Mathematical Institute

IT Induction

Please see

`http://www.maths.ox.ac.uk/members/it/info-new-users`

for various useful links and information for getting started with IT

(as well as the electronic copy of the latest version of this document)

IT accounts

All university members have a **central university single sign on (SSO)** account. Usernames are of the short format unitNNNN and long format unitNNNN@ox.ac.uk.

Departmental staff, DPhil students and long format MSc students are also provided with a **departmental IT account**, which is provided to you as part of your department induction via HR or Academic Administration. Usernames are based on surnames. Others may apply for one if/when needed (see `https://www.maths.ox.ac.uk/members/it/it-facilities-access`).

SSO accounts are strictly tied to having a valid university card and expire at the same time. If your contract or course ends earlier than the date on your card the university will update its records accordingly so access and services closes soon after you leave the university.

Maths IT accounts are normally set to expire within a month of the end of your course or contract. You will receive automated emails about a pending expiry from 28 days to the account end date. Those emails include guidance on how to request an extension (e.g. because you have not yet had leave to supplicate for your DPhil, or because you are moving to another institution and would like an extra month or so to finish up work on our systems or ease the transition to your new location, you have suspended status or extended your course end date for some reason, or perhaps because you have had a contract extension but that info has not safely travelled from HR to IT records).

Both accounts are important and provide access to different services, e.g.:

- SSO: the majority of central university provided IT facilities including Office365 (particularly important for Email and Teams), Eduroam (for wifi), free software (e.g. Office365, Matlab, Mathematica)

- Maths: the majority of department provided services including login to desktops or remote access to compute systems, departmental website etc

Note some departmental services use SSO rather than the Maths IT account - most notably the Moodle course materials system, and undergraduate and short format MSc courses Maths website logins.

The importance of your password(s)

IT systems in general are moving towards single sign on services whereby you have one username and password to access all the providers facilities. Typically the provider is also offering a wider range of means of accessing those services, in particular web and remote access.

With this greater ease of access comes ever greater personal responsibility. You should never tell anyone else your password. Ideally use a different password for different service providers and change your passwords from time to time.

Remember to lock the screen or logout as appropriate when not using a device!

Maths password changer: `https://www.maths.ox.ac.uk/change_password`

Once you have set a password for your Maths account then in general we never force you to change your password again. As such if you receive emails suggesting you must change your maths password, or login to ensure continuity of service or upgrade a service etc, then these are phishing emails! The only time we typically require you to change your password is if the account appears to have already been compromised (in which case we may have already locked it to prevent further harm).

In contrast although your SSO account required MFA (multi-factor authentication) to use for most services, the central university continue to enforce annual password changes. So the challenges is to spot the one legitimate email a year that is instructing you to update that password even though it looks very similar to a typical phishing email. Now MFA is bedded in it is hoped this requirement will finally be dropped.

You may wish to consider whether to use a password manager - there is often a trade-off between convenience and security with such systems. E.g. you could use keepassxc on an account but then the password vault is local to that system/network; you could use a cloud based system so it is easily accessible from multiple devices but then you are more at risk of issues with the 3rd party service and all your passwords being at risk (which has happened on several occasions with various popular providers).

Information security

The implications of information security will be more significant for some than others. For many the only information they have access to will be their own and will not contain personal or confidential information about others.

For others, often professional services and academic staff or those with particular research data, they may have access to personal and/or confidential information. If so it is important to consider how you access it, where it is stored, how it is appropriately shared, and that it remains secure.

The departmental systems are in general managed and secure when used as intended. However you may consider working remotely or accessing data from a mobile device; in such situations you should consider the additional risks of such access, e.g. remote access/working may be best done via the Remote Access Portal (RAP) so the data stays on the Maths systems rather than using applications on your local device that potentially transfer or cache a copy of it to your local device.

All staff should be aware of the Information Security Policy at

https://www.maths.ox.ac.uk/members/it/it-notices-policies/information-security-policy

and it is **mandatory to take the Information Security Awareness Module** at

https://www.it.ox.ac.uk/infosec/module/

and to do a refresher course via the above at least once per year!

