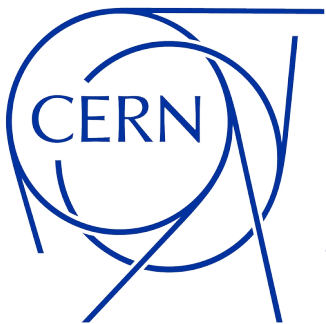


# Hackathon Plan: Simulation

Peter McKeown

CERN, EP-SFT

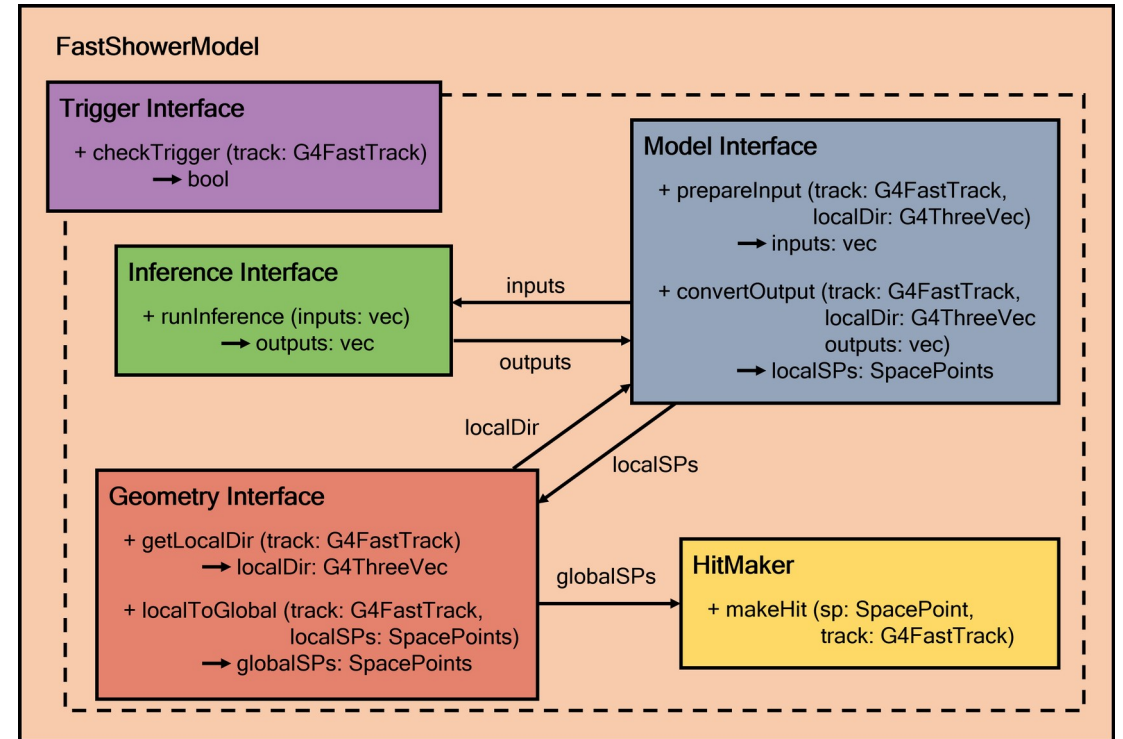


# General Work Plan

- Working on integration of our fast sim models into 'DDML':  
<https://gitlab.desy.de/ilcsoft/ddfastshowerml>
- Dedicated Hackers: Piyush, Anatolii, P.M.
- Involvement from others cross-task e.g. Frank, Thomas  
→ Of course: others welcome to join!
- Piyush + Anatolii → Model integration focus
- P.M. → 'Infrastructure' focus



Interdependence



# Model Integration (Piyush, Anatolii)

## Piyush

- 1) Par04: CaloDiT model
  - Conversion to Onnx and Torch
  - Validate
- 2) ODD: CaloDiT Model → repeat procedure

## Anatolii

- 1) Conversion of CaloClouds model into Torch
- 2) Integration of model into DDML for ILD (a la BIB-AE implementation)
  - via Model Interface

**Common task: discussion on diffusion models and distillation**

# Infrastructure (P.M.)

1) Working on 'DDML': <https://gitlab.desy.de/ilcsoft/ddfastshowerml>

- Cylindrical placement: prototype with arbitrary model
- Arbitrary choice of detector to start (probably CLD)

**A lot for the time available- do as much as possible!**

2) Repeat cylindrical placement validation for ODD and Par04

- Probably also have to get an event display working correctly for debugging...

3) Output of Piyush's task 2- insert models into DDML

4) Validation

5) For production: (Fast Sim and Full Sim together)- incorporate custom sensitive detector