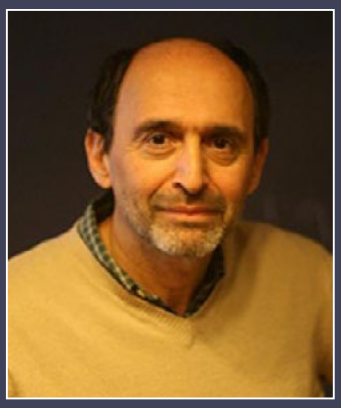
LECTURE SERIES

Mathematical Science Literature

June 15, 2021

11:00am ET- *Virtually*



Sergiu Klainerman
Princeton University

"Nonlinear stability of Kerr black holes for small angular momentum"

According to a well-known conjecture, initial data sets, for the Einstein vacuum equations, sufficiently close to a Kerr solution with parameters a, m, $|a|/m <1$, have maximal developments with complete future null infinity and with domain of outer communication (i.e complement of a future event horizon) which approaches (globally) a nearby Kerr solution. I will describe the main ideas in my recent joint work with Jeremie Szeftel concerning the resolution of the conjecture for small angular momentum, i.e. $, $|a|/m $ sufficiently small. The work, ArXiv:2104.11857v1, also depends on forthcoming work on solutions of nonlinear wave equations in realistic perturbations of Kerr, with Szeftel and Elena Giorgi, which I will also describe.

Talk chair: Lydia Bieri

This lecture will be held virtually.
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