ARCHER Training Courses

General Overview

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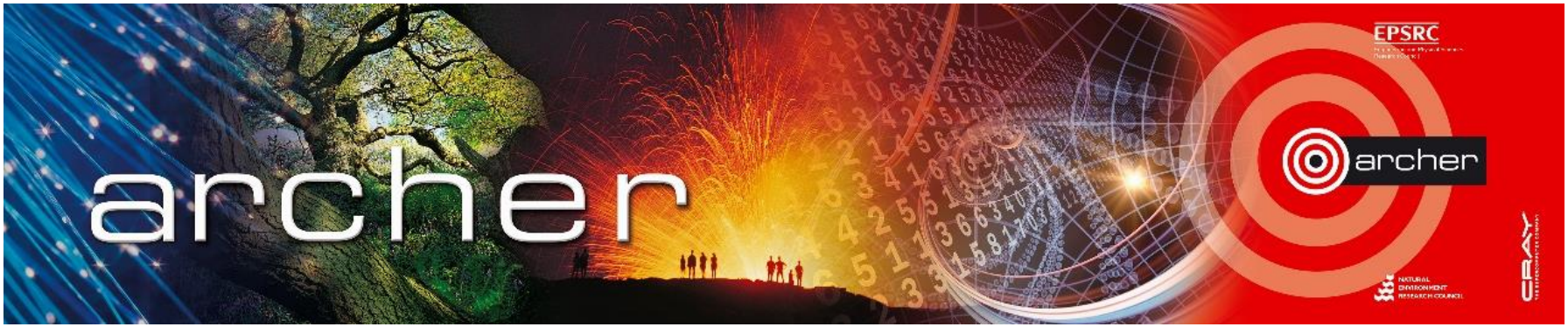
epcc

THE UNIVERSITY OF EDINBURGH



- UK National Supercomputer Service, managed by EPSRC
  - housed, operated and supported by EPCC
  - hardware Supplied by Cray
- Training provided by the ARCHER Computational Science and Engineering (CSE) support team
  - 72 days per year at various locations round the UK
  - free to all academics

EPCC's Advanced Computing Facility

What is EPCC?

- UK national supercomputer centre
  - founded in 1990 (originally Edinburgh Parallel Computing Centre)
  - a self-funding Institute at The University of Edinburgh
  - running national parallel systems since Cray T3D in 1994
  - around 70 full-time staff
  - a range of academic research and commercial projects
  - one-year postgraduate masters in HPC www.epcc.ed.ac.uk/msc/
  - new online accredited courses www.epcc.ed.ac.uk/online-courses/
- Get in contact if you want to collaborate
  - many staff are named RAs on research grants
  - joint research proposals
  - European project consortia

Key ARCHER Resources

- Upcoming courses
  - http://www.archer.ac.uk/training/
- Material from past courses
  - http://www.archer.ac.uk/training/past_courses.php
- Virtual tutorials (online)
  - http://www.archer.ac.uk/training/virtual/
- Documentation
  - http://www.archer.ac.uk/documentation/

Who am I?

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

- In charge of training at EPCC
  - MSc
  - PRACE Advanced Training Centre
  - ARCHER training programme
  - commercial training
  - ...
- Also do HPC research
  - new parallel programming models, accelerators, performance, ...

