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Seminar

The C^0 Inextendibility of the Schwarzschild Spacetime

Dr. Jan Sbierski

University of Cambridge

Abstract

A C^k-extension of a smooth and connected Lorentzian manifold (M,g) is an isometric embedding of M into a proper subset of a connected Lorentzian manifold (N,h) of the same dimension, where the Lorentzian metric h is C^k regular. If no such extension exists, then we say that (M,g) is C^k-inextendible. The study of low-regularity inextendibility criteria for Lorentzian manifolds is motivated by the strong cosmic censorship conjecture in general relativity.

The Schwarzschild spacetime is manifestly inextendible as a Lorentzian manifold with a C^2 regular metric. In this talk I will describe how one proves the stronger statement that the maximal analytic Schwarzschild spacetime is inextendible as a Lorentzian manifold with a continuous metric.

Date :	June 27, 2016 (Monday)
Time :	3:00p.m. – 4:00p.m.
Venue :	Room 222, Lady Shaw Building, The Chinese University of Hong Kong

All are Welcome