Pattern formation is the study of mechanisms that lead to the appearance of simple or complex spatial-temporal patterns. It is motivated in part by the observation of strikingly similar patterns in apparently unrelated physical systems. In this REU, participants will conduct mathematical research in the area of pattern formation from a viewpoint of dynamical systems and differential equations, using both analytical and computational tools. No previous research experience is required.

Program Description:
- Six weeks (June 11 – July 22, 2020) at the U of Minnesota Twin Cities, Minneapolis campus.
- Use mathematical analysis and numerical simulations to gain insight into dynamics of patterns
- Projects will be guided and can be tailored to student interest
- Students will be mentored by Professor Arnd Scheel, as well as graduate students Sally Jankovic, Olivia Cannon, and Montie Avery (pictured below, left to right)

Participants will receive a stipend of $3,000 and up to $2,000 for travel and living expenses

Successful Applicants:
- Need no prior research experience
- Should have had a course in differential equations or dynamical systems
- May have higher-level coursework
- May have familiarity with or an interest in learning Mathematica or Matlab
- Must be US citizens or permanent residents
- Must not complete their undergraduate degree before summer 2020

Women and minority students are especially encouraged to apply

Contact: Arnd Scheel (scheel@umn.edu). Program sponsored by the NSF.
Application Deadline: February 7, 2020. For more information about past projects, and to apply, go to: [http://www.math.umn.edu/~scheel/reu/reu-opportunities.html](http://www.math.umn.edu/~scheel/reu/reu-opportunities.html)