

# Erwin Schrödinger Lecture

Thursday, February 23, 2017 – 5 p.m.

Boltzmann Lecture Hall, ESI, Boltzmannngasse 9, Vienna

**Mihalis Dafermos**

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## On falling into black holes

*The celebrated “black hole” spacetimes of Schwarzschild and Kerr play a central role in our current understanding of Einstein’s general theory of relativity. Are these spacetimes stable, however, as solutions to the Einstein vacuum equations, in their exterior region? And what fate awaits physical observers who enter inside a “generic” black hole? It turns out that these two questions are intimately related and the answer to the second may be more disturbing than previously thought. This talk will try to explain how so.*

**Mihalis Dafermos** holds the Lowndean chair of Astronomy and Geometry at the University of Cambridge in the Department of Pure Mathematics and Mathematical Statistic and is Professor at Princeton University in the Department of Mathematics.

The Erwin Schrödinger Lectures are directed towards a general audience of mathematicians and physicists. In particular it is an intention of these lectures to inform non-specialists and graduate students about recent developments and results in some area of mathematics or physics.

The lecture will be followed by an informal reception.

Christoph Dellago  
*Director*