

CLUSTER OF EXCELLENCE

QUANTUM UNIVERSE

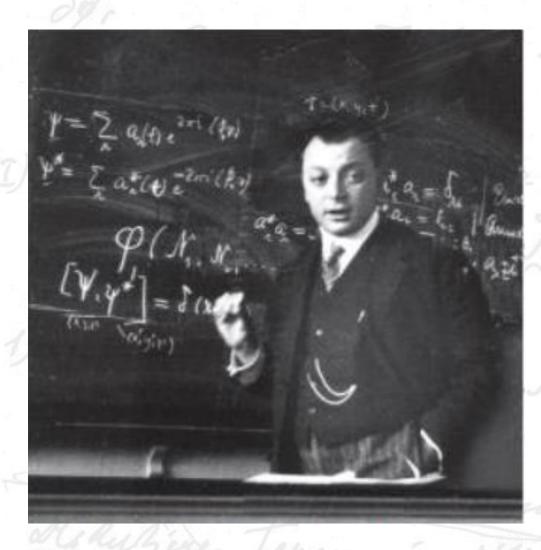
**CRC 1624** 

HIGHER STRUCTURES, MODULI SPACES AND INTEGRABILITY

## **WPC Colloquium**

Tuesday, 14 January 2025 6:30 PM

Agathe-Lasch Lecture Hall University of Hamburg Edmund-Siemers-Allee 1, 20146 Hamburg



## Invitation to Black Hole Thermodynamics

Prof. Dr. Edward Witten Institute for Advanced Studies Princeton

**Abstract:** Since the work of Bekenstein and Hawking over half a century ago, it has been understood that although classically a black hole is a featureless object that satisfies a "no hair theorem", quantum mechanically a black hole behaves as a complex many-body system that obeys the laws of thermodynamics and statistical mechanics. I will provide an introduction to some of the old and new ideas in this subject, in which much is understood and much is not understood.

