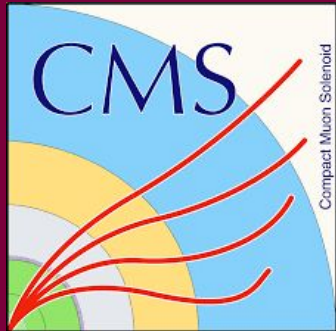**Vilniaus universitetas**

Data Certification, CMS Phase 2 DAQ and Online Tools

by VU FMI CERN group

VU FMI CERN group

- Vilnius University Faculty of Mathematics and Informatics (FMI)

- Led by Valdas Rapševičius

- 2 - 4 technicians and researchers

- Experience and main projects at CMS

  - Data Quality Monitoring Systems and tools

  - Online Monitoring System (CMS OMS)

  - Detector Construction Application (CMS DCA)

  - Sub-detector databases and related software applications

  - Data Certification Automation by using Machine Learning

Activities in 2023

- High-energy Particle Event Mathematical Generator using Deep Learning Methods

  - Investigate the topic of high-energy particle event data set generation. The study focuses on the analysis of $H \rightarrow ZZ \rightarrow 4l$ events recorded in the LHC CMS detector during proton-proton collisions. The goal is to investigate new architectures and software for a new generation of dataset generators.

- Development and Maintenance of CMS Detector Monitoring Systems

  - Maintenance and development of OMS, DCA and other applications and tools. Strong collaboration is maintained with various CMS detectors such as Tracker, ZDC, HGCAL, and others.

  - Contribution to ZDC runtime monitoring data transfer and visualization pipeline

Contacts

Valdas Rapševičius

+370 618 37331
valdas.rapsevicius@cern.ch