

What's Happening in the Math Department This Year

September 7, 2023

Department Overview: People

- ~ 40 full-time faculty
- ~ 70 graduate students (mostly PhD)
- ~ 250 math majors

Administrative Structure

- ▶ **Department Chair:** Dehua Wang
- ▶ **Graduate Director:** Michael Neilan
- ▶ **Undergraduate Director:** Jason DeBlois,
jdeblois@pitt.edu
- ▶ **Academic Coordinator (staff):** Gregory Panariello,
grp60@pitt.edu
- ▶ **Your faculty advisor** (varies)

Events Calendar

Competitions

- ▶ Putnam (national problem-solving competition, December)
Prep: MATH 1010, TuTH 5:20-7 PM, Dr. Lewicka
- ▶ COMAP (national modeling competition, winter)
- ▶ Integration Bee (departmental, late spring)

Look for announcements.

MathFest: late spring

- ▶ Departmental celebration of undergraduate research
- ▶ Features a poster competition.

Departmental Colloquium: most Fridays at 3:30 PM, Thack 704
Tea at 3 PM in 705.

Summer Opportunities

Research: apply early spring.

- ▶ Painter Undergraduate Research Fellowships (departmental).
- ▶ REUs (national).

Internships: apply throughout spring

- ▶ The Career Center: drop-ins 11-3 PM, careers.pitt.edu
- ▶ Handshake (sign up at my.pitt.edu)
- ▶ University internship fairs: mid-February

This year's MATH 1800 (to run in spring)

Unofficial Title: Mathematical Introduction to Machine Learning

Instructor: Stephan Wojtowytsch (s.woj@pitt.edu)

Description: The course will cover the mathematics of machine learning from a modern perspective. It will introduce various learning tasks (supervised, semi-supervised, unsupervised, reinforcement, online/offline) and a sample of classical and modern solution methods. The course will explore core concepts of modern machine learning: empirical risk minimization, approximation, generalization, and optimization and the challenges of high-dimensional data. ...

Prerequisites: MATH 0240, 0280/1180/1185, and 0413.

Recommended: MATH 1119 or 1510 or STAT 1151, programming experience

Affiliated Organizations

- ▶ Gamma Iota Sigma (the Actuarial Math Club)
Kara Allelunas, president
- ▶ AWM: the Association for Women in Mathematics
Farjana Siddiqua, president; Dr. Lewicka, faculty mentor
- ▶ MAC: the Math Assistance Center
Dr. Hockensmith, director
- ▶ UPitt Math Club
Noah Kochavi, president
- ▶ PIMR: Pitt Interdisciplinary Mathematics Review
Lark Song, editor-in-chief

Now let's hear from these folks!



Gamma Iota Sigma

Actuarial Math Club



- Industry Events – Meet Actuaries, Internship and Alumni Panels, and Resume Workshops
- Membership Development Events – Mentor/Mentee Program, Social Events, and Volunteering with Math Motivators
- Actuarial Career Fair Oct. 5th!!



Staying Connected

- Join our GroupMe and we will send additional info and reminders
- Feel free to reach out:
 - Kara - 215-565-6149, kma91@pitt.edu
- Next Meeting is Monday at 7:30 in Thackeray 427 where we will hear from an Alum

GroupMe QR Code:



University of Pittsburgh chapter of the Association for Women in Mathematics (AWM)

President: Farjana Siddiqua

Vice-President: Rui Fang

Treasurer: Anna Kishida Thomas

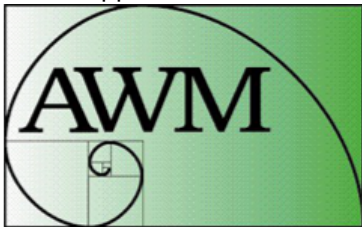
Secretary: Akshara Vincent

Faculty Sponsor: Professor Marta Lewicka

September 7, 2023

AWM Mission:

- Encourage women to study and to have active careers in the mathematical sciences.
- Promote equal opportunity
- Promote, educate, and support women in mathematics.



Association for Women in Mathematics

What we do?

