

Speaker: Dr. Yang-Ting Chien

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Time: 3:00 pm – 4:00 pm

Title: Probing the Trillion Degree Little Bang in Heavy Ion Collisions

Abstract: In relativistic collisions of large nuclei, a hot and dense medium referred to as the Quark Gluon Plasma (QGP) can be formed, which explodes and evaporates very soon after collisions. The long-distance behavior of such a medium resembles a liquid, and its inner working is still an open question. In this talk I will explain how we can probe the QGP using streams of energetic particles produced in hard collisions known as jets. These jets penetrate the QGP, and through strong interactions, the substructure of jets can tell us information about short-distance medium properties. The upcoming data from Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory and also the Run 3 of the Large Hadron Collider (LHC) at the European Organization for Nuclear Research (CERN) will hopefully shed light on the microscopic picture of the QGP.