



清华大学高等研究院

Institute for Advanced Study, Tsinghua University

物理学学术报告 Physics Seminars (biweekly)

Title: Conformal Bootstrap and Critical Phenomena

Speaker: Ning Su (苏宁) *University of Pisa*

Time: 3:30pm, Tuesday, Nov. 17, 2020

Venue: Conference Hall 322, Science Building, Tsinghua University

Abstract

3D critical phenomena are in general difficult problems. In the past decade, powerful techniques were developed to study criticality following the bootstrap idea: based on consistency conditions, one can directly constrain the macroscopic theory without reference to microscopic details. In some cases, the constrains almost uniquely determine the theory and one obtains very precise critical exponent. In this talk, I will explain how conformal bootstrap works and overview recent progress. I will discuss in more detail on the 3D $O(3)$ CFT bootstrap and its implication for cubic model.