



EINLADUNG

im Rahmen Literaturseminars

zum Vortrag

von

Marcus Khuri

(Stony Brook)

über

„Black lenses in Kaluza-Klein matter“

Abstract:

We present the first examples of formally asymptotically flat black hole solutions with horizons of general lens space topology $L(p, q)$.

These 5-dimensional static/stationary spacetimes are regular on and outside the event horizon for any choice of relatively prime integers $1 \leq q < p$, in particular conical singularities are absent. They are supported by Kaluza-Klein matter fields arising from higher dimensional vacuum solutions through reduction on tori.

The technique is sufficiently robust that it leads to the explicit construction of regular solutions, in any dimension, realising the full range of possible topologies for the horizon as well as the domain of outer communication, that are allowable with multi-axisymmetry. Lastly, as a by-product, we obtain new examples of regular gravitational instantons in higher dimensions. This is joint work with Jordan Rainone.

Zeit: Donnerstag, 20.04.2023, 15.30 h

Ort: on zoom

<https://univienne.zoom.us/j/6540036841?pwd=SytyVkZJZzNyRG9IMm13ejlHeHRRUT09>

Meeting ID: 654 003 6841 Passcode: Gs4brS

gez.: P. Chrusciel, D. Fajman