



Analysis Seminar

Title: Uniqueness results for entire harmonic functions and for Fischer decompositions

Speaker: Hermann Render

Date: Tue 5th March 2024 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: In this talk we shall present sufficient conditions such that an entire harmonic function of sufficiently low order which vanishes on the zero-set of a given irreducible polynomial $P(x)$ of degree $2k$ is identically zero. It is assumed that the leading homogeneous part P_{2k} of $P(x)$ is non-negative and satisfies for each natural number m a lower integral estimate for all homogeneous polynomial of degree m . In particular it is shown that an entire harmonic function of order smaller than $1/2$ which vanishes on the boundary of a paraboloid is identically zero. Further applications are uniqueness results for Fischer decompositions.

This is joint work with J.M. Aldaz (Universidad Autonoma de Madrid).

<https://ucd-ie.zoom.us/j/69673850551>

<https://ucd-ie.zoom.us/j/69673850551>