

Winter 2022

NAZARETH COLLEGE MATHEMATICS DEPARTMENT

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Do you wish the newsletter came every week? To get you through the gaps of length x between the issues, you can [sign up](#) for Monday Morning Math, hand delivered to your inbox during the semester. And if you want to write one of the vignettes, even better!

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Our Newsletter

The Gilmer Globe

Around the world in $2\pi r$

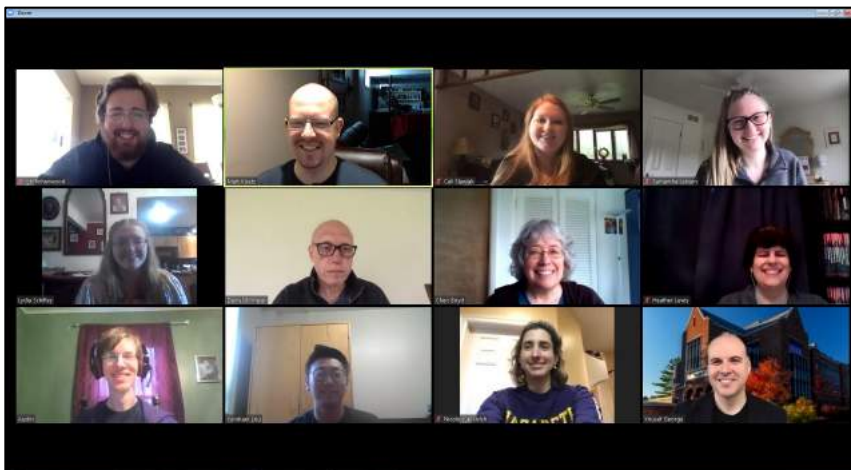
2018

2017



2019

2021



2020

Alumni News

In days of yore each spring we would post a photo of the previous year's graduates along with an update on what they were doing the year after graduation. But then we hit a tesseract and skipped 5 years of the newsletter. We don't want to miss anyone, though, so this issue contains the five-years-for-the-price-of-one special! We are all about the bargains.

Sami Bickford ('21): Life has been crazy (shocker, I know) but a good crazy! I am doing my grad classes full-time at Naz still, I have been substitute teaching a lot at Cal-Mum, and I am the assistant coach for Cal-Mum's JV and Varsity volleyball teams (which I LOVE). My head coaches even asked me to coach club volleyball with them starting in November! So yeah I am a little stressed, but surviving and thriving!!

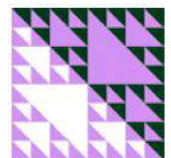
Justin Boyer ('21): I've been working on the math research and whatnot, but since graduation, I started working with AML RightSource as an Anti-Money Laundering Analyst. Basically, I work with financial institutions to help identify and prevent financial crimes, namely money laundering, by comparing data, patterns, and general financial activity. It is absolutely not where I expected to end up post-graduation, but it's super interesting and keeps me challenged.

Bailey Carter ('19): There is a lot to catch up on, but probably the most relevant for this question is that I am currently finishing up my masters and certification in secondary mathematics education at the University of Bridgeport! I'm student teaching at Fairfield Warde High School (teaching Algebra 2 and precalc!) and over the summer officially moved to Fairfield; I currently have my own apartment and live with my cat, Elton. I graduate in December and am really looking forward to trying to find a job in the area because i love the location - so many places to go hiking and only a car ride away from Vermont for the best skiing! And my daily math needs are being met because i get to do math all day long, it turns out teaching math is almost as fun as learning it :)

Stephanie Mongelli ('18): I am now teaching kindergarten! I thought about teaching some Calculus or Abstract to my 5 and 6 year olds, but I don't think they are quite ready for that yet! Anywho, last year I taught first grade at St. Louis School and this year I just started in Pittsford at Mendon Center Elementary School in Kindergarten!

Dr. Alison Stedman ('17): Hi! Hope you are doing well! I do very little math and very much medicine these days :(I'm just hanging out in Connecticut doing Family Medicine residency and hanging out with Billy and our dog. I still play Blokus from time to time when I'm not working weekends! I miss everyone in our math family and I miss doing math.

Previous updates (from...a while ago): **Jennie Betts ('17)** became a CPA and accepted an accounting position in audit/financial assurance at Dejoy, Knauf, & Blood in June 2018, and went on a mission trip to South Africa in February 2018. Jennie and Ben moved into a new house in Springwater (near Honeoye) tucked away on a hill where our cute doggy Weston loves to run around. **Jen (Iler) Tauterouff ('17)** has been working at Carestream in the city of Rochester in the Early Career Analyst Program. This program is designed for college graduates to begin their career at Carestream by doing 3 rotations that are 4 months long in 3 different IT parts of the company. **Jack Whalen ('17)** was still doing math as a TA at Syracuse, and remains disappointed that nobody there plays Blokus. **Sara Edell ('17)** was loving the Educational Technology graduate program at Naz, and was a long-term sub in a fourth-grade classroom.



Gloria Ford Gilmer

This issue is named after Dr. Gloria Ford Gilmer, a pioneer in ethnomathematics (the study of the relationships between mathematics and culture). Gloria Ford Gilmer was born in Baltimore Maryland, in 1928. She studied mathematics at Morgan State University in Baltimore, where she was a student of Clarence Stephens, and where she earned her bachelor's degree in 1949. Two years later she earned her master's degree in math at the University of Pennsylvania.



