



# PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik  
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 18.05.2016, 16 Uhr c.t.  
Großer Hörsaal, Raum \_0.111,  
Max-von-Laue-Str. 1



**Prof. Luciano Rezzolla**  
Institute for Theoretical Physics  
Goethe University Frankfurt

## Kolloquium zum 100. Todestag von Karl Schwarzschild

*"Black holes, neutron stars and  
gravitational waves: exploring Einstein's  
Universe with supercomputers"*

Einstein's theory of general relativity predicts the existence of compact objects such as black holes and neutron stars, whose properties are the most extreme known in physics and that can release enormous amounts of gravitational radiation through some of the most catastrophic events in the universe. I will present a virtual journey into black holes and neutron stars and explain how, with the aid of modern supercomputers, we are now able to explore the physics and astrophysics of these objects and predict the gravitational waves that they are expected to emit.

Die Dozenten der Physik