ID de Contribution: **2** Type: **Non spécifié**

Real-time analysis in high energy physics and beyond

mardi 9 mars 2021 10:30 (30 minutes)

The Large Hadron Collider collides protons up to 30 million times a second, and provides its experiments with an enormous amount of data. The trigger systems of each experiment quickly analyse and decide whether to retain each of those collision events from the LHC for further analysis, on a timescale of the order of milliseconds. In this seminar, I will present/discuss an overview of the tools and real-time analysis techniques employed within these trigger systems, focusing on the ATLAS experiment but also outlining elements of the strategies of the CMS and LHCb experiments. I can also present/discuss connections of those techniques physics cases that use novel techniques to make the most of LHC data with a sensitivity that would not be achievable with standard techniques. I would be happy to discuss connections beyond high energy physics.

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Classification de Session: Workflows