The full course takes about an hour to complete; the refresher is even shorter.

Data Breaches, FoI, SAR and more

The university information security awareness training and other guidance covers various topics, not just how to keep yourself and the information you have access to safe, but also

- appropriate and permitted use, handling and disposal of personal data
- requirement to keep data accurate, to make corrections when individuals provide new information/feedback, and to remove data where requested to do so when not essential to continue to provide service
- privacy notices, information asset registration and permitted transfer to 3rd parties
- require action should you receive a freedom of information (FoI) or subject access requests (SAR), or identify a data breach
- necessary checks and considerations should you be investigating the option of using a new service or designing a new process that will collect and process personal data

In particular please be aware if you identify a potential data breach then it must be promptly reported to data.breach@admin.ox.ac.uk (and copy in director-of-it@maths.ox.ac.uk) who will handle the case and follow up with you further as necessarily.

Similarly please be aware if you receive a freedom of information or subject access request, even if the requestor does not use that particular language, then you must immediately notify the university's Information Compliance Team at information.compliance@admin.ox.ac.uk. You would typically also notify your line manager, the Head of Administration and Finance, or the Director of IT as appropriate too.

In addition to the information security awareness training please also familiarise yourself with the guidance covering these topics at https://compliance.admin.ox.ac.uk/staff-guidance and https://www.maths.ox.ac.uk/members/policies/data-protection-information-compliance as appropriate for your role (and seek guidance from with your line manager etc as appropriate).

Phishing and other scam emails

It is not uncommon to receive phishing and other scam emails. Some may be well written, potentially link to external sites — but critically those sites and links may be made to appear as if they are a more familiar internal site you might regularly use — and claim to come from the department or university.

They may claim you need to reply with confidential information or go to an external link and login to confirm details, ensure a service continues, gain more quota, update your password etc.

In general **these emails are not from the department** and can simply be deleted.

Similarly these emails are not from the central university, with one exception, each year they will send an email reminder requiring you to change your central university SSO password. Be careful to spot this one exception!

If unsure please do ask IT support.

If you happen to respond to such an email or visit such a site and enter in details then please let IT support know so they can advise and check for any further compromises.

For further guidance see https://www.maths.ox.ac.uk/members/it/faqs/communication/phishing

The IT Team & support/help

The primary way to obtain local advice and assistance from the IT Team is via email or a web form.
Email: it-support@maths.ox.ac.uk
Webform: https://www.maths.ox.ac.uk/members/it/support/it-help-request
This reaches the entire IT team and the problem is then properly logged and tracked.

Some key points:

- create a separate ticket for different questions — this will maximise your chance of speedy answers to each part rather than waiting until someone can answer a whole set of questions in one ticket
- keep the automated reply for the ticket — by replying to it it adds to the same ticket ensuring the info stays together, minimising confusion
- give it a sensible subject line so it can be easily understood in the list of requests on the dashboard the IT team review
- remember to be clear about where the problem is/you are as there are over 1000 users, over 300 offices, numerous department systems, personal devices, and people contacting us from all over the world
- the more clearly you report the problem, and its context, the better chance you give yourself of a quick and accurate response that resolves the issue

The IT Team & support/help 2

Other useful resources can be

- IT Team web pages — http://www.maths.ox.ac.uk/members/it
- Office mates and colleagues
- an internet search ;-)

although you are not expected to always search for answers before asking the IT Team. In particular our web pages are there to capture common responses and information which helps us when answering such queries as we can point you to the relevant page to try and then come back if you still have issues.

You can of course also visit and speak to the IT team members directly. With post-pandemic on/off site work patterns, and a large range of possible queries and systems though if you approach any one team member they may not always be the best person for your issue — hence they may still direct you to sending in a ticket to capture the info so a more appropriate person can then help.

A list of who they are and where the IT team members can be found (when working in the building) is at https://www.maths.ox.ac.uk/members/it/support

You may also wish to see the IT policies and notices — http://www.maths.ox.ac.uk/members/it/it-notices-policies

Note whilst the team will try to assist with questions about services beyond the department, e.g. those provided by the central university or beyond, we cannot be experts on them all and will have no privileged access to investigate issues on such systems (and in some cases may have no standard user access either).

