

On the Einstein flow in 2+1 dimensions

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It is well known that the Einstein equations can be interpreted as a system of PDEs describing a geometric flow - a continuous family of Riemannian metrics on a given topological manifold.

In this perspective the global structure of solutions to the Einstein equations is analysed using this geometric flow to obtain information on the asymptotic behaviour towards future and past. In this talk we consider this problem in the context of 2+1-dimensional solutions of the Einstein equations and present a result on the future dynamics of general initial data on closed hyperbolic surfaces for the vacuum Einstein equations with a cosmological constant.

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