

## Seminarium Szkoły Doktorskiej NCBJ

Thursday, 8 December, 9:15  
room 207, Pasteura 7

<https://www.gotomeet.me/NCBJmeetings/phd-seminar>

<https://events.ncbj.gov.pl/e/PhDSeminar2223>

Speaker:

**Swaleha Mulani** (Szkoła Doktorska NCBJ)

Title:

**In search of precision in QCD at high energy physics: beyond eikonal order**

Abstract:

Studying high-energy hadronic scattering processes to understand the interior of atoms has been the focus of experimental and theoretical studies for more than three decades now. During this period, the Color Glass Condensate (CGC) effective field theory has been utilised to analyse specifically high-energy proton-nucleus (pA) collisions. One of the main approximations used in the CGC is the so-called eikonal approximation, which amounts to neglecting power-suppressed corrections in high-energy limits. For high-energy colliders like LHC, this is a good enough approximation. But the corrections beyond eikonal approximation can be sizable at intermediate energies, in particular at relativistic heavy ion collider (RHIC) and upcoming electron ion collider (EIC). In this talk, I will briefly review the eikonal approximation and present the computation of a gluon propagator through the target at next-to-eikonal accuracy.