

PHYSIKALISCHES KOLLOQUIUM

Wintersemester 2024/25

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 16:15 Uhr in Präsenz im Röntgen-Hörsaal** des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg **und online via Zoom statt**.

Zugangsdaten siehe <https://www.physik.uni-wuerzburg.de/aktuelles/veranstaltungen-aus-der-physik/physikalisches-kolloquium/>

18.11.2024

Prof. Dr. Watse Sybesma
Nordita and Stockholm University

Quantum Black Holes as Theoretical Laboratories

Abstract

Black holes are among the most fascinating and perplexing objects in physics. They are indirectly observed as stellar-mass dark objects in binary systems or as supermassive entities at the centers of galaxies. Some of the most energetic emissions in the universe are associated with matter accreting onto black holes or with black hole mergers. Theoretically, black holes serve as laboratories for gedanken experiments, allowing us to generate and test new theoretical ideas. From this perspective, the study of black holes has provided key insights into the nature of gravity and its interplay with quantum mechanics. In this talk, I will review some of these insights, focusing on recent advances related to Hawking's seminal work on black hole radiance and the associated information paradox, which continues to inspire (and confuse) researchers in the field.

Für die Dozentinnen bzw. Dozenten der Fakultät

Prof. Dr. Porod, Prof. Dr. Hinkov, Dr. Leisegang, Dr. Ünzelmann, Hr. Baumbach