

# ARCHER Training Courses

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General Overview

**EPSRC**

**NERC** SCIENCE OF THE ENVIRONMENT



**CRAY**  
THE SUPERCOMPUTER COMPANY

**epcc**



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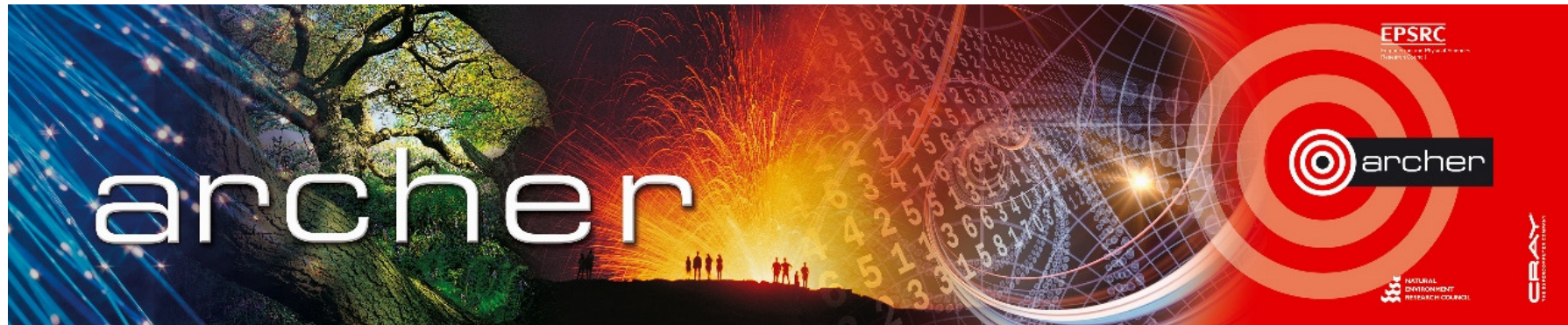
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- UK National Supercomputer Service, managed by EPSRC
  - housed, operated and supported by EPCC
  - hardware Supplied by Cray
- Training provided by the ARCHER Computational Science and Engineering (CSE) support team
  - 72 days per year at various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



# EPCCC'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 75 full-time staff
  - a range of academic research and commercial projects
  - one-year postgraduate masters in HPC [www.epcc.ed.ac.uk/msc/](http://www.epcc.ed.ac.uk/msc/)
- 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](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?

- Adrian Jackson [adrianj@epcc.ed.ac.uk](mailto:adrianj@epcc.ed.ac.uk) @adrianjhpc
- Research Architect at EPCC
  - Involved with ARCHER and PRACE training
  - Parallel computing, software, and hardware research
  - EPCC MSc in HPC teaching
  - Porting and optimisation of scientific applications
  - .....



# 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](mailto: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/>





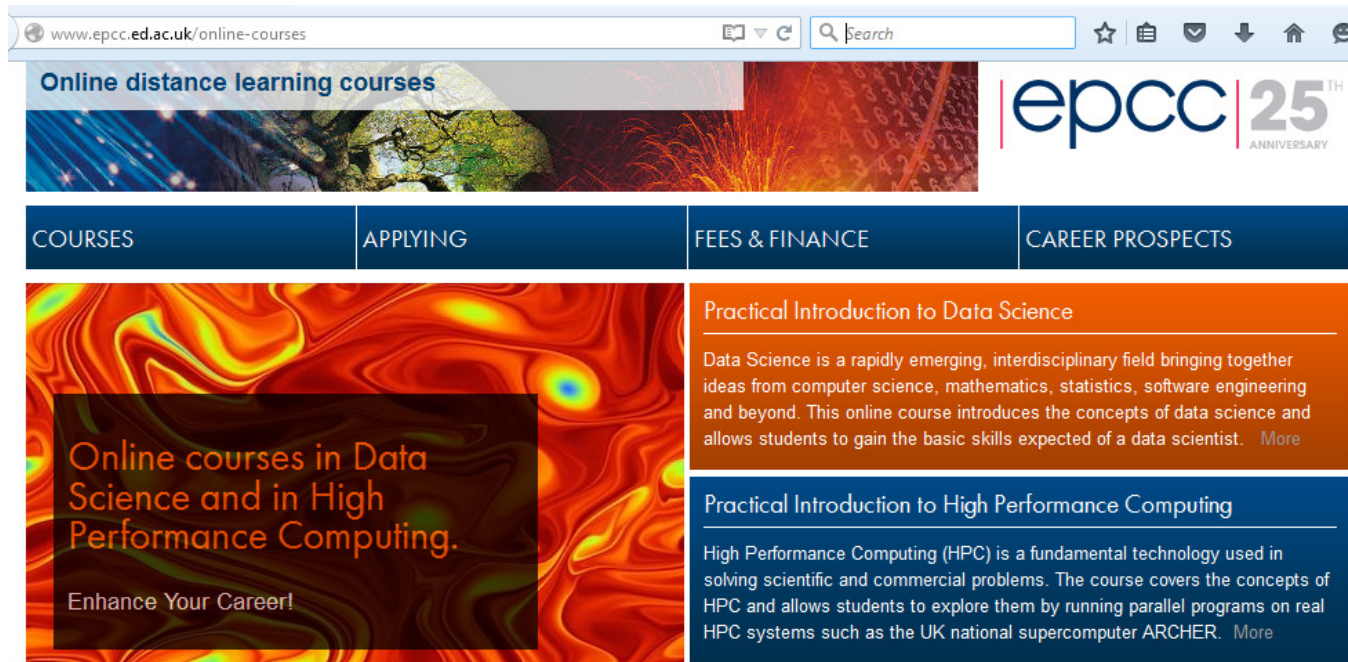
# MSc in HPC / HPC with Data Science



- taught by EPCC staff (plus options in Informatics, Maths, Physics, ...)
- 12 taught courses (8 months); research dissertation (4 months)



# Online accredited courses



The screenshot shows the website [www.epcc.ed.ac.uk/online-courses](http://www.epcc.ed.ac.uk/online-courses). The page features a navigation menu with four categories: COURSES, APPLYING, FEES & FINANCE, and CAREER PROSPECTS. Below the menu, there are two main course listings. The first listing is for 'Online courses in Data Science and in High Performance Computing', which includes the text 'Enhance Your Career!'. The second listing is for 'Practical Introduction to Data Science', with a description: 'Data Science is a rapidly emerging, interdisciplinary field bringing together ideas from computer science, mathematics, statistics, software engineering and beyond. This online course introduces the concepts of data science and allows students to gain the basic skills expected of a data scientist. More'. The third listing is for 'Practical Introduction to High Performance Computing', with a description: 'High Performance Computing (HPC) is a fundamental technology used in solving scientific and commercial problems. The course covers the concepts of HPC and allows students to explore them by running parallel programs on real HPC systems such as the UK national supercomputer ARCHER. More'. The EPCC 25th Anniversary logo is visible in the top right corner of the website screenshot.

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



# 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](http://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/](http://www.archer.ac.uk/training/course-material/online/)



# 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
  - Sixth call currently open
  - The 9th eCSE call closed at 4pm on Tuesday 11th October 2016
  - Happen every 4 months
- See <http://www.archer.ac.uk> for details

