

NUMBER THEORY LEARNING SEMINAR SPRING 2018

Organizers:

David Nguyen and Garo Sarajian

Arithmetic of Zeros of Entire Functions

Tuesdays 1:00 p.m.

South Hall 6635

Abstract: In 1859 Riemann studied the zeros of the Riemann zeta function $\zeta(s)$ and linked them to the distribution of prime numbers. In 1927 Pólya introduced a family of functions $H_t(z)$, parametrized by $t \in \mathbb{R}$, with H_0 giving the Riemann zeta function. The function H_t can be viewed as the evolution of the function H_0 under the backwards heat flow. The zeros of H_0 are linked to the zeros of ζ which are intimately related to prime numbers. This quarter we study the zeros of the entire functions $H_t(z)$; do they carry arithmetical information? If so, how?

First meeting:

Tuesday, April 3rd, 2018

1:00 p.m. South Hall 6635

This seminar is part of the UCSB Graduate Number Theory Seminar. Information about future meetings can be found at <https://web.math.ucsb.edu/GNTseminar/>