

- The challenge for the LHCb simulation for Run3 is to cope with the amount of simulated samples needed both in term of statistics and accuracy
- Extensive development is being carried out on parallel lines to meet this challenge
  - A wide variety of fast simulation options are actively pursued ranging from fully parameterized to fast detectors response to reuse of events
  - Ways to speed up the simulation are being explored from code modernization to algorithmic optimization
- A major rewrite of the LHCb simulation framework, Gauss, is in progress to adopt the new Gaudi and Geant technologies and at the same time encapsulate experiment agnostic and LHCb specific parts
  - Gaussino as underlying generic simulation framework and prototyping test bed
  - Gauss as a fully Integrated Simulation Framework allowing the most suitable mix of simulation options for a given Run3 LHCb physics analysis