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CHAPTER
ONE

ABOUT

Danger: COVID 19 - This Handbook is being updated in the middle of the COVID 19 Pandemic and so the information containing within it is as up to date as possible but changes may be frequent as the situation changes. In this case, please contact the relevant person for an update after you have read this Handbook, the COVID 19 Update, and looked at the PGR COVID 19 FAQ https://www.staffnet.manchester.ac.uk/coronavirus/faqs/pgr/.

This is the Handbook for Post Graduate Research (PGR) in the Department of Computer Science which is part of the School of Engineering within the Faculty of Science and Engineering (FSE) at The University of Manchester. You are expected to make yourself familiar with the contents of this Handbook as it contains information about PGR programmes, assessment rules, and descriptions of the facilities of the Department and University, as well as guidance on undertaking PGR work here.

Our programmes are regulated by the Manchester Doctoral College2, as are all other Doctoral level training programmes at the University, for which there are a set of rules and regulations as detailed in the Code of Practice3. Further, the School of Engineering delegates authority to all of its Departments for the implementation and management of all University policies and frameworks relating to Teaching, Learning and the Student Experience and its degree regulations. This handbook is a description of how we - here in Computer Science - operationalise these rules and regulations as delegated to us by the School.

This handbook is an evolving document that continues to grow in line with developments in graduate education and with the ever increasing levels of best practice in postgraduate research at the University of Manchester. Staff and PGRs are encouraged to become actively involved in improving and extending the code. All feedback is welcome and should be directed to the Director of Post Graduate Research here in Computer Science.


Although the information contained in this handbook is believed to be correct at the time of going to press, the Department reserves the right to make appropriate changes without prior notice; however the Department will endeavour to inform PGRs of any substantial changes affecting its programmes. This disclaimer does not affect any statutory rights which you may have under English law. Please email any errors or suggestions to the Simon Harper (HoPGR)1 with “PGR Handbook Corrections” in the subject.

Department of Computer Science
The University of Manchester
Oxford Road
Manchester

2 http://www.manchester.ac.uk/study/postgraduate-research/why-manchester/doctoral-college/
3 http://www.staffnet.manchester.ac.uk/services/rbess/graduate/code/
1 mailto:simon.harper@manchester.ac.uk
M13 9PL
United Kingdom

Tel: (+44) 161 275 6181
Fax: (+44) 161 275 6204
Welcome to Manchester\textsuperscript{1} and to Post Graduate Research in Computer Science\textsuperscript{2}. We are very excited to have you working with us.

### 2.1 Welcome to Post Graduate Researchers

Welcome, too, to the start of your research careers. You are here to learn how to do research, which means that during the next years you will be learning the skills of a researcher: how to address a problem and understand its context and importance, how to carry out effective investigations using the techniques of particular research fields, and how to evaluate and communicate research.

You will be working under the direction of one or more academic supervisors (typically two) and will have the opportunity to work with other staff, colleagues and students. We hope by the latter half of the programme you will be communicating or collaborating with researchers world-wide in your chosen research area by attending conferences and meeting them face-to-face.

We expect you will soon be contributing to the wider research community, by writing papers, making presentations at scientific conferences, and helping to shape the future of computer science. We hope your time here is challenging, fulfilling and enjoyable.

I hope we will make your time here - as an early career researcher - a great experience. I wish you the very best success.

### 2.2 The University

Our Purpose as a University is ‘To advance education, knowledge and wisdom for the good of society.’ while our Vision states that ‘We will be recognised globally for the excellence of our people, research, learning and innovation, and for the benefits we bring to society and the environment.’

Only together we can achieve these dual aims.

Prof Simon Harper, Head of Post Graduate Research,
Department of Computer Science.

\textsuperscript{1} http://www.manchester.ac.uk
\textsuperscript{2} http://www.cs.manchester.ac.uk
**Danger:** COVID 19 - The following emails will work but phones are not manned and offices are not staffed - we’re all working from home. However, if you’d like to get back into the buildings have a look at the COVID 19 Update.

PGR follows a Flexible Working model with

**Core Hours between 10:00 - 16:00**

(you are expect to be here between these times unless personal circumstances dictate otherwise)

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### Useful Information and Contacts

#### Student Support Office (SSO)
- LF21 Kilburn Building
- T: 0161 306 8155 (internal extension 68155)
- E: Student Support

#### School Health and Safety Advisor
- LF23 Kilburn Building
- T: 0161 275 6118 (internal extension 56118)
- E: Tony McDonald

#### Head of PGR (HoPGR)
- 2.60 Kilburn Building
- T: 0161 275 0599 (internal extension 50599)
- E: Simon Harper (HoPGR)

#### Deputy Head of PGR (DHoPGR)
- 2.88a Kilburn Building
- T: N/A
- E: Dr Bijan Parsia (DHoPGR)

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1 mailto:compsci-sso@manchester.ac.uk
2 mailto:tony.mcdonald@manchester.ac.uk
3 mailto:simon.harper@manchester.ac.uk
4 mailto:bijan.parsia@manchester.ac.uk
Academic Support Office (ACSO)

• 2.03 Kilburn Building
• E: Academic Support²

PGR Student Mentors and CDT Representatives

• PGR Mentors³

Emergencies

In the event of any emergency, contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. This number can be found on the reverse side of your University Staff/Student card. The School Health and Safety Advisor must be notified of any emergency (contact above).

Fire Evacuation Procedure

On hearing the fire alarm, evacuate the building immediately by the nearest available exit.

• Do not use lifts
• Do not return to offices to collect belongings
• Go to Building Assembly Point

Fire Detection

If you discover a fire and the building alarm is not sounding, activate the nearest break glass point on your escape route and evacuate the building immediately. Make your way to the building assembly point and await further instruction. If possible you should inform security of the event and supply them with as much information as possible in order for them to evaluate the risk and to take appropriate action.

Fire Alarm

The audible alarm for Kilburn building is a two stage system:

Stage 1 An intermittent alarm - be prepared to evacuate the building.
Stage 2 A continuous alarm – evacuate the building immediately.

The audible alarm for IT building is a single system. Upon hearing the fire alarm it is necessary to evacuate the building.

First Aid

Details of first aiders are available on first aid notices which can be found next to each fire notice, on notice boards and near to every exit point of the building. If local first aiders are not available, Security can be contacted to provide first aid by calling 69966 internal or 0161 306 9966 external line.

Important Notes to Students

• You are responsible for driving your own Research, not your supervisor.
• General CS PGR information⁸ can be found on studentnet.
• Your PGR Handbook can be found at: http://studentnet.cs.manchester.ac.uk/pgr/handbook/
• eProg is the central system which monitors your progress. You must keep it up to date and you must prompt your supervisor to complete the forms. eProg can be found at: https://app.manchester.ac.uk/eprog/. You are responsible for familiarising yourself with the progression criteria for your programme and for ensuring that deadlines are met.

² mailto:CSOps@manchester.ac.uk  
³ mailto:cs-mentors@listserv.manchester.ac.uk  
⁸ http://studentnet.cs.manchester.ac.uk/pgr/
• University PGR Regulations and Policies, including PGR Degree Regulations, Examination of Doctoral Degrees, Circumstances leading to Change and Presentation of Thesis, can be found at: http://www.regulations.manchester.ac.uk/postgraduate-research-students/

• The Faculty of Science and Engineering provide lots of study support for Research Students, information can be found at: http://www.researchsupport.eps.manchester.ac.uk/

• Your core hours are 10:00-16:00. We expect you to be at the University between the times unless you have other commitments.

• If you need help, advice or guidance on anything - ask!

PGR Home
The PGR Home is in LF15 Kilburn Building. The majority of students will spend their first semester on the programme here before moving to an office in their second semester.

PGR Consultative Committee (CC)
The School holds quarterly PGR CC meetings at which PGR Representatives raise issues for concern to the Committee. If you would like to raise something to be reported or are interested in becoming a PGR Mentor, you should email CS-Mentors@listserv.manchester.ac.uk

Out of Hours Access to the Kilburn Building
Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass. The Student Support Office can provide information on how to obtain a pass.

Further Useful Contacts and Links
Information about the University’s Students’ Union and the services and activities they provide can be found here: https://manchesterstudentsunion.com/

General University Student Support including information on accessing academic, financial and personal wellbeing support and advice can be found here: http://www.studentsupport.manchester.ac.uk

The University’s Student Support and Advice team, based in the Atrium of University Place, can offer advice on issues affecting your PGR life, and can signpost to more specialist services. Email studentsupport@manchester.ac.uk

The My Manchester Crucial Guide is the essential stop for information and advice on everything to do with being a student at Manchester and can be found at: http://www.studentnet.manchester.ac.uk/crucial-guide/

Bullying & Harassment: All PGRs can report something anonymously or get support from an advisor, further information can be found at: https://www.reportandsupport.manchester.ac.uk/

The University of Manchester Counselling Service offers confidential help with any personal issues affecting work, self-esteem, relationships, sexuality, mental health and general well-being. Further information can be found at: http://www.studentnet.manchester.ac.uk/counselling/

Nightline is a confidential listening and information service run by students for students. It is open 8pm till 8am every night during term time. The phone number can be found on the reverse of your ID card. Nightline can also be contacted at nightmail@nightline.manchester.ac.uk (Expect a reply within 48 hours) and further information can be found at http://manchester.nightline.ac.uk/

The Samaritans are available 24 hours a day, seven days a week, to talk confidentially about any problem, however big or small: www.samaritans.org

The University’s Disability Advisory and Support Service (DASS) provide confidential help and support for people with conditions, whether emotional or physical, that may have a significant, adverse and long-term effect on your ability to carry out normal day-to-day activities. Further information can be found at: http://www.dso.manchester.ac.uk/
The University’s International Student Support team can provide advice and help to answer queries relating to visas and immigration: http://www.studentsupport.manchester.ac.uk/immigration-and-visas/

If you’re not sure about where to find the help you feel you need, just email compsci-sso@listserv.manchester.ac.uk, or call in to Kilburn Building, LF21 to speak to someone.

Instructions for using the Desktop PCs in the PGR Home

1. The desktop PCs are installed with Centos 7 only and will accept your University username and password for logging in. They have pre-installed, what is considered a base set of applications as well as a home file store provided by servers from within the School.

