## New examples of Lorentzian metrics admitting timelike closed curves

## MIKE SCHERFNER

Institute of Mathematics, TU Berlin, Germany  ${\bf scher fner@math.tu\text{-}berlin.de}$ 

## Abstract

Using methods of Lorentzian Geometry it is possible to construct particular Lorentzian metrics via PDEs and the decomposition of covariant derivatives into irreducible parts. This leads to interesting new classes of spacetime models with or without timelike closed curves.