

# PhD Induction at RAL

Rutherford Appleton Laboratory

Emmanuel Olaiya

25<sup>th</sup> Oct 2023

Welcome to RAL!

Have you check out of Ridgeway  
House?

# Outline

- What is today about?
- RAL
- PPD
- Communications
- Computing infrastructure
- Graduate lectures
- Today's agenda

# What is today about

- Help you feel being a part of RAL
- Get you set up at RAL
  - Admin
  - Site passes
  - Email accounts
  - Computer accounts
  - Familiarise yourself with the department

# RAL



Diamond light source

SCD

PPD

Technology

ISIS

# Particle Physics Department

- Probably the Physics Department in the UK involved with the most number of particle physics experiments
  - Neutrino experiments
    - Hyper-Kamiokande
    - T2k
  - Dark Matter experiments
    - LUX/LZ detectors
    - MIGDAL
    - Darkside-20k
  - LHC experiments
    - ATLAS
    - CMS
    - LHCb
  - Future experiments
    - DUNE
    - EIC
    - LhARA
    - Muon Collider
    - nuSTORM
  - Past Collaborations
    - BaBar
    - MICE

# Email

- Please use (read) your RAL email accounts
  - Email is the main source of communication within the department
    - Department announcements etc.
  - You will need your email and password to login to lots of PPD private pages
  - Log into email via a web browser login via
    - [outlook.office365.com](http://outlook.office365.com)



# Email

- Use a client like Thunderbird to access email. Here are the client settings

## Incoming mail server

### Server Settings

Server Type: IMAP Mail Server

Server Name:  Port:  Default: 993

User Name:

### Security Settings

Connection security:

Authentication method:

### Server Settings

Check for new messages at startup

Check for new messages every  minutes

Allow immediate server notifications when new messages arrive

When I delete a message:

## Outgoing mail server

### Details of selected server:

Description: <not specified>  
Server Name: authbox.cclrc.ac.uk  
Port: 587  
User Name:   
Authentication method: Normal password  
Connection Security: STARTTLS

# Computing

- Within the PPD group you have access to powerful computing resources
- Powerful front end machines for hacking and debugging
- Access to a computing farm with thousands of CPUs
  - Hosted across the road in SCD
- Significant SSD disk for storage and fast data access
- Power GPUs for coding and Machine Learning

```
[olaiya@mercury008 ~]$ freegpu
Machine          StartJobs TotalGPUs GPUs DetectedCPUs CPUs GPUs_DeviceName
hepacc03.pp.rl.ac.uk true        4         4    40           40  Tesla P100-SXM2-16GB
hepacc04.pp.rl.ac.uk true        2         2    48           48  NVIDIA TITAN RTX
hepacc05.pp.rl.ac.uk true        2         2    48           48  NVIDIA TITAN RTX
hepacc06.pp.rl.ac.uk true        2         2    48           48  NVIDIA TITAN RTX
hepacc09.pp.rl.ac.uk true        1         1    80           80  NVIDIA A100-PCIE-40GB
hepacc13.pp.rl.ac.uk true        2         2    96           96  gfx90a:sramecc+:xnack-
hepacc14.pp.rl.ac.uk true        2         2    96           96  NVIDIA A100 80GB PCIe
hepacc15.pp.rl.ac.uk true        2         2    96           96  NVIDIA A100 80GB PCIe
hepacc16.pp.rl.ac.uk true        2         2    96           96  NVIDIA A100 80GB PCIe
```

- Also have machines with on board FPGAs

# Useful pages

- Useful admin page:
  - <https://stfc365.sharepoint.com/sites/ParticlePhysicsHub>
- Useful information page
  - <https://www.ppd.stfc.ac.uk/Pages/home.aspx>

- Every year we have a week of graduate lectures at RAL.

Advanced Graduate Lectures on practical Tools, Applications and Techniques in HEP

Invited theorists and experimentalists will explain the hands-on reality of designing and running detectors and accelerators, computing, machine learning, Monte-Carlo and simulation, trigger and data acquisition, and practical statistics. Several of these topics are complemented by tutorials. This course is aimed at 1st year PhD students.

# Graduate lectures

- Every year we have a week of graduate lectures at RAL.
- Your graduate lectures will be the week June 3<sup>rd</sup>-7<sup>th</sup> 2024.
  - You are expected to attend lectures in-person!
  - Put the date in your diary now!
- Accommodation and catering will be provided
  - Accommodation at Ridgeway House

# Claims

- If you have any issues claiming back your travel, please get in touch with me!

# Plan for today

	<b>Meet at RAL Reception</b> RAL Reception	09:20 - 09:30
	<b>Site Passes</b>	
10:00	RAL Reception	09:30 - 10:15
	<b>Coffee</b> Building R1 CR23 and CR24	10:15 - 10:30
	<b>Administration</b> Building R1 CR23 and CR24	10:30 - 10:45
	<b>Welcome to RAL</b> Building R1 CR23 and CR24	Emmanuel Olaiya 10:45 - 11:15
11:00	<b>Laboratory Tours</b> Building R1	Emmanuel Olaiya 11:15 - 12:15
12:00	<b>Photographs</b> Building R1 CR23 and CR24	12:15 - 12:45
13:00	<b>Lunch</b> Building R1 CR23 and CR24	12:45 - 14:00
14:00	<b>ISIS Tour</b> ISIS	14:00 - 16:00
15:00		
16:00	<b>Depart</b>	



- This time is pretty flexible
- It can be used to:
  - Sort out computer accounts
  - Take care of other admin
  - Speak to supervisors
  - Chat to over PPD members

# Anything else!

- Any questions throughout the day, just ask me!
- Any questions after today, email me!