Training WG update

Sudhir Malik (Univ. of Puerto Rico Mayaguez)
Dario Menasce (INFN Milano)

The major role of the Software Sustainability Core (SSC) will run workshops and training events for the community covering a broad range of topics on computing skills necessary to be a proficient particle experimentalist.
HOW2019 Workshop
HSF parallel: Education and Training

11:00 → 12:30

**HSF parallel: Education and Training**

**Convener:** Sudhir Malik (University of Puerto Rico (PR))

- **11:00**
  - **Starter-Kit training program**
    - Speaker: Albert Puig Navarro (Universität Zürich (CH))
    - Starterkit.pdf
  - **HSF Training survey**
    - Speaker: David Lange (Princeton University (US))
    - training_how2019.pdf
  - **First-HEP training program**
    - Speaker: Sudhir Malik (University of Puerto Rico (PR))
    - FIRST-HEP-JLAB-H...
  - **Software and Computing Training at Jefferson Lab**
    - Speaker: Ole Hansen (Jefferson Lab)
    - Hansen-Training-JL...

- **12:00**
  - Discussion items

**ARC (JLab)**
StarterKit -(LHCb/ALICE) Re-engage with Carpentries to adapt the material for HEP users

Financial support and career recognition needs to be addressed at the funding agency

HSF Training Survey  - People do seem to like to learn from written material, invest in suitable C++ material

First-HEP training program  - is about developing sustaining and scalable training, not specific pieces of material, need to also emphasize on Careers too, especially giving students appropriate and transferable skills (90% will leave the field)

Software and Computing Training at Jefferson Lab  - initial training would be a good way to establish a baseline, complex tools like RooFit get picked up by students, but without a full understanding, so easy to make mistakes

https://docs.google.com/document/d/1FQNHHVvDOlc7bNYaYBxEPUFWOZmqDWQdk4Jnr2XIWmY/edit#
Near Term Plan Update

- Build starting point for newcomers to HEP
- Start introductory level Carpentry
  - Build Assemble an introductory HEP curriculum
  - Plan in works to organize introductory level Carpentry (scale it) at the LPC, Fermilab in March
  - Target audience - CMS/ATLAS to begin
  - Invite LHCb/ALICE to showcase Starterkit
  - Survey in preparation to assess training needs - now survey is done, > 350 responses, will summarize and present later
- Website (on HSF website in works listing training schools)
We are very excited to announce the Software Carpentry Workshop at Fermilab. Our experiment-specific and advanced software trainings has shown that participants' knowledge of basic software skills can be quite variable, depending on their particular background. Some have basic skills from university courses or self-training, but holes are very common. This has the potential to hinder the ability to profit from the advanced trainings being offered. In offering the workshop, we hope to establish and provide a uniform set of basic skills for all HEP graduate students and postdocs, thereby broadening participation from institutions lacking such courses.

The topics will cover Python, Python plotting, access physics data in Python with Py:lab, as well as manipulating irregular data as jagged arrays.

**NOTE:** The registration is strictly limited to 25 on first come first serve basis. There will be a waitlist of 5 in case a spot opens up. To be waitlisted, send email to Sudhir Malik (malik@fnal.gov).

**NOTE:** Coffee/cookies will be served. Lunch is on your own.

**Tutors:**
- David Yakobovitch - Enterprise Data Scientist at Galvanize, AI Instructor
- Will Trimble - bioinformatician, based at ANL
- Jim Pivarski - Physicist, Princeton University

**Organisers:**
- Sudhir Malik (University of Puerto Rico Mayaguez)
- Peter Elmer (Princeton University)
- Ian Cosden (Princeton University)

