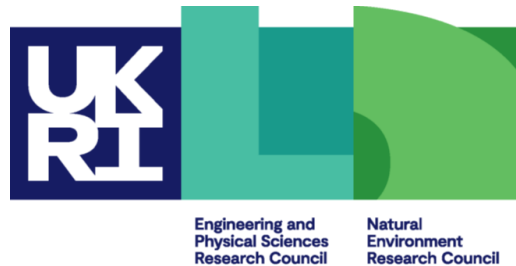


ARCHER2 Training Courses

General Overview



Engineering and
Physical Sciences
Research Council

Natural
Environment
Research Council



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- Next UK National Supercomputer Service
 - managed by UKRI/EP SRC
 - to be housed, operated and supported by EPCC
 - hardware Supplied by Cray
- Training provided by the ARCHER2 Computational Science and Engineering (CSE) support team
 - 60 days per year at various locations
 - free to all academics



To be located at EPCC's Advanced Computing Facility (ACF)



ARCHER@ACF



Cirrus@ACF



What is EPCC?

- UK national supercomputer centre
 - founded in 1990 (originally Edinburgh Parallel Computing Centre)
 - a self-funding Centre of Excellence at The University of Edinburgh
 - running national parallel systems since Cray T3D in 1994
 - over 100 full-time staff
 - a range of academic research and commercial projects
 - postgraduate teaching and HPC training courses
- Get in contact if you want to collaborate
 - many staff are named RAs on research grants
 - joint research proposals
 - European project consortia



Key ARCHER2 Resources

- Upcoming courses
 - <http://www.archer2.ac.uk/training/>
- Material from past courses
 - <https://www.archer2.ac.uk/training/materials/>
- Virtual tutorials (online)
 - <http://www.archer2.ac.uk/training/>
- Documentation
 - <http://www.archer2.ac.uk/documentation/>

Who am I?

David Henty d.henty@epcc.ed.ac.uk

- In charge of education and training programme at EPCC
 - MSc
 - PRACE Training Centre
 - courses on the ARCHER2 training programme
 - commercial training
 - ...
- Also do HPC research
 - new parallel programming models, accelerators, performance, ...



Other Resources

- Please fill in the feedback form!
 - <http://www.archer.ac.uk/training/feedback/>
- General enquiries about ARCHER go to the helpdesk
 - support@archer2.ac.uk
- EPCC runs one-year taught postgraduate masters courses
 - ***MSc in HPC*** and ***MSc in HPC with Data Science***
 - awarded by the University of Edinburgh since 2001
 - scholarships available
 - <http://www.epcc.ed.ac.uk/msc/>



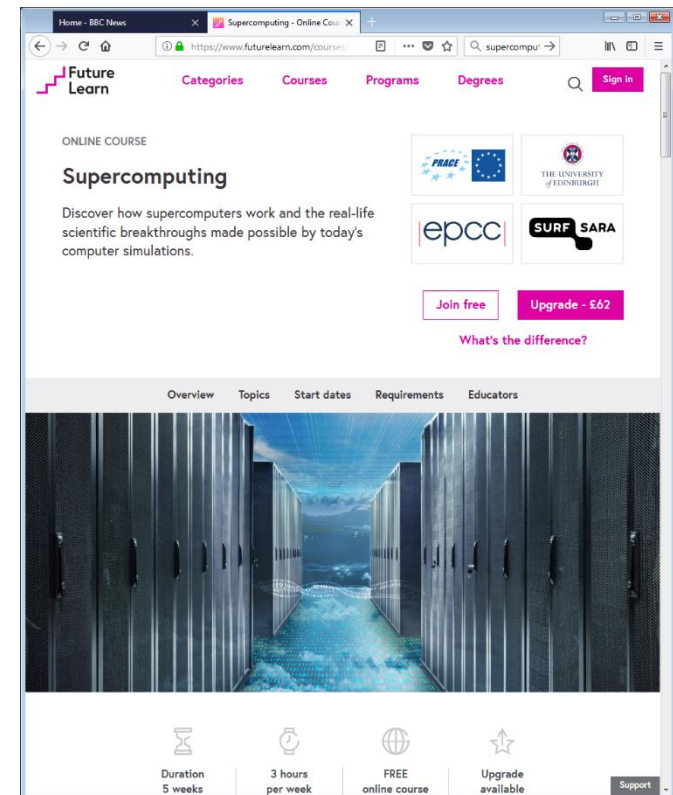
MSc in HPC / HPC with Data Science



- taught by EPCC staff (plus options in Informatics, Maths, Physics, ...)
- 12 taught courses (8 months); research dissertation (4 months)
- also available fully online for part-time, intermittent study