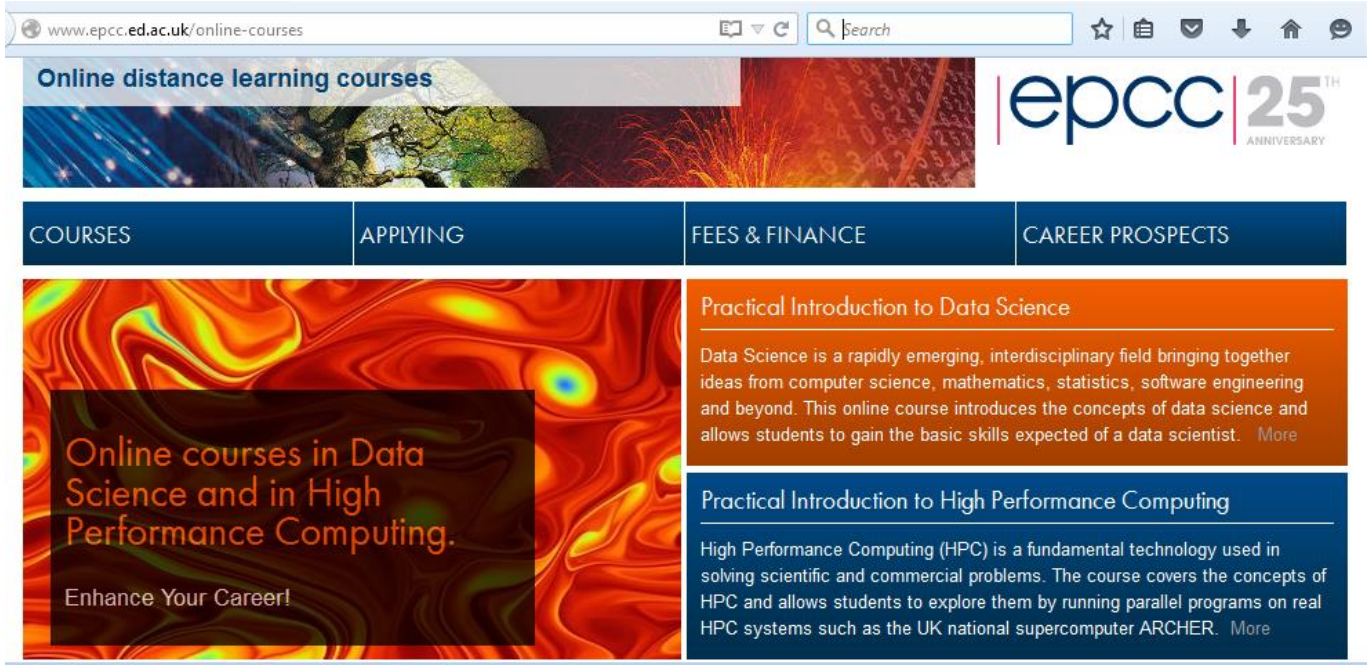
Other Resources

- Please fill in the feedback form!
  - http://www.archer.ac.uk/training/feedback/
- General enquiries about ARCHER go to the helpdesk
  - support@archer.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)

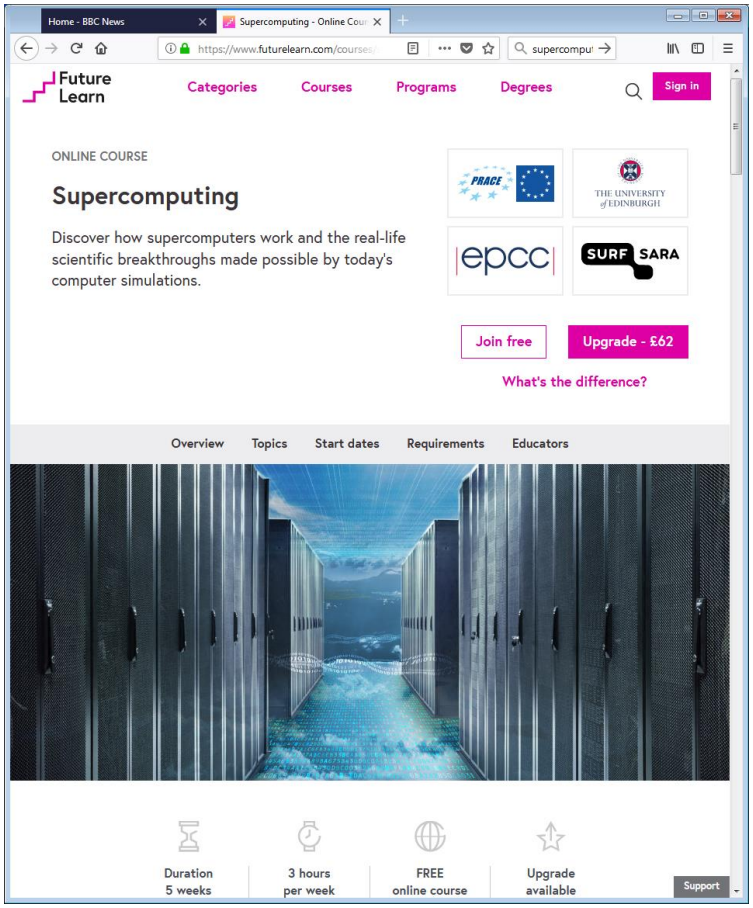
Online accredited courses



- Run from January to June each year
  - entirely online: www.epcc.ed.ac.uk/online-courses/.
  - each course is 20 credits (c.f. a 180-credit MSc)

Supercomputing MOOC

- futurelearn.com/supercomputing
  - 5 weeks
  - free (with paid “upgrade” option)
  - conceptual
  - no computer programming required
- runs twice per year
  - typically thousands of “joiners”
  - several hundred active in final week
  - very collaborative
  - lots of support from fellow learners



Access to ARCHER (during course)

- Guest accounts for duration of course
  - should only be used in the classroom
- Accounts will be closed immediately after the course
  - all files etc will be deleted
- Take copies of all your work before course ends!
- Course materials (slides, exercises etc) available from course web page
  - archived on ARCHER web pages for future reference

Access to ARCHER (longer term)

- Various ways to apply for time on ARCHER
  - see http://www.archer.ac.uk/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 ARCHER users
  - many contain information relevant to training
- You can subscribe to receive only training-related emails
  - even if you don't have an ARCHER account
- Visit:

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

Funding calls

- Embedded CSE support
  - Through a series of regular calls, Embedded CSE (eCSE) support provides funding to the ARCHER user community to develop software in a sustainable manner for running on ARCHER. Funding will enable the employment of a researcher or code developer to work specifically on the relevant software to enable new features or improve the performance of the code
  - Apply for funding for development effort
  - Happen roughly every 4 months

- See https://www.archer.ac.uk/community/eCSE/calls.php for details