

# Course Syllabus:

## Fractals and geometric measure theory BMETE95MM06

**Classroom:** H 46

**Class Time:** 8:30-10:00 Friday

**Office Hours:** Tentatively, Thursday 13:00-13:50

**Text in English:**

K. Falconer, Fractal Geometry, Wiley, 2003

K. Falconer, The geometry of fractal sets, Cambridge, 1985

K Falconer, Techniques in fractal geometry, Wiley, 1997,

P. Mattila, Geometry of Sets and Measures in Euclidean Spaces: Fractals and Rectifiability, Cambridge, 1995.

**Prerequisites:** This is a course for MSc and PhD students. No further prerequisites.

**Homework:** Homework will be assigned occasionally. Homework is due in three weeks from the moment it was assigned. Total number points for home works: 20 points.

**Test:** On the last week of the semester for a maximum of 80 points.

**Grading:**

1: 0 -35 points

2: 35-49 points

3: 50-64 points

4: 65-80 points

5: 81-100 points

**Topics:**

- (1) Hausdorff-box- and packing-dimension
- (2) Deterministic fractals
- (3) Random fractals