



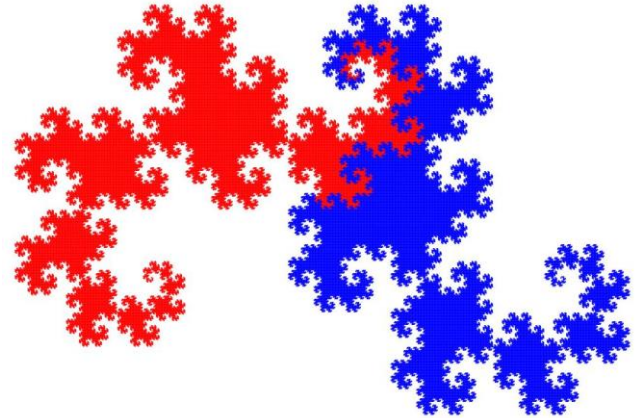
## *Fractals and Geometric Measure Theory*

*Code: BMETE95MM06*

*Lecturer: Balázs Bárány*

*Where: H45A*

*When: Monday 16:15-17:45*



*About what:*

- **Hausdorff- and box-counting dimension**
- **Introduction to Iterated Function Systems**
- **Self-similar sets without overlaps, dimension and measure**
- **Local dimension, self-similar measures, multifractal analysis**
- **Projection and slicing theorems**
- **Overlapping self-similar set, transversality method**
- **random Cantor sets and Mandelbrot percolation**



**Requirements:** There are two options to complete the subject.

- holding only a 20 minutes long mini-lecture, which is worked out by the student on his/her own about a recent paper in the field. If the student chooses this option, the best grade that he/she can get is a satisfactory (közepes (3)).
- holding the mini-lecture and writing a midterm on the week of repeats about one theoretical topic.
- writing a midterm on the week of repeats about two theoretical topics without a mini-lecture.

In the last two cases, the students might get the best grade excellent (jeles (5)).

Materials for the mini-lecture can be asked from the lecturer during the semester.