Note the central IT Service no longer provide email access to report issues and ask questions. You can access their resources at:

Website: https://help.it.ox.ac.uk
To log a support request: https://help.it.ox.ac.uk/service-desk

IT Team privileged access

Material in your own account is in general private. Material in a pseudo account/share is open to those with access permission which will generally involve the immediate team and other relevant staff.

Although IT staff have the technical means on departmental systems to grant access to others or obtain things from within an account/share this is not done in general for individual accounts.

In such circumstances people will be asked to reconsider the need for the material, whether it is urgent, can they obtain explicit permission from the owner/holder etc. Only in extreme and clearly justified situations will IT staff provide access without explicit permission of the owner/holder. If in doubt IT staff would refer the matter to the Director of IT.

For additional access to operational/team file shares the request should come from the line manager/person responsible for the operational area/material.

Where user support requests are raised in relation to files, emails, webpage, application settings or configuration etc, then where appropriate IT staff may inspect the individual piece of data, or in some cases use tools that allow them to view the problem from the users perspective, to provide suitable assistance. The support request referencing the particular data, setting etc is taken as permission to inspect the content as appropriate. The vast majority of support requests do not require inspection of such data in these ways. Where such elevated access is used, the minimal amount of access and investigation needed will be undertaken, and IT staff must take suitable care when performing such operations.

Departmentally provided IT services

The department provides various IT services in-house as with most of the other large departments in the division.

Your Maths username/password will work on the departmental

- managed Windows, Linux and Mac desktops, including those in the teaching spaces
- compute systems
- website
- remote access portal (RAP)
- and various other more specific services such as the nextcloud file share, gitlab version control system etc

The majority of the department's desktop and compute systems are running Linux — aimed at academic research with ~6000 packages installed.

There are though also many managed Windows systems too (primarily for professional services staff), some managed iMacs, numerous laptops provisioned (running Windows, Linux, Mac OS), and tablets provided.

There are also Windows Terminal Servers that provides easy remote access to Windows applications, e.g. MS Office, regardless of the native OS of the system you use.

Reasonable personal use of departmental systems is fine: apply common sense but also see the IT rules for details

Email & Teams

The University calls its Microsoft 365 email and calendaring service Nexus. It has a web interface at

https://outlook.office.com

where you login with your SSO details.

Guidance to configure other mail clients is at

https://help.it.ox.ac.uk/how-to-configure-your-email-client

Blanket forwarding of a university email account to an external services is not permitted.

The departmental Zimbra mail and calendaring service at https://zimbra.maths.ox.ac.uk is in the process of being closed down in 2025. As of July 2025 the majority of people have been migrated with remaining migrations due to complete in August 2025.

Email & Teams 2

The university's chosen video conferencing/calling, chat and collaboration system is Microsoft Teams (together with the wider Office365 online application suite).

It is a central university provided service so you login using your long format SSO username and password (together with MFA).

You can access it using a MS Teams app (on a desktop, laptop, tablet, smartphone) or via its web interface https://teams.microsoft.com

You can use other platforms where appropriate (e.g. Zoom) but only MS Teams is licensed for all members of the university and approved for secure working and collaboration.

For lots more specific information on email and communication see

http://www.maths.ox.ac.uk/members/it/faqs/communication

In particular take note of the tips for safe email and Teams use, options for securely transfering information, and guidance on phishing:

- https://www.maths.ox.ac.uk/members/it/faqs/communication/email-and-teams-messaging-safety-tips
- https://www.maths.ox.ac.uk/members/it/faqs/communication/phishing
- https://www.maths.ox.ac.uk/members/it/faqs/security/sharing-and-transmitting-information-securely

Remote access and working

In a modern world people may be working from a variety of different devices and locations, some of those may be managed by the university whilst others are not. To support such flexible working there are a variety of options for remote access and working as outlined at
https://www.maths.ox.ac.uk/members/it/remote-access
For many the easiest, most secure, and recommended way to work remotely, will be using the department's Remote Access Portal (RAP), potentially combined with browser based access to the university's email service, together with a running Teams client for video calls and chat. These can be accessed at

