ABSTRACT: A central object of interest when describing the dynamics of a holomorphic self-map $F$ of a complex manifold is the Fatou set of points with stable dynamical behaviour and its connected components, called Fatou components. A Fatou component is invariant, if $F$ maps it inside itself. In one variable, an invariant Fatou component either admits a conjugation of $F$ to a rotation or all its orbits accumulate at a single fixed point of $F$. In other words, the limit set has either full dimension 1 or trivial dimension 0.

One of the many new phenomena in dimension 2 is that the orbits of an invariant Fatou component may accumulate on a limit set of intermediate dimension 1. In this talk, I will present classification results on Fatou components with limit sets of dimension 1 and construct examples not arising as straightforward products of one-dimensional components in the categories of endomorphisms of projective space and automorphisms of $\mathbb{C}^2$. 

Non-trivial limit sets of Fatou components

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