

## **Session Program**

**28 May 2024 to 2 August 2024**

# **USCMS Undergraduate Summer Internship 2024**

## ***Morning***

WH11NW, Pileup

## Tuesday 28 May

07:30

### Morning: Morning Session

07:30-08:00

**Start at 7:30 AM from Hyatt for FNAL for Badging at Fermilab Aspen East**

08:00-09:30

**Badging at Aspen East (8:00 AM - 9:30 AM)**

09:30-10:00

**Shuttle/Transport from Aspen East to Wilson Hall**

10:00-10:20

**Welcome****Speakers**

Santanu Banerjee, Sudhir Malik, Tulika Bose

10:20-10:50

**Introductions (Slide Deck) - Interns and Mentors**

10:50-12:00

**Cohort building session****Speaker**

Matthew Bellis

12:00

## Wednesday 29 May

09:00

12:00

### Morning: Morning Session

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

### The UNIX Shell: A guide through the basics of the file systems and the shell

#### Speaker

Mitanshu Thakore

## Thursday 30 May

09:00

12:00

### Morning: Morning Session

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

**Git I - In this lesson we use Git from the Unix Shell**

**Speaker**

Guillermo Antonio Fidalgo Rodriguez

## Friday 31 May

09:00

12:00

### Morning: Morning Session

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

#### Introduction to Python

**Speaker**

Bruno Moreira Coimbra

# Monday 3 June

09:00  
12:00

**Morning: Morning**  
**Session** | **Location:** WH11NW, Pileup

09:00-12:00

**Python for HEP**  
**Speaker**  
Roy Cruz Candelaria

## Tuesday 4 June

09:00

12:00

### Morning

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

### PyROOT and RDataFrame

**Speaker**

Xiaohe Shen

## Wednesday 5 June

09:00

12:00

### Morning

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

### Machine Learning

#### Speakers

Dr Caixia Chen, Mitanshu Thakore



## Thursday 6 June

09:00

### Morning

**Session** | **Location:** WH11NW, Pileup

09:00–11:00

**C++****Speaker**

Roy Cruz Candelaria

11:00–12:05

**Tour of Sidet (Silcon Detector Facility)****Speaker**

Jennet Elizabeth Dickinson

14:00

## Friday 7 June

09:00

12:00

### Morning

**Session** | **Location:** WH11NW, Pileup

09:00–12:00

**Coding Dojo**

# Thursday 1 August

09:00

**Morning: Interns' Final Presentations (20 min talk + 10 min Q&A) - Reviewers : Sridhara Dasu (University of Wisconsin), Daniel Diaz (UCSD), Abdollah Mohammadi (University of Wisconsin - Madison), Chris Neu (University of Virginia)**

**Session | Location:** WH11NW, Pileup | **Conveners:** Abdollah Mohammadi, Daniel Diaz, Christopher Neu, Sridhara Dasu

09:00-09:30 **Talk 1 - Rucio Rebalancer**

**Speaker**

Chinyemba Kalenga

09:30-10:00

**Talk 2 - Development of a Cosmic Ray Trigger for Quality Control of HGAL Scintillator Tile-Modules**

**Speaker**

Danielle Nunez

10:00-10:30

**Talk 3 - DAQ Upgrade of Step 3 in Quality Control Procedure for CMS GEM Chambers**

**Speaker**

Liz Mirra de Carvalho Rachid

10:30-11:00

**Talk 4 - Investigating the production of top quark together with W boson and a Z boson (the tWZ process)**

**Speaker**

Tsion Dessalegn

11:00-11:30

**Talk 5 - Calibrating Neutrino Detection and W Boson Mass Measurements**

**Speaker**

Raven Lee

11:30-12:00 **Talk 6 - Improvements to the Tracer Log Viewer**

**Speaker**

Richard Kasongo

12:00

## Friday 2 August

09:00

**Morning: Interns Final Presentations (20 min talk + 10 min Q&A) - Reviewers: I-see Jaidee (Wellesley College), Ken Bloom (University of Nebraska - Lincoln), Oz Amram (Fermilab), Georgios Krintiras (University of Kansas), Richa Sharma (UPRM)**

**Session** | **Location:** WH11NW, Pileup

09:00–09:30

**Talk 13 - Implementing CMS Open Data from 2016 into the AGC Coffea workbook**

**Speaker**

Jordan Vickers

09:30–10:00

**Talk 14 - Measuring Properties of Exotic Charged Particles at the L1 Trigger of CMS**

**Speaker**

Luis Felipe Domingues

10:00–10:30

**Talk 15 - HGCal Project: ECONT and ECOND Testing**

**Speaker**

Cassandra Saxon

10:30–11:00

**Talk 16 - Vector Like Quarks search set-up + Lego ParticleFlow**

**Speaker**

Camila Pazmino Izquierdo

11:00–11:30

**Talk 17 - Dark QCD: Dark Matter in Semi-visible Jet**

**Speaker**

Jakia Choudhury

11:30–12:00

**Talk 18 - Building a Computer Board Visual Inspection Pipeline**

**Speaker**

Fredrick White

12:00