Topological Censorship for spacetimes with timelike boundary

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Abstract

We present a version of topological censorship for spacetimes (M, g) with timelike boundary ∂M. In this 'quasi-local' setting, no conformal completion of spacetime is assumed, but topological and curvature assumptions are imposed on the boundary. We discuss such issues as the existence of fastest null geodesics joining boundary components and wormhole non-traversability as well as possible applications to black string theory.