Special matrices and measures, Eigenvalues, and integrals

Toeplitz operators (with giant Toeplitz matrices) on $\ell^2(\mathbb{N})$ can be interpreted as compositions of multiplications (by a ‘symbol’ function $f$) and orthogonal projections. The Szegö limit theorems describe a relationship between the spectrum of compressions of these operators to finite dimensional subspaces - the sequences of length $n$ - and the integral of the symbol. Recently a survey by Donald Sarason aroused much interest in ‘truncated Toeplitz operators’ on ‘model spaces’. Model spaces are subspaces of $\ell^2(\mathbb{N})$ which ‘generalize’ the finite sequence spaces; and truncated Toeplitz are generalizations of Toeplitz matrices. I will speak about these operators and Szegö -type theorems which hold for them.

REFERENCES


Refreshments will be served 3:15 – 3:45 pm in the Faculty & Graduate Student Lounge
Rm 4118 French Hall West