EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-Naturwissenschaftliche Fakultät

Fachbereich Mathematik

AB Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Sommersemester 2022

Geometrische Evolutionsgleichungen
Geometric evolution equations

Dozent / Lecturer: Prof. Dr. Gerhard Huisken

Beginn / Start: Freitag, 29. April 2022 / Friday, 29th April 2022

Zeit / Time: Freitags / Fridays 10:15-12:00

Ort / Place: Hörsaalzentrum Morgenstelle Hörsaal N08

Beschreibung/ Description:

https://uni-tuebingen.de/de/23873

Modulhandbuch / Module Handbook, Studiengang / Study programmes M.Sc. Mathematik, Modul / Module MAT 60-01, Seite / Page 208

Following an introduction to the deformation of hypersurfaces by geometric evolution equations the course will concentrate on smooth and weak solutions to inverse mean curvature flow and applications of these solutions in differential geometry and relativity.

All lectures except the first lecture of the course will take place in presence, starting 29.4.2022.
For the first week of semester please view and work through my introductory lecture

https://www.mfo.de/about-the-institute/staff/prof-dr-gerhard-huisken/lectures/mean-curvature-flow/lecture-1

of a series of lectures on mean curvature flow:

https://www.mfo.de/about-the-institute/staff/prof-dr-gerhard-huisken/lectures/mean-curvature-flow

I will review and discuss that content then in the first meeting.in person.

Voraussetzungen / Prerequisites:

Eine Vorlesung über Partielle Differentialgleichungen und eine Vorlesung über Differentialgeometrie / One course on partial differential equations and on course on differential geometry

Literatur / Literature:

B. Andrews et al., "Extrinsic geometric flows", AMS Graduate Studies in Mathematics 206.
K. Ecker, "Regularity theory for mean curvature flow", SpringerScience 2004 (formerly Birkhäuser)

Prüfung / Exam:

Je nach Größe der Veranstaltung schriftliche oder mündliche Prüfung / Written of oral exam depending on course size