



# UNIVERSITÀ DI PARMA

DIPARTIMENTO DI SCIENZE MATEMATICHE, FISICHE E INFORMATICHE

## SEMINARIO

**Giovedì 16 dicembre 2021, ore 14:00**

**Aula F, Plesso di Matematica/Informatica**

**Dr. Josias Reppekus, University of Wuppertal**

### ***Non-trivial limit sets of Fatou components***

Organizzatrice: prof.ssa Anna Benini

**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  $\mathbb{C}^2$ .