



Contribution ID: 947

Type: **Parallel Talk**

## Software and computing challenges in a Muon Collider Detector

*Saturday, 9 July 2022 17:45 (15 minutes)*

Studies of physics and detector performance of a possible experiment at a Muon Collider are attracting a lot of interest in the High Energy Physics community. Projections show that high precision measurements are possible as well as large new physics discovery potential. However, the presence of a large beam-induced background (BIB), generated by the muon beams decay, poses new computing and software challenges ranging from event simulation to reconstruction algorithms.

This contribution will present the strategy adopted so far to overlay the beam-induced background to the physics event and the algorithms currently employed to reconstruct the event in presence of BIB. Special attention is dedicated to the track and jets reconstruction.

The increasing number of collaborators around the world demands as well an easy to maintain and flexible infrastructure distributed across several countries. The solutions currently adopted will be also presented.

### In-person participation

Yes

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**Session Classification:** Computing and Data handling

**Track Classification:** Computing and Data handling