

Before we start ...

Please complete the short  
pre-masterclass survey



<https://app.onlinesurveys.jisc.ac.uk/s/liverpool/particle-physics-masterclass-pre-questionnaire>

# Welcome

Carl Gwilliam and Saskia Charity

12<sup>th</sup> March 2025

Particle Physics Masterclass



UNIVERSITY OF  
LIVERPOOL

Liverpool  
Particle Physics  
Masterclass

2025

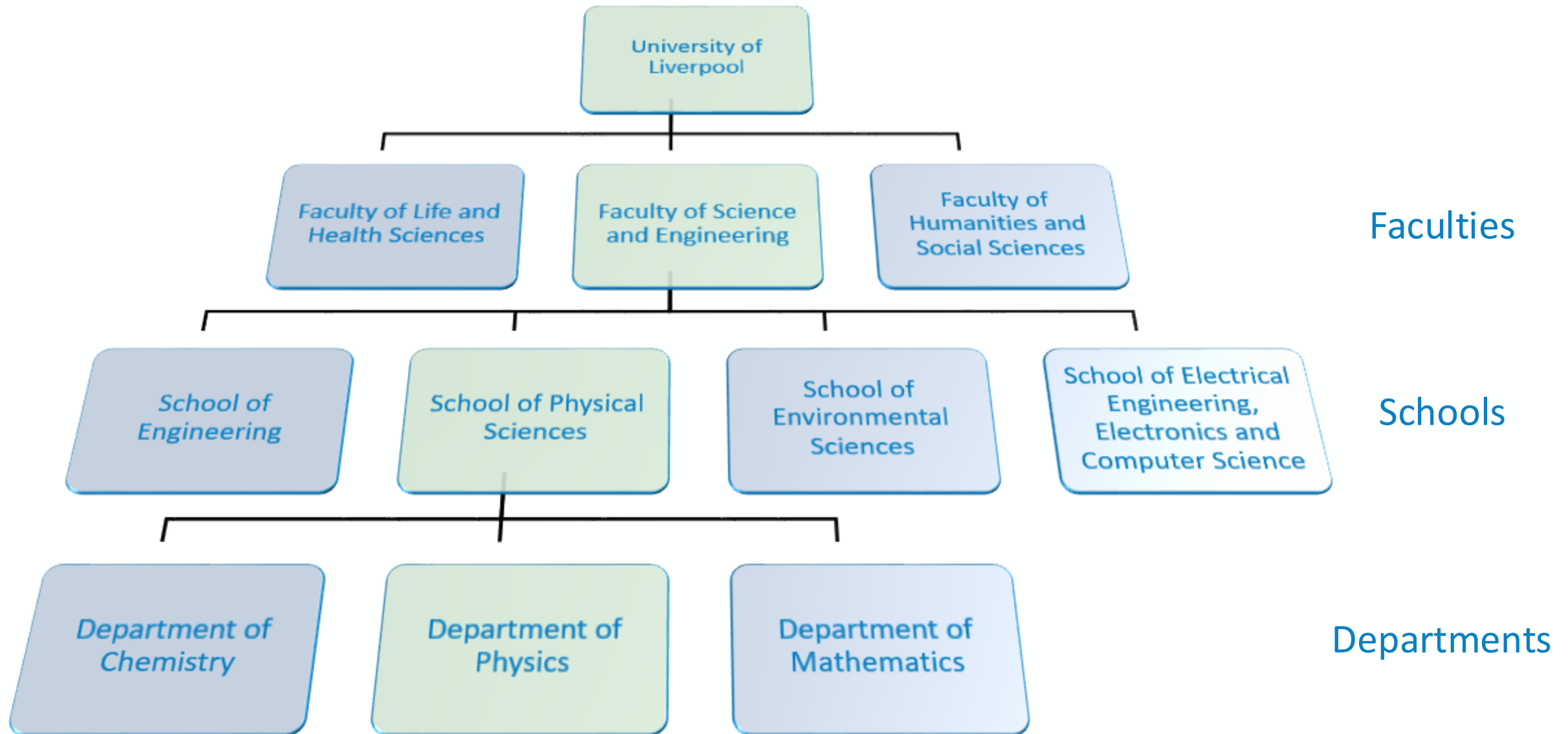
# University of Liverpool

- Large research-orientated Russell group university
  - $\approx$  25,000 students enrolled
- Since 1881, we've been at the forefront of world-class research and education
  - Rated in the world's top 1% of higher education research institutions.
  - Known for our cutting-edge facilities and relentless pursuit of excellence and achievement



