

DYNAMICAL DEVELOPMENT OF BLACK HOLE SCALAR HAIR

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Testing different beyond-Kerr alternatives has been amongst the major goals of astrophysical and especially gravitational-wave physics. In the present talk, I will focus on the different dynamical mechanisms for the development of black holes scalar hair and especially on the phenomenon of spontaneous scalarization of black holes. I will also discuss what are the possible ways to realize such scenarios in realistic astrophysical processes such as stellar core-collapse and binary black hole mergers.