Title: Simulating Black Hole Feasts, Burps, and Fireworks

Abstract:

Based on latest state of the art general relativistic magnetohydrodynamic simulations, I will discuss how black holes feast on the surrounding gas, burp away their surroundings, and produce bright emission in a wide range of contexts, ranging from stellar-mass black holes in the context of binary compact object mergers and collapsing massive stars to supermassive black holes at the centers of active galaxies.