

Research IT

Supporting your research

A newsletter from IT Services: Research IT

Welcome to issue #20, November 2014, in a **regular series** of updates on IT research support and facilities for postgraduates, researchers and academics of The University of Manchester.

Your main Faculty contact email addresses (for research computing support) are given on the last page; emailing your research computing queries this way will also automatically raise a job for you in the *Remedy* tracking system.

Everyday, routine work should continue to be submitted through the IT Service Desk on +44 (0) 161 306 5544 or via online submission at: www.manchester.ac.uk/servicedesk.



Web Page: Research IT

The web site for our support areas and all contact details is available here: www.its.manchester.ac.uk/research/.

Emerging Technology for Researchers

The recent GPU Club had speakers comparing the use of GPUs and FPGAs for their research. Neil Morgan (STFC), Greg Kozikowski (UoM, CompSci) and Malte Vesper (UoM, CompSci) covered the challenge of energy efficient compute (EEC) and the use of emerging technology for research. Slides and a podcast of the event are available from the [GPU Club \(gpu.manchester.ac.uk\)](http://GPU Club (gpu.manchester.ac.uk)).

For those wishing to trial new technologies, Research IT provides an [Emerging Tech cluster \(ri.itservices.manchester.ac.uk/zcsf/overview/config/\)](http://ri.itservices.manchester.ac.uk/zcsf/overview/config/), Zrek. For production runs there is also the [CSF \(ri.itservices.manchester.ac.uk/csf-apps/software/applications/nvidiagpu/\)](http://ri.itservices.manchester.ac.uk/csf-apps/software/applications/nvidiagpu/). For those requiring high numbers of GPUs, there are two options. Firstly, the "Centre for Innovation" consortium provide [Emerald \(wiki.rac.manchester.ac.uk/community/GPU/resources/emerald\)](http://Emerald (wiki.rac.manchester.ac.uk/community/GPU/resources/emerald)), for which there are charges. Secondly, there are GPU clusters available through PRACE via a peer review process (www.prace-ri.eu/prace-resources/). We can assist with applications.

At the GPU Club, Dr. David Topping (Centre for Atmospheric Science) announced a Call for Papers for submission to the Emerging Tech Conference (EMiT2015) being organised primarily by Manchester. Abstracts of one page should be submitted by 19 December 2014. The [EMiT website \(emit.manchester.ac.uk\)](http://EMiT website (emit.manchester.ac.uk)) has full details.

N8 High Performance Computing (N8 HPC) User Survey 2014 now open

If you are a registered N8 HPC user then we need to hear from you. N8 HPC is now in its second year of operation and we are planning to grow and improve the service that we offer. We need to gather feedback on all current aspects of N8 HPC including the application procedure, machine usage, helpdesks, website, etc., in order to tailor our services, but we also want to know what you would like to see in the future, both in terms of user events and future technologies.

Please complete the short user survey online at <https://selectsurveys.humanities.manchester.ac.uk/TakeSurvey.aspx?SurveyID=m8M1964K> before 3 December 2014.

Dr Mike Croucher

Many academics, postgraduates and researchers will know of the fantastic work Mike Croucher has contributed to software optimisations and general support of scientific applications in his role as Head of EPS Applications Support, within IT Services, during the last decade. Around February time next year, Mike is leaving for pastures new at the University of Sheffield. I am sure you will join the editors in wishing him all the best for the future.

To illustrate some of Mike's work, within IT Services, please see the following testimonials:

www.walkingrandomly.com/?page_id=5122. Mike is also a contributor to our Condor High Throughput Computing Service (amongst other services), and some users' feedback comments are given here condor.eps.manchester.ac.uk/case-studies-and-success-stories/. He also collates the research software list *Made in Manchester* www.walkingrandomly.com/?p=4951.

Finally, if you want to keep in touch with Mike after he has gone, you can follow his blog www.walkingrandomly.com and social media postings: <https://twitter.com/walkingrandomly>.

Central Isilon Storage

During December, IT Services will be undertaking a major upgrade of its central storage. This is to ensure that the storage remains in support and will also provide additional functionality that has been requested by researchers. The work will take place over two Saturdays as follows:

On Saturday, 13 December 2014, the Isilon *research* storage will be upgraded. This work will start at 7:00am and is expected to be completed by 2:00pm, although access to storage should be considered "at risk" for the whole day.

On Saturday, 20 December 2014, the Isilon *P: drive* storage (including eScholar and the video library service) will be upgraded. Again work will start at 7:00am and is expected to be completed by 2:00pm, although access to storage should be considered "at risk" for the whole day

Horizon 2020 and Data Management Planning Requirements

Projects taking part in the Horizon 2020 Pilot on Open Research Data are required to provide a first version of a

Data Management Plan (DMP) as an early deliverable within the first six months of the project. The DMP is required to include detail around what data the project will generate, whether and how it will be exploited or made accessible for verification and re-use, and how it will be curated and preserved.

Other projects are invited to submit an Horizon 2020 Data Management Plan if relevant for their planned research.

