

Nonvanishing of L-functions: a story with character

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The Riemann zeta function plays a central role in our understanding of the prime numbers. In this talk we will review some of its amazing properties as well as properties of other similar functions, the Dirichlet L-functions. Chowla's conjecture predicts that these functions should not vanish at the center of the critical strip. We will present some results concerning the non-vanishing of L-functions associated with fixed order characters and show a positive proportion of non-vanishing, which goes to 0 as the order of the character goes to infinity.

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