2. When you have settled at a desk and taken “ownership” of one of these desktops you will need to email the hostname of your PC to Chris Page (Department IT Manager)\(^6\). He will then add you to the sudoers file on your PC. To find the hostname if it is not printed on a sticker, type in the command ‘hostname’ in a terminal window. Access to sudoers will allow you to install software of your choice for your work by using the sudo command.

3. When you have finished your time in the PGR lab the machines will be wiped clean and re-installed for the next student. So, please make sure that you do not save anything important on the local hard drive but save your work either in your home directory (which is backed up) or to some kind of external media. When you move to a research group and are given a new PC to work with, you will find that your home files store travels with you.

4. The lab printer is called pgrprt.cs.man.ac.uk (IP address 10.99.192.163). You should be able to print documents directly to it using lpr and the printing is free!

\(^6\) mailto:chris.page@manchester.ac.uk
CHAPTER
FOUR

MENTORS KICKSTART GUIDE

Danger: COVID 19 - Email is the best contact in all cases as most people are working from home. However, if you’d like to get back into the buildings have a look at the COVID 19 Update.

In order to help new PGRs through their first year the mentors team provide support for a series of events and offer advice in a variety of different ways.

The mentoring service is a simple, informal, way for you to get extra help and advice about studying for a PhD at the University of Manchester from those who have been through it before you. It is open to all PGRs in the Department. https://studentnet.cs.manchester.ac.uk/pgr/mentors/.

4.1 Helpful Numbers and Links

1. Emergency number: 999 and 112 (free)
2. Non-emergency police number: 101 (free)
3. Non-emergency medical number: 111 (free)
4. University Security: 0161 306 9966 (also on the back of your Uni ID card)
5. University
   - Student Centre https://studentadmin.manchester.ac.uk/psp/CSPROD/EMPLOYEE/HRMS/h/?tab=DEFAULT
   - myManchester https://my.manchester.ac.uk/uPortal/f/home/normal/render.uP
   - Blackboard https://online.manchester.ac.uk
   - eProg https://app.manchester.ac.uk/eprog/default.aspx
   - my eProg (for PGR students, where to fill out a lot of forms) https://app.manchester.ac.uk/myprofile/eprog/progression.aspx
   - Timetable for welcome week and PGR courses http://studentnet.cs.manchester.ac.uk/pgr/timetable/
   - 2 factor authentication (needed for some university links off campus) https://www.itservices.manchester.ac.uk/ourservices/popular/2factor/
   - VPN (needed for some university links and to access university machines off campus) https://www.itservices.manchester.ac.uk/ourservices/popular/vpn/
6. Manchester city council https://www.manchester.gov.uk/
4.2 Helpful Offices in Kilburn (10:00-16:00)

- Student Services Office (SSO, locating on the lower first floor in Kilburn Room LF21) Email: compsci-sso@manchester.ac.uk
- Academic Support Office (ACSO, locating on the second floor in Kilburn Room 2.3) Email: compsci-acso@manchester.ac.uk

4.3 General

1. Register online if you haven’t done so. For IT account: https://iam.manchester.ac.uk/ For student registration: see Helpful Links (Student Centre 5a) (Main Menu -> Self Service -> Student Centre)

2. Pick up your University Card from Student Services Centre (SSC, near the Main Library) For September starters, this might be in the University Place

3. How to set up Wifi on campus:
   - Use UoM_WIFI first to access the internet, the username is your “IT account” (similar to mbax123) and the password is your IT account password.
   - Get eduroam certificate https://cat.eduroam.org/ (1 click setup) http://www.itservices.manchester.ac.uk/wireless/eduroam/ (step by step guide)
   - Login username is your [ITaccount]@manchester.ac.uk
   - Password is your IT account password

4. Complete “Out of Hours Access” tests on Blackboard (see Helpful Links (Blackboard 5c): CS-PGR-Welcome -> Out of Hours). Then go to SSO to activate the access.

4.4 If you’re new to the UK:

5. As soon as you have your term-time accommodation:
   - Put your address in Student Centre (see Helpful Links (Student Centre 5a)). Make sure you update your address and phone number information when there are changes
   - Set up your bank account information in the Student Centre (Helpful Links 5a) to be able to receive stipend

6. Opening a UK bank account:
   - Get a letter confirming your term-time address from SSO
   - With item 6a (and passport, possibly other documents needed) you can now go to a bank and open an account. Call ahead and check what documents to bring. You might need to make an appointment first. Bank branches around here include Barclays, HSBC, Lloyds, NatWest, Santander, and TSB

7. Mobile phone:
   - There are several providers you can go to: EE, Giffgaff, O2, Three, Vodafone. You can get free SIM cards easily from most service providers, then just decide whether you want to use (1) Pay as you go, or (2) Monthly plan, depending on your preferences

8. Accommodation:
• Students are exempt from council tax. If you receive a letter from the city council, don’t panic. Go to this link and fill out the form https://www.manchester.gov.uk/info/500334/students
• Starting from June 2019 (The Tenant Fees Act), your landlord or letting agent cannot ask you to pay for referencing, credit and immigration checks, administration fees, and renewing your contract, etc.

9. GP registration:
• Find a GP near where you live https://www.nhs.uk/Service-Search/GP/LocationSearch/4
• Pick one and go to the Medical Practice to register in person (bring ID)

4.5 For Non-European International PGRs

• Collect your BRP (Biometric Residence Permit) as soon as possible
• Get an appointment for police-registration (Only apply to certain countries, see more details here https://www.gov.uk/register-with-the-police/who-needs-to-register)

Whenever you change your UK home address, you must update with the police as well as the university

4.6 For Europeans

Check the current regulations about Comprehensive Sickness Insurance (CSI) May not be the case after Brexit. . . check the new regulations!

4.7 Others

1. Cycling
• The university provides secure cycle parking, to obtain access, visit the Permit Office in the Beyer Building with your university ID card. https://www.estates.manchester.ac.uk/services/operationalservices/carparking/cycleshelters/
• To apply for the secure lock discount scheme http://www.estates.manchester.ac.uk/services/security/ourservices/crimereduction/cyclesecurity

2. Shower Facilities are available in Kilburn

3. You can request a laptop/desktop by following the guide (talk to your supervisor) http://www.itservices.manchester.ac.uk/ourservices/popular/purchasing/work/

4. Printing in Kilburn
• on a Linux-based machine, the following should work (if not, get help from the colleagues in your office):
• Create a file ~/.cups/client.conf
• In there, put the line ServerName staffprint.cs.man.ac.uk/version=1.1
• Now you should be able to see all the printers. The one in PGR home is called “pgprt”
Danger: COVID 19 - Email is the best contact in all cases as most people are working from home. However, if you’d like to get back into the buildings have a look at the COVID 19 Update.

For support with travel, expenses, room bookings and stationary please contact Academic Support in room 2.3 of the Kilburn Building or contact us via email at compsci-acso@manchester.ac.uk.

Activity Codes for expenses such as travel and conferences can be found from your supervisor

5.1 Credit card expenditures (RBS)

For item orders, conference registrations and subscriptions (e.g. grammarly) please complete the credit card expenditure form. Budget holder signature can be obtained by your supervisor through a hard signature or via email. Once you have this then you can submit to ACSO for the retrieval of the authorise signature and processing. This can be found in the ACSO office or on the Staffnet: https://documents.manchester.ac.uk/DocuInfo.aspx?DocID=22713.

Please note that we will require 2 weeks’ notice for any payments due to the high volume of requests.

5.2 Booking Travel

Travel Process: Setting up an account In order for any travel to be booked you will need to setup a traveller account with are provider, Keytravel. To do this please follow the below steps: Firstly, you will have to provide Academic Support with the below details. . .

- First Name
- Surname
- Email Address
- Faculty
- School
- Division
- Access End Date

Once done send off to ACSO and we will pass on to the travel help desk and may take up to 2 DAYS. After this they’ll then be able to complete the below steps to setup there account:

\[^{1}\text{mailto:CSOps@manchester.ac.uk}\]
1. Please login to your account on https://www.keytravel.com/uk/log-in

2. If this is the first time you are logging in you will need to request a password using the ‘New Online User / Password Reset’ option

3. Once logged in, go to ‘My KT’ on the right hand side of the page

4. Click on ‘Profile Manager’

5. Once on this page please select – create your own profile. Please make sure you add all the necessary information.

6. This will then take 24 hours to process before you can complete any bookings for them.

7. If you happen to find cheaper flights on the internet please send us a screenshot and we will ask Key Travel to price match.

8. For special hotel rates (eg discounted conference rate), please provide us with the details and we will pass it on to Key Travel – if they cannot arrange that, we can pay with a credit card

9. Please note that Air B&B cannot be booked for any type of travel due to the insurance policy – HR will not reimburse your expenses

10. If it is a long trip – more than 3 weeks, please consult with Academic Support

5.3 Expenses

If you are claiming expenses for travel, taxis, food etc., please fill in the correct form. For non-staff members - PR7, for staff members (TA) – Staff expenses claim form, which can be found online on My Manchester. Note that all receipts have to be attached to the hard copy of the form and bring to Academic Support.

5.4 Room Booking

To request a room booking, please use https://resourcebooker.manchester.ac.uk/. If the room is not available on the system, please contact Academic Support.

5.5 Stationary

For any stationary items, please visit Academic Support.

5.5.1 Mentors Informal Kickstart Guide
CHAPTER SIX

COVID 19 UPDATE

Danger: COVID 19 - This Handbook is being updated in the middle of the COVID 19 Pandemic and so the information containing within it is as up to date as possible but changes may be frequent as the situation changes. In this case, please contact the relevant person for an update.

This is a very fraught and challenging time with many stresses and adjustments - we appreciate it must be incredibly difficult for all PGRs. As ever, we hugely value your work and contribution to the University and will do everything we can to inform and support you as this situation develops.

We’re exploring every option to alleviate and mitigate the impact of the COVID-19 pandemic on your research. If you have specific questions that are not addressed please discuss these through to your supervisor and/or your PGR support team. Below is a list of pointers in no particular order:

1. The PGR COVID 19 FAQ is at https://www.staffnet.manchester.ac.uk/coronavirus/faqs/pgr/.

2. If you are submitting soon then remember to include the COVID 19 Statement approved by the University COVID Statement.

3. RTSGs have been reduced to £333pa.

4. There is funding available for working from home outside of the RTSG (see Funds for Working from Home).

5. You can get an Extension or Interruption for non specific COVID related reasons with very minimal (read none) evidence. If you are a University or UKRI (EPSRC, BBSRC, MRC, etc) sponsored PGR then some of this may be funded, if not then you will need to contact you sponsor about funding but the extension or interruption can still be granted unfunded by the University. In this case, please contact Student Support¹ for an update after you have read this Handbook, and in particular the Extensions and Interruptions section.