<https://www.liverpool.ac.uk>

# Science and Engineering





# Department of Physics

- We are one of the best physics departments in the UK.
  - Ranked in the top 200 physics departments across the world
  - Collaborating with leading institutes and laboratories around the world



<https://www.liverpool.ac.uk/physics/>

Physics Education  
Research

Accelerator  
Physics

Nuclear  
Physics

Condensed  
Matter Physics

Particle  
Physics

- Be a particle physicist for the day!
  - Today is about getting a taste of what it is like to do real physics research
  - In one of the largest particle physics groups in the country

# Schedule

<b>10:00</b>	→ 10:10	<b>Welcome</b>	🕒 10m
<b>10:10</b>	→ 10:55	<b>Particle Physics Overview</b>	🕒 45m
<b>10:55</b>	→ 11:10	<b>Comfort break</b>	🕒 15m
<b>11:10</b>	→ 12:00	<b>LHCb Lectures</b>	
	<b>11:10</b>	<b>LHCb Experiment Overview</b>	🕒 20m
	<b>11:35</b>	<b>LHCb Hands-on Session Introduction</b>	🕒 20m
<b>12:00</b>	→ 13:00	<b>Lunch (CTL atrium)</b>	🕒 1h
<b>13:00</b>	→ 14:45	<b>Hand-on Session (+ Lab tours)</b>	🕒 1h 45m
<b>14:45</b>	→ 15:00	<b>Walk to Yoko Ono Lennon Centre</b>	🕒 15m
<b>15:00</b>	→ 16:00	<b>Video Conference with CERN</b>	🕒 1h
<b>16:00</b>	→ 16:30	<b>Feedback and Close</b>	🕒 30m



# Safety

- Follow instructions from the demonstrators
  - At all times
- Do not take bags or coats into the PC class or labs
  - Leave them in the lockers provided at lunch
  - Collect them before we go to the video conference
- In case a fire alarm sounds
  - Stop what you are doing immediately
  - Exit through the nearest exit
  - Once outside, wait at the assembly points
- If you have questions at any point
  - Please ask a member of UoL staff
- Building specific details on subsequent slides ...





