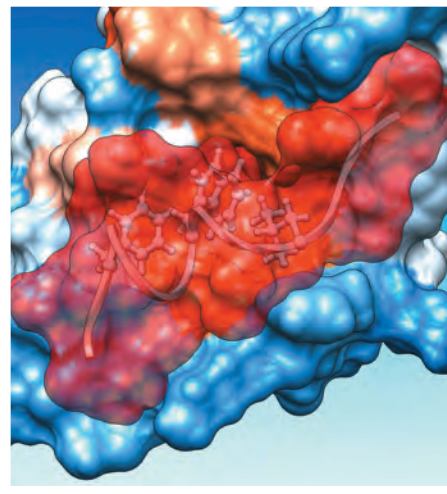## Services for researchers

For many researchers, the quality of their research is dependant upon the quantity of computing cycles available. It is not uncommon to find problems that require weeks or months of computation to solve. High Throughput and High Performance Computing environments deliver large amounts of computational power over long periods of time and as such are ideal for this sort of work.

Computational Shared Facility (CSF)

The CSF is a collection of servers joined together to form a large High Performance Computing resource, for University researchers to run computationally-intensive calculations, simulations, and problem analyses. It is built on a shared model, the expansion of which is funded by research groups. The service began in spring 2011 and is operated on behalf of the research community by IT Services.

Why get involved?
- It maximises available computational power, by pooling resources and funds.
- It can relieve researchers' PCs of heavy workloads.
- It allows researchers to focus on their work, rather than on IT systems and software maintenance.
- The service provides extensive user support through central and Faculty IT teams.

Since spring 2011:
- More than **250 users** have registered.
- Research groups from across the University have contributed to the purchase of more than **£1 million** worth of hardware.
- The service has grown to deliver more than **3500** central processing unit cores and graphics processing units, with more than **50** applications and tools installed.

To find out more visit: **www.itservices.manchester.ac.uk/keyservices/csf/**

EPS Condor service

Condor is a High Throughput Computing service, available to University researchers. This specialised workload system for computationally-intensive jobs, utilises the free computing power of staff and student workstations over a network. Condor seeks out idle machines to run research. With around 700 desktop PCs situated in open access clusters around the Faculty of Engineering and Physical Sciences, many with quad-core processors, this translates into more than 2000 processor cores available for processing!

This service is particularly suitable for parameter sweep and Monte-Carlo style studies (where you might want to run many simulations, all with slightly different conditions) and for pleasingly parallel problems.

Managed by IT Services staff based in EPS, Condor is a fully-supported service that any researcher across the University can access. To find out more, visit: **condor.eps.manchester.ac.uk**

University GPU club

Over the last two years, IT Services has been building communities of researchers around the common interest of methods in computational research. These communities include: University GPU Club, Multiscale Club and Image-based Modelling Club.

Graphics Processing Unit (GPU) devices are no longer just a plug-in card in your PC, dedicated to displaying graphics on your screen. Today's GPU cards have a peak performance of over 0.5 TFLOPS/sec, equivalent to 25 Intel CPU cores (but at a fraction of the cost). Such computational capability enables researchers to dramatically reduce their modelling times. However, there is a challenge in extracting this peak performance and that is where the University GPU Club can help.

We hold frequent meetings and workshops where there is a chance to interact, discuss and see members of the research community present the work they have undertaken on GPUs. The Club also hosts speakers from equipment vendors and internationally-renowned experts.

The community website includes GPU training opportunities, an FAQs page and is kept up to date with the latest research successes. For further information, visit: **http://gpu.manchester.ac.uk/**

Think twice before you attach

Emails containing personal data that are misdirected or sent to the wrong people can cause significant harm and distress. They can also lead to heavy fines for the University and severely damage its reputation.

The University has had several 'near misses' in the recent past which would have had very serious consequences if they had not been contained. Many were as a result of human error and often involved email attachments.

It is essential that you take the following precautions when sending emails which contain personal data:

- ALWAYS double-check the email address, particularly if you use 'auto-complete' which may display similar addresses to ones you have recently used.

- Make sure attachments only include the data you want to share. Be aware of hidden personal data in spreadsheets. Sending a spreadsheet as a PDF helps to ensure that only the information you can see is sent.

- If you need to send sensitive or personal data, which includes information on disabilities or health, then the data MUST be sent as an encrypted attachment. Protecting documents with a password means data cannot get into the wrong hands.

- You should consider whether email is the most appropriate way to share this kind of information.

- Consider setting up a delay function on your outgoing emails – this might help to prevent emails being sent in error.

Remember that what you write in an email might be circulated beyond the recipient. Information contained in emails is also subject to Freedom of Information Legislation and the Data Protection Act. Every email you send is therefore potentially open to wider public scrutiny.

