



# LHC Seminar

**SPEAKER:** Jiangyong Jia (State University of New York and Brookhaven National Lab)

**TITLE:** **What do recent ATLAS measurements tell us about the dynamics and properties of quark-gluon plasma?**

**DATE:** Tue 13/10/2015 11:00

**PLACE:** Main Auditorium

## ABSTRACT

To understand the space-time dynamics and properties of the quark-gluon plasma (QGP), a new state of matter existing at high temperatures formed in relativistic heavy ion collisions, ATLAS has conducted measurements of a large number of observables in lead-lead collisions at the LHC. To further understand these data, similar measurements have also been carried out in proton-lead and proton-proton collisions. In this talk, ATLAS studies with these data addressing some key questions about QGP will be presented. These include

- What are the behaviours and properties of the QGP at both long and short wavelengths?
- Do we understand the initial conditions and rates of hard-probes prior to the formation of the QGP?
- What is the smallest droplet of QGP created in these collisions?