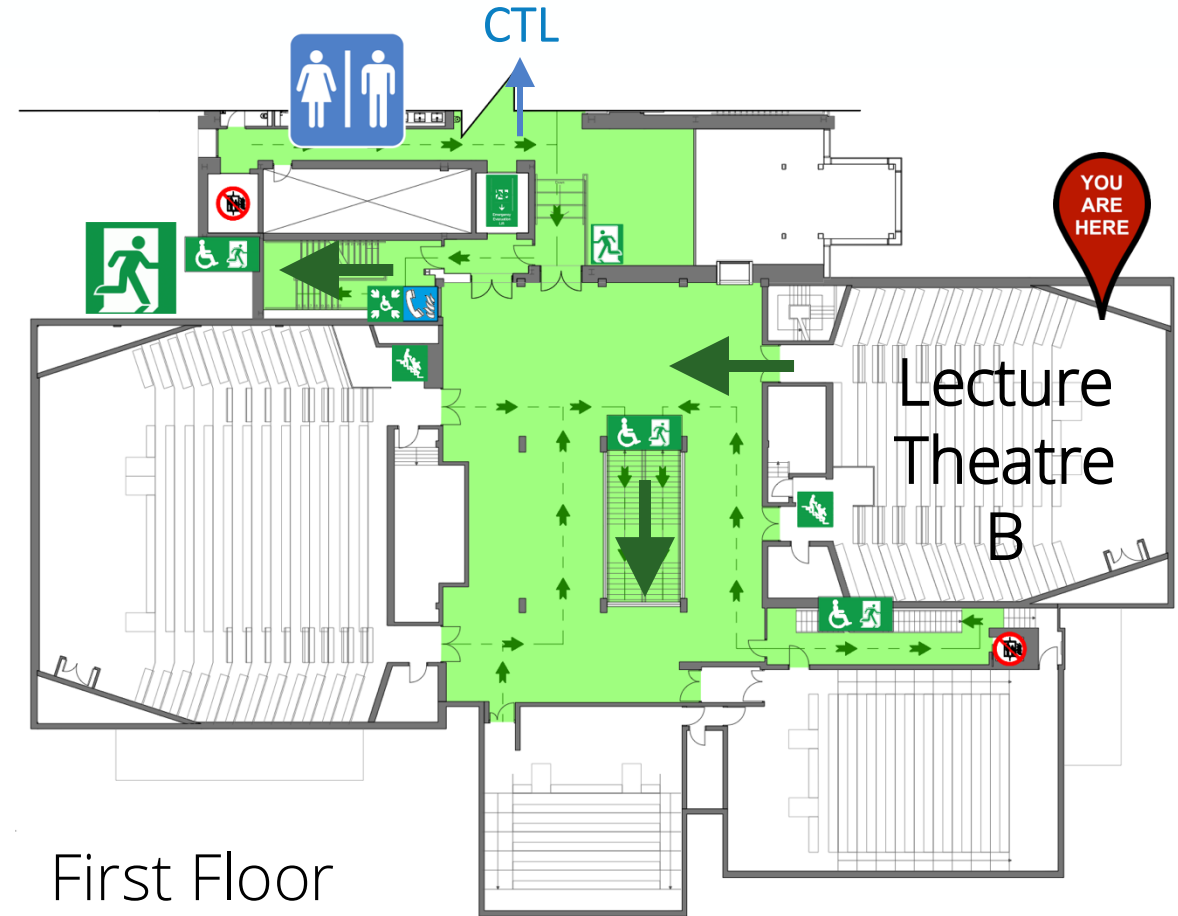
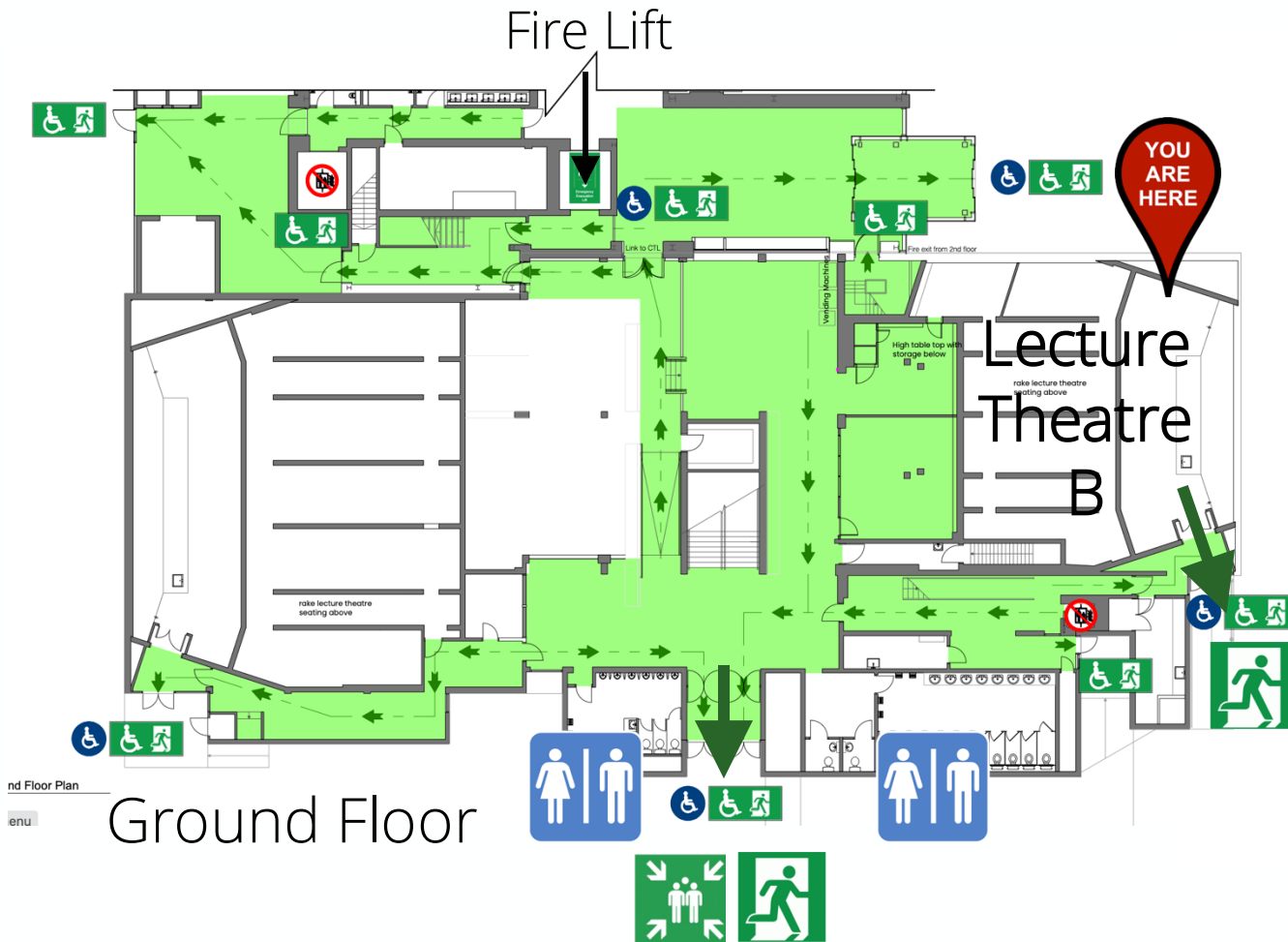
# Central Teaching Hub (CTH)

