

VECTORS

THE NEWSLETTER OF THE ROWAN UNIVERSITY MATHEMATICS DEPARTMENT





Farewell

Dr. Tom Osler

Renowned and celebrated
Rowan Mathematics Professor

Dr. Tom Osler was a celebrated mathematics professor, an elite runner, and a loving husband and father.

Dr. Osler's teaching career began at Rowan University in 1972. He published over 150 papers, mentored countless students, and earned numerous awards including the Gary Hunter Excellence in Mentoring Award, the Editorial Excellence Award, and the Distinguished Teaching Award. He made challenging mathematics topics not only understandable, but enjoyable too. His passion and enthusiasm for mathematics easily transferred to his students. He loved teaching and planned on never retiring. Mathematics was a way of life for Dr. Osler.

Outside of the classroom, Dr. Osler was an elite runner. Among many running achievements, he won the AAU's 30-kilometer and 50-mile National Championship races. He took pride in completing a

24-hour, 100-mile run for charity. Dr. Osler also published books on running including *The Conditioning Distance Runners* and *Serious Runner's Handbook*.

We bid a heartfelt farewell to a remarkable individual whose passion for numbers and running was only surpassed by his unwavering affection for his dear wife—his Kathy. Dr. Osler leaves behind a legacy of dedication both in and out of the classroom.

Dr. Tom Osler touched countless lives and many of us have stories to share about him. Dr. Chris Lacke shares one such memory below.

A great person left this earth. Twenty-five years and ten days ago, I interviewed at Rowan. After landing and getting to the hotel, I realized that I left my dress shoes at home in Cary. After finding a store that sold 15EE shoes, I called a cab. Some \$200 later, I was simultaneously relieved and mad at myself. The next day, upon meeting with the search committee, one individual walked in wearing a running outfit and running shoes to match, some seven colors between the various parts of his outfit. He asked one question during my teaching presentation: What would the regression line look like if you had three data points and they were in the shape of an equilateral triangle? I answered the question politely, but wondered what the hell I was getting myself into. As fate would have it, I took the position and my office ended up being next to Tom Osler, the interestingly attired committee member whose question implied that he either knew very little or a great deal about statistics. As he told me on my first day on the job, it was the former. He also told me that, since I was a member of the Isolated Statisticians, that it would be better for me and the other statistician in the Department to have

