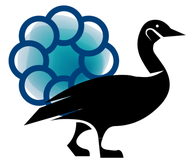
Introduction to fractal geometry

William O'Regan

Week 4 - Term 2

WARWICK MATHEMATICS



POSTGRADUATE SEMINAR

Abstract

While there is no agreed definition of a fractal, broadly speaking, a fractal is a geometric shape containing detailed structure at arbitrarily small scales. They will also usually have a fractal dimension which differs from its topological dimension. The aim of this talk is to introduce fractal geometry to those unacquainted.

Time dependent, I will cover some of the following: box dimension, Hausdorff measure and dimension, mass distribution principle, Frostmans Lemma, energy, projection theorems, iterated function systems et cetera, all whilst using concrete examples to get a feel for the theory. No prior knowledge will be required, but knowing what a measure is would be helpful.

Time

12 pm, 1st February 2023

Location

Room B3.02

Organisers

Patience Ablett, Alvaro Gonzalez, Daniel Marlowe and Katerina Santicola