Supercomputing MOOC

- futurelearn.com/courses/supercomputing
 - 5 weeks
 - free (with paid “upgrade” option)
 - conceptual
 - no computer programming required
- Run five times from 2017 - 2019
 - typically thousands of “joiners”
 - very collaborative
 - lots of support from fellow learners
- Available soon in “self-study” mode
 - no active support from EPCC educators



Access during course

- Personal accounts for duration of course
 - will allow machine access for up to a month afterwards
- Accounts will be closed two weeks after access ends
 - all files etc. will be deleted
 - take copies of all your work beforehand!
- Course materials (slides, exercises etc) will continue to be available from ARCHER2 website
 - archived on ARCHER2 training pages for future reference

Access longer term

- Various ways to apply for time on ARCHER / ARCHER2
 - <https://www.archer.ac.uk/access/>
 - <https://www.archer2.ac.uk/support-access/>
- All require justification of resources
 - Instant Access has the lowest barrier to entry
 - designed for exploratory work, e.g. in advance of a full application
- Or take the “ARCHER Driving Test”
 - www.archer.ac.uk/training/course-material/online/driving_test.php
 - successful completion allows you to apply for an account for 12 months with an allocation of around 80,000 core-hours
 - backed up by online training materials
 - www.archer.ac.uk/training/course-material/online/



Subscribing to training emails

- Weekly service updates sent to registered users
 - many contain information relevant to training
- You can subscribe to receive only training-related emails
 - even if you don't have an ARCHER or ARCHER2 account
- Visit:

<https://www.jiscmail.ac.uk/cgi-bin/webadmin?SUBED1=ARCHER-TRAINING&A=1>



Security of room

- We cannot guarantee that the training venue is secure!
- We advise that you take your laptops and valuables with you during any breaks, e.g. over lunch time.

Code of Conduct

<https://www.archer2.ac.uk/training/code-of-conduct/>

- We expect all course trainers and attendees to:
 - Use welcoming and inclusive language
 - Be respectful of different viewpoints and experiences
 - Gracefully accept constructive criticism
 - Focus on what is best for the community
 - Show courtesy and respect towards other community members
- See web page for full details and incident reporting form

Funding calls

- Embedded CSE support
 - Through a series of regular calls, Embedded CSE (eCSE) support provides funding to the ARCHER2 user community to develop software in a sustainable manner to improve research on the ARCHER2 service. The funding allows the employment of a Research Software Engineer (RSE) to carry out software development of ARCHER2 software.
- See <https://www.archer2.ac.uk/ecse/> for details



I hope you enjoy the course



- ... and *please ask questions!*



Partnership for Advanced Computing in Europe

Currently 25 members:

- Austria
- Belgium
- Bulgaria
- Cyprus
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Israel
- Italy
- Netherlands
- Norway
- Poland
- Portugal
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- UK

UK represented by EPCC
(on behalf of UKRI/EPSRC)





Ten PRACE Training Centres (PTCs)

Hubs for world-class HPC training for researchers in Europe

www.training.prace-ri.eu

- ▶ Barcelona Supercomputing Center (Spain)
- ▶ CINECA - Consorzio Interuniversitario (Italy)
- ▶ CSC - IT Center for Science Ltd (Finland)
- ▶ EPCC at the University of Edinburgh (UK)
- ▶ Gauss Centre for Supercomputing (Germany)
- ▶ Maison de la Simulation (France)
- ▶ GRNET (Greece)
- ▶ ICHEC (Ireland)
- ▶ IT4I (Czech Republic)
- ▶ SURFsara (Netherlands)



PRACE support

- ▶ PRACE also funds catering and other expenses for PTC courses
- ▶ Upcoming courses (at EPCC and throughout Europe)
 - ▶ www.archer.ac.uk/training/
 - ▶ www.training.prace-ri.eu
- ▶ Please fill in the course feedback form!
 - ▶ see www.archer.ac.uk/training/feedback/
 - ▶ opens on last day of course