EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Mathematisch-Naturwissenschaftliche Fakultät

Fachbereich Mathematik

AB Geometrische Analysis, Differentialgeometrie und Relativitätstheorie

Winter term 2021/22

Seminar: Topics in mathematical relativity

Instructor: Dr. Melanie Graf
Time and place: Wednesday, 10 c. t. to 12, in C5H10 Seminarraum S07
Begin: Wednesday, October 20 2021

Information session: Wednesday, July 14, 11 c.t.
Meeting ID: 946 8795 9900
Kenncode: 403324
Link: `https://zoom.us/j/94687959900?pwd=dmovYnpxUVhNUzR4UFl4aDlVdXFUdz09`

Description

The main goal of this seminar is to study and understand the main ideas and results of important/interesting research articles in mathematical relativity.

Each student will be required to present in detail (at least) one article.

A description of possible research articles to study will be given in the information session. Within reason further articles can be chosen based on the individual interests of the participants.

Requirements

Geometry in Physics and Mathematical Relativity (or equivalent).

Literature

J. M. Lee, *Riemannian manifolds: An introduction to curvature*, Graduate Texts in Mathematics **176**, Springer-Verlag New York, 1997.

B. O'Neill, *Semi-Riemannian Geometry With Applications to Relativity*, Pure and Applied Mathematics **103**, Academic Press, Inc., New York, 1983.

S. W. Hawking und G. F. R. Ellis, *The large scale structure of space-time*, Cambridge Monographs on Mathematical Physics (1973)