Do you know how easy it is to encrypt a document? **www.its.manchester.ac.uk/secure-it/encryptionsw/fileencryption/**

Helping new staff and students

If you are a member of staff who is responsible for welcoming and inducting new staff or students to the University, you may be interested in finding out more about leaflets and webpages that we provide to help newcomers make the most of the of the University's IT facilities

New Students

www.studentnet.manchester.ac.uk/it-services is a website specifically for new students.

Here they will find simple IT information, including useful links, information about how to update their IT account and details about downloading iManchester to their Smartphone.

Two leaflets are also available to students:
- A Student Guide to IT – ideal for new undergraduate and postgraduates
- Buying a computer for University – generic advice on what to consider before buying a laptop for University. Ideal for those considering studying at the University.

To request copies of these, email: **its-publicity@manchester.ac.uk**

New Staff

For new staff members, a useful starting point is the IT Services for New Staff webpage: **www.itservices.manchester.ac.uk/newstaff/**

You can download a PDF of the IT Services for New Staff leaflet for your new starters.

A wide range of IT training is also available for new staff, either online or face to face. For more information visit: **www.its.manchester.ac.uk/trainingcourses**
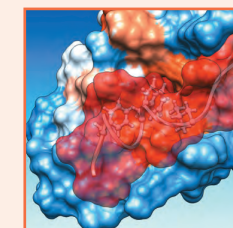
MANCHESTER 1824
The University of Manchester

ITnews

Features

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Welcome

Welcome to *IT news*, a new publication showcasing to staff the latest activities and innovations from IT Services.

In this issue, we'll tell you how new and returning students are benefitting from a major upgrade to Windows 7. More than 3,000 PCs in clusters and the Alan Gilbert Learning Commons have been updated with over 350 of the latest software applications. Our student printing service is now based on environmentally friendly 'pull-printing' technology which also offers integrated copying and scanning right across the campus. A new iManchester Mobile app has been launched with a range of news and information, including access to MyManchester and up-to-the-minute PC availability information. If you frequently use the University's rapidly expanding Wi-Fi service, check out our eduroam facility at **www.its.manchester.ac.uk/wireless/eduroam** for easy re-connection here and at other universities.

Lecture podcasting was a major success story for the last academic year with more than 160,000 downloads of recorded lectures. As a result, the University has agreed to deploy the facility to over 100 lecture theatres and teaching rooms across campus. I'm delighted that the project has been shortlisted for the Times Higher Education Outstanding ICT Initiative of the Year Award. You can find out more about the service inside this issue.

We also highlight some of our services for researchers. Our Computational Shared Facility offers an expandable, High Throughput Computing service for research groups. It's proving extremely popular, with nearly £1M invested directly from research grants. We are increasingly expanding the services with Graphics Processing Unit (GPU) nodes and you can find out about our GPU club if you want to know more. We also showcase the successful Condor pool which utilises PCs across the Faculty of Engineering and Physical Sciences when they are not in use for other purposes.

Finally, to find out more about our long term plans or to discuss your local IT needs, visit: **www.itservices.manchester.ac.uk/aboutus**

Paul C Harness

Contents

Improvements for new and returning students

New and returning students are benefiting from a range of improved services for the new academic year. These are the result of a huge collaborative effort across central and Faculty IT teams, along with other colleagues across Professional Support Services.

New improved MyManchester for 2012/13

MyManchester, the principal website for students at the University, has been upgraded to reflect their feedback. It has an improved look and feel, the content has been updated and reorganised, an AskMe feature has been introduced and other new features added. In conjunction with this, a specific Welcome Week site was used to support new students at this important time.

iManchester app

The University now provides a mobile application for students.

Find out more on page 4!

The University of Manchester
iManchester

Windows 7 student desktop

Windows 7 is now available for students, deployed on more than 3000 student desktops (PC Clusters) for the start of academic year. Using the new service, students can access over 350 software applications in support of their learning and research. Behind the scenes, we have replaced the legacy Novell-based systems with the latest Microsoft technology. As a result, students are benefitting from much faster login times.

Staff will start to benefit from a similar service as PCs are upgraded over the next year.

Print > Swipe > Pull

We have been working over the past 12 months on the introduction of a modernised pull print service, that fundamentally changes the way students print and adds valuable new functions.

A student clicks print as normal from a PC cluster, however the print is now held in a queue. Print outs can be collected at any time from any of the 130+ print stations across campus, by simply swiping a student card.

All of the new printer devices know as Multi Functional Devices (MFDs), allow students to photocopy and scan, using the same simple swipe card process. Not only does the new service add to the student experience but environmentally we are seeing less waste due to unwanted or uncollected prints.

Blackboard – online learning

Following a year of dual-operation of Blackboard 8 and 9, a major project has concluded to move all students to the latest Blackboard 9 platform. This provides staff and students with the latest tools for online learning.