Continued on page 4



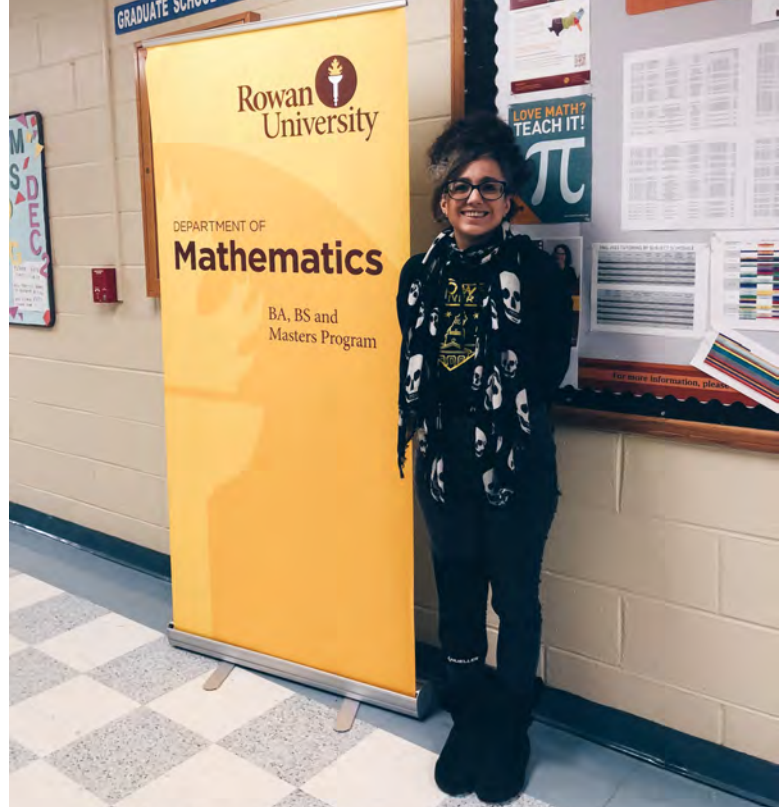
Dr. Tom Osler and his wife Kathy

Continued from page 3

our offices moved to a trailer on the outskirts of campus. I was wondering if the offer at AT&T Labs was still available. Those first two encounters were quite different from what the next 25 years would bring. Tom was the Chair of the Tenure & Recontracting Committee, and there couldn't have been a better person for the job. He was an excellent professor who had done so much work helping students publish. Admittedly, our fields didn't intersect that much, but Tom always took an interest in what I was doing, how my family was doing, and, among other things, my "running." Tom was more than a mathematician and a professor. Tom once held the world record at 50 ...miles. He wrote the first book on training for ultramarathon running. He knew the greats. People would come to races to meet him. It didn't matter how fast you were, as he was always there to support you, the same way that he would as a colleague, as a professor, or as a friend. Now that friend is back with his wife, who he would always say meant more to him than mathematics. If you knew Tom Osler, you knew just how strong that statement was. RIP - Run in peace - my friend.



Dr. Osler with one of his students



Meet Gina

The Mathematics Department gained a new clerk typist.

I started Rowan University in 2009, but decided to leave after a semester-and-a-half for personal growth. After completing five years' worth of soul searching, I decided it was time to build a solid future for myself, and there was no other place I wanted to start doing so than at Rowan. In 2015, I returned to dual-major in Philosophy and Psychology and was fortunate enough to hold a student worker position in the Law/Justice Department during the majority of my undergrad. After graduating and moving on to the career field for some time, I decided to try my luck in seeing if I could get hired at Rowan. Fortune must have smiled upon me because not too long after, I got hired as a temporary worker in Geography, Planning & Sustainability. Then I landed a full-time position in the Psychology Department before luckily finding a home in Mathematics, where I hope to remain for a long time.

FACULTY SPOTLIGHT

Ira Fine

Faculty Spotlight, Ira Fine, shares his three passions with students: mathematics, origami, and chess. Learn more about the dedicated Mathematics Instructor here.

I got my mathematics post high school education from two institutions with four different names. It all began when I was accepted into Yale University's early concentration in mathematics program and yes, it was very concentrated. However, after two years I decided that Yale and New Haven were not for me. After a year of having various jobs and experiences I decided it was best to return to college. I graduated from Glassboro State College with a BA in Mathematics. Then I taught mathematics in public schools for several years. I taught all grades 6 through 12. I taught remedial math all the way through high school calculus. Then I felt it was time for a change and thought I could be of most value teaching on the college level. So, I then earned my master's degree in mathematics education from Rowan College of New Jersey and this was followed by a master's degree in pure mathematics from Rowan University. That's two institutions with four different names.

For the past twenty years I have been teaching mathematics at Rowan University. First as an adjunct and then I progressed to the ranks of instructor. Recently the courses I have spent most of my time teaching are Contemporary Mathematics and Calculus. Contemporary math students usually have not had a good experience with mathematics in the past. My goal is to help them realize the beauty of mathematics and that it is within their grasp to understand it. Calculus on the other hand is about presenting the ideas of



calculus so that they can be understood and appreciated as opposed to just memorizing step by step rules.

I have always enjoyed the art of origami. It is very mathematical in terms of the geometry, angles and folds. However, the beauty and appreciation of the final result requires no special mathematical ability. Every semester I incorporate origami into at least one lesson. Ideas about geometric shapes and transformations abound in the process of folding a model. I have also been exploring how origami can help one discover, understand and appreciate many of the ideas associated with solid geometry. Platonic, Archimedean, and Johnson solids can all be recreated using origami and along the way many interesting properties of the solids can be discovered. Recently I created an origami design for the Coronavirus. It uses a snub dodecahedron as a base. The spikes are twenty octahedrons evenly spaced around the core. Students are very interested in understanding the mathematics behind the model. There are 642 rectangular paper strips used in its construction. It is all held securely together without the use of tape, glue, etc. Every

Continued on page 6

Continued from page 5

year I also participate in presenting origami and flexigons at Rowan's Homecoming. I also do an origami workshop for the Math Learning Community class every fall.

