

**Subject:** [imf.stip] Student Seminar

**From:** Susanne Solem <susanne.solem@math.ntnu.no>

**Date:** 12/11/15 15:02

**To:** MATH Liste Stipendiater og ph.d-studente <imf.stip@math.ntnu.no>

Dear all,

the last student seminar of the semester will take place next Tuesday (November 17.) at 16:15 in the lunch room.

The seminar will be given by Silvius Klein

**Title**

Average laws in analysis

**Abstract**

Perform the same experiment (say, flipping a fair coin) a large number of times, and look at the average result of your trials.

Sample an observable of a given dynamical system along a large number of iterations of a typical point, and look at the average value of these observations.

Consider a long sequence of random matrices and look at a certain geometric average involving their product.

Do these averages obey any laws? Remarkably, under certain appropriate assumptions, they do. In this talk we will mention some of them, including the law of large numbers, the pointwise ergodic theorem, and even the existence of Lyapunov exponents.

Incidentally, some of these topics will be carefully studied in a course offered next semester.

Pizza will be served as usual.

Hope to see many of you there!

Best,

Susanne and Nikolai