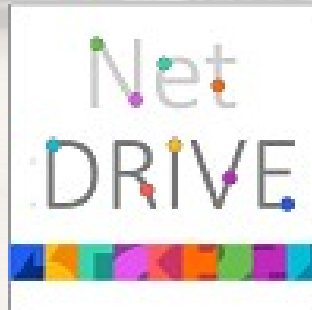


# NetDRIVE Summer School 2026

Alastair, Lorna, Fatima



# Welcome!

- Congratulations – you made it this far!
- Introducing the hosts!

# About NetDRIVE



- Network for sustainable Digital Research Infrastructure Vision and Expertise
  - Led by Martin Jukes, Oxford University
- A common vision for a sustainable future and to incite a transition to sustainable working practices in the Digital Research Infrastructure communities
- Enable change through technological progress, to build a common vision of a sustainable future, and to incite a transition to sustainable working practices in the DRI communities

# Agenda

[durham.readthedocs.io](http://durham.readthedocs.io)

Alastair Basden  
DiRAC / Durham University

|       | Monday                                               | Tuesday                                       | Wednesday                                                                  | Thursday                                                       | Friday                                              |
|-------|------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------|
| 9:00  |                                                      | HPC Days talk:<br>Performance<br>optimisation | Talks:<br>Environmental<br>cost<br>JASMIN<br>CEDA data<br>QMUL data centre | Green software use<br>(HPC Days)                               | Keynote:<br>Sufficiency<br>Practical:<br>Monitoring |
| 10:30 | Refreshment break                                    |                                               |                                                                            |                                                                |                                                     |
| 11:00 |                                                      | Talks: GreenDisk<br>Sustainable<br>software   | Talks: Data<br>centres<br>heat reuse<br>Poster prep                        | Responsible<br>computing                                       | Activity: DRI<br>design                             |
| 12:00 | Arrival,<br>registration and<br>lunch                | Lunch                                         |                                                                            |                                                                |                                                     |
| 13:00 | Welcome<br>Keynote: The<br>challenge<br>Facilitation | HPC Days talk:<br>Performance<br>optimisation | Data centre tour<br>Practical: Impact<br>mapping                           | Practical: FAIR data<br>Case study:<br>champion<br>Poster prep | Goodbyes and<br>departure                           |
| 14:30 | Refreshment break                                    |                                               |                                                                            |                                                                |                                                     |
| 15:00 | Facilitation<br>Talk: DRI Net-<br>Zero               | Storytelling<br>workshop                      | Practical: Impact<br>mapping<br>Engagement:<br>planning                    | Keynote talks:<br>Politics<br>Monitoring                       |                                                     |
| 16:00 | Refreshment break                                    |                                               |                                                                            |                                                                |                                                     |
| 16:30 | Storytelling<br>workshop                             | Practical:<br>Optimisation<br>Poster prep     | HPC Days:<br>scavenger hunt                                                | Engagement:<br>lifestyle<br>Practical: repair                  |                                                     |
| 18:00 | Board games                                          | Ceilidh                                       | Botanic garden<br>tour                                                     | Social time                                                    |                                                     |

# HPC Days

- We are running alongside and as part of HPC Days: Annual HPC event
  - Shared food, refreshments, some talks
- HPC Days sponsors will be present throughout the week
  - Mostly Wednesday
  - Visit them during breaks to pick up tat and enter competitions!

# Aims

- Introducing the Net-Zero challenge
- Thinking about our impact
- Working out what we can do
  - Research perspective
  - Personal perspective
- Developing engagement techniques
- Improving use of DRI (Digital Research Infrastructure)
  - Code improvements, techniques, training etc
    - Awareness of courses, e.g. Archer2, DiRAC
  - Testbeds are available (HPC Hardware Lab)

# The sessions

- Keynotes
- Talks
- Practical sessions
- Outreach
- Workshops
- Story telling
- Posters
- Social times
- Food!

# The speakers

- Stuart Basden, Co-founder XR
- Martin Farley, UKRI
- Erinma Ochu, UWE
- Rosie Stanbury, Coach
- Thomas Gruber, Friedrich-Alexander-Universität
- Loic Lannelongue, Cambridge
- Liz Ing-Simmons, KCL
- Kirsty Pringle, EPCC
- Martin Juckes, Oxford (NetDRIVE PI)
- Alison Panment, CEDA
- Matt Pritchard, JASMIN
- Alex Owen, QMUL
- Lorna Smith, EOCC
- Alastair Basden, Durham
- Marcia Smith, Lancaster, Kirsty Blair, UKCEH
- Andy Turner, EPCC
- Fatima Chami, JASMIN
- Jess Huntley, STFC
- Michael Rudyard, Consultant
- Carolynne Lord, UKCEH

# Attendees

- x29
- From 11 different universities
- Diverse fields ranging across signal design, fault diagnosis, molecular dynamics, epidemiology, fluid dynamics, renewables and climate change, AI, web, transport, genetics, food production, particle physics, weather, digital twins, heat storage, astronomy
  - Challenge for the week: Identify someone working in a completely different field with whom you might be able to collaborate
  - Interdisciplinarity is encouraged!
- Python, C(++) and R are most common
  - Other languages include Matlab, Fortran, Bash, Java, Rust, PHP, VHDL
- Please think of one interesting fact about yourself – you'll need it in a few minutes!

# Code of Conduct

- Link from the website
  - Basically:
    - Be kind to others. Do not insult or put down others. Behave professionally. Remember that harassment and sexist, racist, or exclusionary jokes are not appropriate

# An introduction to Durham

- Some interesting facts!