She did ballistics research for the US Army, but soon turned to teaching. She taught both high school and college students, eventually earning a PhD in curriculum and instruction at Marquette University. Most of Dr. Gilmer's research was in ethnomathematics. She was particularly interested in finding mathematics in everyday places, and is known for her mathematical analyses of the braiding patterns in African American women's hair.

Dr. Gilmer was active in many professional organizations, and was a "first" for many of them. She was the first African American woman on the board of governors for the Mathematical Association of America, and the first woman to give the [Cox-Talbot Address](#) for the National Association of Mathematicians. In 1985 she, along with Ubiratan D'Ambrosio, Gil Cuevas and Rick Scott, co-founded the *International Study Group on Ethnomathematics* (ISGEM); she served as the organization's president for 11 years.

Dr. Gilmer passed away last year, on August 25, 2021. The recently established American Mathematical Society's Claytor-Gilmer Fellowship is named in her honor, and she was an honoree on *Mathematically Gifted & Black* last year.

Around the...Universe

The 1977 short film *Powers of Ten* (<https://youtu.be/0fKBhvDjuy0>) by Charles and Ray Eames remains an amazing journey from the smallest to the largest objects in the universe. The BBC has produced a new video, *How Big Is Our Universe?* (<https://youtu.be/2iAytbmXYXE>), that incorporates 45 additional years of research and understanding, zooming out an additional three orders of magnitude!

2022 ICM Is Virtual and Free

The 2022 [International Congress of Mathematicians](#) will be held July 6-14 this year. It was originally scheduled to be in St. Petersburg, Russia, but due to the Russian invasion of Ukraine, it has been moved online, and it will be completely free to attend.

WHAT GREEK LETTERS MEAN IN EQUATIONS

- π THIS MATH IS EITHER VERY SIMPLE OR IMPOSSIBLE.
- Δ SOMETHING HAS CHANGED.
- δ SOMETHING HAS CHANGED AND IT'S A MATHEMATICIAN'S FAULT.
- θ CIRCLES!
- ϕ ORBS
- ϵ NOT IMPORTANT, DON'T WORRY ABOUT IT.
- U, V IS THAT A V OR A U? OR...OH NO, IT'S ONE OF THOSE.
- μ THIS MATH IS COOL BUT IT'S NOT ABOUT ANYTHING THAT YOU WILL EVER SEE OR TOUCH, SO WHATEVER.
- Σ THANK YOU FOR PURCHASING *ADDITION PRO®!*
- Π ...AND THE *MULTIPLICATION®* EXPANSION PACK!
- ζ THIS MATH WILL ONLY LEAD TO MORE MATH.
- β THERE ARE JUST TOO MANY COEFFICIENTS.
- α OH BOY, NOW *THIS* IS MATH ABOUT SOMETHING REAL. THIS IS MATH THAT COULD KILL SOMEONE.
- Ω OOOH, *SOME* MATHEMATICIAN THINKS THEIR FUNCTION IS COOL AND IMPORTANT.
- ω A LOT OF WORK WENT INTO THESE EQUATIONS AND YOU ARE GOING TO DIE HERE AMONG THEM.
- σ SOME POOR SOUL IS TRYING TO APPLY THIS MATH TO REAL LIFE AND IT'S NOT WORKING.
- ξ EITHER THIS IS TERRIFYING MATHEMATICS OR THERE WAS A HAIR ON THE SCANNED PAGE.
- Υ ZOOM PEW PEW PEW [SPACE NOISES] ZOOOOM!
- ρ UNFORTUNATELY, THE TEST VEHICLE SUFFERED AN UNEXPECTED WING SEPARATION EVENT.
- Ξ GREETINGS! WE HOPE TO LEARN A GREAT DEAL BY EXCHANGING KNOWLEDGE WITH YOUR EARTH MATHEMATICIANS.
- Ψ YOU HAVE ENTERED THE DOMAIN OF KING TRITON, RULER OF THE WAVES.

Pi Day 2022 Winners

For the first time in *three years*, the Math Club held an in-person Pi Day celebration, on March 10. This year's judges were President Beth Paul, Rugby Coach Taye Daniel-Ayibiowu, and our own TAS Professor Wendy Norris.



Creativity: **Olivia Minor ('22)** - Mini Apple Pies



Presentation: **Quentin Lewis-McKinzie ('25)** - Apple Pie



Taste: **Jennifer Canning** (Center for Civic Engagement) - Swedish Apple Pie

Problems

Solutions to Problems 14.1

14.1.1: The boy, 7-3

14.1.2: 10 children, 39 apples

14.1.3: $\sqrt{x + \frac{x}{x^2 - 1}} = x\sqrt{\frac{x}{x^2 - 1}}$

Congratulations to **Andy Lund ('15)** for solving the problems from the last issue!

Problems 14.2

14.2.1: The year 1978 has the interesting property that $19+78 = 97$ (the middle two digits). What was the previous year to have this property? What will be the next?

14.2.2: Call a number “cool” if it can be written in exactly one way as a sum and product of the same numbers. For example, $10 = 5+2+1+1+1$ and $10=5*2*1*1*1$, and this representation is unique. Describe all “cool” numbers.

14.2.3: The “exactly one way” condition in 14.2.2 is important. Write 12 in two ways as a sum and product of the same numbers. Explain why almost all numbers can be written like this in multiple ways.

Send solutions, Crumbl cookies, Girl Scout cookies, awards, Wordle scores, alumni news, book recommendations, or suggestions to Heather (hlewis5@naz.edu) or Matt (mkoetz1@naz.edu).