

## Invitation

to the seminar of Division of Elementary Particle Physics of the Institute of Physics of the Czech Academy of Sciences





Jiří Hejbal<sup>1</sup> and Petr Jačka<sup>1,2</sup>

<sup>1</sup>Institute of Physics of the Czech Academy of Sciences <sup>2</sup>Faculty of Nuclear Sciences and Physical Engineering, CTU

## Top quark physics in ATLAS experiment

**Abstract:** Measurements of the properties of the top quark, the heaviest known fundamental particle, could provide hints of possible new physics beyond the Standard Model. The large number of top quarks produced in the ATLAS experiment gives the possibility to test the theory in the regions with high transverse momentum or high mass. Dedicated techniques have been developed to reconstruct and identify boosted objects in such regions.

This contribution will provide an overview of recent measurements of top-quark production cross sections and its mass and properties in proton-proton collisions with the ATLAS detector at the Large Hadron Collider. In the second part, we will focus on the ATLAS top quark pair differential cross-section measurement in a boosted topology at a center-of-mass energy of 13 TeV using all Run 2 data from 2015 - 2018.

When: Thursday, December 1, 2022 at 2PM

Where: Main conference hall, Institute of Physics, Na Slovance 2, Prague 8

For more information, please see <a href="https://indico.fzu.cz/event/120/">https://indico.fzu.cz/event/120/</a>

Roman Lysák Jiří Hejbal