UMD REU 2022
Modern topics in pure and applied mathematics

Kick-off meeting

Maria Cameron
University of Maryland
June 13, 2022
Senior and junior personnel

• Faculty:
  • Maria Cameron, mariakc@umd.edu
  • Wojtek Czaja, czaja@umd.edu
  • Dio Margetis, diom@umd.edu

• TAs
  • Luis Suarez, lcsuarez@umd.edu
  • Luke Evans, evansal@umd.edu
  • Margot Yuan, jyuan98@umd.edu
Schedule

• **Weeks 1—2** (06/13—06/24):
  - Daily Tutorials/Computer Labs. *Each REU student is expected to choose a particular project by themed of Week 2.*

• **Weeks 3—8** (06/27 — 08/05):
  - Working on particular projects
  - **Monday:** Lunchtime Workshop (MATH lounge)
  - **Wednesday:** Exposure Seminar (2–3 PM, MATH3206)
  - **Friday:** Update Seminar (1:30—3:30 PM, MATH3206)

• **Wednesday, August 3:**
  - **Poster Competition**

• **Friday, August 5:**
  - **Symposium**
Lunchtime Workshop

Mondays, 12–1 PM, MATH lounge

- June 27: How to give a talk
- July 11: How to apply to graduate schools and for graduate research fellowships
- July 18: How to write a paper
- July 25: How to design a good poster
- August 1: How to prepare the final presentation for the Symposium
Exposure Seminar
Wednesdays, MATH 3206, 2—3 PM

- **June 29**: Haizhao Yang, *Reinforcement Learning*
- **July 6**: Yanir Rubinstein, *Convexity and Positivity*
- **July 13**: Wojtek Czaja, *Harmonic Analysis meets ML*
- **July 20**: Stuart Antman, *The PDEs of continuum physics: the virtue of ignorance*
- **July 27**: Deep Ray, *Deep Learning aided Bayesian inference*
- **August 3**: Jonathan Rosenberg, *The mathematics of crystals and quasicrystals*
Update Seminar
Fridays, MATH 3206, 1:30—3:30 PM

- REU students will give 15-minute talks on their projects
- In each seminar, 2—4 students from each group will speak
- Each REU student is expected to give at least two talks besides the Symposium

Symposium
Friday, August 5, MATH 3206

- Each REU student will give a 20-minute talk: *what project she/he was working on, what did she/he learn, what are the research results*
Poster Competition
Wednesday, August 3, Rotunda

• Each research mini-team working on a particular project is expected to present a poster

• Graduate students not involved in the REU will judge the poster competition

Written Report

Due day: Friday, August 5

• Each REU student is expected to write a report on her/his work. This report can be a draft of a paper, a research write-up, or a summary of what the student has learned.
Social activities

• **Tonight** (Monday, June 13): visit **The Board and Brew**, address: 8150 Baltimore Avenue, College Park, MD 20740, time: **6:30 PM (refer to a reservation by Maria Cameron)**, self-paid.

• A **hike** near Potomac Falls. Tentatively the weekend of June 25—26.

• TBA