The game of chess is another activity I am interested in that is not considered mathematics. However, it too has many mathematical themes within such as geometry and logical thinking. For the past seven years I have been advisor to Rowan Chess. At chess club we have informal games and also teach students who do not know how to play the various moves which each piece can make. We have weekly tournaments and also two weekend tournaments every year. The tournaments raise money to fight brain cancer and also to help chess players in financial need in the local area. We have raised several thousand dollars over the past few years for these causes. In my contemporary classes when we cover graph theory I always challenge my students to see if they can solve the Knight's Tour problem: Try to have the knight jump around the board so that it lands on every square exactly once. I have a big interest in fractal geometry, the Mandelbrot and Julia sets, etc. The beautiful images of the Mandelbrot set can be understood without the knowledge of advanced mathematics. The only topic I have to give the students a little crash course in is complex numbers and arithmetic using them. Once that is accomplished the concept of understanding and creating Mandelbrot sets is totally within the grasp of students with little interest in or success in mathematics in their past.

My hope is to continue teaching at Rowan as long I believe I can be a positive influence on students of all mathematical levels in appreciating and understanding mathematics.



Enjoying origami in the Math Learning Community



Raising money for a cause with chess tournaments



Holiday origami



STUDENT SPOTLIGHT

Rachel Bruno

Student Spotlight, Rachel Bruno, shares her Rowan University experience.

While I was a sophomore in high school, I toured Rowan for the first time with my older brother. I immediately fell in love with the campus buildings and all Rowan had to offer. What really caught my attention was the math department and the 4 + 1 mathematics and education program that was offered. After four years of being an undergraduate I will graduate in the spring of 2024 with a B.A. in Mathematics and, after my fifth year, I will graduate in the summer of 2025 with a M.A. in STEM Education.

During my four years at Rowan, I have developed many valuable relationships with professors as well as some really great friendships with peers. I am a student worker for the Mathematics Department, the treasurer for the Math Team, a member of the Association of Women in Mathematics, a member of the Pi Mu Epsilon, and I have participated on an intramural basketball team for the past three years.

While working in the Mathematics Department, I have been given the opportunity to help out at



many of our events. Last year, I attended many lunches with potential candidates for a position in the department. I helped set up for the Pi Mu Epsilon induction ceremony and even got to hand my roommate her honor cord! I helped out at Rowan's Accepted Students Day and got to talk to potential mathematics majors about our department and classes.

On top of all this, I have a minor in physics as well as statistics and operations research in addition to the 4 + 1 mathematics and education program. I have just started taking my graduate level classes and finally started to go into the field to begin observing a teacher at a middle school. At the end of my five years here, I hope to be a middle school or high school teacher up in North Jersey where I am from!

Interested in a 4 + 1 accelerated dual degree program like the one Rachel Bruno is completing? Check out the Mathematics Department website for more information:

<https://csm.rowan.edu/departments/math/programs/dual-degree-programs.html>

- 4 + 1 B.S. in Mathematics and M.A in Mathematics
- 4 + 1 B.A/B.S. in Mathematics and M.A. in STEM Education
- 4 + 1 B.S. in Mathematics and M.S. in Data Analytics

The fall semester adds up to success for the Math Team

Hi Everybody! Math Team president Chrissy here with a special holiday update! Before I jump into what we've been up to this year, allow me to introduce you to the members of our fabulous e-board! We have a mix of familiar faces and new ones this year:

President . . . Chrissy Quinn (hi! I'm waving!)
Vice President . . . Jake Levey
Secretary . . . Srivalli Valluri
Treasurer . . . Rachel Bruno
Senator . . . Moosh Khan

