Happy Birthday - it's been 10 years 👏 !

- We did a great deal at the strategic level, which paid off

- We did practical things as well - it's rewarding work

HSF

HEP Software Foundation

HSF: Summary and next steps

Eduardo Rodrigues, for the HSF Steering Group

WLCG-HSF Workshop 2024, 13-17 May, DESY, Hamburg

HSF reorganisation proposal

HSF Coordination Team
_____

HSF CCT

HSF Working Group and Activity convenors

Chair: CT member rotation*

Function: Coordination of HSF working groups and activities

*There is no standing chair for the HSF Coordination Team meetings which are focused on running the day to day work of the HSF

HSF Core Coordination Team
_____

Chair: elected by CCT

Function: Decision-making body responsible for HSF strategy

HSF

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HSF Advisory Group
_____

HSF-engaged community representatives

HSF CCT Chair + Secretary

Chair: elected by AG

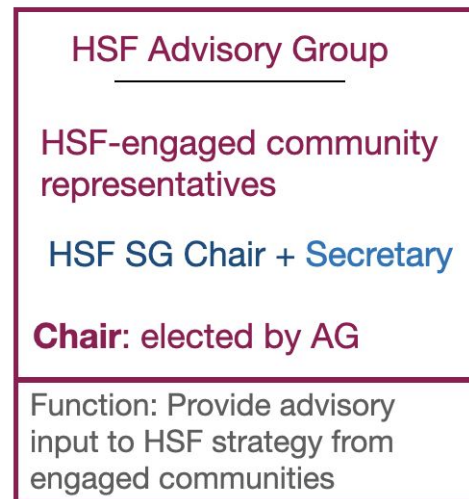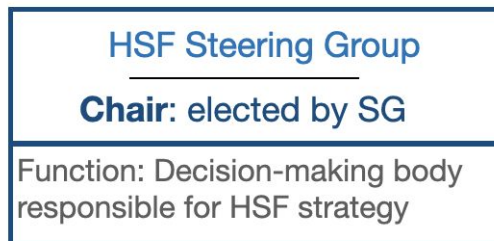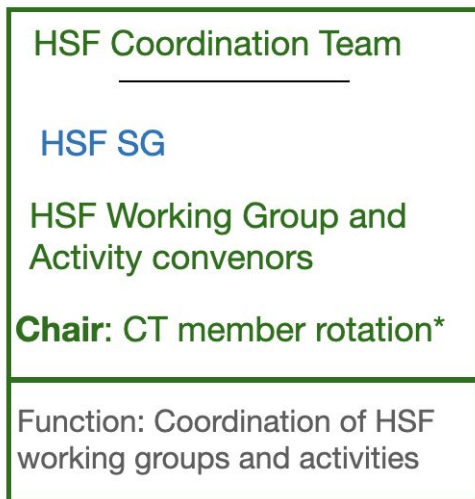Function: Provide advisory input to HSF strategy from engaged communities

A selection of comments (paraphrased)

- "Core coordination team" and "coordination team" is a bit confusing, why don't you call the decision-making group the "**HSF Steering Group**" ?
  - Good idea !
- Should the Steering Group (!) members have term limits?
  - Good idea ! Long-term stability is a priority, but we also want new ideas. We'll discuss this.

If you would like to become a member of the Steering Group, please get in touch!

- Judging from the feedback, introducing an **Advisory Group** seemed to be accepted to be a good, possibly overdue idea, we should set this up quickly!

HSF reorganisation proposal update

HSF Coordination Team
_____

HSF SG

HSF Working Group and Activity convenors

Chair: CT member rotation*

Function: Coordination of HSF working groups and activities

*There is no standing chair for the HSF Coordination Team meetings which are focused on running the day to day work of the HSF

HSF Steering Group
_____

Chair: elected by SG

Function: Decision-making body responsible for HSF strategy

HSF Advisory Group
_____

HSF-engaged community representatives

HSF SG Chair + Secretary

Chair: elected by AG

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Working Groups and Activities - current situation

