BLAIR DAVEY, Montana State University
Self-similar sets and Lipschitz curves

If E is a purely unrectifiable 1-set in the plane, then the intersection of E with any Lipschitz graph has zero 1-dimensional Hausdorff measure. This leads to a natural question: Given a purely unrectifiable 1-set, can we find a Lipschitz curve for which the intersection with E is non-trivial in some dimension less than 1? Going further, how close to 1 can we get? We discuss the answer to this question for self-similar sets. This talk covers joint work with Silvia Ghinassi and Bobby Wilson.