

Title:

A unified proof of complex bounds for multimodal maps  
Sofia Tejo (University of Warwick)

Abstract:

Complex box-mappings are a generalisation of the polynomial-like mappings introduced by Douady and Hubbard. We will be interested in constructing such complex extensions for real analytic interval maps. Universal bounds on the geometry of the complex box-mappings are commonly known as complex bounds. These bounds have many applications, for example they are a central ingredient on the theory of renormalization and to prove density of hyperbolicity. In this talk I will discuss the construction of complex box-mappings with complex bounds for maps with any given combinatorics and with critical points of any (integer) order.