Workshop Overview and Goals

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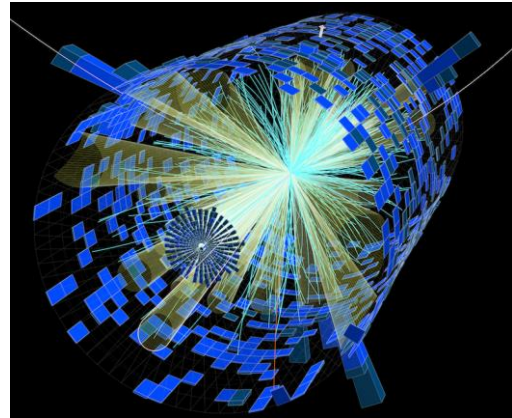
Institute for Research and Innovation in Software for HEP (IRIS-HEP)

Computational and Data Science Challenges of the High Luminosity Large Hadron Collider (HL-LHC) and other HEP experiments in the 2020s

- The HL-LHC will produce exabytes of science data per year, with increased complexity — 200 overlapping proton-proton collisions on average per event — as compared to the LHC

- During the HL-LHC era, the ATLAS and CMS experiments will record ~10 times as much data from ~100 times as many collisions (and at twice the *pp* collision energy) as was used to discover the Higgs boson.
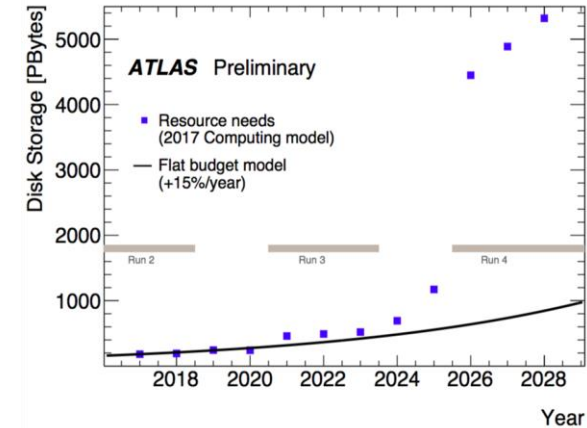
IRIS-HEP resulted from a 2-year community-wide effort involving 18 workshops and 8 position papers, most notably a Community White Paper and Strategic Plan. IRIS-HEP started in Sept 2018.

Blueprint Activity and Process

- The ***Blueprint activity*** is used to
  - inform development and evolution of the IRIS-HEP **strategic vision**
  - build (or strengthen) **partnerships among communities** driven by innovation in software and computing

- A series of workshops that bring together IRIS-HEP team members, key stakeholders and domain experts from disciplines of importance to the Institute's mission
  - *Topical presentations* and *discussion sessions*

- Discussions are captured and inform key outcomes which are summarized in a short report made publicly available

Some Recent Blueprint Workshops

- Analysis Systems R&D on Scalable Platforms

- Fast Machine Learning & Inference

- A Coordinated Ecosystem for HL-LHC Computing R&D

- Software Training

- Sustainable Software in HEP

- Future Analysis Systems and Facilities

This Workshop

- The goal of this workshop is to bring together experts to share their experiences, on-going work and plans in area of **portable inference,** seeking to maintain momentum from the **Fast Machine Learning for Science** workshop this week.

- The workshop is meant to be an informal technical interchange and split 50/50 between short presentations and discussions.

- During the discussion block, we would like to develop a short document which identifies common challenges around portable inference for co-processing applications (e.g. High-level Trigger, analysis) and points of future collaboration.