Physics Seminar: Deniz Bozkurt
Wednesday, September 10 · 2:00 – 3:00pm

Location: 313

Title: Towards an Analytic Bootstrap Framework for Thermal CFTs

Abstract: In this talk I will present recent progress in developing an analytic bootstrap framework for thermal conformal field theories (CFTs). Our approach to scalar two-point functions exploits the analytic structure of thermal correlators through dispersion relations, together with the Kubo-Martin-Schwinger (KMS) condition, which enforces periodicity on the thermal circle and plays a role analogous to crossing symmetry. This universal method reconstructs correlators from minimal input and applies broadly to both weakly and strongly coupled theories. In particular, we sharpen the asymptotics of heavy states, and obtain new results. I will illustrate the framework with examples from the critical O(N) model and holographic CFTs, and conclude with an outlook on ongoing extensions to related setups.
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