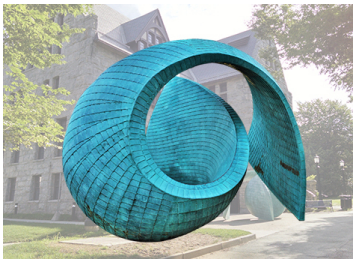

UNIVERSITY OF RHODE ISLAND

Department of Mathematics
and Applied Mathematical Sciences

Applied Mathematics and Scientific Computing Seminar

Location: Lippitt Hall 204
Time: Monday, November 4, 2024, 1:00pm
(refreshments at 12:55 p.m.)

Global Asymptotic Stability for Linear Fractional Difference Equation

by **Dr. Mustafa Kulenović**

Department of Mathematics and Applied Mathematical Sciences, URI

Abstract: The global behavior and the exact solutions of linear fractional difference equations of first order even for real parameters have been known for some time and it ranges from global attractivity of the equilibrium to chaotic behavior.

The global behavior of solutions of linear fractional difference equations of second order have been studied in the monograph of M. Kulenović and G. Ladas and exhibits behavior ranging from global attractivity of the equilibrium to conservative chaotic behavior.

We will demonstrate a method for proving global attractivity of the equilibrium for linear fractional difference equations of any order.