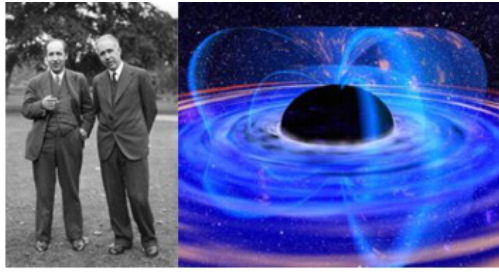


Mathematical Aspects of General Relativity



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Rod-structure of stationary and axisymmetric solutions in General Relativity

Friday 11 April 2008 15:05 (45 minutes)

We consider stationary and axisymmetric solutions in General Relativity, primarily in five dimensions. We motivate the introduction of the Rod-structure for any given solution and give examples of Rod-structures for various five-dimensional exact solutions of General Relativity. We consider the questions of uniqueness and existence of a solution given the Rod-structure. Finally we review briefly the uniqueness theorem of Hollands and Yazadjiev which proves that five-dimensional stationary and axisymmetric solutions are unique given the Rod-structure, and the asymptotic charges.

Presenter: HARMARK, Troels (Niels Bohr Institute)