

Title: Approximating everything

Abstract:

The Riemann zeta function has been a central object of study in Mathematics since it is linked to one of the notorious Millennium Prize Problems, the Riemann Hypothesis, which has remained unsolved since 1859. In 1975, Voronin showed that the Riemann zeta function, via considering its vertical shifts, can approximate arbitrary non-vanishing holomorphic functions in the critical strip. In this talk, we will discuss this surprising phenomenon, known as universality, in various settings. In particular, we will focus on properties of holomorphic functions on the the unit disc with universal radial approximating properties on subsets of the unit circle. (Based on joint work with Stéphane Charpentier and Konstantinos Maronikolakis.)