GR 16: Hauptvorträge Freitag: Quantengravitation und Quantengravitationsphänomenologie

Zeit: Freitag 11:00–12:30 Raum: 30.45: 101

Hauptvortrag GR 16.1 Fr 11:00 30.45: 101

News from Quantum Gravity Phenomenology — •Sabine Hossenfelder — NORDITA, Roslagstullsbacken 23, 106 91 Stockholm, Sweden

The phenomenology of quantum gravity is a young and lively research field that brings together many areas of physics, both experimental and theoretical. Its purpose is to bridge the gap between current approaches towards a fundamental theory of quantum gravity and observation, with the hope of obtaining experimental guidance for our quest to find the right theory. In this talk I will give a brief overview on the present efforts to construct phenomenological models for quantum gravity, and to test them in astrophysics, cosmology, particle physics and high precision measurements. I will also mention some recent developments and speculate on what directions are promising for further research.

Hauptvortrag GR 16.2 Fr 11:45 30.45: 101

Extra Dimensions in String Cosmology and Phenomenology — •Marco Zagermann — Institut für Theoretische Physik, Leibniz Universität Hannover, Appelstraße 2, 30167 Hannover, Germany

I discuss some of the phenomenologically relevant aspects associated with the presence of extra dimensions in string theory, in particular in the context of cosmological applications. This includes a discussion of the moduli fields of string compactifications as well as the modeling of dark energy and early universe inflation.