6. Conference travel is currently via remote connections and so you should expect a very cheap fee which we can typically cover.

¹ mailto:compsci-sso@manchester.ac.uk
CHAPTER
SEVEN

MINIMUM VIABLE PHD

if you are a software engineer, or developer, you may be familiar with the term Minimum Viable Product (MVP). This is the term used to describe the absolute minimums a developed product needs to accomplish to be useful.

In the terms of your PhD studies we also have a term Minimum Viable PhD (MVPhD). This is something that you should discuss in detail with your supervisory team at the earliest possible juncture, and indeed, we would expect that the supervisory team would provide an MVPhD pathway, as part of their project description for the advertising of the project, and also in discussions with you. Which, of course, might change this MVPhD at some point.

So what does a minimum viable PhD look like? Well the University regulations are reasonably clear.

“The Degree of Doctor of Philosophy (PhD) is awarded by the University in recognition of the successful completion of a period of supervised research and training, the results of which show convincing evidence of the capacity of the candidate to pursue research and scholarship and make an original contribution and substantial addition to knowledge. The results of this research shall then be embodied in a thesis or other appropriate form and must contain material of a standard appropriate for peer-reviewed publication.”

This is the yardstick by which we will measure your progress. So in this case the PhD may not have the outcomes that you expect, or wanted. And it might not be the large piece of research work which you envisaged when you started or thought about PhD studies when you applied.

Most PhDs, are incremental, very few are groundbreaking to the extent that new knowledge is created by the PhD alone, especially in Computer Science. We see more that large research breakthroughs are part of research projects, and those research projects have PGR, who are undertaking incremental but important research work.

So, we would expect that in your first year Research Progress Review, and in the End of Year (EOY), progressions for year one and year two, you should also include a description of what the minimum viable PhD is; whether you have achieved this MVPhD, and what additional aspects/extensions to the MVPhD you’re going to undertake; ie once you’ve completed the minimum, what will be the maximum.

You should be realistic about exactly what the minimum viable PhD is, appreciating that you need to complete your studies in three years. The first year is typically given over to background studies, and a small prototypical experiment, or slice, through a particular problem to gauge the effectiveness of possible solutions. Year two – and some of year three – is where most of the research work happens. And you must have your research complete by the end of year three.
7.1 A MVPhD Specification

So what might a minimum viable PhD description look like? A possible roadmap for this PhD may look something like:

- Year 1: A literature review that establishes the different techniques used to evaluate human memory augmentation systems. Further literature review and/or study that establishes the everyday practices by which individuals determine if their memory is performing better or worse than expected.
- Year 2: Design and development of a platform that operationalises the everyday practices identified in year 1.
- Year 3: Use of the platform to evaluate one or more human memory augmentation systems. Writing of thesis (or alternate format submission) for examination.

The student should expect to publish their work in the form of academic papers at venues such as ACM CHI, PACM IMWUT and the Computers in Human Behavior journal.

7.2 Thesis by Journal Format

Attached to the concept of the MV|PhD is the way that work will be written up. Traditionally we have used the form of the thesis, in which the last three to six months of your PhD studies are taken up with writing a large thesis text. And forms the basis of your oral examination (your viva).

However, the university has introduced a new format – which is becoming common in the sciences – and this is the Journal Format thesis, in which you assemble published papers relating to your PhD studies throughout the period of your PhD; at the end these papers are amalgamated into a single text.

This has to be done very carefully to follow the narrative of the PhD and so this is why the minimum viable PhD is critically important. Simply you must know what you’re going to investigate out the outset, even if you don’t yet know the results. And you must be able to describe the narrative of this work so that it can be easily understood by a reader – as opposed to being a disjoint collection of your published papers.

Even though each paper is included as a chapter within the PhD thesis, you would still normally need to write an Introduction (of possibly 10 to 15 pages) and Conclusions and Future Work (again, probably five to 10 pages). You would then need to bracket each paper with a couple of pages discussing how this paper fits with the overall research aims, and the trajectory of the overall research you are presenting (and defending). If you manage to publish background work, such as a narrative survey, in, say, ACM Computer Surveys (or a systematic review), then you may have less work to do when it comes to the background chapter. This background chapter typically involves a primer on your specialist domain, followed by related work. The related work section can be narrative, but, in some cases, PGRs include a systematic review to solidify the gap analysis; ie the analysis of related work, such that the gaps in the domain are self-evident.

PGRs should declare their intended thesis format on the ‘Notice of Submission (Student)’ form (eProg). PGRs are also asked to confirm the format as part of the thesis submission process on the eThesis repository.
Danger: COVID 19 - The emails will work but phones are not manned and offices are not staffed - we’re all working from home. For more information have a look at the COVID 19 Update. However, you should be meeting every week with your Supervisory Team and regularly with your Cohoert and Cohort Advisor, which will typically be via discord, zoom, or teams.

The Department is located in the Kilburn Building, and the IT building behind it (accessed via the internal first floor walkway). Due to the interdisciplinary nature of computer science, several of our staff are located elsewhere, most notably at the Manchester Institute of Biotechnology (MIB). MIB is building number 16 on the University Interactive Map\(^\text{13}\). Plans of the building are included at the end of this document.

8.1 People and Places

The Student Support Office (SSO): is located in Room LF21 (Lower First floor), Kilburn Building, email: Student Support\(^\text{1}\). They provide administrative support for all students, from registration to graduation. They will be very helpful during your time here.

Supervisors: You have already been assigned a main supervisor, who is responsible for your research and training. There will usually be one or more co-supervisors; their role in the research should be clarified at an early stage. PGRs should have regular contact with their supervisor(s), typically in the form of weekly meetings, although different supervisors may have different approaches. Important point: The relationship between the PGR and supervisor is crucial to the success of the doctorate. If anything goes wrong with that, you should get help to get it resolved.

Cohorts: When you arrive you’ll be assigned a cohort. You’ll keep this cohort for your entire time here in Manchester. And have regular meetings with your Cohort Advisor. The cohort is there to provide peer support to each other, to maintain a group dynamic as you progress in your work, to get help and advice on technical aspects which you may not be familiar with but others in your cohort are, and for your pastoral care.

Advisor: Each PGR (and cohort) will be assigned an advisor. The advisor is not an expert on your research. Their role is largely to be an independent person to turn to when you are having difficulties you don’t want to discuss with your supervisor. They can also provide general advice.

Mentors: We have a team of peer mentors. They are PGRs like you that, having progressed beyond the first year, volunteer to be available to you in order to share with you their experience of what it felt like to be through the stages you will be going through. They are there as another point of help for you. They will promote social activities and, most important of all, only they can give you a feel for how it feels like, as a PGR, to be going through the several stages in your work.

\(^\text{13}\) http://www.manchester.ac.uk/discover/maps/interactive-map/
\(^\text{1}\) mailto:compsci-ss@manchester.ac.uk
8.2 Accounts & Passes

**Identity Cards:** Everyone will be issued with a **photographic University identity card** (swipe card). You should have this card on you at all times whilst on University premises. It is used to access various restricted areas, as well as acting as your library entry/borrowing card for the central university library. *On the back of this card is the number for campus security.*

**Out of hours passes:** Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass which can be obtained from the Student Support Office. You will need to bring your University ID card and a printout of the confirmation email indicating that you have passed the on-line Out of Hours Health and Safety test required by the Department, a University one, and a Department one.

To take the Health and Safety course, go to [myManchester](https://app.manchester.ac.uk/Default.aspx) and log in using your University credentials. Find Blackboard and log into that. Click on the “Health and Safety Course and Out-of-Hours Pass Information” folder. Complete the test called “Part 1: University of Manchester Health & Safety” and the test called “Part 2: Health & Safety within the Department of Computer Science”. WHEN YOU HAVE PASSED BOTH TESTS and have confirmed that you have completed them, the “Out of Hours Access” folder will appear. Click on the “Out of Hours Access” folder, read through the guidance document, and complete the “Out-Of-Hours-Pass Test”: you need to score 100% to successfully complete it. When you have scored 100% on the Out-of-Hours Pass Test, a link called “Out-of-Hours Completion Confirmation” will appear. Click on this “Out-of-Hours Completion Confirmation” link, and a confirmation screen will appear. Take this confirmation screen (either print it out, or show it on an electronic device) and your University of Manchester ID card to SSO (room LF21) who will issue an Out-of-Hours Pass for the Kilburn Building. You will then receive a confirmation email which shows the times during which you are allowed out-of-hours access to the Kilburn Building. Passes can ONLY be issued from SSO between 10.00am and 4.00pm Monday – Friday. Out-of-Hours access is only available with a valid University of Manchester ID card during the times listed in the confirmation email which you receive when your Pass has been issued. Read the document and then take the test. You can take the test as many times as you need to, until you get all questions correct.

**Computer Accounts:** You will need to set up a University account. A central username and password allows you to access various university-wide systems, as well as giving you access (via the Central Authentication System (CAS)) to online journal content to which the University Library has a subscription. It also serves as your username and password for your teaching domain account. You can sign-up for your account by visiting: [Computer Accounts](https://iam.manchester.ac.uk/initial_login/overview). You will need your personal details and University ID number (the number on your swipe card) to sign-up.

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**Warning:** There is a delay of one working day before you can use your ID card for swipe access to the Kilburn Building outside normal hours; however, during this period you can still gain out-of-hours access by showing your ID card to a staff member on duty at the Kilburn Building side entrance.

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5 https://app.manchester.ac.uk/Default.aspx  
6 https://iam.manchester.ac.uk/initial_login/overview
8.3 Communications

**Email:** You will have a University email account usually of the form: `<user>@postgrad.manchester.ac.uk` - detailed instructions on how to send and receive emails, both locally and remotely, for both Linux based and windows based systems, are to be found on the Wiki at the StudentFAQ/IT pages mentioned above, as well as this University site: PGR email[^7]. *Read your email frequently!* There may be important messages from the staff or from the Department or University. There may even be offers of free pizza. If you use other (external) email accounts (e.g. gmail or hotmail), you may wish to set up a forwarding to automatically forward mail from your Department mail account to your external account. If your Department account becomes over quota, then mail will not be received and you may miss important messages. Always ensure that you clean up your account regularly, deleting large files and junk (especially in your email box and web browser caches). Or periodically archive your mailbox.

