



## Departmental Colloquium

**Professor Timothy Clark**

Department of Mathematics and Statistics

Loyola University, MD

**January 24th 2024, 3:00 PM, Knot Hall 309**

**Zoom link <https://loyola.zoom.us/j/81524803402>**

**Meeting ID: 815 2480 3402**

**Passcode: mathstat**

## Exploring Matrix Dynamics



### **Abstract**

Iterating a function of a real or complex variable leads to interesting numerical behavior with connections to fractals and chaos theory. In this talk, I begin with a light survey of the topic's history and describe the ideas of function iteration. Using this context, I report on early progress in applying the principles of iteration to study the fixed, periodic, and attracting/repelling behavior of square matrix inputs to polynomial functions.

*The talk will be accessible to students, and will outline areas for possible undergraduate research.*

Refreshments will be served.