



# Institute for Research and Innovation in Software for High Energy Physics (IRIS-HEP)

Computational and data science research to enable discoveries in fundamental physics

IRIS-HEP is a software institute funded by the National Science Foundation. It aims to develop the state-of-the-art software cyberinfrastructure required for the challenges of data intensive scientific research at the High Luminosity Large Hadron Collider (HL-LHC) at CERN, and other planned HEP experiments of the 2020's. These facilities are discovery machines which aim to understand the fundamental building blocks of nature and their interactions. [Full Overview](#)

The IRIS-HEP project was funded on 1 September, 2018.

G. Watts, IRIS-HEP Steering Board Meeting #20





# IRIS-HEP Steering Board Meeting #20

G. Watts

For the IRIS-HEP Executive Board

2024-01-16

“The IRIS-HEP Steering Board represents the Institute’s stakeholders to provide, to the Executive Board, the stakeholder’s input on the priorities, execution, and strategy of the Institute.”



# Thank You

Liz Sexton-Kennedy (CERN)  
CMS

---

Paolo Calafiura (LBL)  
US ATLAS Ops Program

---

Simone Campana (CERN)  
WLCG

---

David South (DESY)  
ATLAS

Tulika Bose (U Wisconsin)  
US CMS Ops Program

---

Patrick Koppenburg (NIKHEF)  
LHCb

---

Graeme Stewart (CERN)  
HSF

---

Ken Herner (FNAL)  
The OSG Council



# Welcome

[steering-board@iris-hep.org](mailto:steering-board@iris-hep.org)

(you)

[exec-board@iris-hep.org](mailto:exec-board@iris-hep.org)

(us)



# Next Meeting Dates

July 2, 2024

Oct 1, 2024

Jan 14, 2025



# Innovative Algorithm Leadership



David Lange (Princeton)  
(continuing)



Louis-Guillaume Gagnon (Berkeley)  
Welcome!!



Heather Gray (UC Berkeley)  
Many thanks for the last 6 years!



# The Analysis Facilities Conversation

From SB#19

Since last time we met...

- The HSF White Paper on Analysis Facilities has been released
  - Archive: [2404.02100](#)
- LHCC has asked the LHC experiments to help it build a *blueprint* for Analysis Facilities
  - Step 1: Build a list of questions, to be curated by the WLCG/LHCC
  - Step 2: Answer the questions
- The [WLCG/HSF workshop May 13-24](#)
  - Question input for LHCC due
  - Thursday afternoon is devoted to Analysis Facility Discussion

Analysis Facilities

Great deal of interest in the field

- Experiments have discussed the topic extensively internally
- Experiments have various R&D efforts
- HSF has a forum and produced a white paper
- IRIS-HEP has R&D activities based around AFs ([coffee](#), [casa](#), for example)

*But for all this activity we have not really found a way to work together as a community*

G. Watts, IRIS-HEP Steering Board Meeting #20

Open Questions

Moving into "Phase 2"

- Do we want a community?
- Who should be in that community?
- What is the goal and role of the community we build?
- Where should we pull the leaders from?

Today: Discover some way forward we are all interested in making work.

If some meetings are required, we have funds to make them happen.

For example:

- Bringing physicists and computing experts together to decide on what a benchmark HL-LHC analysis.
- Bringing a group together to build consensus on a white paper for future R&D.
- Supplement an HSF AF meeting.

G. Watts, IRIS-HEP Steering Board Meeting #20



# Community Involvement

## We are running...

### Full Team Retreat

- Seattle
- September 4-6
- All SB members are invited

### US LHC/IRIS-HEP Summer Meeting Training

- US CMS/IRIS-HEP, Princeton, 21-22 June
- US ATLAS/IRIS-HEP, Seattle, 18-19 July

### CODAS-HEP Training Event

- Application period closed
- Princeton, July 22-26
- Had 77 applicants this year!

## We are co-sponsoring...

### PyHEP.dev

- Aachen
- Aug 26-30

### MODE Workshop

- Valencia
- Sept 23-25

## Recent Highlights...

### Joint k8s hackathon

- Chicago
- April 24-26

### Workflow languages for HEP

- CERN
- Apr 3-5

### Also

- ACAT 2024
- Training on Analysis Pipelines
- pyhf Workshop
- AGC Demo Day 1, 2, 3





# A few other things

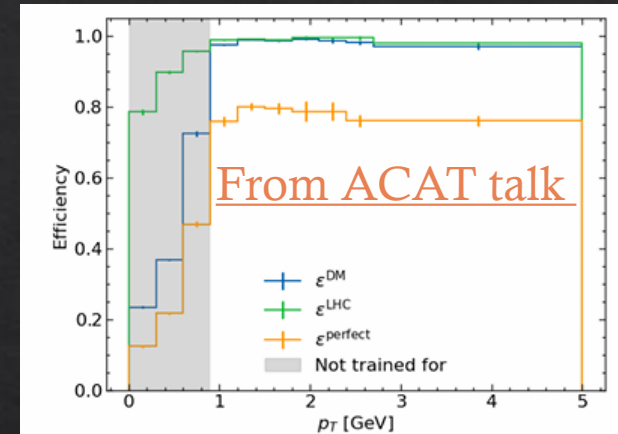
## GNN Tracking: High Pileup Particle Tracking

Awkward Array and Uproot are now part of the Scientific Python's Package Index

- Recognition outside of HEP
- Several talks and tutorials will be given on tools from IRIS-HEP at the SciPy (Scientific Python) conference in Tacoma in July.

### Fellows and More:

- We now have a small post-bac program running at CERN (5 students)
- We are matching Summer 2024 fellows to projects
- HSF-India is another source of fellows, post-bacs, and sponsorship of s1-3 month research visits



(tracks emerge as clusters in latent space)

### IMPRESS-U Funding

- Collaboration/funding for Ukraine, Lithuania, Poland
- Continuing with [QuarkNet](#) collaboration to offer additional training



# Today

## DOMA

- Recent News
- 200 Gbps Challenge

Please use the google doc linked to the agenda to add comments or make any notes you want us to track!

### IRIS-HEP Steering Board Meeting #20

Tuesday 30 Apr 2024, 18:00 → 19:30 Europe/Zurich

Zoom

**Description** [Live Minutes Can Be Found Here](#). Please Help Out!  
Zoom link distributed by email

<b>18:00</b>	→ 18:20	<b>Introduction</b>	🕒 20m	✎
<b>Speakers:</b> Brian Paul Bockelman (University of Wisconsin Madison (US)), Gordon Watts (University of Washington (US)), Peter Elmer (Princeton University (US))				
<b>18:20</b>	→ 18:40	<b>200 Gbps Challenge</b>	🕒 20m	✎
<b>Speaker:</b> Brian Paul Bockelman (University of Wisconsin Madison (US))				
<b>19:10</b>	→ 19:30	<b>Discussion</b>	🕒 20m	✎



# Questions & Comments?

