Abstract
High-energy small-angle scattering has traditionally been used to provide information on the “size and shape” of hadrons. In contrast, it is believed that large-angle scattering is required to reveal their “partonic structure”. Exploration of the idea of “Gauge-String Duality”, also known as “AdS/CFT Correspondence”, has exploded in recent years, and the interest in its application to high-energy collisions in QCD has also increased dramatically. It is now possible to provide a unified treatment where “size and shape” and “partonic structure” can be understood on an equal footing. An introductory discussion on this rapidly evolving area of study will be provided. In particular, we will explain the crucial role of “graviton” in an AdS-like space-time in high-energy hadron collisions. Possible application to the detection of the Higgs particle will also be discussed.

About the Speaker
Professor Tan Chung-I (Physics Department Chair, Brown University) has had a long interest in the formulation of the Quantum Chromodynamics (QCD) string and in its phenomenological consequence. Specific efforts include the following areas: QCD from gauge/gravity duality, QCD at High Energy, Diffractive Scattering, Chirally improved lattice QCD, Confinement/de-confinement transitions, etc. He was the Director for the “Int. Symposium on Multiparticle Dynamics” at Brown, (2000), and “Eighth Workshop on Non-Perturbative Quantum Chromodynamics”, (2004). In addition, he has served as the U.S. member on the organizing committee for the annual QCD-Moriond. He has also been serving on the organizing committees for the annual Int. Symposium on Multiparticle Dynamics and for the Blois Workshop on Elastic and Diffractive Scattering.