

Title: Uniformly rectifiable metric spaces

Abstract:

In their 1991 and 1993 foundational monographs, David and Semmes gave various characterisations of uniform rectifiability of subsets of Euclidean space. These fundamental geometric conditions can be naturally stated in any metric space and it has long been a question of how these concepts are related in this general setting. This talk will present results demonstrating the equivalence of Big Pieces of Lipschitz Images, the Bi-lateral Weak Geometric Lemma and the existence Corona Decompositions in any Ahlfors regular metric space. We will also present new Reifenberg parametrisations that play an essential role in the characterisation. This talk is based on joint work with Raanan Schul and Matthew Hyde.