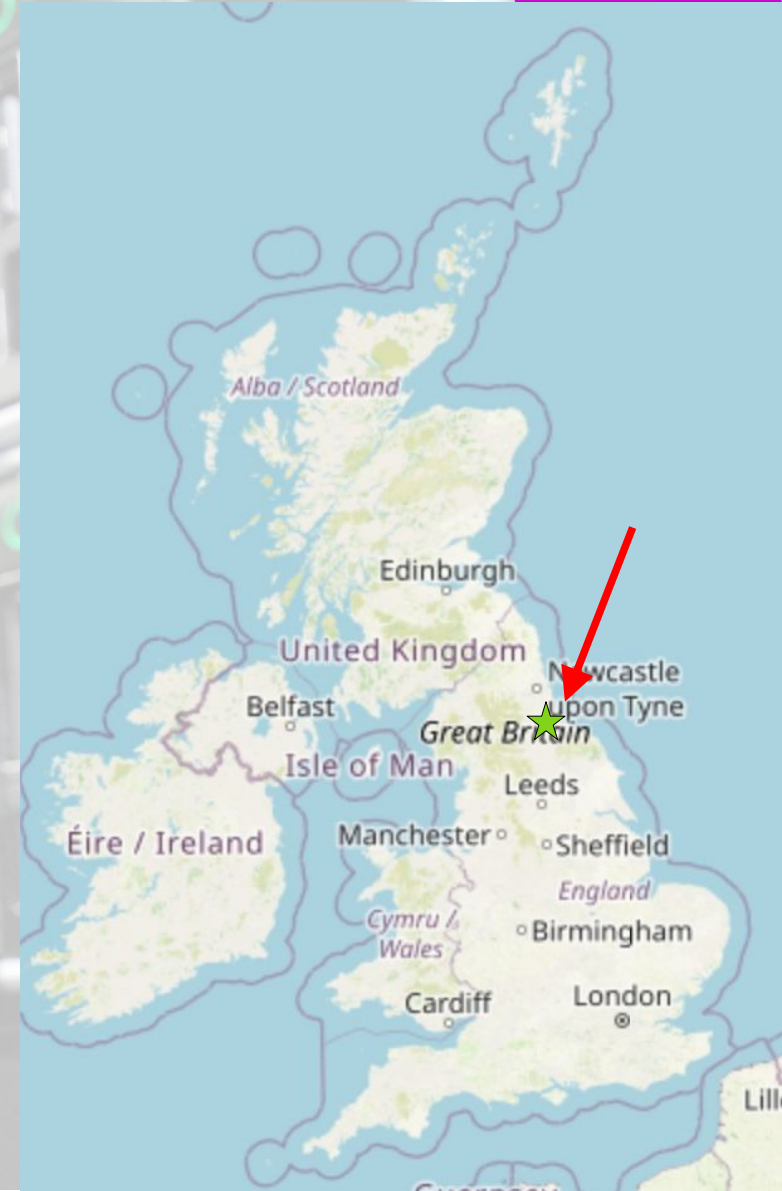
# Durham County

- Bounded by Northumberland, Tyne and Wear, North Yorkshire and Cumbria
- 870,000 people
- Has a coast
- North Pennines AONB
- 200 years of public steam railway
- Highest point: Mickel Fell, 788m
- Plenty of history
  - Castles, palaces, forts, Beamish, etc
- Great place for a holiday! Or a Summer School!
- A 1-bed flat can be purchased for £22k



# Durham City

- 50,000 people
- Founded in 995
- On the river Wear
- Historically known for manufacture of mustard(!)
  - And coal mining
- Hosts the largest socialist trade union event in the world: Durham Miners' Gala
- Record high of 36.9°
- Higher than average sun, lower than average rain
- Twinned with Durham, Durham and Durham, US
- Hosts the worst night club in Europe (source:FHM)



# Durham: A Top-100 University

- Founded in 1832: Collegiate
  - Third oldest university in England
  - UK's first World Heritage site
    - Including Durham Castle (C11)
  - In the QS World Top 100 every year since 2010
  - Top 5 nationally (Times - 3rd, Complete)
- 640 acre estate, £850m insurance reinstatement (2014)
- Russel group, N8, etc
- 17k undergrads, 4.5k postgrads





Alastair Basden  
DiRAC / Durham

Image credits: wikipedia



DiRAC / Durham University

Alastair Basden  
DiRAC / Durham University





Alastair Basd  
DiRAC / Durham University





Alastair Ba  
DiRAC / D





Alastair Basden  
DiRAC / Durham University



Alastair Basde  
DiRAC / Durh







Alastair Basden  
DiRAC / Durham University

# Our ask:

- Pay attention to the talks etc
  - No scrolling, distraction, etc
  - Even if not directly relevant: You never know...
- Join in the activities
  - Get to know your co-attendees
- Try to mingle at refreshment breaks
  - With other Summer School and HPC Days attendees
  - Good to be building up connections
- Be thinking and planning how what you learn applies to you and your research
- Arrive promptly for the start of each session
  - Including 9am!

# Logistics

- The hotel: 26 minute walk (according to Google) – 1 mile
  - Perhaps allow a bit longer
  - Breakfast included
  - Checkout Friday morning
    - But you can leave bags there if you wish
- Thursday evening: Free time
- Food: In the Mount Joy Centre (where you registered)
- Talks: Mostly in here, except one or two
- Evening meals: Food vans coming each evening
  - Prior to the evening activities

# Lets get started!

- Please introduce yourself:
  - Name
  - Where you're studying
  - One interesting fact about yourself!



Alastair Basden  
DiRAC / Durham University



Alastair Basden  
DiRAC / Durham University







Alastair Basden  
DiRAC / Durham University





Alastair Basden  
DiRAC / Durham University