- Create opportunities for undergraduate and graduate students to gather and support one another by providing a space to discuss issues pertaining to women in mathematics.
- Arrange monthly Pitt AWM Student Seminar Series. **We won award in the Scientific Excellence Category for this.**
- Have a mentoring program pairing graduate students with undergraduates seeking advice regarding opportunities in mathematics.
- Arrange “Coffee Meet-ups” with invited female math scholars who encourage the students by sharing their stories and academic journeys.

Socialization

Dinner Time!

Members of AWM at Pitt are having dinner.



MathFest 2023!

Receiving AWM Student Chapter Award from Dr. Talitha Washington at the MAA MathFest.



Wanna be a AWM member?

Find us on Google! (Keywords: AWM Pitt)



Email me for more details: fas41@pitt.edu

Math Assistance Center - Overview

The MAC offers assistance in all mathematics courses at the 1270 level and below.

- ▶ It is staffed by both graduate and undergraduate students.
- ▶ Undergraduate Tutors provide walk-in assistance and 1-on-1 tutoring.
 - ▶ Appointments are 30 minutes long.
 - ▶ Appointments are made in the Navigate Student app.
- ▶ Graduate and undergraduate TA's provide walk-in assistance.
- ▶ Generally, we have a few thousand visits per semester.

Math Assistance Center - Working at the MAC

- ▶ Applications on Talent Center.
- ▶ Generally, we look for students who are at least in their second year.
- ▶ But, exceptions are made!
- ▶ Tutors: 4 mandatory hours per week, the remaining hours are flexible.
- ▶ UTA's: 2-3 mandatory hours per week in addition to leading a recitation.
- ▶ You are only responsible for assisting with courses in which you are proficient.

Math Club at Pitt

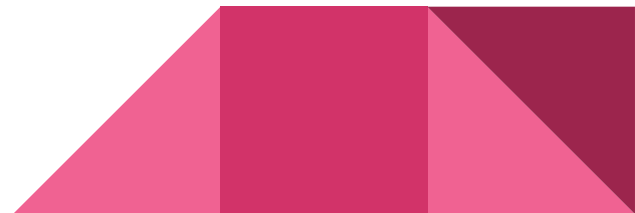
A chill place for mathematical talks and challenges



What do we do?

