

# TEMPLE UNIVERSITY

Department of Mathematics

## Analysis Seminar

Room 617 Wachman Hall

Monday, April 24th, 2023, 2:30 p.m.

### *Equidistributions and L-functions*

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**Abstract:** When is a sequence on the unit circle equidistributed?

J. -P. Serre proved that the equidistribution of a sequence in a compact group is connected to the non-vanishing of certain  $L$ -functions associated to the sequence. The theorem has many applications to density results in number theory. In this talk we will explore the notion of equidistribution and develop the background needed to state and prove Serre's theorem. Moreover, we will apply the theorem to deduce Dirichlet's theorem about primes in arithmetic progressions.