**Internal Telephone System:** External phone numbers for the University are usually of the form 0161-275****. From an internal phone, you just have to dial the extension number, which is 5 followed by the last four digits of the external phone number. Some internal phones also allow you to make external calls, you dial 9 to get an external line, followed by the usual external phone number.

**Emergency Phone Numbers:** In the event of any emergency, medical or otherwise, please contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. This number is on the back of your University Identity Card.

8.4 Resources & Facilities

**Programme Handbook (this document) CS PGR Handbook[^4]:** This describes what is expected of you as a PGR in the Department of Computer Science, and should also serve as a useful reference. You are expected to consult it. Further information can be found on the Department of Computer Science PGR web-site CS PGR information[^3]. This handbook also contains some other information that is hopefully useful to doctoral candidates especially when they are new to the University of Manchester.

**Important Dates:** **Induction Week (Week 0)** A number of induction events and social events run during this week. **Do take part!** You will have opportunities to learn what is expected of you, as meet and make friends with staff and other PGRs, and familiarise yourself with the layout of the Department and of the University. Within Computer Science, undergraduate and MSc teaching occurs in 12-week semesters, although MSc teaching occurs in 6-week blocks which divide the semesters. You will have the opportunity to get involved in many activities of the Department including UG or PGT laboratory teaching by becoming a Teaching Assistant. More at Important Dates[^8].

**IT Services:** IT Services look after much of the technology that powers The University of Manchester, and the support services which come with it. We have all the services you’d expect, such as campus-wide Wi-Fi, email, printing, file storage, walk-up support desks and online learning, and there are also other services you may not expect, such as our 24/7 telephone support line, halls-based support, and our lecture podcast service which automatically records most lectures to help students replay, revisit and revise. More information can be found at: IT Instruction leaflets[^14].

**Computing Facilities:** Each PGR will be given a desk and a computer in the PGR Home and then in the appropriate research group lab. Most machines are set up to run Linux and MS Windows. Depending on the conventions of

[^7]: http://www.itservices.manchester.ac.uk/email/student/
[^4]: http://studentnet.cs.manchester.ac.uk/pgr/handbook
[^3]: http://studentnet.cs.manchester.ac.uk/pgr/
[^8]: http://www.manchester.ac.uk/discover/key-dates/
[^14]: http://www.itservices.manchester.ac.uk/students/leaflets/
your research group, you may need to be familiar with either. There is an introductory Linux lab for those who need to familiarise themselves with our local setup during welcome week.

**Computer Science Information Systems (CSIS):** The University has an IT services section. The group who work within our Department are called CSIS. They are very helpful. However, if there is some fault with your equipment or with your CS account, you should “raise a ticket” with the IT service desk. Follow the link on the IT Services page. Other useful places to get information are are on the CS Student Intranet.

**Intranet:** There is a Department Intranet which is divided in sections for students (CS Student Intranet) and for staff (CS Staff Intranet).

**eProg:** The University has developed an online system for post-graduate researchers which is called eProg. This enables PGRs to plan and track their progression, and provides online listing of various skills training courses. You will need to use eProg as part of your assessment.

**Student Societies:** The University of Manchester Students’ Union (UMSU) is an organisation, independent of the University, to which all students automatically belong. As well as the facilities within the Student Union building itself, UMSU also supports an enormous range of student societies, where you can meet students with similar interests.

**International Students & English Language Courses:** If English is not your first language, you may need to further develop your skills throughout the course of the programme. Further English language courses are available during the course of the PhD programme, to enable students to fulfil their full potential as they progress with their study and research. Further information about these courses will be provided at registration. International students may also find it useful to participate in activities arranged by the International Society which has more than 6000 members representing more than 120 nationalities. The university’s International Advice Team offers help and advice to international students on a wide range of issues.

### 8.5 Help and Advice

Starting a new course - and settling in - can be daunting for anyone. In many cases, PGRs will have moved from a familiar university and course, where they were seen as an experienced and knowledgeable PGRs, someone who others came to for advice. Compared to this, being a new PGR, at an unfamiliar university, in what may also be an unfamiliar city or country, can be a big change that isn’t always that easy to deal with. If you do experience difficulties, remember that even if all the other PGRs in your cohort seem to be having a wonderful time, with no problems at all with the course or anything else, things aren’t always exactly as they may seem, and many other people may be having similar problems to yourself!

It is important that if you are experiencing any difficulties, whether they be academic, personal, or university related, that you seek advice at the earliest opportunity. Any matter whatever that affects your work and progress can and should be brought to the attention of the Simon Harper (HoPGR) or other suitable member of staff, or to the Student Support Office. We are all here to help you succeed.

In general, if your difficulties involve carrying out your research you need to make this clear to your supervisors, who are here to help you and train you on how to be a researcher. Other members of your research group can also be very helpful. Issues concerning resources required to do your research also must be resolved with your supervisors, who are authorised to decide what resources are appropriate.

If you are having difficulties communicating with your supervisors, or are having other problems with your relationship with your supervisors, you should discuss this with your advisor, or Simon Harper (HoPGR). The mentors may also be able to offer advice. Any information will be treated as strictly confidential if you request it.

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9 [http://www.itservices.manchester.ac.uk](http://www.itservices.manchester.ac.uk)
10 [http://studentnet.cs.manchester.ac.uk](http://studentnet.cs.manchester.ac.uk)
11 [http://staffnet.cs.manchester.ac.uk](http://staffnet.cs.manchester.ac.uk)
12 [http://manchesterstudentunion.com](http://manchesterstudentunion.com)
2 [mailto:simon.harper@manchester.ac.uk](mailto:simon.harper@manchester.ac.uk)
If you need help with an administrative issue, such as registration, payment of funds, or form filling, Student Support\textsuperscript{1} should be your first port of call.

Members of university staff (whether administrative or academic) have a wealth of experience in dealing with the issues that effect you, and if they can’t help you themselves, can often assist you in finding the help you need. Academic staff will be able to advise on management of work, and in many cases, any problems or disruptions you may have had can be taken into account when it comes to assessment of your work and progress.

The Faculty of Science and Engineering also supports your study and runs short courses, events, provides advice, and links to the Faculty and University policies relevant to PGRs.
CHAPTER
NINE

EXPECTATIONS OF THE POST GRADUATE RESEARCHER

This is a traditional Doctoral programme which has been designed to be completed in three years. The aim of any PGR on the 3-year programme is to complete the research and the writing up within three years. The planning must take this into account from the outset. The University regulations allow for one additional year beyond the third for completing the thesis, called Submission Pending. However, most funding schemes for 3-year Doctoral programmes will end after three years, and will not fund 3-year PGRs during Submission Pending.

Danger: It is now policy (since Sept 2019 intake) that PGRs must complete within three years ‘on programme’ and six months ‘Submission Pending’ at a maximum! After this period, the registration will be terminated and no degree will be awarded.

There is every incentive to complete this programme within the allotted three years while the funding lasts. It is an absolute requirement that you finish within three years and six months.

Therefore, the great majority time will be devoted to the main task, which is doing research and completing the thesis within three years. However there are other activities that three year PGRs are required to engage in, and yet others that they have the option of engaging in. The courses listed below are designed to help all PGRs in their endeavours. Activities such as laboratory demonstrating, mentoring and public engagement are optional though they encouraged as being conducive to the general experience of being a successful PGR and preparing for wider roles when PGRs take up their chosen careers.

9.1 The Main Event - Supervised Research

The main part of your time here will be spent learning to be a researcher, by doing research under the guidance of a main supervisor, aided by one or more co-supervisors. You will also be learning the techniques and tools of a particular field. By the time you get to your third year, you should be writing and communicating your ideas, and interacting with a wider research community. You might even know more about your research topic than your supervisor at this point, although you might not be aware of this.

There are a few guiding points which will help you succeed. First, being a PGR is a full-time pursuit. You need to put in the hours. Second, you need to meet with your supervisor(s) regularly. We recommend at least once per fortnight, but weekly is better. Third, it is highly advisable that you work in the Department, so that you can interact with the other members of your research group. Don’t just hide yourself in a garret somewhere. Discussion with others is an excellent source of ideas.

At some point, you might find yourself falling into one these traps. You start to feel, “I’m not good enough; I’m not good as these other PGRs”. This is fairly normal; most people go through this at some point. If you start feeling this, talk to your supervisor(s) about it. They might be able to allay your fears.

The second trap is the perfectionist trap. You don’t want to show your work to your supervisor until it is perfect, or you stop seeing your supervisor at all, because you feel there is not enough progress. This is a path to failure.
9.2 Success is not Guaranteed

As with most worthwhile endeavors, success in graduate study cannot be guaranteed and often depends on the mutual efforts of faculty and PGRs to work diligently and form a productive professional relationship. PGRs are responsible for working towards completion of their degree programs in a timely manner. In addition to gaining expertise in a particular field of study, PGRs are expected to expand the knowledge of that disciplinary field by discovering and pursuing a unique topic of scholarly research, resulting in the PGR Thesis. It is the PGRs responsibility to ensure continued progress of their academic program and thesis research. PGRs have a responsibility for the following aspects of their program.

Your Doctorate will be unlike many of your previous academic experiences. It is academically challenging, occasionally isolating and requires a lot of self-motivation, but for the right candidate it can be a phenomenally rewarding experience. A Doctoral qualification is predominantly research-based and PGRs will be responsible for their own learning and development. Knowledge is less acquired from classroom based teaching and more from critical reading and experimentation. In terms of course structure, a Doctorate will be significantly different from your Bachelor’s or Master’s Degree. It will take from 3-4 years and will culminate in a thesis which outlines what you have learnt from your specific research area. Your thesis will be a document containing approximately 80,000 words (although this will depend on your area) and it will be broken down into chapters. Ideally PGRs should have some of their research published throughout their course of study. Each PGR will be given a supervisor who will monitor their progress and (occasionally) give feedback on the research.

Your supervisor will be there to guide and support you as well as provide you with a sense of direction throughout your work. What they are not expected to do is spoon-feed you information. A supervisor’s feedback on your thesis will often be critical, and come the submission period, your supervisor should play a key role in helping you present your research in an original manner. Given that there isn’t much contact time in terms of lectures and seminars, it is important that your supervisor remain in regular contact with you, and you should arrange meetings as often as possible to discuss your project. Normally the relationship between PGR and supervisor is a smooth process, but occasionally problems may arise. If this is the case, you should mention it to your Cohort Advisor.

