



Contribution ID : 236

Type : **Oral talk**

## Experiment-independent framework for femtoscopic analysis

*Thursday, 1 December 2022 19:15 (15)*

In high energy physics, software infrastructure for the analysis of experimental data is tightly connected with the specifics of experiment: detector setup, collision system, reconstructed event and track information. However, the aspects of physics analysis are common. In this work, we present a framework for correlation femtoscopy technique that could be applicable for any experiment.

It is developed in an object-oriented paradigm using a combination of software design patterns [1]. As a result, the polymorphic behavior of the framework encapsulates the data differences, providing a universal way to manage the analysis of any experiment. The additional interface, based on C++ typecasting features, allows users to control parameters that are unique for the experiments. C++ language and CERN ROOT libraries are used for implementation.

**References:** [1] E. Gamma et al. Design Patterns: Elements of Reusable Object-Oriented Software. Reading, Mass.: Addison-Wesley, 1995.

**Primary author(s) :** KUZINA, Ekaterina (NRNU MEPhI)

**Co-author(s) :** NIGMATKULOV, Grigory (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute))

**Presenter(s) :** KUZINA, Ekaterina (NRNU MEPhI)

**Session Classification :** Heavy Ion Physics

**Track Classification :** Heavy ion physics