LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

ARNOLD SOMMERFELD CENTER FOR THEORETICAL PHYSICS

Sommerfeld Theory Colloquium

Prof. Johannes Henn

MPP Munich

Recent developments for scattering amplitudes

Scattering amplitudes describe the interactions of elementary particles in quantum field theory. They are relevant for collider physics phenomenology, as well as for foundational studies of quantum field theory. Although the basic principles for computing scattering amplitudes have been known for decades, our understanding of these processes, and our ability for computing them, has undergone several conceptual revolutions. While the ultimate phenomenological aim are numerical results for observables, the usefulness of 'theoretical data' - analytic expressions for amplitudes - has been a crucial seed for progress in this field. It has enabled researchers to understand properties that are hidden in the conventional Lagrangian formalism. Examples are hidden symmetries, intriguing connections to modern mathematics, and novel geometric approaches.

Wednesday, 29 June 2022, 16:15h, Room A348, Theresienstr. 37/III

Professor Ivo Sachs