ziwei Ma joined UTC as an Assistant Professor in the Department of Mathematics in August 2020 after he received his Ph. D. degree in mathematics from New Mexico State University. His research focuses on statistical methods in skewed

data based on skew normal and related families and application of mathematical and statistical models in engineering, biology and public health.

Dr. Qiao Zhuang joined the UTC Math Department as a post-doctoral researcher in August 2020, immediately after receiving his Ph.D. in Mathematics from Virginia Tech. Dr. Zhuang's research area is computational mathematics, with a focus on numerical PDEs and finite element methods. At UTC, Dr. Zhuang is working with Dr. Jin Wang, UNUM Chair of Excellence in Applied Mathematics, on the development and analysis of new computational methods for moving interface problems, and their applications in physics, fluid mechanics, and biomedical science.

The department is pleased to welcome these two members to the faculty.

GRANTS



Wang Awarded NSF Research Grant

Dr. Jin Wang, Professor and UNUM Chair of Excellence in Applied Mathematics, was recently awarded a research grant from the National Science Foundation (NSF) for his project entitled "Deterministic Models for Waterborne Infections". The amount awarded is \$200,000 and the project duration is from 2020 to 2023.

With this support from the NSF, Dr. Wang plans to establish a new mathematical modeling framework for waterborne infectious diseases based on deterministic differential equations. In particular, Dr. Wang plans to develop a novel cluster modeling technique that will extend the classical Lagrangian and Eulerian modeling approaches, with the aim of optimizing the balance between homogeneity and heterogeneity in the characterization of disease transmission and spread. Using this framework, Dr. Wang will perform a detailed study on the complex dynamics of waterborne infections across a wide range of spatial and temporal scales. The outcome of this project is expected to improve the quantitative understanding of waterborne infections and provide useful guidelines for related disease control strategies.

Congratulations to the Department of Mathematics Graduates for 2020

Spring 2020

BS Actuarial Science

Grace Cahill
Justus Hurd
Alexander Smith
Kelsey Tweedy

BS General Mathematics

James Cummins
Matthew McCarver
Ashwyn Sam
Peter Zeglen

BS STEM Education

Stone Gray

MS Mathematics Education

James Crichton

Summer 2020

BS General Mathematics

Brayden Born

PB Certificate Computational & Applied Statistics

Angelique Ramnarine

MS Applied Mathematics

Jeremy Stewart

PH.D. Computational Science Applied Mathematics

Chayu Yang

Fall 2020

BS Actuarial Science

James Cox
Bethany Taylor

BS STEM Education

Garret Flores
Gavin Reiniche

BS General Mathematics

Thomas Lusk
Rosalinda Powell