UNIVERSITÄT DES SAARLANDES
FACHRICHTUNG MATHEMATIK
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22nd Internetseminar on Functional Analysis

Ergodic Theory

Seminar announcement for the winter term 2018/2019

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Monoden, welche nur durch die Gleichung der lebendigen Kraft beschränkt sind, will ich als Ergoden bezeichnen.

Boltzmann, 1885

The Internetseminar on Functional Analysis was founded by the functional analysis group in Tübingen in 1997 and is held since then every year. Amongst others, teams from Germany, Italy, Hungary and the Netherlands are participating. Lecture notes will be provided electronically every week, by Tanja Eisner (Leipzig) and Balint Farkas (Wuppertal). We read and discuss these notes together in our local seminar. There will be an online exchange with participants from other universities, so we will be part of a virtual seminar with many other places.

This year's topic is ergodic theory. The motivation from physics is to understand the motion of a gaz in a box over the time. Mathematically, this amounts to studying a certain linear operator on a vector space, the Koopman operator and we may then employ techniques from operator theory.

The seminar will take place: *Tuesday, 14–16, SR6 (room 217, E2 4)*

The seminar is held in English. The Internetseminar aims at students on a higher level (second or third year Bachelor's students, Master's students or PhD students) having some basic background in functional analysis. For students who are interested, there will also be a phase 2 of the seminar from March to June 2019, where small and internationally mixed groups work on a specific research project. The results are then presented on a workshop in June, where all participants of the participating institutions come together. Further information via email (`weber@math.uni-sb.de`) and on the webpage `https://www.math.uni-sb.de/ag/speicher/weber_lehre_22ndISwise1819.html`.

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