

MATH DEPARTMENT SLOGAN



Congratulations to Sarah Robinson on winning a prize for her submission for the Tennessee Tech Math Department slogan. Sarah's submission, "Tennessee Tech Mathematics, it just adds up," was chosen to be the official slogan of the TN Tech Math Department. The motto will be used on postcards that will be sent to prospective students as well as other official items used for recruiting outstanding students to the department.

CONGRATS

Congratulations to Kayla Sims on being named the recipient of the Outstanding Graduate Assistant Teaching Award.

Congratulations to Jacob Copeland on being named the recipient of the Stanley Dolzycki Memorial Scholarship. This memorial scholarship is to recognize and reward outstanding mathematics graduate students.

Congratulations to Thomas Clayborn for successfully defending his thesis titled, "On Orthogonality in Normed Spaces," under the supervision of Damian Kubiak, associate professor of mathematics.

Congratulations to Marlana Hatcher for successfully defending her thesis titled, "Approximating Convolution Integrals for Laplace and Exponential Fourier Transformations Using Simpson's Rule," under the supervision of Brian O'Connor, associate professor of mathematics.

Congratulations to Kayla Sims for successfully defending her thesis titled, "Bayesian inference for the logistic change point model using reweighted parametric bootstrap samples," under the supervision of David Smith, professor of mathematics.

Congratulations to Duane Vick on successfully passing two exams, one in Topology and one in Abstract Algebra, to obtain his master's degree. Duane chose to do the non-thesis path to obtain his master's degree in mathematics.

Congratulations to Brelyn Grant on winning the math section of the 2020 Research and Creative Inquiry Day. In each category submissions were grouped by undergraduate and graduate and a winner was selected based on the highest average score. Brelyn won the undergraduate math award for his research titled, "A Longitudinal Study of Critical Asset Failures: Statistical Models and Inference." Motoya Machida, associate professor of mathematics was Brelyn's research advisor on the project.

MATH CLUB

The Math Club held a special election in March to elect a president for next year since the current president, Brelyn Grant, is graduating this semester. The winner of the election was Madison Pearson. She currently holds the position of Treasurer for the club. Congratulations to Madison! Election for the rest of the officers will be held when classes resume in the fall.

CORNHOLE

The Math Department faculty hosted several cornhole matches during the fall semester and won every one of them. On Thursday, November 7, 2019, the math faculty competed against the Math Club. The faculty won three out of four games. On Monday, November 18, 2019, the math faculty competed against the MSCI 1020 freshman class and won five out of eight games.

We were only able to get one game in during the spring semester before classes went online. The math faculty took on the physics faculty in a very heated competition. The math faculty won five out of five games. A rematch is in the making for the fall.

The math faculty has been the winner of every match they have competed in this year. This might be a good time to be practicing your cornhole skills so you can come back in the fall and form a group to compete against the faculty to topple them from their pinnacle.

GRADUATION

This semester the Tennessee Tech Department of Mathematics is graduating ten undergraduate math majors and four graduate math majors.

Undergraduate students who have met the requirements to receive bachelor degrees in mathematics are Alexander Adam, Victoria Buck, Jacob Campbell, Jordan Crowell, David Garber, Brelyn Grant, Benjamin Luna, Hunter Morgan, Sarah Robinson, and Jacob Stinson.

Graduate students who have met the requirements to receive master degrees in mathematics are Thomas Clayborn, Marlana Hatcher, Kayla Sims, and Duane Vick.



Noncommutative Algebra Corner

Hello all! 😊

I am, Dr. Veerapen, the resident non-commutative algebraist in the department. It's been a hectic and nerve-wrecking spring 2020 semester but hopefully, a semester that still allowed us to learn and grow! In our fall 2019 article, we discussed how we might view noncommutative algebra in an intuitive way. Today, I would like to briefly explore how noncommutative algebra came into existence. In the early 1980s, Evgeny Sklyanin, a mathematical physicist, was interested in finding all the solutions to a certain equation related to the quantum Yang-Baxter equation and the quantum inverse scattering method. He found that certain algebras and their modules provided solutions to that equation. These algebras ended up playing a major role in the development of our field - they were shown to be examples of algebras that the community started viewing as non-commutative analogs of the polynomial ring.

MTMT CONFERENCE



Holly Anthony, professor of curriculum and instruction, and Sam Narimetla, instructor of mathematics, are shown at the Middle Tennessee Math Teachers Conference held in Hendersonville, TN on February 22, 2020 with keynote speaker Ryan A. Nivens. Nivens is an associate professor of mathematics from East Tennessee State University. Anthony presented “Using Algebra Triangles & Hundreds Boards to Develop Algebraic Reasoning” and

“Mathematical Letter Writing,” while Narimetla presented “Mathematics in Engineering and Physics.”

