

NEB-19 Recent Developments in Gravity (Online)

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Out-of-equilibrium hydrodynamic rotating black holes

We will discuss theoretical and experimental results studying the wave-vortex interaction arising from rotating fluid and superfluid flows. The dynamical equation describing the wave-vortex interaction can be mapped to scalar fields exhibiting an effective rotating black hole. This opens the possibility of studying a variety of rotating black hole processes in hydrodynamic systems. The focus of this presentation is to showcase the behaviour of perturbed hydrodynamic fluid and superfluid vortex flows and establishing analogies with out-of-equilibrium black holes.

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