

Seminar

Prof. Alexander Strohmaier

Loughborough University

The Dirac operator on curved spaces: Index Theorems, Spectral Theory & Gravitation

Thursday, August 6, 2015

at 14:00 h

ESI, Schrödinger Lecture Hall

Abstract: In this introductory talk I will start by explaining some basic properties of the Dirac operator on Riemannian and Lorentzian manifolds. I will revise the Atiyah-Singer index theorem and the Atiyah-Patodi-Singer index theorem for manifolds with boundary and discuss some applications. I will then discuss a recent result about the index of the Dirac operator on a globally hyperbolic spacetime and the relation to physics.

This is a joint seminar with the Gravitational Physics group.

C. Guillarmou, W. Müller, A. Strohmaier, A. Vasy

July 31, 2015