



Sommersemester 2019

Limits of Spaces

Dozent: PD Dr. Martin Kell

Beginn: Montag, 15. April 2019 keine Veranstaltung am 17. April 2019

Zeit: Montag und Mittwoch, 10 Uhr c. t. bis 12 Uhr

Ort: Seminarraum S09

Prüfungsgebiet: Reine Mathematik

Beschreibung / Description

In this course basic concepts of metric geometry like geodesics, doubling property of measures and Hausdorff measures are introduced and their properties are investigated. Furthermore, generalized curvature conditions in the sense of Alexandrov and Busemann are studied and the convergence concepts of Gromov-Hausdorff and the ultra convergence are presented and a proof of Gromov's Precompactness Theorem and other stability theorems will be developed.

Voraussetzungen / Prerequisites

Analysis I+II and some measure theory. A course in differential or Riemannian geometry helps but is not necessary.

Literatur

JEFF CHEEGER; DAVID EBIN, *Comparison Theorems in Riemannian Geometry*, AMS (1975).

DIMITRI BURAGO; YURI BURAGO; SERGEI IVANO, *A Course in Metric Geometry*, AMS (2001).

MIKHAIL GROMOV, *Metric Structures for Riemannian and Non-Riemannian Spaces*, Springer (2007).

STEPHANIE ALEXANDER; VITALI KAPOVITCH; ANTON PETRUNIN, *Alexandrov geometry: preliminary version no. 1*, arxiv:1903.08539v1 (2019)

Prüfung / Exam

Oral exam.