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The University of Manchester

Research IT

Helping you achieve your research outcomes

A newsletter from IT Services: Research IT

Welcome to issue #34, April 2016, in a [regular series of updates on IT research support and facilities for postgraduates, researchers and academics of The University of Manchester.](#)

Your main contact email address for research computing support is given on the last page; emailing your queries this way will automatically raise a job for you in the IT Services helpdesk system. Every day, routine work should continue to be submitted through the IT Service Desk on +44 (0) 161 306 5544 or via the Support Centre online at:

www.itservices.manchester.ac.uk/help/

Research IT Twitter

To keep up to date with all the news from Research IT and beyond, please subscribe to our Twitter feed

[@UoM_eResearch.](#)



News

Get Help to Improve your Research Software

If you write code as part of your research, then you can get help to improve it - free of charge - through the Software Sustainability Institute's (SSI) Open Call for Projects. The call closes on **April 29th 2016.**

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 accept submissions from any discipline, in relation to research software at any level of maturity, and are particularly keen to attract applications from BBSRC and ESRC funding areas.

For more information and to apply please visit SSI [website](#) or contact [Research IT](#). 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 at info@software.ac.uk.

Quick and Easy Software Installation

Many of you have indicated that you would like to be able to install software on your University computers. As a result of your feedback the new Software Centre has been launched, which allows you to install a wide variety of site-licenced software on your computer, without needing to contact the IT Support Centre.

In addition to the software which comes with a standard managed desktop or laptop computer, you can now choose from many licensed applications, including SPSS, CorelDraw, SAS, Abaqus and many more.

The Software Centre is available exclusively on University managed staff desktop and laptop computers.

[Read the full article on StaffNet](#) to find out more, including plans for further features and how to provide feedback.

UoM Dropbox Project

The Secure External Collaboration project is part of the Cyber Security Programme to provide a secure external file sharing service for University of Manchester staff. Dropbox is about to be implemented with an additional integrated cloud security layer. It is planned to have the service ready by the summer.

The project is currently looking into how the University of Manchester Dropbox service will coexist with existing Dropbox accounts that staff may already use.

If you are already using Dropbox it would be very helpful if you would complete this short survey [online](#).

If you would like further information about the project, please contact caroline.hargreaves@manchester.ac.uk

Collaborations Workshop 2016 (CW16), Edinburgh

The annual [Software Sustainability Institute](#) (SSI) gathering was held this year at the Royal College of Surgeons of Edinburgh and attended by current SSI fellow, Senior Research Software Engineer [Robert Haines](#), newly inducted fellow [Caroline Jay](#) who is lecturer in the School of Computer Science and [UoM Research Software Engineers \(RSE\)](#) Shih-chen Chao, Phil Bradbury, and Rob Dunne.

The three day [unconference](#) featured timed lightning talks by attendees on their current work, demo sessions of projects, and keynote talks, with topics ranging from the Square Kilometer Array to running one man crowdsourcing projects.

The event was rounded off with the CW16 Hack Day that pitted teams of three to six attendees against each other to produce prototypes of ideas generated in the CW16 collaboration sessions. The Hack Day winner created an automated sentiment analyser that crawled Twitter for mentions of software, and decided on whether the consensus of opinion was positive or negative, giving research teams a method for evaluating the impact of the software they create.

RSE Rob Dunne was a member of the hack team that came second with Matchmakedemia, a match making tool that identifies relationships between researchers using the [ORCID](#) database and social graphing, to recommend collaborations between researchers and engineers that share similar goals.

Over the three days CW16 provided the opportunity for members of the research and software engineering communities from universities, national laboratories and other scientific organizations to gain an insight into how each of us fit into the grander vision of creating research software.

For new RSEs this was an excellent experience - giving a broader context to the daily work undertaken at our University, and offering perspective on how being a software engineer can have a big impact on the research community.

ARCHER Champions

On March 16/17th Gerard Capes from the Research IT applications team and George Leaver from the Research Infrastructure team attended the ARCHER Champions workshop in Edinburgh, run by EPCC.

[ARCHER Champions](#) is an initiative set up by the national supercomputer service, ARCHER, to provide a support network between staff involved in the support of local HPC services who may be advising their users on access to regional and national facilities. The first

workshop was mainly concerned with defining the role of an ARCHER Champion but it is expected future workshops will be opened to PDRAs that are using ARCHER and could provide local advice to other researchers within their research group or school. An ARCHER Champion primarily provides advocacy and advice about ARCHER, not technical support (this is covered by the ARCHER service).

The workshop material is available from the ARCHER [website](#) and covers many topics. One of the topics covered was routes to access ARCHER, in particular the [ARCHER Driving Test](#). This is an on-line assessment tool that, once completed successfully, allows access to an account on ARCHER and a small allocation of CPU time - ideal for testing your codes before making a larger project application.

