

Department of Mathematics, BGU

Colloquium

On *Tuesday, June ,24 2025*

At *14:30 – 15:30*

In *Math 101-*

James Eldred Pascoe (Drexel University)

will talk about

Spectral constants and dilation theory

Abstract: The von Neumann inequality states that a contractive analytic function on the disk evaluated at a contractive operator gives a contractive output. For general pairs of classes of operators and algebras of functions, one might obtain an analogous inequality but with a multiplicative factor called the spectral constant. An important tool for such analysis is to consider the distinguished boundary of whatever class of operators, which can in certain cases be analyzed explicitly via Nelson's trick. We discuss the theory of spectral constants, relations to the grail quest of Cartan's extension theorem with sharp bounds, and dilation theory for various domains of operators.