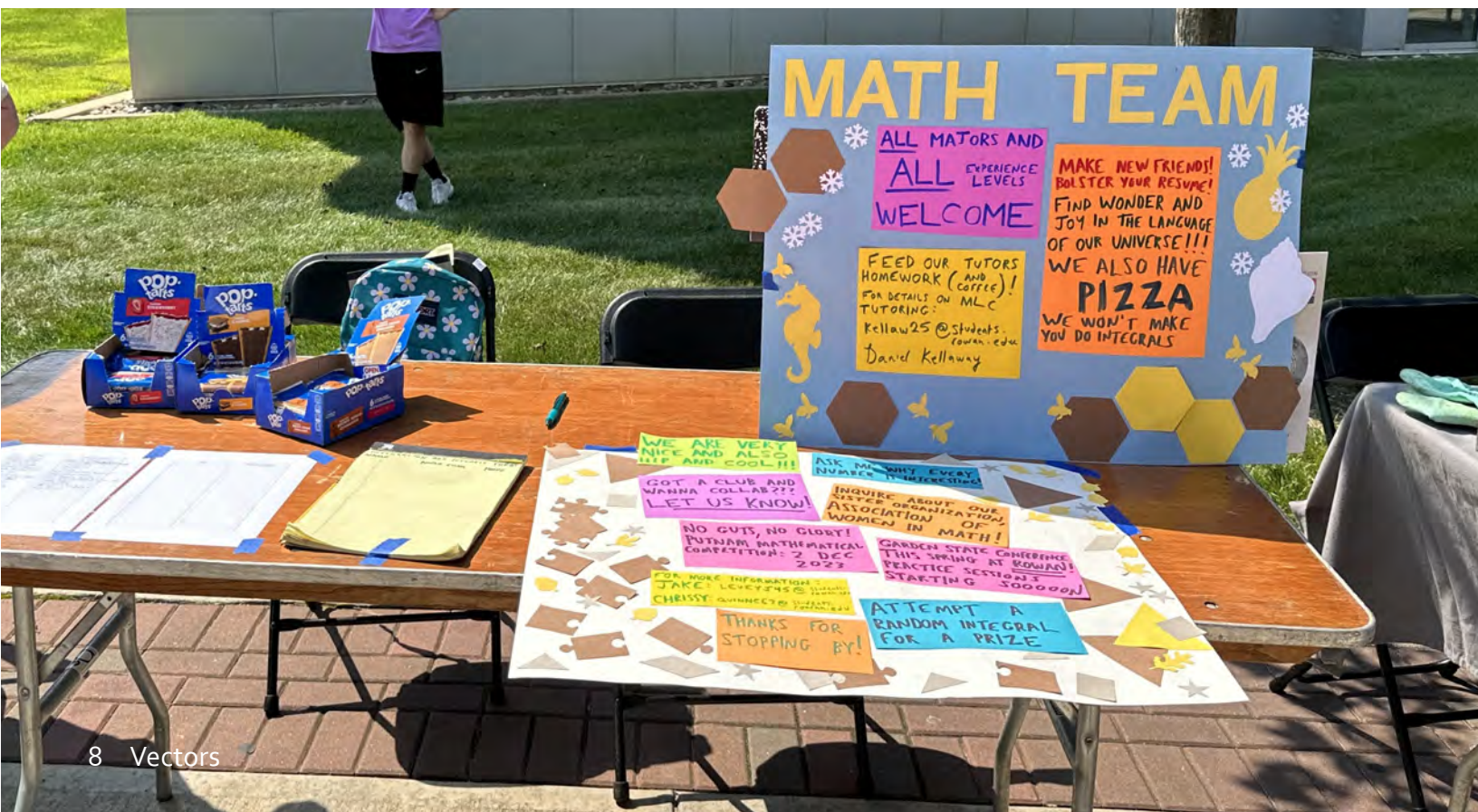
The Math Team is Rowan's place for anybody who loves talking about math and having fun! All are welcome to join the Rowan Math Team. We have active members across a variety of disciplines and majors: math, education, computer science, engineering, physics, finance, and even English! We volunteer as tutors in the Mathematics

Department, host game nights and research events, and also compete in state and national math competitions, like the Putnam Competition this December and the Garden State conference in the spring.

Fall 2023 has been a semester of rapid growth and success for the Math Team. We take in new members from all experience levels every month, and are currently in the process of redecorating the Math Learning Resource Center. And, in addition to our usual stops at the organizational fair, outreach events, the Putnam Competition, and our monthly general meetings, this November we crowned the winner of our first Integration Bee and recipient of the Golden Integral Award: Ryan Correll!

