Contribution ID: **28**

Type: **Talk**

# User analysis software in a large collaboration (xAODAnaHelpers): development, maintenance and training.

*Tuesday 14 May 2024 11:35 (20 minutes)*

A number of analyses and performance groups in ATLAS use an analysis framework, written in C++ with python steering files, called xAODAnaHelpers (xAH). xAH is used to loop on events a variety of ATLAS analysis data formats, by using central software to calibrate, select and correct physics objects. xAH has been chosen as one of the EVERSE (European Virtual Institute for Research Software Excellence) pilot cases representing user analysis software in particle physics, given (a) its widespread use in a large collaboration (b) the fact that its modular and intuitive interface fits the needs of diverse analysis use cases that require custom calibrations and objects beyond traditional physics analyses and (c) the challenges that end-user analysis software faces when relying on centrally developed tools that are updated often but still need to have full backward compatibility for ongoing analyses.

After a brief description of the framework itself, this contribution will focus on the software development and maintenance practices for such a framework and on the development of tutorials for newcomers. It will also discuss plans for future work on software sustainability.

## Requested talk length

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