

1139-35-516

Pieter Blue* (pblue@ed.ac.uk), Maxwell Institute & School of Mathematics, University of Edinburgh, Edinburgh, EH9 3FD, United Kingdom. *Decay for fields outside black holes*. Preliminary report.

The stability of Kerr black holes is one of the major open problems in mathematical relativity. If a two-tensor satisfies the linearised Einstein equation with the linearisation taken around a Kerr black hole, then it has been known since the early 1970s that the extreme components of the curvature must satisfy the Teukolsky equation. Breakthroughs in the last year by Ma and by Dafermos-Holzegel-Rodnianski have proven for the first time that there are uniformly bounded energies for this equation. This talk will present a method to reprove this result using differential operators instead of Fourier techniques. (Received February 19, 2018)