Alan Gilbert Learning Commons

The fantastic new Alan Gilbert Learning Commons benefits from new IT services, including Windows 7, pull printing and Wi-Fi throughout.

Technology services include: touch screen information points; more than 350 student computers mounted in state of the art 'intelligent furniture'; video conferencing on desktops and in group study rooms; and soon external wireless access for those warmer, dryer days!

IT Services start of year promotions

The IT Services start of year fair stand was particularly well attended this year. To help get students to the stall we ran a competition using a 1980s style Nintendo 'Shoot the Duck' game. It was a fun way of getting across the message 'Don't be a sitting duck' in terms of IT security. Students won different prizes including a Google Nexus 7 tablet.

Our lucky winner, Xiaoyun Fan, received her Nexus 7 Tablet from Tyrrell Basson, Head of PSS IT, in the Alan Gilbert Learning Commons.

Nancy Rothwell, President and Vice-Chancellor, takes part in the IT Services game at the start of year fair

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Podcasting project

IT Services are working with Media Services to deliver a new automated podcasting system in 100 of the centrally timetabled lecture theatres and seminar rooms. The goal of the new podcasting system is to enable teaching staff to produce high quality recordings of their lectures without the need for them to have technical know-how, receive extensive training or use specialist software. Teaching staff will not need to press buttons or manage the system during a lecture. Instead, staff can simply teach as before and a network of unseen, automated technology handles the creation of digital material.

This type of system was trialled during the previous academic year with outstanding results. During the pilot, 5,000 students downloaded more than 163,000 individual podcasts. A survey of 588 of these students showed that 91% believed they would achieve better examination results after having used the podcast service, 94% would like the service to be more widely available and 88% indicated that podcast availability increased their course unit satisfaction.

It will take a full year to complete the rollout of the podcasting system, with the service becoming fully operational in August 2013. However, a limited number of high priority rooms (approximately 20) will be enabled for Semester 2 of this academic year.

Staff interview: podcasting project

John Moriarty, a Senior Lecturer in Mathematics, has been involved in the podcasting pilot for over a year. His lectures on Probability and Statistics run on Mondays at 9am and Tuesdays at 5pm. Here he answers a few questions about what the new podcasting facility has done for him so far:

What has been the most significant benefit of being able to podcast your lectures?

I would say its usefulness to international students; podcasting is even more valuable to them than I had expected. International students do not have English as their first language and so by podcasting my lectures this gave them the opportunity to listen again and gain a better understanding.

What other features of podcasting have you found useful?

The beauty of podcasting is how simple it is to use. All you need to do is present your timetable (for the semester) and the recording is automatic on the hour. You can also use something called the visualiser switch. Because podcasting doesn't capture when you write on a white board you can overcome this by free writing using a Visualiser (a camera mounted on a stand that connects to a projector). Podcasting allows you to switch between your PowerPoint slides and a visualiser which is great! A good substitute if you cannot do this is to just scan and add your page to Blackboard 9. I used a YouTube clip in one of my lectures and the podcast managed to pick this up. Podcasting records everything that happens on your PC screen.

Has there been any effect on attendance?

I saw attendance go up last year, but this could also be related to my use of online quizzes and assessments. There may be fewer students attending if you used podcasting alone but I don't know how much of an effect this would have. I have lecture timings which put me at risk of low attendance and I would recommend a package of e-Learning resources to overcome this. Engagement is a huge part of any course. Podcasting needs balance; if a student misses a lecture, I need something to make them prioritise watching the podcast. I don't want to create a backlog of work for students missing lectures.

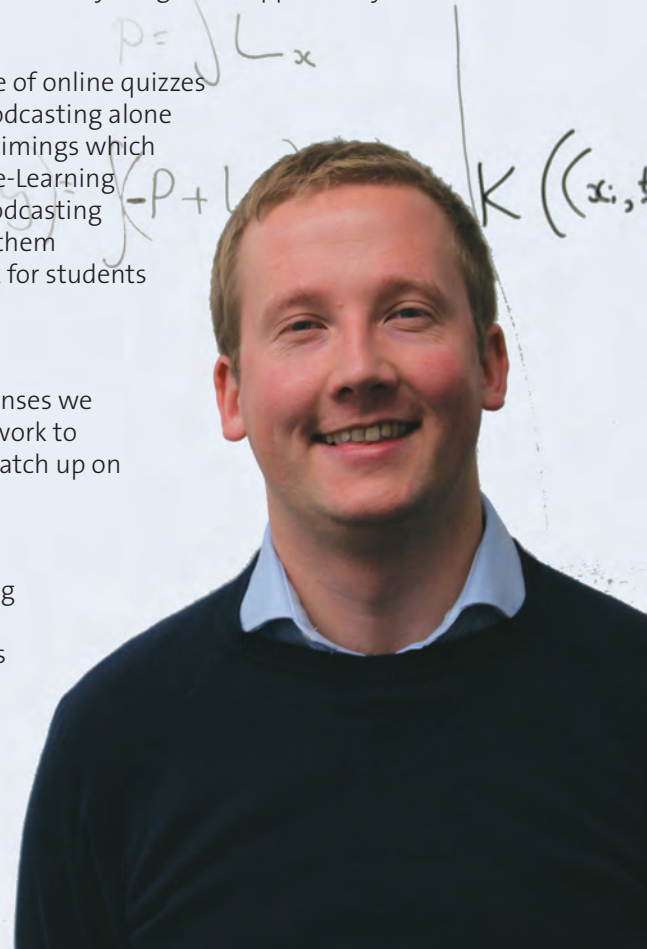What feedback have you received from students?

