SPEAKER:

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TITLE:

Linear and quasilinear wave equations on Schwarzschild de Sitter and
subextremal Kerr de Sitter

ABSTRACT:
We discuss a new physical space approach to proving exponential decay for
the wave equation on Schwarzschild de Sitter. In this approach, exponential
decay follows from a novel "relatively non-degenerate" estimate on fixed time
slabs. We apply our physical space "relatively non-degenerate" estimates of
the linear theory to prove decay for solutions of the quasilinear wave equation
on Schwarzschild de Sitter. Then, we generalize the approach to subextremal
Kerr de Sitter. Specifically, by assuming mode stability on the real axis or slow
rotation, we prove that linear and quasilinear waves on Kerr de Sitter decay
exponentially by similar "relatively non-degenerate" arguments.