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**Peter Hintz** and **Andras Vasy\*** ([andras@math.stanford.edu](mailto:andras@math.stanford.edu)), 450 Serra Mall, Bldg 380, Stanford, CA 94305-2125. *Microlocal analysis for Kerr-de Sitter black holes.*

In this lecture I will describe a framework for the Fredholm analysis of non-elliptic problems both on manifolds without boundary and manifolds with boundary, with a view towards wave propagation on Kerr-de Sitter spaces, which is the key analytic ingredient for showing the stability of black holes. This lecture focuses on the general setup such as microlocal ellipticity, real principal type propagation, radial points and generalizations, as well as (potentially) normally hyperbolic trapping, as well as the role of resonances. (Received September 01, 2017)