Your supervisor will expect you to work hard and be enthusiastic about your research and thesis. They will be very busy people, with work of their own to do, so it is important that you respect their time and contribution to your project. If you arrange a meeting then make sure you turn up, and if you’ve a deadline looming then ensure that your work is submitted on time.

9.3 Attendance (Flexible Working)

In CS we expect attendance between 1000-1600 but you can discuss this with your supervisors to come to an equitable arrangement based on our Flexible Working Model\(^1\). Therefore, you can work flexibly at anytime with the consent of your supervisory team.

\(^1\) http://www.staffnet.manchester.ac.uk/human-resources/current-staff/leave-working-arrangements/flexible-working/

Danger: COVID 19 - Obviously, you’ll probably be working from home! For more information have a look at the COVID 19 Update.
9.3.1 Contact Hours

As a rough non-prescriptive guide - all supervisions are a unique interaction between supervisor and PGR. However, you should typically expect supervision of at least:

1. Weekly supervision should be around 1h per week for 52-6 weeks is 46h.
2. Reading over reports/papers etc 12 h pa (1h a month) indeed some paper time should be with the supervisor as they get benefit; and in the first year very few publish at all so the 36/48h distributed over 3 or 4 years is asymmetrically distributed.
3. Assistance with 9m RPR and yearly progressions - asymmetrically distributed so on average 2h per year.
4. Final thesis reading and corrections 10h.
5. Using 3 years as the norm which then accounts for additional duties such as internal examiner and external examiners of PhDs

9.3.2 Illness

If you are ill don’t come to work at all, but, let all concerned parties know the situation, it is really that simple. However, in some cases your presence is important, in cases where you are speaking, attending a conference or giving a conference presentation, and in cases where your lack of attendance may reflect badly on your supervisory team or the University in general, then you should attend if at all possible. My rule-of-thumb is to answer the following question:

“Would I attend if this was an interview at [Google | insert company you really like] and this was the only opportunity for an interview that would be available.”

If the answer is yes, then you should attend; if the answer is no, then you should make your apologies (preferably by telephone and followed up by email) as soon as you know that you are not attending.

9.4 Responsibilities

PGRs should note that they are responsible for their work and that the role of the supervisor is to provide guidance and advice. But, be open with your supervisor, if you experience difficulties either in your personal life or with your work then mention it to your supervisor as early as you can - your supervisor will want to support you, and the earlier they know the more options there are.

The responsibilities of the PGR normally include:

- Arranging meetings with his/her supervisor(s) (taking account of any periods of holiday or work-related absence during the supervision period).
- Keeping appointments with his/her supervisor(s), or informing his/her supervisor(s) where this is not possible.
- Discussing any plans for vacations before commitments are made, to ensure that these are realistic in the light of deadlines and grade aspirations.
- Maintain timely updates on Eprog.
- Learn and improve his/her skills in scientific writing - including writing tools, grammar checking tools, and tools for organizing their literature review.
- Discussing with his/her supervisor(s) the type of guidance and comments s/he finds most helpful.
- Be proactive and ask questions
- Maintaining a professional attitude to his/her work and to the supervision process at all times.
• Maintaining a suitable record of supervision meetings, including dates, action agreed and deadlines set.
• Preparing adequately for meetings with his/her supervisor(s).
• Attending and participating fully in any courses related to the dissertation element of the course provided by the Department.
• Developing self-assessment for timely feedback.
• Discussing issues arising from feedback and taking appropriate action.
• Maintaining the progress of the work as agreed with his/her supervisor(s).
• Raising problems or difficulties with his/her supervisor(s).
• Making his/her supervisor(s) aware of any circumstances likely to affect his/her work.
• Giving his/her supervisor(s) due warning and adequate time for reading any drafts. It is the PGR’s responsibility to make sure that they understand the supervisor’s advice and the feedback on early drafts, and to generalise from specific pieces of advice and feedback.
• Being familiar with University / Faculty / Department regulations and policies that affect him/her.

9.5 Expectations

In the first 2-3 months, your supervisor will be guiding you, but by the end of your first year you should be to think independently about the direction of your project. You should:

• Be conducting experiments unsupervised (physical, numerical or literature based)
• Begin to design your own studies, with general guidance from your supervisor.
• Be able to analyse and discuss your data critically.
• Be asking questions at lab or research group meetings.
• Be coming up with your own solutions to problems and your own ideas!
• Where appropriate, contribute to lab meetings, to other projects in the lab, and will probably supervise an undergraduate or a new post-grad.
• Have learned to criticise constructively both your own work and that of others, and discuss research ideas (in lab meetings, conferences, with colleagues in the pub!).
• Be able to describe your research aims to colleagues.
• Be organising your own meetings with your supervisors.

Strong time management is one of the most important parts of PGR study. You should treat your Doctorate as a full-time job, while appreciating that a complete lack of leisure time can be damaging to your health and chances of success. The Research Department, here in Computer Science, follows a Flexible Working model with

Core Hours between 10:00 - 16:00 (you are expect to be here between these times unless personal circumstances dictate otherwise)

Similarly, it’s important to recognise when additional duties such as teaching undergraduates or becoming a PGR representative are taking up too much of your time; if the quality of your PhD is suffering, it’s okay to reject the opportunity to do new things.
9.6 Writing-Up

Your time management is particularly important when writing your thesis. By the time you get to this task you’ll be responsible for:

- Submitting the thesis title and ethical approval form (if appropriate) to the relevant office by the due date specified.
- Ensuring that the final thesis is written in accordance with requirements relating to the correct use of English language and presentation of tables, references, figures etc.
- Checking the completeness and accuracy of the text of the thesis / project submitted.
- Ensuring that submitted work is their own (i.e. avoiding plagiarism and other disciplinary offences).
- Ensuring adequate time for the binding of the thesis.
- Submitting the thesis to the appropriate office by the submission date specified.

9.6.1 Some Additional Resources


9.7 Finally... 

Finally, research runs on acts of volunteerism. From reviewing papers to helping at conferences, from organising Department socials to giving a group presentation there are many reasons for volunteering within your academic community and the Research Department. Helping out (this includes watering the plants in PGR Home) is an excellent way of gaining or developing new skills, knowledge, and experiences. It’s also a good way of meeting new people, both within your own research domain and those people who work in slightly less direct areas to the ones that you are interested in. By getting to know your community and Research Department, opportunities for collaborations or new research may present themselves.
CHAPTER

TEN

EXPECTATIONS OF THE SUPERVISOR

All PGR projects should have a main supervisor and one or more co-supervisors. The co-supervisors should be meaningfully involved in the supervision of the PGR, albeit not necessarily attending every meeting and at a level reflected in the credit split.

The main supervisor should schedule regular meetings with the PGR, normally weekly but at least fortnightly. These should involve only the supervisor(s) and the PGR. The PGRs should be expected to bring work and ideas to the meeting, but the supervisor should actively seek evidence of progress and should discuss reasons for lack of progress with the PGR. Whilst the supervisor should honestly assess progress and should inform the PGR if progress or work is not satisfactory, the supervisor should also make constructive suggestions to the PGR for future work.

Group meetings or workshops are an excellent forum for PGRs to learn how to conduct research, and to see a wider view of the subject than their own project, which is an essential component of a research programme, but these cannot replace one to one progress meetings with PGRs.

PGRs are here to learn, and the main supervisor has the primary responsibility for ensuring that they are educated as well as assessed. In the case of research PGRs they are here to learn how to become independent researchers. Whilst the final evaluation (submission of the PGR’s thesis and its examination) must determine whether or not the PGR has attained the level of an independent researcher, the educational process, led by the main supervisor, must constructively guide them to that point throughout the programme.

The supervisor’s behaviour towards the PGR must at all times remain calm, professional and constructive, in both oral and written communications. Whilst deficiencies in PGRs’ work must be clearly explained to the PGR, derogatory comments should not be used. Whilst group meetings will inevitably discuss the work that PGRs present, and the analysis and questioning of work that would normally occur in conferences or other research meetings is essential, this should be conducted professionally and in a constructive manner. Deficiencies in progress should be discussed with the PGR individually and not in front of other PGRs or staff (except co-supervisors).

PGRs have a right to request and receive regular feedback on written work. Writing is a vital component of research training and the development of academic writing skills must be supported by the supervisor(s).

PGRs have a right to request a mock viva, and if they wish to do this the supervisor(s) should arrange one.

The thesis is the responsibility of the PGR, who must decide the final content of the thesis and when the thesis is ready to be submitted. The PGR must have ultimate responsibility for his/her own research activity, and in relation to the final thesis, the supervisor’s opinion is only advisory and the PGR has the right to decide when to submit and if to follow the advice of the supervisor. Thus the PGR takes responsibility for submitting his thesis for examination and for the consequences. The requirement that the PGR is able to correctly decide what research to present and is able to correctly judge the value of the research presented in the thesis at the time of submission is implicit in the nature of programme, the award of which is a statement that the PGR has become an independent researcher.

Whilst it is natural that supervisors will wish to support their PGRs, applications for special consideration and progress reports for internal purposes and for external sponsors must always be completed accurately, completely and honestly.
10.1 Contact Hours

As a rough non-perscriptive guide - all supervisions are a unique interaction between supervisor and PGR. However, you should typically expect to provide supervision of at least:

1. Weekly supervision should be around 1h per week for 52-6 weeks is 46h.
2. Reading over reports/papers etc 12 h pa (1h a month) indeed some paper time should be with the supervisor as they get benefit; and in the first year very few publish at all so the 36/48h distributed over 3 or 4 years is asymmetrically distributed.
3. Assistance with 9m RPR and yearly progressions - asymmetrically distributed so on average 2h per year.
4. Final thesis reading and corrections 10h.
5. Using 4 years as the norm which then accounts for additional duties such as internal examiner and external examiners of PhDs

This gives a total of 70h pa for 4 years per PGR.

10.2 Research Supervision

Remember that keeping good records (of supervision, meetings, etc) is essential, and key to showing that decisions were reasonable in all the circumstances. There must be evidence that supervision took place.

A thorough induction to set expectations is key, with an appropriate and comparable replacement if the PGR misses induction for good reason.

It is important to provide clear information about who to contact if they are experiencing issues with their supervisor(s) that cannot be resolved via discussion with the supervisor(s).

Where progress is not satisfactory, this should be made very clear to the PGR (and recorded).

