



# Sommerfeld Theory Colloquium

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Harmony of Scattering Amplitudes and Form Factors

In this seminar I will describe some of the hidden structures recently discovered in the scattering amplitudes of elementary particles, such as those measured at the Large Hadron Collider. These structures are responsible for the mysterious simplicity of these quantities, which is completely obscured by a calculation based on textbook techniques such as Feynman diagrams. I will then move on to discuss form factors. These are slightly off-shell quantities and, similarly to amplitudes, are also much simpler than what expected based on conventional approaches. In particular I will focus on form factors of particular (half-BPS) operators in a special theory, known as N=4 super Yang-Mills, and briefly discuss some unexpected connections to scattering amplitudes in phenomenologically relevant theories.

Wednesday, 21 May 2014, 16:15h, Room A348/349, Theresienstr. 37/III

Prof. L. Ferro, Prof. D. Lüst