The event was well attended with representatives from many UK Universities and an industry representative. The evening's social event in Edinburgh provided an opportunity to network and sample the local whisky. If you would like more information about accessing ARCHER please get in touch us via with its-research@manchester.ac.uk

LinguaSnapp - Manchester's Multilingual Landscape

The School of Arts, Languages and Cultures recently launched LinguaSnapp, a project to create a multilingual landscape map of Manchester by crowdsourcing data from the public. As part of the project Research IT worked with researchers from the School to create the first mobile app. Users take photographs of multilingual signs, posters, leaflets and other texts and upload them to University servers along with other optional data about the photograph. A bespoke [website](#) then displays the photos on a map using Google Maps API as the mapping tool, so that StreetView images of the location can be shown. The data will also be used to aid future research about the demand for language services across the city.

The app was created using a cross-platform development tool called PhoneGap, which meant that both Android and Apple apps could be created

simultaneously from the same source code, saving months of development time. Research IT also wrote the webservice that enabled the app to communicate with the LinguaSnapp database, plus an administrative website for the LinguaSnapp team to moderate and add contextual information to the photos. For more information about Linguasnapp visit the website at <http://www.linguasnapp.manchester.ac.uk/>.

Global Challenge Advanced Radiotherapy Network+ funded by STFC grant

[STFC](#) designs, builds and operates large scale, national research infrastructures as well as managing the significant volumes of data these experiments generate. Notable is the X-ray synchrotron Diamond Light Source, ISIS the UK Neutron spallation source, subscriptions to colliders including CERN, and access to astronomical telescopes. There are a range of research grants from STFC available including [public engagement](#) and creating [global challenge research networks](#).

A recent successful collaboration between [Research IT](#) and researchers at the University is the launch of the STFC Global Challenge Network+ in Advanced Radiotherapy. This has strong HPC components (GEANT4 software based products) for the new proton beam therapy unit in Manchester, which is under construction in the Christie Hospital.

The [Press release](#) announces two Town Hall events; one on Wed 27th April - at the Cockcroft Institute, a collaboration with the University of Manchester - and another in London on Fri 22nd April. The Town Hall events will explain the vision of the Network+ with invited talks on potential areas for collaboration.

Requests for sandpit ideas (e.g. specialist HPC interactive service), to fund projects, are welcome from related researchers in the university as well as options for joint PhDs. Contact in Manchester is: PI [Karen Kirkby](#), [Hywel Owen](#) (based at the Cockcroft Institute) or [Martin Turner](#) (Research IT).

Upcoming Events

Geo-capabilities Forum – “Insights into interrogating data - the application of location analytics”

Research IT is organising a seminar/workshop to bring together people interested in the use of location in analytics. There will be a presentation from Professor Bob Barr OBE regarding the importance of Location in analytics and breakout sessions to discuss the state of geo-infrastructure at the university, identify good practice and recommend the way forward in infrastructure, consultancy, training and interdisciplinary research.

Join us to decide how data analytics infrastructure at the University will look like.

Date: 27th of April from 10:00 to 13:00 (Complimentary Lunch)

Venue: Atlas Rooms, 1st floor, Kilburn Building, School of Computer Science,

For more information and to register please visit the event [website](#).

EMiT 2016 Conference

EMiT (EMerging Technology) conference series will hold its 3rd annual event on **2-3 June 2016** at Barcelona Supercomputing Centre, which is co-hosted by Mont Blanc and The University of Manchester.



The EMiT conference series brings together experts from all areas of computing to examine how to best take advantage of the changing landscape of computer hardware and novel techniques.

The conference themes include: Device-independent Compilers; High Level Languages; Low Power & Energy Efficient Computing; Advances in Novel Hardware; Numerical Algorithms; Applications.

[Registration](#) at just €100 (€75 for students) is now open.

Hartree Centre Summer Schools 2016

Four weeks, four subjects: Big Data – Engineering Simulation – Visualisation – HPC:

- **Week One – Big Data.** Learn about the opportunities and challenges that Big Data & Analytics presents including the chance to get hands on.
- **Week Two – Engineering Simulation.** Learn about the future capabilities of engineering simulation through innovative open source and proprietary software platforms. Discover novel techniques for dealing with uncertainty and multiscale effects in the large-scale parallel finite element analysis of structures.
- **Week Three – Visualisation.** Learn the skills necessary to develop applications that enable you to assimilate complex information quickly and easily and discover the latest visualization tools.
- **Week Four – High Performance Computing.** Learn the skills necessary to develop applications that run on the top 20 machines of the Top500 list, now and in the future.

