

DREXEL ANALYSIS SEMINAR

October 28, 2016

2-2:50 PM, Korman 245

Speaker: Joe Erickson (Drexel)

Title: Zeros of Linear Combinations of Partial Sums of the Exponential Function

Abstract: After giving a brief history of the Szegő curve as it relates to zeros of the normalized partial sums $s_n(nz)$ of the exponential function's Maclaurin series as $n \rightarrow \infty$, we render in detail a recent paper's findings on the large n asymptotics of the zeros of sections of $\exp(nz)$ of the form $s_{cn}(nz) - s_n(nz)$. Then, using a different technique involving the notion of a zero attractor, we determine the large n asymptotics of the similar sequence $s_{cn}(nz) + s_n(nz)$. Finally, we take a look ahead to more general linear combinations of partial sums of the exponential function as well as other analytic functions.