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.

Program Description:
Six weeks (June 18 – July 27, 2018) on the U of Minnesota campus in Minneapolis.

Use analysis and numerical simulations to gain insight into dynamics of patterns, in particular the selection and orientation of banded patterns, with possible applications to vegetation banding, recurrent precipitation, or Langmuir-Blodgett transfer.

Participants will receive a stipend of $3,000 and up to $1,000 for travel, room, and board.

Successful Applicants:
- Are motivated undergraduate students
- 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 2018

Application Deadline: February 16, 2018. For more information and to apply, go to:
http://www.math.umn.edu/~scheel/reu/reu-opportunities.html