[Registration](#) opens Monday 4th April – registration fees are only £150 per week! Schools start on Monday 13 June.

Other News

Hartree Insights

Hartree Insights is a new monthly newsletter launched by the Hartree Centre where they share a selection of the exciting things happening there, as they accelerate the application of HPC, big data and cognitive technologies to meet industrial and research challenges.

These updates are aimed at partners and anyone interested in Hartree activities. Past editions can be found using [this link](#) and you can [subscribe](#) to be the first to receive new updates by email.

Vacancies

Are you trying to recruit someone? Let us know and we will help you advertise here.

Researcher Satisfaction Survey

We value your feedback; please take a moment to tell us how we're doing by completing this [short survey](#).

Research Computing Facilities

IT Services supports University of Manchester researchers and staff on a wide range of facilities including your own desktop, University owned clusters and externally hosted facilities. Links to a range of facilities are provided below. If you would like to find out more about the best option for your particular research needs, please [contact us](#).

- [University of Manchester Computational Shared Facility](#)
- [University of Manchester Condor Service](#)
- [N8 Regional High Performance Computing Service \(N8 HPC\)](#)
- [PRACE EU High Performance Computing Service](#)
- [UK Hartree Centre Facilities](#)
- [PRACE EU High Performance Computing Service](#)
- [XSEDE USA High Performance Computing Service](#)

Access to ARCHER

Researchers can request anything from pump-priming access to full projects on the UK High Performance Computing Service (ARCHER) for suitability for their work all year round via a lightweight application process. [Click here](#) for details.

Research Computing Training

University of Manchester Courses

Research IT is running a short series of [hands-on](#) training courses which provide skills for researchers to further enhance their research. For information on our courses or other training that we can provide, please take a look at our [training catalogue](#) or [contact us](#).

IT Services also offers a range of [online](#) courses to improve skills in all aspects of research computing including programming, high end computing and visualization. Some of the online courses include:

- [Introduction to Unix](#)
- [Introduction to Fortran](#)
- [Intermediate Fortran](#)

PRACE Advanced Training Courses

The Partnership for Advanced Computing in Europe (PRACE) offers [free courses](#) at different HPC centres in Europe. Courses offered in April and May 2016 include:

4-8 Apr	Fortran for Scientific Computing	Germany
4-7 Apr	Advanced Topics in High Performance Computing	Germany
5-7 Apr	Advanced usage on Curie: parallelism, optimisation, IO, tools	France
6-8 Apr	HPC enabling of OpenFOAM® for CFD applications	Italy
11-12 Apr	Systems Workshop: Programming MareNostrum III	Spain
12-15 Apr	Cray XC40 Optimization, and Parallel I/O Courses	Germany
18-22 Apr	21st VI-HPS Tuning Workshop	Germany
19-22 Apr	Debugging and Optimization of Scientific Applications	Italy
20-22 Apr	Scientific Python	Liverpool
21-22 Apr	Parallel filesystems and parallel IO libraries	France
25-27 Apr	GPU Programming with CUDA	Germany
26-28 Apr	HPC Tools	Durham
4-5 May	Enabling Software for High Scalable INTEL Architecture	Italy
9-10 May	Performance Analysis and Tools	Spain
11-12 May	Heterogeneous Programming on GPUs with MPI + OmpSs	Spain
13 May	Systems Workshop: Programming ARM based prototypes	Spain
17-19 May	Uncertainty quantification	France
18-19 May	Parallel I/O and management of large scientific data	Italy
23-27 May	22nd VI-HPS Tuning Workshop	France

Subject-specific Email Lists

Join the email lists below to collaborate and share ideas with a broad network of staff across campus. Please note that these email lists are subject specific discussion forums, rather than a way of contacting IT Services.

[University HPC PhD Network](#)

finite-elements@listserv.manchester.ac.uk

fortran@listserv.manchester.ac.uk

sciprogramming@listserv.manchester.ac.uk

university-gpuclub@listserv.manchester.ac.uk

Useful Links

[Faculty of Humanities Blog for Researchers](#)

[Faculty of Humanities Training Hub for Postgraduates](#)

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Online Copy

If you have received a printed copy of this newsletter and wish to follow the links, staff can download an electronic copy with clickable links at:

<http://documents.manchester.ac.uk/display.aspx?DocID=28549>

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Next edition

The next edition of this newsletter will be circulated at the beginning of May 2016.

If you have any news to contribute, please contact Ignas Daugalas ignas.daugalas@manchester.ac.uk and Gillian Sinclair gillian.sinclair@manchester.ac.uk at any time.

Items received **before 22 April 2016** will be included in the next edition. News from academic colleagues and researchers are most welcome.