Graduate Seminar in Mathematics

Thursday, October 9, 2014

1:00 - 2:00 p.m., HH-3017

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Black holes in mathematics and physics

Abstract:

I will introduce black holes and the role that they play in modern mathematical physics and astrophysics. Along the way we'll visit Newtonian black holes, introduce the crucial notions of simultaneity and causality in general relativity and their connection to the Cauchy problem, discuss black hole thermodynamics and its link to theories of quantum gravity, and briefly discuss the goals and achievements of numerical relativity.