



Sommerfeld Theory Colloquium

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Isings Challenge and the Conformal Bootstrap

Throughout the century that has passed since Ernst Ising submitted his PhD thesis in 1924, the Ising (-Lenz) model has provided an incredibly fruitful challenge that gave rise to entirely new branches of physics and mathematics. In this colloquium I will focus on the conformal bootstrap program which was designed by Polyakov in 1974 as a mathematical method to access non-perturbative aspects of critical systems/fixed points of the renormalization groups. In the light of holography, such systems are also relevant for the study of quantum gravity. In my presentation I will review some of the milestone achievements of the modern conformal bootstrap and outline current frontiers. The advances will be benchmarked mostly within the context of the 3D Ising model.

Wednesday, 7 February 2024, 16:15h, Room A348, Theresienstr. 37/III

Prof. Ilka Brunner