Looking ahead to the spring, the team is so excited to continue doing outreach, hosting more games and events, and bringing in guest speakers to discuss research and career opportunities. We'll also be getting prepared to compete at the Garden State Undergraduate Mathematics Conference.

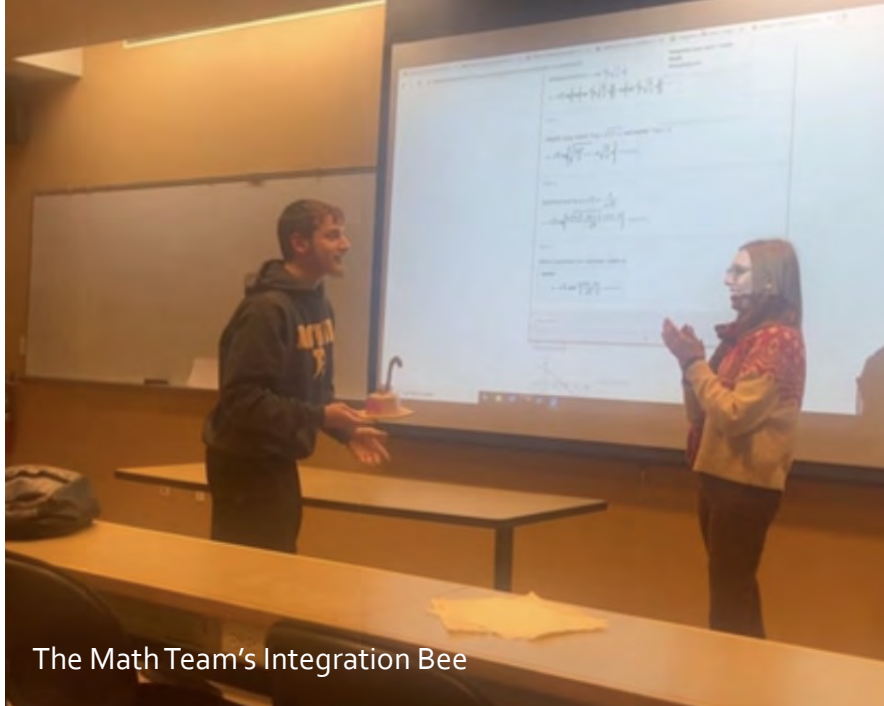
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Continued from page 8

The Conference is especially exciting this year because Rowan is the host! With so many enthusiastic and talented new members this semester, I expect us to do great things!

We also rolled out a shiny new Discord server to discuss the latest and greatest Math Team updates on the go! To join the server and get more information on all things Rowan Math Team, just email me, Chrissy at quinnc67@students.rowan.edu.



The Math Team's Integration Bee

The Association for Women in Math ascends to charter organization status

Our students have been actively working to expand and grow the group. This semester, they have been approved by the senate to be an SGA Chartered Club at Rowan and have also been recognized as a student chapter of AWM. Both provide greater support and awareness of our group so that more students might become a part of this community.

This fall has included monthly meetings with discussion, games, connections, pumpkin painting, and of course food. They are also collaborating with other clubs and connecting across campus with STEM majors. The group is open to all students and seeks to provide an environment to encourage each other to thrive in their adventures in mathematics.



Our current student leaders are Bella Stefanowicz, Carly Dougherty, Jackie Regensburger, Jessica Rippman, and Laura Jones. Shannon Miller continues to meet with and advise the leaders.

If you are interested in following the group or learning more about what they are doing, you will find them in a few different places.

Follow them on Instagram (@rowanawm) or join them in GroupMe (https://groupme.com/join_group/79731427/2zNfbs5c)

AWM is also featured on the College of Science and Mathematics website (<https://csm.rowan.edu/student-resources/student-organizations.html>)

as well as on the Mathematics Department website

(<https://csm.rowan.edu/departments/math/current/association-for-women-in-math.html>)

And on the proflink page (<https://rowan.campuslabs.com/engage/organization/rowanawm>)



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