PhD Induction at RAL

Rutherford Appleton Laboratory

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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





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

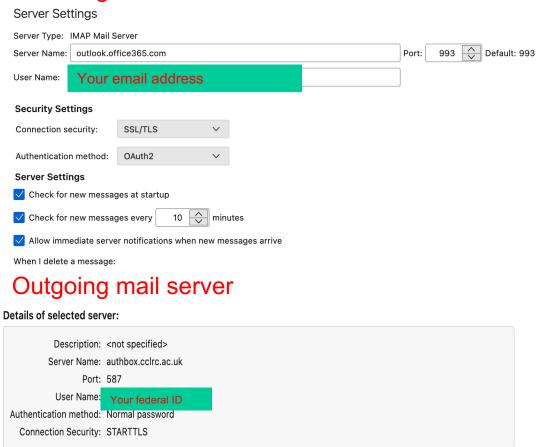
Email

- 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

Email

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

Incoming mail server



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

Graduate lectures

 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 3rd-7th 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



- 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!