**Local Organiser:**
- Scarlet Norberg (UPRM)

**Group Photo:**
Machine Learning Workshop/Hackathon
24 - 26 Apr 2019, UPRM, Puerto Rico

Overview
Timetable
Contribution List
Registration
Participant List

Contact

Physics Department is organizing the very first Machine Learning Hackathon on 24-26 April, 2019. Machine learning is a method of data analysis that automates analytical model building. It is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns and make decisions with minimal human intervention. While many machine learning algorithms have been around for a long time, the ability to automatically apply complex mathematical calculations to big data repeatedly and ever faster is a recent development. Learning these skills will make it possible to quickly and automatically produce models that can analyze bigger, more complex data and deliver faster, more accurate results. ML techniques encompass all STEM fields. It is very essential that UPRM students learn these tools early on to make good careers in future. The agenda includes talks by UPRM researchers and faculties from Mathematics, Physics and CS&E departments. The topics will cover Statistics, ML techniques and used cases in UPRM research. The main guest will be Dr. Sergei Gleyzer, who is a physicist from University of Florida and expert and convener of ML group at CMS Experiment. The participants will be students from UPRM and will be given challenging problem to solve during Hackathon.

Registration is limited to 25 participants and deadline is 20 April, 2019

Starts 24 Apr 2019, 09:00
Ends 26 Apr 2019, 16:00
UPRM, Mayaguez, Puerto Rico
Eugene Francis Hall

Participants + 1 tutors
9 speakers - Computer Science + Engineering + Physics + Math
Schools for HSF Training
https://hepsoftwarefoundation.org/Schools/events.html

Schools for HSF Training

Upcoming Training Schools

*Warning: Application deadlines are before the date shown*

1. 11 May - 26 May 2019 - Summer School on Intelligent Signal Processing for Frontier Physics and Industry
2. 27 May - 4 Jun 2019 - Joint 9th IDPASC SCHOOL and XXXI INTERNATIONAL SEMINAR of NUCLEAR and SUBNUCLEAR PHYSICS "Francesco Romano"
3. 2 Jun - 7 Jun 2019 - INFN School of Statistics
5. 16 Jul - 26 Jul 2019 - 2019 CTEQ Summer School University of Pittsburgh, USA
7. 28 Aug - 6 Sep 2019 - 14th CERN-Fermilab Hadron Collider Physics Summer School
8. 4 Sep - 7 Sep 2019 - 2019 CERN-JINR European School of HEP
9. 15 Sep - 28 Sep 2019 - CERN School of Computing

Past Schools

1. 25 Mar - 25 Mar 2019 - Nvidia Workshop
2. 13 Mar - 26 Mar 2019 - Latin American School
3. 4 Mar - 7 Mar 2019 - Inverted CERN School of Computing
4. 12 Sep - 25 Sep 2018 - AEPSHEP (Asia-Europe-Pacific School of High-Energy Physics)
First-HEP/ATLAS Training

- August 19-23 and it is being held at Lawrence Berkeley National Lab
- Computing "bootcamp" in the context of US-ATLAS and "mashup" with First-HEP
JLAB interest in training

- Work with IRIS-HEP/OSG on training, particularly leveraging the carpentries in a way that is well suited for a physics community
- Staff members interested in expanding training opportunities for staff and users and train a couple to serve as instructors
IRIS-HEP/FIRST-HEP training activities meeting

Peter Elmer sent an email to sign up for doodle poll

https://doodle.com/poll/qq2i3wsun54micqc
Related Links/Info

  ▶ General public announcement mailing list for IRIS-HEP events, talks, meetings, workshops, opportunities for training and job opportunities (subscribe to)
    ▶ announcements@iris-hep.org

▶ HSF (HEP Software foundation) - [https://hepsoftwarefoundation.org](https://hepsoftwarefoundation.org)
  ▶ General Information about HSF (subscribe to): hsf-forum@googlegroups.com
  ▶ Discussions and activities in the HEP Software Foundation mailing lists can be found here (General and Dedicated Forums): [https://hepsoftwarefoundation.org/forums.html](https://hepsoftwarefoundation.org/forums.html)
  ▶ You can contribute [https://hepsoftwarefoundation.org/cwp/cwp-working-groups.html](https://hepsoftwarefoundation.org/cwp/cwp-working-groups.html)
  ▶ HSF Events/Workshops - [https://hepsoftwarefoundation.org/events.html](https://hepsoftwarefoundation.org/events.html)

▶ FIRST-HEP website [http://first-hep.org](http://first-hep.org)
  ▶ Funding for participants and lecturer support for Training