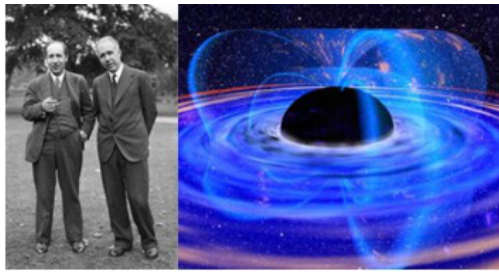


## Mathematical Aspects of General Relativity



Contribution ID: 3

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### **Ricci flow as an algorithm to construct black hole metrics**

*Friday 11 April 2008 10:20 (45 minutes)*

Ricci flow potentially provides a tool to allow explicit numerical construction of black hole metrics of interest in physics. Whilst in 4 dimensions stationary black holes of interest are known analytically, I will discuss how black holes in theories with extra dimensions (such as string theory) are generally not known analytically. Then a numerical construction of the metric is likely the only way to examine them. I will show that black holes (of interest) are actually unstable fixed points of Ricci flow and I will discuss how to use the flow in practice for this application.

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