Theory CANADA 4 Conference Conférence Théorie CANADA 4 4–7 June/Juin, 2008

## Wave equations in Kerr geometry

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## Abstract

I will give an overview of some key mathematical results concerning the long-time behavior of the solutions of the Dirac and scalar wave equations in the Kerr metric. In particular, I will discuss decay rates for the solutions of the Dirac equation, for  $L^2$  initial data.

This is joint work with Felix Finster, Joel Smoller and Shing-Tung Yau.