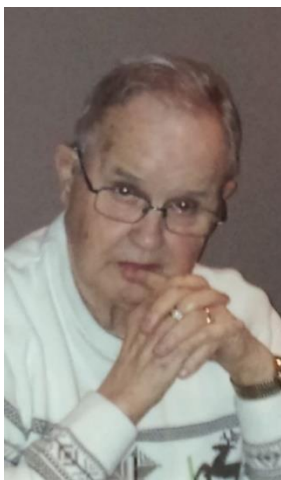
NEW COURSES APPROVED

The University Curriculum Committee and Graduate School Executive Committee have approved our recent course proposals and curriculum changes. The new courses are Math 1831-Further Topics in Applied Calculus, Math 4550/5550-Mathematics of Investment I, Math 4560/5560-Mathematics of Investment II, Math 4060/5060-Topics in Cryptography, Math 6001-Communicating Mathematics I, Math 6002-Communicating Mathematics II, and Math 6700-Graph Theory.

Since the new actuarial science course sequence will appear in the university catalog, TN Tech is now on the Universities and Colleges Actuarial Program list as having an introductory curriculum in actuarial science. You can see the listing at: <https://www.soa.org/institutions/tennessee-technological-university/>. Kudos to Chuda Poudyal, assistant professor of mathematics, for his work developing the necessary courses and submitting the paperwork to SOA to get our program listed.

IN MEMORIAM

On Sunday, December 15, 2019, the Tennessee Tech Department of Mathematics lost one of our highly respected emeritus math faculty. Reginald Mazerres, emeritus professor of mathematics, passed away in Dallas, GA. Mazerres was born on February 15, 1934 in Metairie Ridge, LA. He received his Ph.D. from Auburn University. He was a professor for Tennessee Technological University for 38 years and was a



member of St. Vincent De Paul Catholic Church in Dallas, GA. He also bravely served in The United States Navy during the Korean War. In his free time, Reggie was an avid golfer and a Rotary Club member.

Services were held for Professor Mazerres on Monday, January 6, 2020, at the Clark Funeral Home Chapel with Father Adrian Pleus officiating. Interment followed the service at The Georgia National Cemetery.

In lieu of flowers, the family respectfully asks that donations be made to Tennessee Technological University in loving memory of Professor Reggie Mazerres.

FIRST YEAR IN FOUNDATION HALL

Well, we survived our first year in Foundation Hall. It's been a tumultuous year for the Math Department with having to uproot from 50 years in Bruner Hall and move to Foundation Hall so Bruner can be renovated, but we made it through and are stronger for it. We've had our ups and downs this year such as the day in January when the boiler went out. The weather outside was cold and damp. The outside temperature averaged around 45 degrees. The indoor temperature wasn't much better averaging around 56 degrees depending on which room you were in. No space heaters were allowed. We braved the cold as best we could. Some



of us were able to withstand the coldness in the building better than others.

Then in the spring, we had the novel coronavirus outbreak later dubbed COVID-19. Spring break was extended an extra week and when classes resumed on March 30 they were all held online until the end of the



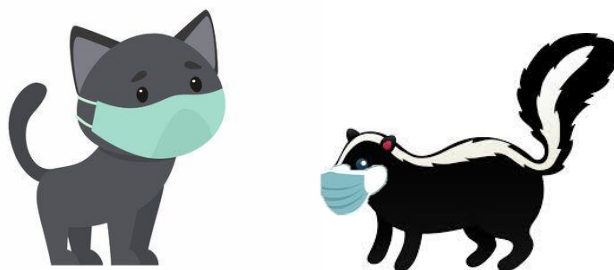
semester. All campus activities were cancelled and the majority of campus faculty and staff began working from home.

Faculty found new ways to conduct their classes. Many have been recording lectures and uploading them on iLearn for students to watch at their convenience. Then later they would have their office hours on Zoom so students would have an opportunity to ask questions in real time. Some faculty have actually been conducting their classes on Zoom during their regularly scheduled class times. Tests have been given in different ways as well. Since most of the math faculty prefer to see their students' work rather than just giving them a multiple choice test, they have been uploading their tests online and then students take a picture of the completed test and send it back to their instructor, a much harder task than taking the test in the classroom.

It was a little shaky at first, but everything seemed to work out and students have been

able to finish the semester from the comfort of their own homes. Faculty, staff and students have had to learn new ways to communicate and do their jobs during these trying times, but we have done it and can do it again if necessary.

Have a great summer,
stay safe, social
distance, and don't
forget to wear your
mask!



See you in the fall!

Follow us on Instagram @tntechmath.

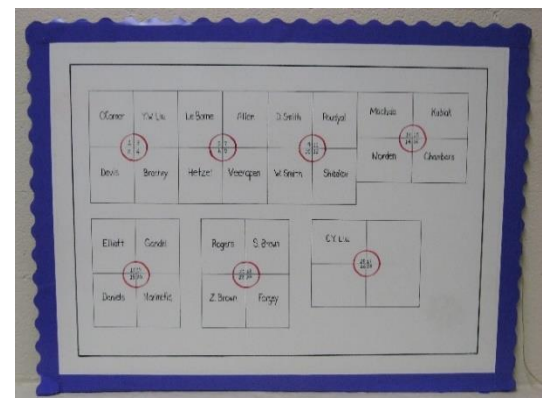
Foundation Hall **Before** our Arrival



Foundation Hall **After** our Arrival



Layout of Faculty Office Cubicles



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