

## **Seminarium Szkoły Doktorskiej NCBJ**

**Thursday, 21th April, 9:00**

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

**Speaker:**

**Grzegorz Żarnecki (Stodium doktoranckie NCBJ)**

**Title:**

**Cross section measurement of the charged current muon antineutrino single  $\pi^-$  production at T2K**

**Abstract:**

T2K experiment is a long baseline neutrino oscillation experiment in Japan. Cross section measurements of (anti)neutrino interactions in sub-GeV to few GeV energy range allow to constrain the systematic uncertainties in the oscillation analysis. Single charged pion production is a relevant interaction mode at this energy scale. The biggest contribution to that mode is due to the baryonic resonance interaction, coherent interaction and deep inelastic scattering.

In this seminar I will present the cross section measurement of single  $\pi^-$  production in muon antineutrino CC interaction on hydrocarbon. The cross section is reported as double-differential in muon kinematical variables i.e. momentum and cosine of the muon emission polar angle.