



LHC Seminar

SPEAKER: Alexandru Florin Dobrin
TITLE: **Probing the Quark Gluon Plasma with anisotropic flow measurements in ALICE**
DATE: 13 Nov 2018, 11:00
PLACE: 222-R-001

ABSTRACT

Anisotropic flow provides valuable information on the key properties and the evolution of the Quark Gluon Plasma (QGP) created in ultrarelativistic heavy-ion collisions. It is characterized using the harmonic coefficients v_n in a Fourier decomposition of the azimuthal distribution of produced particles relative to the symmetry plane in a collision. It is found that flow fluctuates from event to event due to fluctuations in the initial geometry; this is used to select of the events corresponding to a specific initial geometry. This technique, Event Shape Engineering (ESE), opens many new possibilities to study the QGP. In this seminar, I will review recent results on measurements of elliptic, triangular and quadrangular flow for inclusive and identified particles from ALICE in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, including the use of ESE. I will then discuss how these results constrain the initial conditions of a collision, the transport coefficients of the QGP and aspects of the hadronization process.