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Stefanos Aretakis* (aretakis@math.princeton.edu). *Conservation laws and asymptotics for linear waves.*

The asymptotic behavior of solutions to the wave equation on curved backgrounds is closely connected with various important open problems in general relativity such as the strong cosmic censorship and the black hole stability problem. In this talk, I will present a new technique that allows us to obtain the precise late-time asymptotics for solutions on such backgrounds and describe their relevance to the aforementioned problems. Our method works for both sub-extremal and extremal black hole backgrounds. This is joint work with Y. Angelopoulos (UCLA) and D. Gajic (Imperial). (Received September 12, 2017)