- Data Analysis
- Detector Simulation
- ~~Frameworks~~
- Physics Generators
- JuliaHEP - Julia in HEP
- PyHEP - Python in HEP
- Reconstruction and Software Triggers
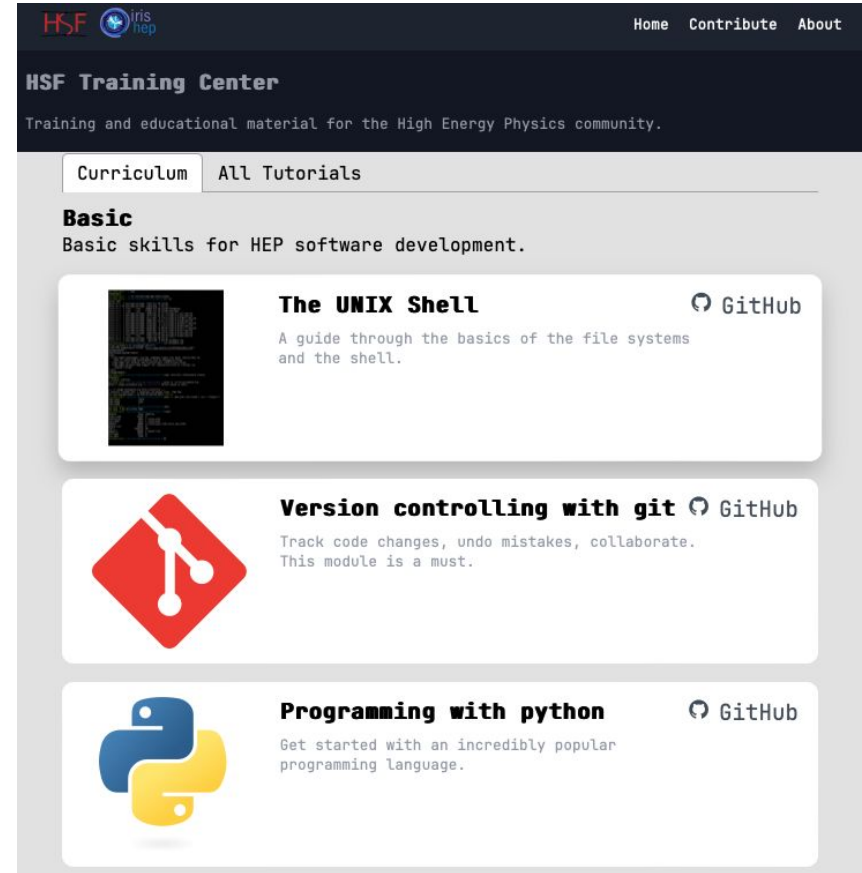- Software Developer Tools and Packaging
- HSF Training

- Analysis Facilities Forum
- Conditions Databases
- Differentiable Computing
- Season of Docs
- Google Summer of Code
- intelligent Data Delivery Service
- Licensing
- Reviews
- Visualisation

HSF Training

- HSF Training working group has now trained more than 2000 students in its various courses
  - Huge thanks to all of those involved - from HSF, IRIS-HEP, ROOT, CERN, Fermilab, …
- Lots of material developed and curated
  - Broadening involvement of younger colleagues in delivering and tutoring the material
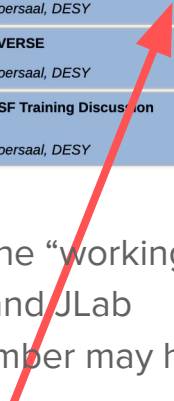
~~Training session~~ at this workshop!

New HSF Training Centre Page!

A selection of comments (paraphrased)

- "Are these really working groups?", "Please, no more meetings!",

  "If you organised a regular (monthly?), well curated seminar series, I would make time for that"
  - Good idea ! A seminar series could be a good replacement for several of the "working groups"
    - c.f. the Software and Computing Roundtable co-organised with BNL and JLab
    - We also find it difficult to find new convenors, hence reducing the number may help
  - Equally, we can all agree that the HSF Training WG is doing fantastic **work**
  - Also, the "activities" are mostly self-organised, which seemed uncontroversial
- Take-away - we should revisit the working groups and activities, including what we call these groups
  - Related, <u>recognition is a priority</u>, mentioned several times in the Training WG session

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From Liz's talk

HSF Projects

How does the project get recognised?

- List of HSF (affiliated) projects hosted in dedicated web area
- All HSF (affiliated projects) have to commit to software sustainability practices
- Propose GitHub badges depending on maturity, community support and update, engagement and implementation of software sustainability practices
    - Bronze: young effort, evolving from few (1 collaboration) users to more, commitment / striving to meet sustainability practices
    - Silver: more mature effort, strong community support, guaranteed maintenance in the medium term, high standards of software sustainability
    - Gold: adopted by several collaborations and/or experiments, strong long-term support from developers and community, highest software sustainability standards
- Annual Project Awards