- RAP: https://rap.maths.ox.ac.uk/
- Email: https://outlook.office.com/
- Teams: https://teams.microsoft.com/

Working in a large browser window connected to RAP you are running your applications on a department system, with all the usual access to files and resources as if sat in the department. RAP is simply securely facilitating a view on this without any data leaving the department — which in turn makes it convenient to naturally follow information security guidance.
Furthermore if you close the browser window then the session stays in place on the server so that next time you connect to RAP you can pick up where you left off. Note if you do not expect to do this you should use the usual logout option in the session to end it completely before closing the browser window.

If you use a particular mail client, e.g. Outlook or Thunderbird, then when working remotely it is often most secure to use these inside a RAP session so that no mail is cached to an external device.
For many though using a web interface to email is the norm these days and one can continue to do that when outside the department from a browser window/tab on your local device.

Teams needs to run on your local device (either using a Teams app or the web version) in order to make use of your local webcam and microphone.

Data Storage

Storing data safely is vital. Each Maths IT account has a home directory. This has an initial limit/quota of ∼60GB. When you reach that limit you can ask for more and all reasonable requests will be actioned if possible. Home directories are backed up to two separate backup systems every night. Maths email is stored separately, with similar backups and quotaing.

Each Linux machine has the spare space on the local disk accessible as /scratch. This is typically 50–300GB of space on a desktop and 9TB of space on a compute system. It is purely local to the machine and is backed up weekly (on a best efforts basis). It is most suitable for computational output or archives that can be recreated or restored from elsewhere should the disk fail or some other issue arise — do not use it for the most important materials that take the most human time to (re)create if lost!
Linux machines also have a /tmp directory. This is not backed up and is automatically emptied whenever the machine is rebooted. Accidentally completely filling /tmp may also stop some things working on the machine.

Windows machines are much harder to lock down and hence protect the user from storing data on the unbacked-up local disk. In general nothing is backed up from the local disk of a windows machine so never try to store files there.

There is also a central scratch system accessible from all maths machines which may be more appropriate in some usage situations. Note it is not backed up!

For more details see
http://www.maths.ox.ac.uk/members/it/faqs/files

Web

The departmental website provides information about the department and its activities. There are public contact and profile pages for those that give permission for their contact data to appear to anyone. You can manage your personal data via the website. For more details see

http://www.maths.ox.ac.uk/members/it/faqs/www/editing-personal-data

Complete members lists are available to logged in users (i.e. typically departmental members and students).

If you log in to the website you can access services and additional information for departmental members (e.g. mathematical software downloads, restricted teaching materials, green IT desktop wakeup system, etc).

As well as the main departmental website there is a people web server on which you have file space and can place additional material beyond that in your main site profile. For more details see

http://www.maths.ox.ac.uk/members/it/faqs/www/personal-web-space

Green IT / Machine Shutdown

The department's current desktop PCs use a fraction of the electricity that machines used to use. Historical standard policy in large networks was typically to ensure all machines stay running 24x7 to ensure remote availability, data integrity, security updates applied in a timely fashion, ease of management etc. As such **policy was users should not in general shutdown machines**.

The department though runs a power management system for the desktop PCs as part of a green IT system. Currently the machines automatically shutdown between the hours of 10am and 8am, and at weekends and fixed closures, if not in use. This reduces the department's electricity consumption without noticable changes for the majority of users. This is an automated/managed system and thus **the policy remains that users should not in general shutdown machines directly, simply stay logged in or logout as appropriate and leave the rest to the system**.

For more details see
http://www.maths.ox.ac.uk/members/it/it-notices-policies/green-it

Compute Systems

If you need computational resources beyond those of the standard desktops then the department has a number of larger systems that you can remotely access. At an even larger scale there is the university Advanced Research Computing facilities.

The compute facilities provided by the department are essentially interactive systems that are scaled up versions of the computational environment users are used to using on the desktop systems.

In contrast the facilities at ARC tend to use a job scheduler whereby you submit your job to a queue and then it is run based on priorities and resources available rather than in the more familiar interactive way.

