

Association for Women in Mathematics Triangle Conference for Undergraduate and Graduate Students

Conference Schedule

9:00am - 10:00am	Breakfast and Registration	Phillips 330
10:00am - 11:00am	Graduate Research Talks I	(see below)
11:00am - 12:00pm	Keynote Lecture <i>Popular Culture and Mathematics: Gender, Race, and More</i> by Dr. Sarah J. Greenwald	Phillips 215
12:00pm - 1:30pm	Mentor Lunch	Phillips 365
1:30pm - 2:30pm	Professional Job Opportunities Panel	Phillips 215
2:30pm - 3:30pm	Graduate Research Talks II	(see below)
3:30pm - 4:00pm	Undergraduate Poster Session and Coffee Break	Phillips 365
4:00pm - 5:00pm	Concurrent Panels: Applying to Graduate School Applying for Academic Jobs	Phillips 328 Phillips 332

Please share on social media your experience at the first AWM Triangle Conference for Undergraduate and Graduate Students with the hashtag *#AWMtriangle18*

Graduate Research Talks I

Session 1 - Small Scale Fluid Mechanics

Phillips 328

- 10:00am - 10:15am Sarah Ritchey (Duke University)
Modeling blood flow with the opened immersed interface method
- 10:20am - 10:35am Weifan Liu (Duke University)
Modeling thin film evolution in response to fluxes
- 10:40am - 10:55am Holly Arrowood (UNC Chapel Hill)
An experimentally-validated first-principles of an oil droplet rising through sharply-stratified fluid

Session 2 - Numerical Methods and Data Analysis

Phillips 332

- 10:00am - 10:15am Ashleigh Thomas (Duke University)
Topological Feature Extraction for Data Analysis
- 10:20am - 10:35am Yanni Lai (UNC Chapel Hill)
Multigrid Solver for Steady Stokes System with Variable Density and Viscosity
- 10:40am - 10:55am Hayley Guy (NCSU)
Using active subspaces to model biotransport in tumors with uncertain material properties

Session 3 - Trees and Graphs

Phillips 367

- 10:00am - 10:15am Ella Pavlechko (NCSU)
On Determining if Tree-based Networks Contain Fixed Trees
- 10:20am - 10:35 am Ran Huo (Duke University)
Latent Voter Model on Locally Tree-like Random Graphs
- 10:40am - 10:55am Molly Lynch (NCSU)
Crystal posets and the weak order

Session 4 - Applications of Pure Mathematics Concepts

Phillips 381

- 10:00am - 10:15am Katharine Ahrens (NCSU)
Lattice-based Cryptography: An Introduction
- 10:20am - 10:35 am Trinity White (UNC Wilmington)
Modeling Art in Mathematics

Graduate Research Talks II

- Session 5 - Mathematical Biology and Disease Spreading Phillips 328
- 2:30pm - 2:45pm Ivanti Galloway (Wake Forest University)
Measuring the Cost of Avoiding Vaccinations
- 2:50pm - 3:05pm Samantha Moore (UNC Chapel Hill)
Predicting Network Dynamics based on Neural Connectivity
- Session 6 - Representation of Lie Algebras Phillips 332
- 2:30pm - 2:45pm Suzanne Crifo (NCSU)
Maximal Dominant Weights for Representations of Affine Lie Algebras
- 2:50pm - 3:05pm Anila Yadavalli (NCSU)
A representation theoretical approach to soliton solutions
- Session 7 - Algebraic Geometry Phillips 367
- 2:30pm - 2:45pm Chen Shen (UNC Chapel Hill)
A brief introduction to Hitchin systems
- 2:50pm - 3:05pm Kate Pearce (NCSU)
Multi-Polynomial Resultants
- Session 8 - Mathematics Education and Outreach Phillips 381
- 2:30pm - 2:45pm Katie D. Bowman (Appalachian State University)
Gender Differences in Cognitive Processes in Problem Solving
- 2:50pm - 3:05pm Francesca Bernardi (UNC Chapel Hill)
Association for Women in Mathematics Mentoring Network - Supporting Female Mathematics Majors throughout their Undergraduate Career
- 3:10pm - 3:25pm Katrina Morgan (UNC Chapel Hill)
Inquiry-Based Learning Problem Sets in an Outreach Program for High School Girls: Increasing Confidence and Strengthening Interest Among Underrepresented Groups