

# Software Carpentry Workshop: Software + HEP Software Fundamentals

Jul 13 - 15, 2022

## Instructors:

- Rayna Harris
- Rayvn Manuel
- Alexander Moreno Briceño
- Aman Goel
- Guillermo Antonio Fidalgo Rodriguez

## Mentors:

- Mason Profit

## Local organising committee:

- Sudhir Malik
- Michel Villanueva
- Wouter Deconinck
- Kilian Lieret



THE  
CARPENTRIES



**If you aren't recording this on Zoom,  
start the recording ...  
(just a reminder)**

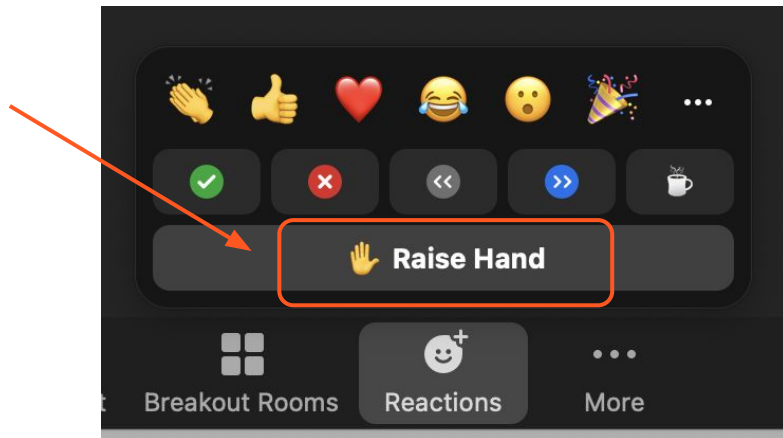
# Everyone is Welcome

- You are physicists working in international collaborations. All of you should know this page:
  - [The CERN code of conduct](#)
- Built on a set of core CERN values →
- Taken together, provide the basis for respect: respect for others, respect for the organization and respect for its mission.
- We encourage a culture of openness where all contributors feel free to engage in the discussion.



# We are here to help!

- Please “raise your hand” (in reactions at the bottom of your Zoom client) if you have questions.
- You can also ask in the Zoom chat or Slack.



***There is no such thing  
as a “stupid question”!***

# You should have done this already...

**[0]** Fill out the pre-training surveys! - It will take 10 minutes.

Links on [Indico](#) (login required!):

HEP Pre-Workshop  
Survey



This one.

Carpentries Pre-  
Workshop Survey  
(External)



And this  
one.

**[1]** Join the Slack channel: [invite](#)

If you have troubles to join, let us know now.



# Rayna Michelle Harris

Postdoctoral Scholar  
University of California at Davis  
[rmharris@ucdavis.edu](mailto:rmharris@ucdavis.edu)

## My research:

The influence of genes on disease and behavior

## My expertise is:

Cell and Molecular Biology

## A problem I'm grappling with:

Auto-compiling information about genes from many sources and displaying that information on gene-specific webpages

## I've got my eyes on:

Camping at the lake

## I want to know more about:

Affordable housing





# Rayvn Manuel

*Sr. Application Developer | DevOps Engineer  
Smithsonian Institution - National Museum of African  
American History and Culture*

## **My research:**

Enabling accessibility features for in-gallery  
interactives which accommodate neurodiverse  
visitors

## **My expertise is:**

Web Application Design and Development

## **A problem I'm grappling with:**

Implementing an application programming  
interface which surfaces metadata and content  
for public consumption

## **I've got my eyes on:**

Designing a costume for upcoming Renaissance  
Fairs

## **I want to know more about:**

Costume design and construction





# Alexander Moreno Briceño

Assistant Professor  
Universidad Antonio Nariño  
[alexander.moreno@uan.edu.co](mailto:alexander.moreno@uan.edu.co)

## My research:

Top quark physics at present and future colliders, in particular top quark spin correlations and top quark production and decay in association with DM.

## My expertise is:

Theoretical and computational calculations in HEP

## A problem I'm grappling with:

Machine learning and quantum machine learning in HEP

## I've got my eyes on:

My little baby boy

## I want to know more about:

The Universe, and specially how to manage my time to know more about the Universe





# Aman Goel

Recent Graduate in Computer Science & Math  
University of Delhi  
[aman.goel185@gmail.com](mailto:aman.goel185@gmail.com)

## My research:

Research and Development of Analysis Systems tools  
such as *Hist* and *uproot-browser* for High Energy Physics



## My expertise is:

Using Python for Research Computing and  
Software Development Life Cycle

## A problem I'm grappling with:

Arch Linux and developing pure Python code  
with minimal dependencies

## I've got my eyes on:

A book I have been meaning to read. And  
cheese.

## I want to know more about:

Astronomy and Sustainable Development



# Guillermo Fidalgo Rodríguez

*Masters Student in Physics*  
*University of Puerto Rico - Mayagüez*  
[gfidalgo@cern.ch](mailto:gfidalgo@cern.ch)

## My research:

Analysis on Exotic Physics: Emerging Jets.  
I do Machine Learning for DQM Studies for the CMS Tracker.

## My expertise is:

Using python for ML Studies

## A problem I'm grappling with:

Designing a new HLT Trigger for analysis

## I've got my eyes on:

A Framework laptop for replacing my old pc.

## I want to know more about:

C++, Arduino

How to efficiently teach a dog new tricks

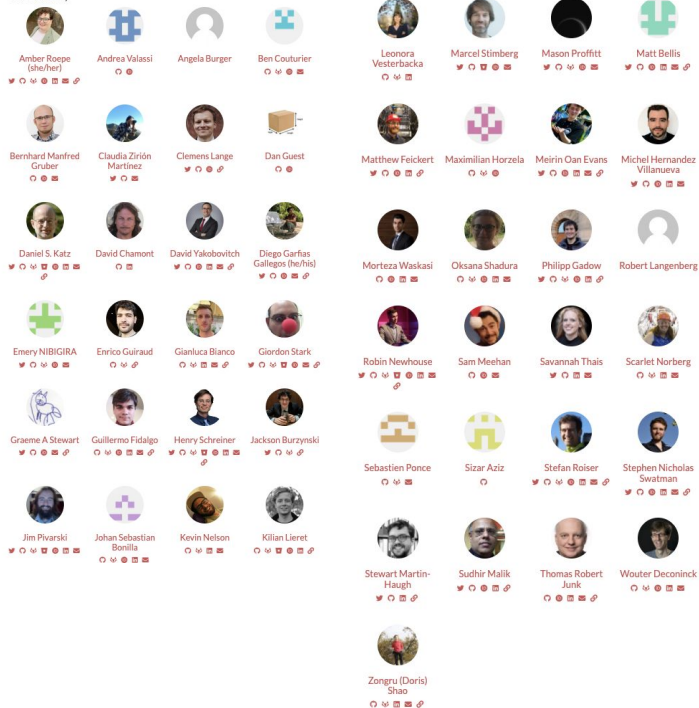


# HSF Educator/Mentor community

<https://hepsoftwarefoundation.org/training/educators.html>

Here is the list of HSF members for a special thank you for everyone who made our workshops possible.

## Our community



- **Become expert**
  - In 1 or more topics
- **Join our community**
- **Become training Educator**
  - a mentor, facilitator, instructor

**Group picture!**