Mathematics Colloquium

Introduction to the Numerical Range of a Matrix

Linda Patton
Math Department, Cal Poly

Friday, March 2, 2018
4:10 – 5 p.m.
Building 53 Room 201

Abstract

Every $n \times n$ matrix A is associated with a set $W(A)$ in the complex plane called the numerical range of A. Many interesting questions arise from studying the relationship between the properties of A as a linear map and the geometric properties of the set $W(A)$. In this talk, I will discuss the basic properties of the numerical range, some related research projects done by Cal Poly students, and some current open problems about numerical ranges. Most of the talk will be accessible to students who have taken Math 206 or the equivalent.

About the speaker: Linda Patton received her BS in Applied Mathematics and PhD in Mathematics at the University of California, San Diego; her PhD advisor was Jim Agler. She has been teaching at Cal Poly since 1991. Her research interests are in operator theory, especially operators on Hilbert Spaces of analytic functions and numerical ranges of operators.

Cookies will be provided before the talk at 4 p.m.
in the same room as the talk, Building 53 Room 201.