If you are a PI or Co-I on an Horizon 2020 project, you can find out more on the Research Data Management Service website (manchester.ac.uk/researchdata) which provides details of European Commission guidelines and submission procedures for Horizon 2020, as well as how to access the Horizon 2020 DMP template:

www.manchester.ac.uk/researchdata/datamanagementplanning/writing-dmp/horizon2020/.

If you have any questions, please do not hesitate to contact the Research Data Management Service team via researchdata@manchester.ac.uk.

From the SSI – Software Sustainability Institute

If you write code as part of your research, you can get help to improve it – free of charge, through the Open Call for Projects (closes 5 December 2014): bit.ly/ssi-open-call.

You can ask for their help to improve your research software, your development practices, or your community of users and contributors (or all three!). You may want to improve the sustainability or reproducibility of your software, and need an assessment to see what to do next. Perhaps you need guidance or development effort to help improve specific aspects or make better use of infrastructure. SSI want applications from any discipline in relation to software at any level of maturity.

The Software Sustainability Institute is a national facility funded by the EPSRC. Since 2010, the Institute's Research Software Group has assisted over 40 projects across all the UK Research Councils. In a recent survey, 93% of our previous collaborators indicated they were "very satisfied" with the results of the work.

A typical Open Call project runs between one and six months, during which time the SSI work with successful applicants to create and implement a tailored work plan. You can submit an application to the Open Call at any time, and it can only take a few minutes. SSI are also interested in partnering on proposals. If you would like to know more about the Open Call, or explore options for partnership, please get in touch with SSI at info@software.ac.uk.

Steve Crouch, Research Software Group Leader, Software Sustainability Institute.

EPSRC Call for Expressions of Interest: Big Data Analytics

Closing date: 15 December 2014 at 4pm.
Workshop: 3 March 2015.

The EPSRC have announced a Call for Expressions of Interest for their "ICT Perspectives on Big Data Analytics" Workshop. The workshop will aim to identify Big Data Analytics research challenges facing the ICT community. A wide range of areas will be covered ranging from fundamental algorithms to human interaction as part of the Big Data Challenge.

Attendees will also be encouraged to use the Well Sorted Tool to participate in an online pre-workshop activity that will help to structure discussions on the day.

[Click \(www.epsrc.ac.uk/funding/calls/ictbigdataworkshop/\)](http://www.epsrc.ac.uk/funding/calls/ictbigdataworkshop/) for further information and to access the Expression of Interest form.

Hartree Centre Training

The Hartree Centre will be hosting a training course on "Parallel Performance Evaluation Using the TAU Performance System" on Tuesday 6 January 2015.

"To meet the needs of computational scientists to evaluate the performance of their parallel, scientific applications, we present the TAU performance evaluation tool along with related measurement libraries (such as PAPI from U. of Tennessee) and visualization tools (such as Vampir from TU Dresden). This workshop will cover performance evaluation of applications on Hartree Centre's HPC platforms including the IBM iDataplex Linux system."

More information, an agenda and the online registration form can be found here:
<https://eventbooking.stfc.ac.uk/news-events/tautraining>.

ARCHER Access

The UK National HPC Service ARCHER has recently been upgraded to 118,020 cores, giving a theoretical peak performance of around 2 Petaflops. There are a number of calls open for researchers to request access to this system. Two have deadlines on 7 January 2015 and instant access for evaluation purposes is open any time. Conditions apply and details are given at: www.archer.ac.uk/access/. How can we help? We are happy to help you fill in the Technical Assessment and review your application before submission.

If your software does not scale on this size platform, but you believe your research could one day benefit from the ability to process larger datasets or faster run times, then we can help you achieve those goals through a range of training courses as well as professional consulting and mentoring.

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Embedded CSE Support

The 4th eCSE call has opened on Tuesday 25 November 2014 and will close at 4pm on Tuesday 13 January 2015. 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. For further details, see: www.archer.ac.uk/community/eCSE/.

IT Services

Winter 2014 Newsletter

Finally, do not forget to look out for the IT Services Winter 2014 Newsletter which will be published in early December. This is a different newsletter and contains the latest news about all aspects of IT, not just the research aspects detailed here. You will be able to find it at: www.itservices.manchester.ac.uk/aboutus/news/.

Subject-specific Email Lists

Please note that these email lists are subject specific discussion forums, rather than a way of contacting IT. For the latter, please see the contact emails in the next section.

finite-elements@listserv.manchester.ac.uk

fortran@listserv.manchester.ac.uk

sciprogramming@listserv.manchester.ac.uk

university-gpuclub@listserv.manchester.ac.uk

Faculty Contact Emails

Humanities:

Hum-ITResearch@manchester.ac.uk

Engineering and Physical Sciences:

EPS-ITResearch@manchester.ac.uk.

Medical and Human Sciences:

MHS-ITResearch@manchester.ac.uk.

Life Sciences:

FLS-ITResearch@manchester.ac.uk.

Next edition

The next edition of this newsletter will be circulated at the end of December 2014.

If you have any news to contribute, please contact Lee Margetts: lee.margetts@manchester.ac.uk at any time.

Items received **before 19 December 2014** will be included in the next edition. Items from academic colleagues and researchers are most welcome.