Clear information about supervisory support during the writing-up period should be provided.

The Department expects all supervisors to be familiar with and abide by the University’s Supervision Policy.

10.2.1 On Commencement of PGR’s Research

1. Ensure induction is carried out; both mandatory University and local induction
2. Ensure suitable training which may be formal and/or ‘on-the-job’ is provided for all tasks including research group/collaborator-specific training
3. Decide on the amount and level of supervision that will be required until the PGR can work independently
4. Ensure there is an assessment of risk for the actual work to be undertaken by the PGR
5. Advance preparation for end of work - share expectations of what will be needed at the end of their research (for example; handover of data, disposal of material)

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1 http://documents.manchester.ac.uk/display.aspx?DocID=615
10.2.2 Throughout the PGR's Project

1. As part of the regular feedback meetings on research output, include safety issues in order to evaluate whether any change in the nature and level of supervision is required

2. Ensure assessment of risks is reviewed in response to planned changes in research scope and training requirements re-evaluated in response.

10.2.3 Towards the end of a research project

1. Set time aside to ensure handover of all relevant information and materials are transferred or disposed of before the PGR leaves.

10.3 Some Additional Resources

10.3.1 Postgraduate Researcher Supervisor Toolkit

In consultation with academic and PS colleagues across the University, Manchester Doctoral College Strategy Group has developed a Manchester-focussed online Postgraduate Researcher Supervisor Toolkit, based on the UKCGE good supervisory practice framework (https://supervision.ukcge.ac.uk/good-supervisory-practice-framework/), to support supervisors in their role. The resource brings together information and guidance about all aspects of research supervision from recruitment through to completion, with the aim of quickly signposting you to useful services, enabling you to navigate policies and regulations, and facilitating your interactions with postgraduate researchers. The resource is a source of information for supervisors from all academic areas and all levels of experience and will be reviewed and updated biannually; please use the form within the resource to send us your feedback and help ensure the resource continues to be useful and relevant.

To access the toolkit click Postgraduate Researcher Supervisor Toolkit (http://man.ac.uk/Pfb9Nt) and follow the steps below:

1. When logged in to Blackboard, click the Enrol button with the green + symbol
2. Click Submit in the bottom right corner of the window
3. Click OK in the bottom right corner of the window
4. When you click on the link within Blackboard to launch the toolkit, ensure that pop ups are enabled

If you have issues accessing Blackboard, please contact IT Support. If you can access Blackboard but have trouble with the toolkit, please contact staffLD@manchester.ac.uk.

10.3.2 Faculty PGR Information for Supervisors

1. PGR supervisor pages are now at: https://www.staffnet.manchester.ac.uk/fse/faculty-support-services/research-business-services/postgraduate-research/
Chapter 10. Expectations of the Supervisor
The Department has a rooms policy which we adhere to and so it might be useful to explain it a little further. Here, we include an abridged version but you can see the complete Rooms Allocation Policy\(^1\) on the Department wiki.

Briefly, it was created so we could use the space more effectively and so that

### 11.1 In General

**Everybody will be assigned office space for the duration of their legitimate stay in the Department, subject to the conditions below.**

- All PGRs who are registered with the Department of Computer Science are entitled to office space excluding those on interruptions, research visits, sickness/illness (without interruption) or the like that lasts for greater than 3 months.
- Hot desk space can be assigned for a period of time, or on a daily basis (first come first served).
- Further, space in individual rooms may need to be expanded (for instance by removing extraneous furniture and facilities) to accommodate increased space requirements.
- Moreover, space must be utilised for it to be kept; even in individual cases where a researcher does not use the space provided, they may be moved to and the original space redistributed (especially when space is at a premium).

### 11.1.1 Further Details

- Any incoming RA, PGR or RV requires an office space request.
- Moving an AC, PS, RA, PGR or RV to a different room requires an office space request.
- “Unofficial” allocations do not exist, and these office spaces will be released.
- To better utilise office space, the Department reserves the right to move a person’s office space in the case that this has general benefits (of course with due notice and care).
- Once office space is due to be released, it is the occupant’s duty to clear that space (in particular remove private possessions), hand back keys, equipment (and so on).

\(^1\) [https://wiki.cs.manchester.ac.uk/staff/index.php/Room_Allocation_Policy](https://wiki.cs.manchester.ac.uk/staff/index.php/Room_Allocation_Policy)
• The Department reserves the right to clear office space it deems to be unassigned, store and ultimately dispose of uncleared materials, including computers and personal items.

• Individual members of the Department can request office space. A group can delegate authority for that group’s request to an individual - noting that groups do not own space, though the Department will make the best effort to keep cognate groups of people together.

• All relocation requests will be considered, although for many reasons we cannot commit to resolving every suggested change.

• Office ‘spaces’ are different: For example, ACs may have an Office allocation, RAs normally would have a desk, pedestal, side table, and some shelving, RVs and PGRs would normally have a desk and a pedestal, TAs would normally not have office ‘space’.

• The individual should keep their allocated space fit for use, sanitary, conforming to Health and Safety guidelines, and in a functional state so as to facilitate work, meetings, and the like.

• Office space should not be used as personal storage space, items in that space should predominantly relate to work although the presence of some personal items are reasonable, and should fit the space allocated (eg for PGRs items should fit in the pedestal and on the desk - while still facilitating the use of the desk for work purposes).

• In all cases the appropriate ‘Exit Policy’ (if instigated) should be followed, and at a minimum: all University property returned; personal effects cleared; hazardous materials appropriately disposed; data, software, source code and associated materials transferred to the supervisor; and the keys returned to the RAP/Environment Manager.

11.2 Room allocation processes:

11.2.1 Allocation

For TAs:

1. TAs are not normally allocated Office space, although a Hot desk may be allocated for the teaching period if the RAP decides it is needed for the TA to perform their duties (such as marking).

For PGRs:

1. An PGR spends the first six months of their Ph.D. in the PGR Home.

2. During this time, supervisor or nominee requests an office space from the RAP (only for the Kilburn and IT Buildings). The RAP will welcome suggestions of which space to use and this may be sought from the RDB.

3. New students are not expected to arrive before the start date shown in their formal offer of admission. Students that do arrive early may be allocated a desk in PGR Home, or may use the hot-desking space - in both cases if space is available.

4. Split site students are allocated a hot desk for the period they are on site via the Student Support Office.

5. Students whose Principal Supervisor is not based in the Department of Computer Science, or students not registered with the Department, will not be automatically allocated a space, but we will make best efforts to accommodate them if there is an academic imperative. Supervisor applies to the Director of PGR Studies (PGRD) (r nominee, who informs the RAP.

For Hot Desks

1. A hot desk may be reserved on a daily first come first served basis.
2. At the end of the hot desk period - be that a semester, period, or day - the hot deskie must clear the desk, anything left after the end of the period will be disposed of to rubbish.

11.2.2 Release

For PGRs:

• PGRs will normally keep their allocated space until the initial Award letter is issued. However, once the Thesis has been submitted this is at the discretion of the RAP.

• Upon Withdrawal, Reject (Civ), or Award (A); the PGRD (or their nominee) informs the RAP, which updates the RDB accordingly and ensures that keys are returned and the desk is vacated.

• PGRs with Revise (B) or Reject (Ci-iii) are not presumed to keep their allocated space and their supervisor must make an application to the PGRD (or their nominee) who informs the RAP. Allocation is at the discretion of the RAP.

• PGRs performing ‘wrapping-up’ work and awaiting their award may keep desk space for a maximum of one year (after application to the PGRD - or nominee - by the supervisor) at the discretion of the RAP.

• PGRs intending to transition: if international to the Doctoral Extension Scheme, or those who are not international students but are carrying out similar functions to those on the Doctoral Extension Scheme, may apply to the Department for RV status and then have space relocated in accordance with RV procedures (after application to the PGRD - or nominee - by the supervisor) at the discretion of the RAP, and once their Award is granted.

• Students who have an absence from study (e.g. an industrial placement, interruption, research visit, sickness/illness or the like) for longer than 3 months will normally be required to surrender their desk at the discretion of the RAP, and be allocated to a new desk on their return.

Hot desks

• Hot desks are released after the period of time agreed.

• Daily (first come first served) Hot desks are released at the end of the day.

11.2.3 Move

For ACs, PSS, RAs, PGR and RVs:

• Anybody can request to move their allocated space by emailing their request to the RAP, which will consider it in view of the current and future space situation, feasibility, and reasons given in the request.

• Requests should be made in discussion with a line manager/supervisor.
ATTENDANCE

**Danger:** COVID 19 - Obviously, we’re all probably be working from home! For more information have a look at the COVID 19 Update.

With respect to attendance, in general, you are required to be engaged in the programme. Including the Scientific Methods courses, and the PGR Symposium, in which all research students are required to participate.

PGR follows a Flexible Working model with Core Hours between 10:00 - 16:00 (you are expected to be here between these times unless personal circumstances dictate otherwise)

This does two things - it means that staff should not be organising supervision meetings outside 1000-1600 unless all parties agree (and students should not by default expect to contact their supervisor outside of these hours). In this way we follow Athena Swan\(^8\) and protect staff and students who may have family responsibilities.

Because we run a Flexible Working Model\(^1\) we now expect students to be in Department between 1000-1600 **unless they have made arrangements with their supervisor to work differently**. Therefore, you can work flexibly at anytime with the consent of your supervisory team.

It is my experience (and that of many other staff) that students who don’t attend, do worse, drop out, or fail because they neither give, nor receive, support.

### 12.1 Working Hours

I quote here from and advice document for new PhD students written by Dame Professor Nancy Rothwell, who is the President of the University, *Doing a PhD*\(^7\)

> These are not fixed — some people start early and leave early, some the other way round, some seem to work long hours but take many breaks. The important thing is that you get things done. A PhD is a very demanding workload and you will need to manage your own working hours. You will need to work flexibly around the demands of your experiments and this may involve work in evenings or weekends.

Your supervisors may have particular reasons for you to work at particular times. The students who succeed well tend to be those who work here and interact with members of their research group(s). It is not a good idea to work from home.

**Warning:** For this reason in CS we expect attendance between 1000-1600 but you can discuss this with your supervisors to come to an equitable arrangement based on our Flexible Working Model\(^1\).