- Emergency Exit

- Exit through front of lecture theatre or via back and then out downstairs via main entrance or CTL
- Assembly point is outside main entrance

- Toilets

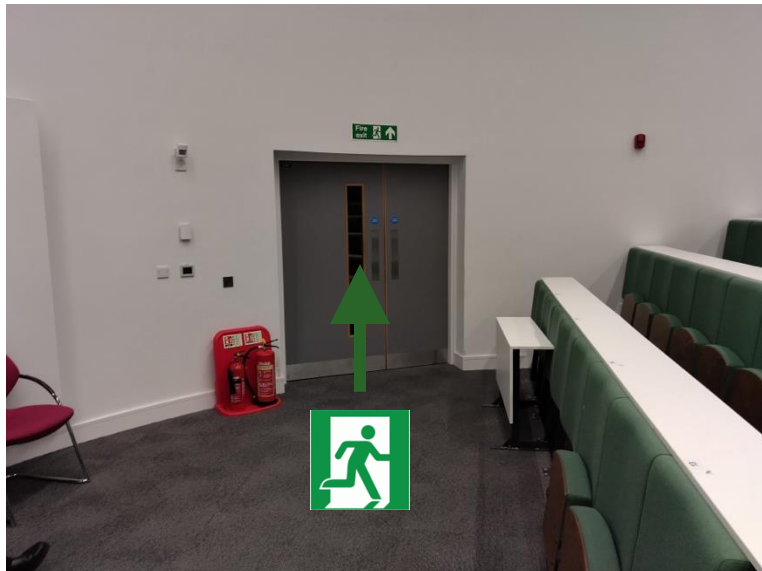
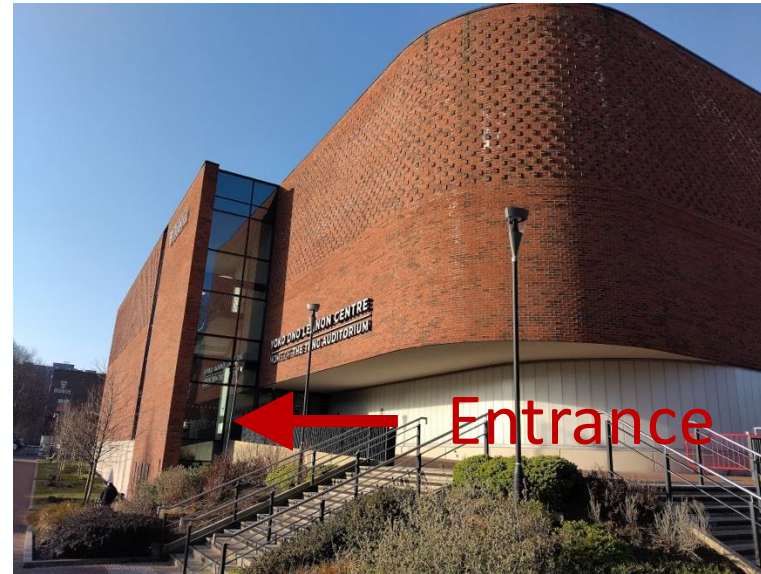
- Downstairs, either side of main entrance
- This floor just through into CTL





# Yoko Ono Lennon Centre (YOLC)

- Emergency exits
  - Front of lecture theatre
  - Back of lecture theatre and directly right
  - Assembly point round back of building
- Toilets
  - Directly outside lecture theatre





# Code of Conduct

- We will not accept behaviour which is unkind, upsetting or excludes any person or group of people.
  - If what you're doing is making someone feel uncomfortable, that is enough reason to stop doing it.
- During the Masterclass you should:
  - Be kind, respectful and inclusive to everyone
  - Listen and respect each other's views and ideas
  - Use welcoming and inclusive language
  - Treat everyone equally
- Everyone has a responsibility to help keep Masterclasses safe for all. This means:
  - Don't take and share pictures, video or audio which includes students from other schools or colleges
  - Adults should not share personal contact details with students under 18 (or vice versa) or connect with them on social media.
  - If something needs to be shared this should go via the Masterclass organisers

