

Boundedness and polynomial decay for the Teukolsky equation on Kerr spacetimes

MIHALIS DAFERMOS

University of Cambridge, Department of Pure Mathematics and Mathematical Statistics, Wilberforce Road, Cambridge CB3 0WA, United Kingdom
: m.dafermos@dpmms.cam.ac.uk

ABSTRACT

This is joint work with Igor Rodnianski and Gustav Holzegel. As part of our previous proof of linear stability of Schwarzschild, we showed both boundedness and polynomial decay estimates for solutions of the spin ± 2 Teukolsky equation by exploiting a physical space transformation to solutions of the Regge-Wheeler equation. We show how this procedure generalises to yield similar results for the Teukolsky equation on Kerr.