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8. [https://www.ecu.ac.uk/equality-charters/athena-swan/](https://www.ecu.ac.uk/equality-charters/athena-swan/)

1. [http://www.staffnet.manchester.ac.uk/human-resources/current-staff/leave-working-arrangements/flexible-working/](http://www.staffnet.manchester.ac.uk/human-resources/current-staff/leave-working-arrangements/flexible-working/)

Your attendance will be monitored in the following way. Once a month, your main supervisor will be sent a form on your eProg account. This asks two questions: have you been present during the last month, and have you been engaged during the last month. The supervisor can provide free text to support his answers; usually filled in only if the answers to the preceding questions are “No”. If your supervisors know you are away, working in another lab as part of your research for example, this is not a problem. It is indicated in the free text box. However, we expect you and your main supervisor to be seeing each other on a regular basis and certainly more than once per month.

12.2 Tier 4 Visa Attendance Monitoring Census

The University operates attendance monitoring Census Points within the academic year in order to confirm the attendance of students holding a Tier 4 Student Visa. This is to ensure the University meets the UKVI statutory requirements as a sponsor of Tier 4 students and its responsibilities in accordance with its Highly Trusted Sponsor status.

If you are a Tier 4 visas holder, you must attend these attendance monitoring census points, in addition to complying with the School’s own programme attendance requirements.

The attendance monitoring census points and further information are accessible via the Immigration and Visas site.

Please note: registration is your first point to confirm your attendance at the University and you will not be required to attend a further census point in October, if you registered in September.

You will receive an e-mail from the Department to confirm when and where you should attend to have your attendance confirmed. You must check your University e-mail account regularly. Failure to check your e-mail account is not a valid reason to be absent from a census point.

12.2.1 What if a Tier 4 student cannot attend a census point?

If you cannot attend in person due to a valid reason which includes: illness; placement; field studies; research work; or any other reason connected to your course of study, you must email Student Support to inform us of your absence and your inability to attend in person. In the case of illness, you must provide a copy of a medical certificate. If you are in this position you should report in person to the Student Support Office as soon as possible after you return to campus.

Students who are recorded as interrupting their studies are not expected to attend during their period of interruption.

12.2.2 What happens if a student does not attend a census point?

The Department must be able to confirm your presence to the UKVI by the end of each census point in the academic year. If you do not attend a census point when required by your Department and you do not provide a valid explanation for your absence you will be deemed to be not in attendance.

Those students identified as not in attendance will be reported to the UKVI and the University will cease to sponsor the student’s Tier 4 visa. The Tier 4 visa will then be curtailed and the student must leave the UK within 60 days.

http://www.studentsupport.manchester.ac.uk/immigration-and-visas
mailto:compsci-sso@manchester.ac.uk
12.2.3 Keeping your ATAS clearance up to date

If you are studying on a course that requires ATAS clearance, you must make sure that your ATAS clearance is up to date by applying for new clearance if your area of research changes at any point after you obtained your ATAS clearance. Apply for your new clearance as soon as you know that your course details have changed. ATAS applications take approximately 20 working days to be processed, but may take longer at peak times including July-September. You do not need to obtain new ATAS clearance if you obtain a new passport, get a part-time job, or if your contact details change. You can perform ATAS Certificate Check\(^5\) to see if you need a new Academic Technology Approval Scheme (ATAS)\(^6\) certificate.

12.2.4 Further information

If you have any concerns about the attendance monitoring census points, or your Tier 4\(^4\) visa status, please contact the Student Support\(^2\) Office.

The University has a very comprehensive website which will answer many of your visa queries at Immigration and Visas\(^3\).

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\(^{5}\) https://www.academic-technology-approval.service.gov.uk/
\(^{6}\) https://www.gov.uk/guidance/academic-technology-approval-scheme
\(^{4}\) https://www.gov.uk/tier-4-general-visa
It is possible to study for PhD part-time. Normally this means half-time, so a 3-year full-time programme becomes a 6-year half-time PhD. This has to be approved at admissions. A PGR who wants to study for part-time PhD would normally apply for the part-time programme. However, under some circumstances a full-time PhD can transfer to a part-time course, but this would have to be approved by the supervisor and by the Department. Because it is difficult to do timely research over a 6 year period, not all academics are willing to take on a part-time PGR, or if they are, not for all projects.

The policy governing part-time programmes is the same as the policy governing full-time programmes.

The relevant rules for part-time study extracted from that document are:

- “...the degree shall be continuous and include study time equivalent to a full-time degree but should not exceed twice the full-time study. The students shall be required to attend the University at all appropriate times” (Ordinance A.4.b)

- “Applicants may also be admitted as a part-time PGR if:” (Regulation 1.e)
  1. “the periods for which they will be free from employment or other commitments will be sufficient for the purposes of the degree;” and
  2. “the subject is suitable for part-time study.”

- “The duration of a part-time degree will be dependent upon the time to be committed by the candidate for study but shall normally be no more than 6 years.” (Regulation 2.b)

- “Part-time students shall submit a progress report on an annual basis, with a major report occurring after the equivalent of one year’s full-time registration.” (Regulation 5.g)

What this means within the Department of Computer Science is described here. For a part-time the PGR the progression procedures as described previously are amended to include the following. Part-time students are required to attend an ‘end of year’ progression interview at the end of each year of their part-time registration. This has the format of the end of year examination described in the previous chapter. The major decisions about progression taken annually by the examiners for full time students will be taken after the equivalent study time, normally two years (e.g. after year 2 and year 4), for part time PhD students. The ‘end of year’ interviews after year 1 and year 3 of part time PhD registration are intended to generate advice about progression, but not enforced mandatory action such as withdrawal.

There is normally no submission pending for part-time students - but it can be granted for up to 1 year part time study.
Within the framework of the University of Manchester’s 2015 Agenda, the ‘split-site’ PhD program extends the scope for research collaborations between the University and other institutions to encompass research degrees. It is intended as a means of enhancing research collaboration between the University of Manchester and other world-class institutions by allowing PhD students to register on a PhD program at the University of Manchester while working mainly at the collaborating institution. The University of Manchester will seek to ensure that the PGR experience (including provision of facilities and supervision) are as close as possible to those of students who are in full-time attendance. The Department of Computer Science has a duty to ensure that all appropriate arrangements, including facilities, study time and supervision are in place before the arrangement is approved.

Split site PhD students may be registered as full or part-time at the University of Manchester. The minimum period of candidature is three years full-time, or six years part-time. Split site PhD students are expected to attend the ‘Introduction to Research — Essentials’ training course and undertake a Development Needs Analysis (DNA) at the University of Manchester. The supervisor must discuss the DNA with the PGR and make appropriate arrangements for any training needs identified.

The supervisory team will be based at the University of Manchester, with one or more additional named supervisors at the collaborating institution. Consideration must be given to the level of supervisory input from the collaborating institution and this should be clearly defined at the outset. The arrangements for supervisory visits to the collaborating institution and PGR visits to Manchester must be agreed and recorded as a part of the proposal at the start of the student’s program. There must be regular contact between the PGR and main supervisor. It is expected that the collaborating institution will provide any additional sources of support to the PGR if needed. Supervisory requirements and the responsibilities of the supervisory team should comply with Section 1 of the Code of Practice for Supervision of Research Degrees, taking into account any special or alternative arrangements which may needed to be made in the light of any supervision being provided at the partner institution.

Split-site PGRs will have a Research Training Support Grant (RTSG) at 70% of the full time RTSG in accordance with 70% fees levied by the University.

It is important that split-site PhD students are aware of their responsibilities and that arrangements are in place at the collaborating institution to enable them to carry out these responsibilities.

PGR progress will be monitored by the Department using its standard formal ‘end of year’ progression review mechanisms. The School’s arrangements for progress monitoring and formal reviews must be specified at the outset, in writing, and agreed with the collaborating institution and the PGR. The PGR must normally come to Manchester for ‘end of year’ reviews by Manchester staff. Informal monitoring and formal progress review meetings are to be carried out regularly, according to a pre-arranged and agreed schedule.

It is expected that the split site PGR will submit a thesis to the Graduate Education Office in the Faculty of Science and Engineering at the University of Manchester and that the ‘viva’ will also take place in Manchester. The PGR will be required to give notification of intention to submit in the normal way (i.e. no later that two months prior to the date of submission) and within the period of their registration. Examination arrangements and the examination process should be carried out as set out in the Ordinances and Regulations for Degree of Doctor of Philosophy\(^1\).

\(^1\) [http://documents.manchester.ac.uk/display.aspx?DocID=13074](http://documents.manchester.ac.uk/display.aspx?DocID=13074)
The ‘viva’ examination will normally take place on the University of Manchester premises and the Department will ensure that arrangements are communicated well in advance to all concerned including the collaborating institution. In particular, sufficient time should be allowed to enable the supervisor from the partner institution to make arrangements to attend the viva should this be requested by the PGR. The cost of any travel for the partner supervisor to attend the viva would need to be provided by the collaborating institution. On successful completion, the research degree will be awarded by the University of Manchester.

In accordance with normal practice, students and supervisors should be aware of the procedures and processes for addressing complaints and appeals. The University of Manchester’s procedures should also be invoked if a complaint or an appeal is made in connection with the student’s period of study at the collaborating institution.
To Reiterate... This is a traditional Doctoral programme which has been designed to be completed in three years. The aim of any PGR on the 3-year programme is to complete the research and the writing up within three years. The planning must take this into account from the outset. The University regulations allow for one additional year beyond the third for completing the thesis, called Submission Pending. However, most funding schemes for 3-year Doctoral programmes will end after three years, and will not fund 3-year PGRs during Submission Pending.

Danger: It is now policy (since Sept 2019 intake) that PGRs must complete within three years ‘on programme’ and six months ‘Submission Pending’ at a maximum! After this period, the registration will be terminated and no degree will be awarded.

There is every incentive to complete this programme within the allotted three years while the funding lasts. It is an absolute requirement that you finish within three years and six months.

Therefore, the great majority time will be devoted to the main task, which is doing research and completing the thesis within three years. However there are other activities that three year PGRs are required to engage in, and yet others that they have the option of engaging in. The courses listed below are designed to help all PGRs in their endeavours. Activities such as laboratory demonstrating, mentoring and public engagement are optional though they encouraged as being conducive to the general experience of being a successful PGR and preparing for wider roles when PGRs take up their chosen careers.

15.1 Mandatory Training

In this section we list as a collection of things we require you do in order to be considered to be making satisfactory progress as a PGR. Of course, we cannot say that if you do these things, you will get a Doctorate. Ultimately, to achieve a Doctorate, you have to create and carry out a novel piece of research, write it up as a dissertation, and defend that work in front of a panel of examiners.

