



Berlin  
Mathematical  
School

## BMS Friday Colloquium

**Friday 30 November 2012 at 14:15**

*Tea & Cookies starting at 13:00*

BMS Loft, Urania, An der Urania 17, 10787 Berlin

### Alan Rendall

*(MPI for Gravitational Physics, Potsdam-Golm)*

#### Spacetime singularities and heteroclinic chains

General relativity is the physical theory of space, time and gravity. It predicts the occurrence of singularities where the theory breaks down and it is important to obtain information about the nature of these singularities. There is a hypothetical picture of singularities in general relativity due to Belinskii, Khalatnikov and Lifschitz. This proposal has stimulated a great deal of mathematical research, but after forty years it is still not clear whether it is correct. In his talk Rendall will sketch the history of this problem and will explain recent progress in understanding it using the theory of dynamical systems.

Alan Rendall is an associate professor at the Albert Einstein Institute (Max Planck Institute for Gravitational Physics) in Golm, specializing in mathematical cosmology. After obtaining his PhD at the University of Aberdeen in 1987, Rendall held positions at the Max Planck Institute for Astrophysics in Garching and at the IHES in France, before moving to the Albert Einstein Institute in 1995. In 1997, he was awarded the Whittaker Prize of the Edinburgh Mathematical Society. He has recently been offered a professorship at the University of Mainz.