For deatils of the departmental CPU and GPU compute machines available, plots giving an indication of how much they are being used, and links through to the ARC facilities see

https://www.maths.ox.ac.uk/members/it/machines/compute-terminal-services

Self-managed/personal devices

In addition to using the managed devices and services provided by the department, these days most people will also have various devices that they self-manage — e.g. a laptop and/or tablet (whether provided by the department or personally), a smart phone etc.

For a network connection in the university we strongly recommend you use eduroam. This uses your SSO username, but a separate remote access password — https://help.it.ox.ac.uk/remote-access-services

In addition to eduroam other wifi networks available within the building are:

- The Cloud — public wifi that anyone can use as found in cafes, train stations etc; generally for visitors and conference guests since all university members can use eduroam

- MATHS — this can be useful when wanting to access other devices in the department, most notably the printers. Note we only have a very small IP range for this so only use it when needed; it should almost never be appropriate to use it with a smartphone and typically not with a tablet either

With a personally managed machine you should also think about:

- backup — consider using the university Code42 Crashplan personal back service

- anti-virus — install Sophos anti-virus which is free to all university members

- maintenance — make sure you have a good warranty for your device

- you can get other software freely through the university to install on self-managed machines — e.g. Matlab, Mathematica, Office365

If you have a problem when working with a self-managed device the IT Team can offer advice. However, resource is finite so there is only so much that can be reasonably done. Even for machines provided through the department the only practical option in such cases may be an automated reinstall.

IT purchases

In general if you wish to purchase IT related items using funds held in the department (e.g. through a research grant, research incentive funds, studentship fnds etc) then you must liaise with the departmental purchasing staff and IT staff to ensure the order is raised via the university purchasing system, purchased where appropriate under a relevant pricing agreement, and any other relevant advice and guidance given.

Ordering direct personally and then claiming the money back is not generally permitted and will lead to issues and costs and typically result in you not being reimbursed the full amount.

For more information see https://www.maths.ox.ac.uk/members/it/it-notices-policies/it-purchasing-guidance

Departmental mailing lists

See http://www.maths.ox.ac.uk/members/it/faqs/communication/mailing-lists

for guidance on using mailing lists and the names of the 180+ departmental mailing lists.

For many people the short summary of key lists to use can be very helpful

http://www.maths.ox.ac.uk/members/it/faqs/communication/which-lists

This includes **members-announce@maths.ox.ac.uk** which will pass a message on to departmental members (excluding undergraduates and short format MSc students). Membership of the lists that make up this list is strictly automated against departmental records.

Note the lists in general are for announcement purposes and posting is moderated by a list owner. Any message not relevant to the list is thus likely to be rejected (e.g. messages about items for sale are generally not acceptable).

The page http://www.maths.ox.ac.uk/members/it/faqs/communication/mailing-lists also contains key information for list owners/maintainers with guidance on how to manage a list.

In particular this covers how to configure the list, add and remove people, and the importance of regular maintainence of addresses on a list to minimise the risk that information is shared with people who should no longer receive it.

For lists used for internal departmental or university business you should only subscribe people with their university email address.

Safety

Maths departments are generally very safe places, and that includes the IT within them!

- For all: Compulsory induction Health and Safety basics training —
  https://safety.admin.ox.ac.uk/induction-training

- For supervisors and line managers: Compulsory induction safety training for supervisors and line managers —
  https://cosy.ox.ac.uk/accessplan/LMSPortal/UI/Page/Courses/book/aspx?courseid=SAFEEL0044

- In general do not move or switch off IT equipment yourself; always contact the IT Team.

- Similarly do not rearrange office furniture without first seeking advice to ensure the change is acceptable to the department and also safe, both in relation to IT and more generally.

- Workstation layout and display screen assessments - see
  http://www.maths.ox.ac.uk/members/health-safety/dse for details. If having looked through the material you would like a formal DSE assessment this can be arranged. All workstations should already be laid out in accordance with the guidance. In most cases the monitor is height adjustable. For monitors that are not height adjustable boosters are available upon request.

Further health and safety induction information is available at

http://www.maths.ox.ac.uk/members/health-safety/induction