ASSOCIATION FOR WOMEN IN MATHEMATICS MENTORING NETWORK
SUPPORTING FEMALE MATHEMATICS MAJORS THROUGHOUT THEIR UNDERGRADUATE CAREER

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AWM CHAPTER AT UNC - CHAPEL HILL
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About our Chapter

• The AWM Chapter at UNC Chapel Hill has existed for over a decade.
• In 2016 we registered for the first time as a UNC Student Organization. We sought official recognition from the University for two main reasons:
  
  Access to funding through the University.
  Visibility and open access to Undergraduate students majoring/minoring in Mathematics.

• From our Chapter bylaws:

  The purpose of the AWM Chapter at UNC Chapel Hill is to foster a sense of community amongst female mathematicians, to encourage girls and women to pursue mathematics, and to promote diversity within the UNC-Chapel Hill Mathematics department.
Our Main Activities

- **Girls Talk Math - Engaging Girls Through Math Media**
  - 2-week day camp for high school female-identifying students interested in Mathematics.
  - Camp meshes challenging Mathematics with the history of women in Mathematics.
  - Campers produce a blog post about their Math experience and a podcast about a historical female Mathematician.
  - Hosted at UNC Chapel Hill.
  - Third run of camp in June, 2018.
  - Founded by Francesca Bernardi and Katrina Morgan in 2016 thanks to funding from the [MAA Tensor Women and Mathematics grant](https://www.maa.org).
Our Main Activities

- **Girls Talk Math - Engaging Girls Through Math Media**

- **AWM Triangle Conference for Undergraduate and Graduate Students**
  - The first AWM Triangle Conference will be on February 17th, 2018.
  - Students from underrepresented gender identities are invited to present.
  - All students are invited to attend.
  - Graduate student talks (pure, applied math, and math education).
  - Undergraduate student posters (research and expository).
  - Founded by Francesca Bernardi, Katrina Morgan, and Dr. Katie Newhall thanks to an NSF INCLUDES WATCH:US mini-grant from the University of Nebraska.
Our Main Activities

• Girls Talk Math - Engaging Girls Through Math Media

• AWM Triangle Conference for Undergraduate and Graduate Students

• Public Lectures
  - Hosted Dr. Moon Duchin for a public lecture titled “Political geometry: why and how shapes matter for voting districts.”
  - Will host another public lecture in Fall, 2018.
  - Funded through UNC Student Congress Appropriations and thanks to the UNC Department of Mathematics.
Our Main Activities

• Girls Talk Math - Engaging Girls Through Math Media

• AWM Triangle Conference for Undergraduate and Graduate Students

• Public Lectures

• Outreach
  - Booth at the UNC Science Expo focused on Mathematics games and the history of women in Mathematics.
  - We will host 50 sixth-graders for the Julia Robinson Math Festival, organized at UNC by Dr. Linda Green (May 6th, 2018).
Our Main Activities

- **Girls Talk Math - Engaging Girls Through Math Media**

- **AWM Triangle Conference for Undergraduate and Graduate Students**

- **Public Lectures**

- **Outreach**

- **AWM Mentoring Network**
  - Started in the Spring of 2017.
  - Pairs graduate student mentors with undergraduate student mentees.
  - Increased our participants number for the 2017/2018 academic year.
AWM Mentoring Network

- 379 students Majoring and 85 Minoring in Mathematics.
- 74 graduate students of which 19% are women.
- We have 76 official AWM members (18 graduate students, 58 undergrads).
- 83% of our AWM members are women (9 graduate students, 54 undergrads).

- Mentoring Network now serves 22 undergraduate students (all female). We started with 10 mentees.
- We have 14 graduate mentors (43% female).
- Many mentors have agreed to be grouped with two mentees.

- We encourage participation of all AWM members.
- Number of male graduate students mentors has allowed us to accommodate a larger number of undergraduates seeking mentorship.
- We hope to increase the number of participants further next year.
Motivation

- Many (female) undergraduate students don’t even consider graduate school as an option.
- Often students need support and guidance from someone who has recently been in their shoes.
- Mentoring relationships benefit both mentors and mentees.
- Mentoring can play a key role in the recruitment and retention of women in Mathematics.

Goals

- Helping participants navigate undergraduate education.
- Guiding students through the transition to graduate school or the job market.
- Providing undergraduates with role models.
- Fostering an open, diverse, and supportive community in the department.
Mentoring Pairings

- Advertise the Mentoring Network, asking people to sign-up and answer:
  - what are you looking for in a mentoring relationship?
  - what are your priorities when being paired with a mentor/mentee?

Most frequent characteristics sought:
- common Math interest, help in Math courses, international student whose first language is not English, experience with studying abroad, common minors, common hobbies.

- Speed Mentoring event for all students to get to know each other.
- Undergraduate students anonymously rank their top three preferences for a mentor.
- Faculty advisor Dr. Katie Newhall makes the pairing.
Speed Mentoring

- Graduate students mentors sit at different tables with a name tag.
- Undergraduate students move around the room in an orderly fashion.
- A moderator allows for 3 minutes of conversation for each pairing.
- Students ask each other any questions they may deem important in choosing a mentor.
- Undergraduate students fill out a preference card anonymously.

- Faculty advisor communicates the official pairings.
- Host a Mentoring Meeting for all mentors and mentees: a low-pressure event to break the ice.
Mentoring Relationships

- Details of the mentoring relationships are left up to the participants:
  - preferred mean of communication
  - how to meet (in person, online, etc.)
  - how often
  - where to meet
  - individual or group meetings.

- Organizers check-in via email halfway through the semester.

- End-of-the-year survey in the summer of 2017 to collect feedback from both mentors and mentees.
Feedback

From Mentees

• 100% of surveyed undergrads found mentoring useful.

Hearing a different prospective from someone who has been through the same struggles

Feeling supported and less isolated

Insight into Department politics and rules

Guidance in selecting courses and sections

Networking with other female Mathematicians

Sharing Math resources for courses

• 100% of surveyed undergrads who shared their mentor found their experience was enriched by the presence of another mentee.
Moving Forward

• Ensure sustainability when current organizers leave UNC.
• Increase the number of participants.
• Include male undergraduate students.
• Organize more network-wide events.
• Collect more detailed feedback about benefits and needed improvements.
• Maintain the mentoring relationships as students leave UNC.
thank you!

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Resources

- Girls Talk Math: Engaging Girls through Math Media
  www.girlstalkmath.web.unc.edu

- MAA Tensor Women and Mathematics grant
  https://www.maa.org/programs-and-communities/outreach-initiatives/tensor-women-and-mathematics-grants

- AWM Triangle Conference for Undergraduate and Graduate Students
  http://awmch.web.unc.edu/conference/

- NSF INCLUDES WATCH:US grant at the University of Nebraska

- Julia Robinson Math Festival organized by Dr. Linda Green at UNC Chapel Hill
  https://chapelhillmathcircle.org/julia-robinson-math-festival/

- Slides will be posted on our website
  https://awmch.web.unc.edu