

BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Monday, 20th of December 2021, 12:15-13:00

Hybrid seminar

Seminar room 00.003, Spiegelgasse 1 / Zoom

PENELOPE GEHRING

University of Potsdam, AEI Potsdam

First Order Operators On Spacetimes With Timelike Boundary

ABSTRACT

Second order operators, such as wave operators, are some of the most studied objects in mathematics as well as in physics. On the other hand, the properties of first order operators are still not as well-understood, specially on spacetimes with boundary. In this talk, I will give an introduction to global boundary conditions for elliptic first order differential operators on Riemannian manifolds with boundary and will point out the difference to hyperbolic operators on Lorentzian manifolds. Then, I will discuss Cauchy-problems of hyperbolic first order operators on spacetimes with timelike boundary, where we use elliptic theory to study boundary conditions.