

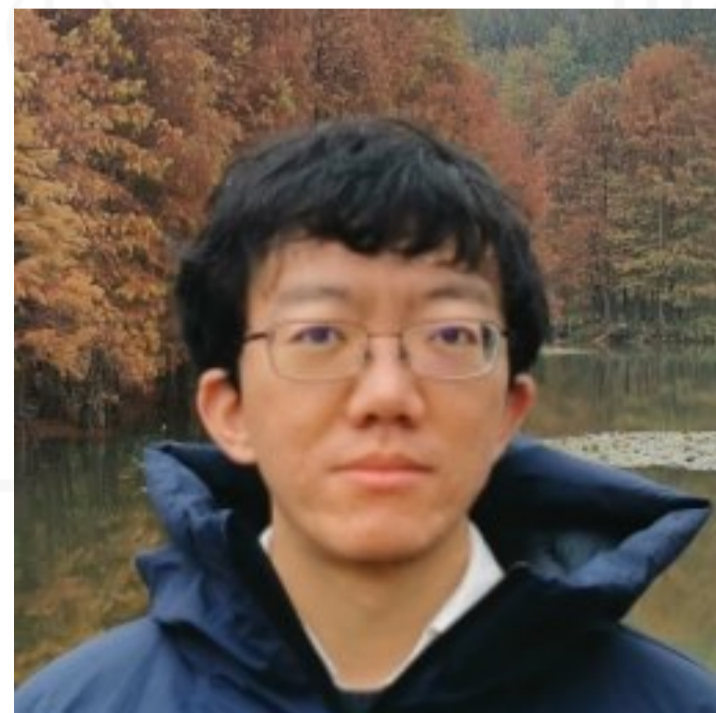
Bootstrap Meets Experimental Data

2025.1.17, 10: 30 am, 物理楼 106

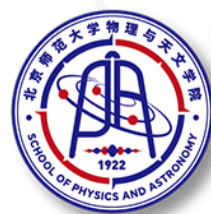
The numerical bootstrap method has become an indispensable tool for studying strongly coupled CFTs and QFTs. This method transforms abstract principles, such as unitarity and crossing symmetry, into predictions on important physical observables in condensed matter and particle physics. In this talk, I will review a decade of groundbreaking developments in the numerical bootstrap. For the condensed matter applications, I will discuss how this approach yields remarkable insights into real-world phenomena, from critical transitions in Helium-4 superfluidity and perovskite materials to deconfined quantum criticality. For the particle physics applications, I will use S-matrix bootstrap to predict the existence of an isospin-2 tetra-quark meson, a previously unknown particle.

Speaker: Dr. Ning Su (Caltech & MIT)

Dr. Ning Su obtained his Ph.D. from Texas A&M University in 2016. After graduation, he worked at Institute of Theoretical Physics Chinese Academy of Sciences, EPFL, U of Pisa, Caltech, MIT as postdoc fellows. His main research interests are bootstrap method and its applications to condensed matter and high energy physics. These work culminated in a review article he coauthored for *Reviews of Modern Physics*.



Hoster: 刘晓辉



北京师范大学物理与天文学院
SCHOOL OF PHYSICS AND ASTRONOMY, BEIJING NORMAL UNIVERSITY