The Department of Mathematical Sciences
Colloquium

Professor Elizabeth Strouse

University of Bordeaux, France

Thursday, October 27, 2016
Rm 277 WCharlton Hall
4 – 5 pm

Special matrices and measures, Eigenvalues, and integrals

Toeplitz operators (with giant Toeplitz matrices) on $\ell^2(\mathbf{N})$ 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 $\ell^2(\mathbf{N})$ 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

[1] Sarason, D. Algebraic properties of truncated Toeplitz operators. *Oper. Matrices 1* (2007), 491–526.

[2] Strouse, E., Timotin, D. , Zarrabi, M A Szegö type theorem for truncated Toeplitz operators. *preprint* (2017).

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

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