Time: Thursday, November 02, 2023, 12:30-1:15pm

Location: Parker Building 301

Speaker: Fuzhen Zhang, Ph.D.
Nova Southeastern University, Florida

Title: **Eigenvalue and Singular Value Inequalities via Extreme Principles**

Abstract: Given two square matrices of the same order, we consider the eigenvalues and singular values of the sum and product of the matrices. For example, what can be said about the sum of the largest and smallest eigenvalues of the product of two positive semidefinite matrices? This talk reviews some eigenvalue and singular value inequalities recently obtained via minimax principles. In particular, we present singular value inequalities of log-majorization type.

The entire NSU community, including students at all levels of mathematics, is invited and encouraged to attend.

About the speaker: Dr. Fuzhen Zhang serves as professor of mathematics at NSU Florida. He earned his Ph.D. in mathematics from the University of California-Santa Barbara (UCSB) in 1993. Dr. Zhang joined NSU in 1993 and has served as mentor and professor to hundreds of NSU students. His research interests include matrix analysis, linear algebra, multilinear algebra, functional analysis, operator theory, and combinatorics. You can learn more about Dr. Zhang's expansive work here: https://works.bepress.com/fuzhen-zhang/about/.