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**Mihai Tohaneanu\*** ([mihai.tohaneanu@uky.edu](mailto:mihai.tohaneanu@uky.edu)), 749 Patterson Office Tower, Lexington, KY 40506. *Quasilinear wave equations on Kerr black holes.*

We study the quasilinear wave equation  $\square_g u = 0$ , where the metric  $g$  depends on  $u$  and equals the Kerr metric with small angular momentum when  $u$  is identically 0. Under a couple of assumptions on the metric  $g$  near the trapped set and the light cone, we prove global existence of solutions. The main technical result is proving an estimate for the linear wave equation on small perturbations of Kerr. This is joint work with Hans Lindblad. (Received September 24, 2018)