We receive student feedback in weeks 3 and 10. The only negative responses we received were related to some students not being able to get iTunes to work to download the podcast. There are many positive responses; it's good to catch up on work and to use during revision.

Can you archive podcasts for future reference?

Yes, I have last year's podcasts on my hard drive and on iTunes. I am using the same schedule for the course again this year, so each week has a specific topic; it means that last year's recordings are always available as a backup.

Finally, would you recommend this service to other teaching staff?

I would. I can't see any disadvantage. I'd only say that my lecture group is over 400 students and I wouldn't necessarily recommend using e-Learning such as quizzes for small lectures with few numbers, as it can be time-consuming. Once built, maintenance of e-Learning is much less but it is the lecturer's responsibility.

Stay connected from your pocket with iManchester

September 2012 marked the launch of The University of Manchester's very own app. iManchester gives students on-the-go access to an interactive campus map, My Manchester, Blackboard Mobile, Library services and much more. The app also provides a directory (similar to people finder on StaffNet), the latest University news and events, making it useful for visitors and staff alike.

iManchester is the result of a sixth-month project comprising of a team from across the University with representatives from the Students' Union, Estates, DSE and IT Services. The project sponsor was Prof. Richard Reece, Associate Vice-President for Teaching, Learning and Students, with Andy Land, Digital Systems Manager at The University of Manchester Library as project manager.

Developed using the Blackboard Mobile Central Platform, this app is available on a variety of devices from Smartphones to tablets. It can already be downloaded from the Apple app store and Google Play. There is even a mobile version on the horizon meaning it will be available on any device with an Internet connection. So far there have been 4100 new active users using the Apple version and 610 Android users.

As part of the app, the directory is proving to be particularly useful to students who wish to locate and contact teaching staff. In order to ensure that this directory remains effective, please make sure your details are available for students to find them and are kept up to date. To find out how to update your details visit: **http://directory.manchester.ac.uk/faq.html**

The project is now developing a 'governance and technical framework' for mobile development to support those Schools and departments who may wish to develop services for mobile devices. This will be available at the start of 2013.

Development of iManchester will continue with additional functionality being added. Any feedback on the app, therefore, would be welcome, just email: **iManchester@manchester.ac.uk**

Student interview: iManchester

Jennifer Douglas, 21, who studies History and Economics and Adam Lowe, 20, a Mathematics student, are in their final year. Here they tell us what they think about the new University of Manchester app, iManchester:

Was iManchester easy to find and download?

Adam – Extremely easy, I just typed 'iManchester' in my iPhone app store. With its unique name, it was the only one.

Which aspect of the app would you have found most useful as first year students?

Adam – The map would be very useful for new students; it tells you where you are on campus and where you need to be. It even has a categories section (under the places tab) which is very handy to know where to grab some lunch.

Jenny – I agree, the campus map would have been helpful when I first arrived in Manchester. I was always getting lost around campus and as Manchester weather is well known for being wet and windy, large campus maps are tricky to use!

What is your favourite tab?

Jenny – Blackboard without a doubt. Since downloading the app I have used it so many times to look up course content and I can even access my modules' past exam papers.

Adam – It has to be the PC cluster section for me. As a Mathematics student, 90% of the time I am required to find a PC on campus. This feature saves me so much time by showing me exactly how many PCs are free in each cluster. Before, I always had to traipse around campus trying to find a free PC, finding one is especially time-consuming during busy exam season.

Jenny – Yes the PC availability tab is a very useful feature. I also like that I can access contact information for my lecturers which is so much quicker than using a website search.

And finally, in the next update what would you like to see included?

Jenny – Maybe a way of accessing your timetable in case you forget what room you need to be in for a lecture.

Adam – That would be handy. What about adding push notifications (allows an app to notify you of new messages or events without the need to actually open the application) or a way of getting academic reminders to your phone for example notifications on coursework deadlines?