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Feedback from Projects

- Let's re-emphasise that projects retain all their organisation and control
  - The HSF is giving **recognition** to the role and potential of the project as in our HEP ecosystem
  - The aim is to ***help the project*** and ***help our community*** find and nurture great software
- Cautiously positive response from a few projects
  - Yes, it would be useful to get this recognition
  - Better known projects might not need this, but they lend credibility to the whole process if they participate
- Take-away
  - We should develop the idea and the criteria for qualification
  - Meanwhile we are very happy if some early-adopter projects who like the idea can work with us to hammer out details

Meanwhile in Community Software Land...
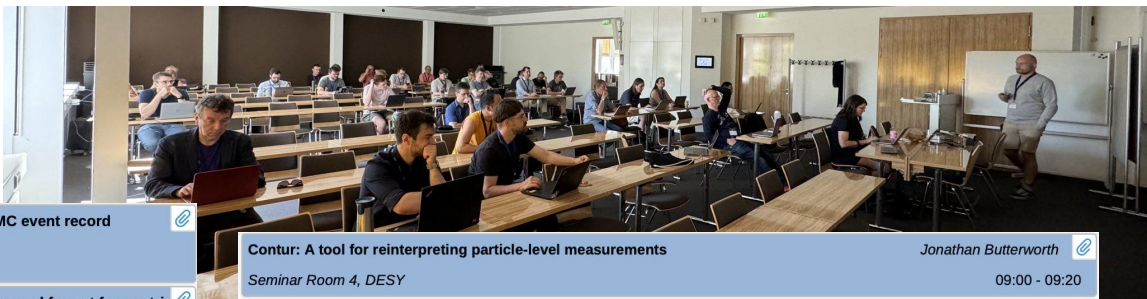
The ROOT Project: Status and Future Directions
Danilo Piparo

The Scikit-HEP project - overview and future
Eduardo Rodrigues

Seminar Room 4, DESY   09:25 - 09:50

Key4hep - The common software stack for future experiments
Thomas Madlener

Seminar Room 4, DESY   09:50 - 10:25

The HSF-India Project   *David Lange*

Seminar Room 4, DESY   11:15 - 11:35

User analysis software in a large collaboration (xAODAna...
Tobias Fitschen

Pythia8 status and future developments   *Leif Lönnblad*

Seminar Room 4, DESY   11:55 - 12:20

The Phoenix Event Display   *Edward Moyse*

Seminar Room 4, DESY   12:20 - 12:40

Recent developments in the HepMC event record
Andrii Verbytskyi

NuHepMC: A standardized event record format for neutrin... event generators
Dr Luke Pickering

Seminar Room 4, DESY   16:20 - 16:40

The HSF Conditions Database   *Lino Oscar Gerlach*

Seminar Room 4, DESY   16:40 - 17:00

The Gaussino core simulation software   *Adam Morris*

*Sem...

Development Status of RNtuple, the future HEP Columnar Storage Software Technology   *Danilo Piparo*

Hoersaal, DESY   11:15 - 11:35

BALER: Bespoke data compression using autoencoders   *James Smith*

Hoersaal, DESY   11:35 - 11:55

Analysis Grand Challenge benchmarking tests on selected sites   *David Martin Koch*

Hoersaal, DESY   11:55 - 12:15

Cloud Data Lake Technologies   *Benjamin Galewsky*

Hoersaal, DESY

Contur: A tool for reinterpreting particle-level measurements   *Jonathan Butterworth*

Seminar Room 4, DESY   09:00 - 09:20

Constructing model-agnostic likelihoods, a method for the reinterpretation of particle physics results   *Lorenz Gärtner*

Seminar Room 4, DESY   09:20 - 09:40

Model fitting in Python with zfit and Scikit-HEP   *Jonas Eschle*

Seminar Room 4, DESY   09:40 - 10:00

NUISANCE <3 HEPData: Automated Neutrino Scattering Comparisons   *Patrick Stowell et al.*

Seminar Room 4, DESY   10:00 - 10:20

Accelerating Monte Carlo event generator analysis using efficient scalable data handling   *Christian Gutschow*

Seminar Room 4, DESY   11:15 - 11:35

Portable event generation on GPU-accelerated hardware   *Max Knobbe*

Seminar Room 4, DESY   11:35 - 11:55

Experiences on the software performance of LHCb's first level software trigger   *Arthur Hennequin*

Seminar Room 4, DESY   11:55 - 12:15

Traccc: Track Reconstruction on GPU in ACTS   *Attila Krasznahorkay*

Seminar Room 4, DESY   12:15 - 12:35

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We had a great set of sessions with many **interesting presentations** and **lively discussions**

Let's not forget this is the real core business of the HSF, so **many thanks to all speakers and participants!**

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