

Colloquium

KYU-HWAN LEE
University of Connecticut

AI-ASSISTED MATHEMATICAL DISCOVERY: MURMURATIONS OF ELLIPTIC CURVES

Friday, April 5, 2024
3:00 p.m. in Massry 221

ABSTRACT. Recently, there have been successful attempts to apply machine learning to various objects in pure mathematics. After overviewing these activities, we will focus on the case of elliptic curves, where a new phenomenon, called “murmuration”, has been discovered through machine learning techniques. Understanding this new phenomenon has been a challenge to the number theory community, resulting in a hot-topics workshop at ICERM last year and several papers on the subject. This work to be discussed in this talk was featured in a recent Quanta article.