

Texas Tech University. Joint Analysis & Applied Mathematics Seminars.

# Cyclicity in the Dirichlet space, explicit computation of polynomials and the log f condition

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Room: MATH 014. Time: 4:00pm.

**ABSTRACT.** A function  $f$  in the Dirichlet space  $D$  (analytic functions over the disk with finite area integral) is said to be cyclic if the set  $\{pf : p \text{ is a polynomial}\}$  is a dense subspace of  $D$ . Necessary conditions for a function to be cyclic were found by Brown and Shields in 1984 and they conjectured that those conditions are also sufficient. Their proofs were elegant but not constructive. Later on Brown and Cohn (1985) constructed examples of cyclic functions proving the sharpness of their conjecture in terms of the size of sets. In this talk we present our attempts to make polynomials explicit and our research around an assumption deriving from Brown-Cohn's paper.