

Rotating black holes beyond Einstein

Saturday 1 November 2025 16:05 (15 minutes)

I will present a new general method to find rotating black hole solutions (analytically and in closed form) for a large class of beyond Einstein theories. These solutions are valid for any black hole spin (including near-extremal black holes) and converge exponentially fast with the number of basis functions kept in the solution. These new solutions can now be used to study extreme mass-ratio inspirals or quasinormal ringdown using analogous methods to those developed in general relativity for perturbations of Kerr black holes.

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