



Analysis Seminar

Title: Mergelyan-type theorems in several complex variables

Speaker: Myrto Manolaki

Date: Tue 8th November 2022 at 4:00PM

Location: Seminar Room SCN 1.25

Abstract: The celebrated theorem of Mergelyan states that if K is a compact subset of the complex plane with connected complement, then every continuous function on K which is holomorphic on its interior can be uniformly approximated on K by polynomials. This talk is concerned with polynomial and rational approximation in several complex variables, where the situation is much more complicated and far from being understood. In my previous talk, I presented a counterexample to a Mergelyan-type statement (Gamelin-Garnett, Transactions of AMS, 1969) that motivated the introduction of a new function algebra. In this talk, we will discuss how we can correct this classical result within the framework of our new algebra, and how we can obtain new Mergelyan-type theorems for certain graphs as well as for Cartesian products of planar compact sets.

(Joint work with J. Falco, P. Gauthier and V. Nestoridis.)

Join Zoom Meeting <https://ucd-ie.zoom.us/j/62265671568>

Join Zoom Meeting <https://ucd-ie.zoom.us/j/62265671568>