The UMD REU Kick-off

Modern Topics in Pure and Applied Mathematics

Summer 2023

Maria Cameron

June 12, 2023
Logistics

- **June 12: 10:00 AM -- 4:00 PM** Kick-off. Room: MATH 3206 and the graduate lounge
- **June 13 -- June 23.** Tutorials. Room: TBA
- **Mondays** June 26, July 3, 10, 24, **12:00 PM -- 1:30 PM. Lunchtime workshop.** MATH Lounge
- **Wednesdays** June 28, July 5, 12, 19, 26, **2:00 PM -- 3:00 PM. Exposure Seminar.** Room: MATH 3206
- **Thursdays** (June 15, 22, 29, July 6, 13, 20, 27) **4:00 PM -- 5:00 PM. Joint seminar with other STEM REUs,** Room: MATH3206
- **Fridays** June 30, July 7, 14, 21, 28, **1:30 PM -- 3:30 PM. Update Seminar.** Room: MATH 3206
- **Monday, July 17.** Visit to NSA
- **Monday, July 31.** Joint lunch with other STEM REUs and graduate directors
- **Wednesday, August 2, 12 PM -- 2 PM. Poster Competition.** Rotunda of the Math Building.
- **Friday, August 4.** 10:00 AM -- 4:00 PM. **Symposium.** Room: MATH 3206
1. June 28: Jonathan Rosenberg, *The Bernoulli numbers: how they were first discovered and some of their amazing applications*

2. July 5: Bill Goldman, *Lines of Cubic Surfaces*


4. July 19: Rodrigo Trevino, *Swedish royalty and space travel*

Joint REU Seminar
Thursdays, 4—5 PM, room MATH3206

1. June 15: Erin Molly, Models and methods for reconstructing population-level evolutionary histories and relationships to tumor phylogenetics
2. June 22: Najib El-Sayed, Computational Biology
3. June 29: Maria Cameron, Quantifying Rare Events in Stochastic Systems
4. July 6, note special time 3--4 PM: Dana Dachman-Soled, Types of Cybersecurity Attacks
5. July 13: Evan Golub, How to do bad science
Lunchtime Workshop
Mondays, 12—1:30 PM, MATH Graduate lounge

1. **June 26:** How to give a talk

2. **July 3:** How to apply to a graduate school and for graduate research fellowships

3. **July 10:** How to apply to a graduate school and for graduate research fellowships

4. **July 24:** How to prepare a poster and write the final report.

*Bring your own lunch!*
Expectations

- **Work daily 10 AM — 4 PM.** Offices are provided. TAs will be available.

- Each student is expected to **choose a project by Monday, June 26.**

- Projects can be **individual or group projects.**

- I recommend having **at most three students working on the same project.**

- Each student is expected to give **two talks** on the **Update Seminar.**

- Each student is expected to participate in the **Poster Competition** on **August 2, 2023.** A good total number of posters is ~7.

- Each student is expected to give a talk at the **Symposium** on **August 4, 2023.**

- Each student is expected to write a **project report** and submit it to the faculty leader by the end of the summer program.
June 19, Monday: Juneteenth holiday. Campus closed.


Tentatively, there will be a hike during the 4th of July long weekend.

Calendar
Reference: https://provost.umd.edu/node/3846