Professor talks

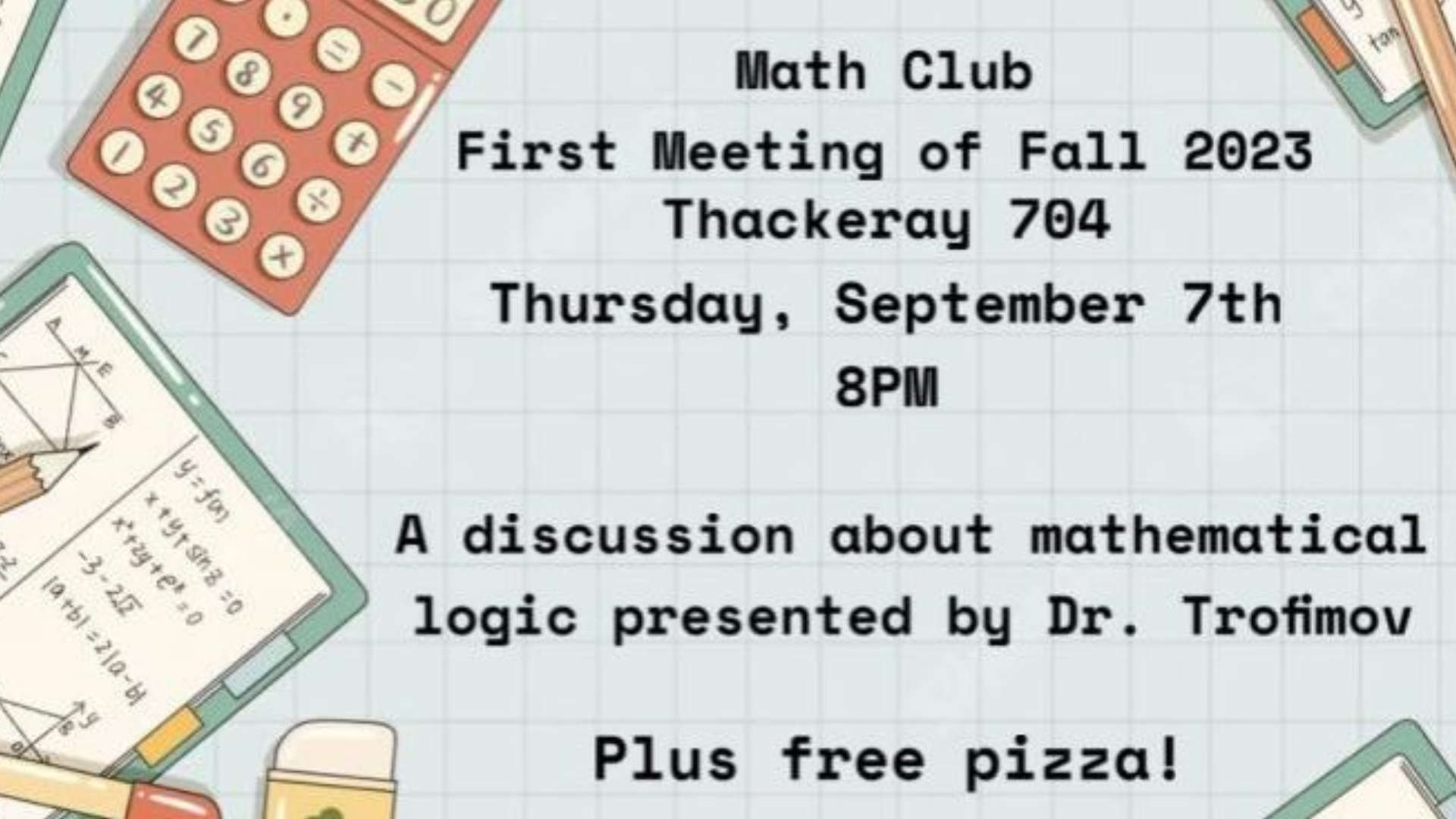
- A math professor comes in to give a 30-60 minute talk about something related to math
- Suitable for all math levels, yet intriguing for higher level math students
- Free pizza for everyone!



Mathematical challenges

- Fun little competitions relating to mathematics
- You get a prize if you win!
- Still free pizza for everyone!
- Past examples:
 - Estimathon
 - Pi Day Kahoot
 - Crack the Code Competition





Math Club

**First Meeting of Fall 2023
Thackeray 704**

**Thursday, September 7th
8PM**

**A discussion about mathematical
logic presented by Dr. Trofimov**

Plus free pizza!

PIMR

Who Are We

- The Pittsburgh Interdisciplinary Mathematics Review (PIMR) is a new undergraduate math journal with a broad purview of subjects.

Our Goals

- To spark interest in mathematics among students from any discipline and to make the beauty of math accessible.
- To foster an interdisciplinary, diverse, equitable, and inclusive mathematics community in Pittsburgh.

Scope

- Interdisciplinary
 - Pure and Applied Mathematics
 - Physics
 - Computer Science
 - Philosophy
 - Economics
 - Computational Biology
 - Statistics
 - Computational Humanities

Topics in Journal

- Our journal accepts original research as well as expository pieces. Course research projects can often meet our criteria.
- Sections
 - Original Research
 - Expository Pieces
 - i.e. What is X, Mathematics in Action
 - Topical articles
 - i.e. Beach Math
 - Advices
 - i.e. Careers

PIMR and You

- If you are or planning on creating original articles for classes or outside of classes and think your paper would be a good fit for us please reach out
 - submissions.pimr@gmail.com
 - Email list:
https://docs.google.com/forms/d/1YvdWZnFv5QrDMVYWZJnOHaBD4YS2ctArZ_IF2_Ei5G0/viewform?ts=64b879e9&edit_requested=true
- We would also love to have more editors and staff
 - Large roles and smaller roles are welcomed
 - Associate Editor
 - Section Editor
 - Copy Editor
 - contact.pimr@gmail.com

Coming Up

- We plan to publish our first issue through the University Library System this month (September 2023)
- We will publish once every semester, so there are plenty of opportunities to contribute
- Soon we will have an official website to help promote our work