What is being said here is a list of things which if you don’t do, you won’t get a doctorate (or at least will put your ability to get a doctorate at risk).
15.1.1 Scientific Methods Courses (COMP81020, COMP82020, COMP83020, and COMP84020)

All PGR are required to take this sequence of four training units spaced over the three years and an additional one to help you through submission pending if things aren’t going to plan. These start in semester two. Timetables for these courses can be found CS PGR information.

The titles of these three courses are as follows:

‘Starting Your Postgraduate Research’ (COMP81020) 20 hours contact time / 50 hours total: Give the PGR the skills to be able to get started on performing quality research, including an understanding of research integrity and statutory compliance.

The unit is intended to give students an introduction to working on their PhD. It covers statutory compliance, interactions with, and expectations of, their supervisor. It prepares students for academic writing include Background Reading, Critical Analysis, Doctoral Consortiums, and Report Writing in the format expected from the Research Progress Review and End of Year Progression. The assessment of this unit is via pass or fail and it is assessed ‘off unit’ as a condition of first year progression.

‘Preparing Papers and Presentations’ (COMP82020) 20 hours contact time / 50 hours total: Give the PGR the skills to be able to write a ‘REF Aware’ Journal and Conference paper and then present it.

The unit is intended to give students an introduction to writing Computer Science centric papers while taking into account REF as an example of good practice when writing journal or conference papers. And then give them the ability to present their work at conference either in person or remotely. The assessment of this unit is via pass or fail and it is assessed ‘off unit’ as a condition of first year progression.

‘Preparing for your Final Year’ (COMP83020) 20 hours contact time / 50 hours total: Give the PGR the skills to be able to understand the work they have left, effectively plan their time, prepare their thesis, and undertake their viva.

The unit is intended to get students ready for thesis submission and oral examination. It also provides the PGRs with the tools to be able to interact with a non-technical audience. The assessment of this unit is via pass or fail and it is assessed ‘off unit’ as a condition of first year progression.

‘Surviving Submission Pending’ (COMP84020) 10 hours contact time / 50 hours total: Give the PGR the skills to be able to understand the work they have left, effectively plan their time, understand the consequences of being late.

The unit is intended to remind PGRs that their thesis submission and oral examination are close, and enable them to discuss barriers to them submitting in a timely fashion and to convey risk analysis and formal methods for prioritisation such as the MoSCoW method or similar.

15.1.2 Introduction to Research — Essentials

This course is put on by the Faculty of Science and Engineering (FSE). You will learn more about this when you attend the FSE Faculty induction. You can also find a schedule for this and other University and FSE Faculty training courses by selecting the “Training Catalogue” from the menu on the left-hand side of eProg.

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4 http://studentnet.cs.manchester.ac.uk/pgr/
15.1.3 University and CS Health and Safety Courses

All PGRs are required by the University to pass a Health and Safety on-line course. If you want to be in the Kilburn build out of hours (outside the hours of 6pm to 8am), you will also need to pass the Department of Computer Science Health and Safety test. These tests can be found on Blackboard, which can be found at your MyManchester\(^9\) page. Below are the instructions to take both tests.

1. Log into Blackboard.
2. Look for the “My Communities” block:
3. PGRs: you need to click on the “CS-PGR-Welcome” community space.
5. Complete the test called “Part 1: University of Manchester Health & Safety”: you need to score 100% to successfully complete it.
6. Complete the test called “Part 2: Health & Safety within the Department of Computer Science”: you need to score 100% to successfully complete it.
7. When you have scored 100% ON BOTH TESTS the “Out of Hours Access” folder will appear.
8. Click on the “Out of Hours Access” folder.
9. Read through the guidance document, and complete the “Out-Of-Hours-Pass Test”: you need to score 100% to successfully complete it.
10. When you have scored 100% on the Out-of-Hours Pass Test, a link called “Out-of-Hours Completion Confirmation” will appear.
11. Click on this “Out-of-Hours Completion Confirmation” link, and a confirmation page will appear.
12. Take this confirmation page (either print it out, or show it on an electronic device) and your University of Manchester ID card to SSO (room LF21) who will issue you with an Out-of-Hours Pass for the Kilburn Building.

Out-of-Hours access is only available during the times shown on the back of your Out-of-Hours Pass. You must have both your University of Manchester ID card and your Out-of-Hours Pass with you to be allowed to work in the Kilburn Building outside normal hours.

15.1.4 Plagiarism Course

All PGRs are required to complete a short course on plagiarism. See the Section on Plagiarism and Academic Malpractice. This test is also found on Blackboard.

15.1.5 Research Integrity

The University expects the highest standards of research integrity from its PGRs. These standards are set out in its Code of Good Research Conduct\(^5\).

All PGRs must complete the University’s Research Integrity\(^6\) on-line training.

Those with concerns regarding Research Misconduct\(^7\) can follow the process for reporting them.

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\(^9\) [http://my.manchester.ac.uk](http://my.manchester.ac.uk)
\(^5\) [https://www.manchester.ac.uk/research/environment/governance/conduct/](https://www.manchester.ac.uk/research/environment/governance/conduct/)
\(^6\) [http://www.staffnet.manchester.ac.uk/services/rbess/governance/upcoming-events-and-training/](http://www.staffnet.manchester.ac.uk/services/rbess/governance/upcoming-events-and-training/)
\(^7\) [https://www.manchester.ac.uk/researchmisconduct](https://www.manchester.ac.uk/researchmisconduct)
15.1.6 Research Data Management

Research Data Management is part of good research practice, improving the efficiency of the research process and making your research more reproducible. There is support available across the University to assist you with this:

- **Planning**: Data Management Plans[^12] help you plan how you will collect and handle data and are also a requirement of the University for every new research project. You can find the data management planning tool, guidance on writing data management plans and a data management plan review service on the [Research Data Management Website][^13].

- **Storing**: Research Data Storage[^14] is available from Research IT services, providing 8TB of replicated storage per project, free at the point of use for funded projects (excluding commercial funders). NB: currently only staff can apply for storage space so ask your supervisor to apply on your behalf.

- **Sharing**: Where possible the University recommends using discipline-specific data repositories to share data and you can find repositories for your subject via Re3data.org and fairsharing.org. Mendeley Data is the University of Manchester’s recommended general-purpose research data repository for researchers without a discipline-specific repository. Records from Mendeley Data are automatically added to Pure[^8] and you can manually add datasets shared elsewhere to your Pure profile.

- **Training**: here are courses on Research Data Management targeted for each faculty available via [My Research Essentials][^11].

- **Support**: If you have any questions about Research Data Management you can send them to research-data@manchester.ac.uk.

15.2 Other Training

There are a number of short courses which are available to you.

15.2.1 ReproducibiliTea

ReproducibiliTea ([https://reproducibilita.org](https://reproducibilita.org)) are a grassroots journal club initiative that helps researchers create local Open Science journal clubs at their universities to discuss diverse issues, papers and ideas about improving science, reproducibility and the Open Science movement. Started in early 2018 at the University of Oxford, ReproducibiliTea has now spread to 109 institutions in 25 different countries. We are completely volunteer run, and provide a unique and supportive community for our members, who are predominantly Early Career Researchers. Manchester’s ReproducibiliTea is the university’s Open Research journal club.

[^14]: [http://ri.itservices.manchester.ac.uk/rds/](http://ri.itservices.manchester.ac.uk/rds/)
[^8]: [http://www.staffnet.manchester.ac.uk/pure/](http://www.staffnet.manchester.ac.uk/pure/)
[^11]: [http://www.library.manchester.ac.uk/using-the-library/staff/research/support/my-research-essentials/](http://www.library.manchester.ac.uk/using-the-library/staff/research/support/my-research-essentials/)
15.2.2 Academic Phrasebank

The Academic Phrasebank is a general resource for academic writers. It aims to provide you with examples of some of the phraseological ‘nuts and bolts’ of writing organised according to the main sections of a research paper or dissertation (see the top menu). Other phrases are listed under the more general communicative functions of academic writing (see the menu on the left). The resource should be particularly useful for writers who need to report their research work. The phrases, and the headings under which they are listed, can be used simply to assist you in thinking about the content and organisation of your own writing, or the phrases can be incorporated into your writing where this is appropriate. In most cases, a certain amount of creativity and adaptation will be necessary when a phrase is used. The items in the Academic Phrasebank are mostly content neutral and generic in nature; in using them, therefore, you are not stealing other people’s ideas and this does not constitute plagiarism. For some of the entries, specific content words have been included for illustrative purposes, and these should be substituted when the phrases are used. The resource was designed primarily for academic and scientific writers who are non-native speakers of English. However, native speaker writers may still find much of the material helpful. In fact, recent data suggest that the majority of users are native speakers of English. The Phrasebank is at: http://www.phrasebank.manchester.ac.uk/.

15.2.3 Research Seminars

The Department runs a seminar series, which runs typically on Wednesdays at 2pm in Kilburn 1.4, but it does not run every week. Upcoming seminars are announced over the seminar-distribution mailing list. They can also be seen at the Department Seminar webpage. All PGRs are strongly encouraged to attend. And if you are presenting here or in a research conference you may want to first read ‘Tell me a story! A plea for more compelling conference presentations’ https://bioone.org/journals/The-Condor/volume-119/issue-2/CONDOR-16-209.1/Tell-me-a-story-A-plea-for-more-compelling-conference/10.1650/CONDOR-16-209.1.pdf.

During the first semester, Science in Practice (SIP) seminars will take place in Weeks 1.1 to 1.12 (1 hour per week) on Wednesdays, 5pm – 6pm. These will inform PGRs of the variety research activity within the Research Groups within the Department. They will be delivered either by the heads of the research groups themselves, or by suitably-qualified representatives. All PGRs are cordially invited.

15.2.4 FSE Courses

A research degree is a challenging and rewarding experience combining core research skills and knowledge and the opportunity to develop a much wider range of personal and professional skills. As a postgraduate researcher you will be expected to take responsibility for your research degree – from defining your subject area, to planning your workload, mastering the techniques required to conduct your research, developing your relationship with your Supervisor, and effectively communicating your research expertise to others. This is your chance to contribute to scientific advances that excite and challenge you, and to develop the skills, attributes and competencies of a professional researcher.

To help you meet this objective, Researcher Development, within the Faculty of Science and Engineering, offers you a range of support, training and development opportunities that you can choose to engage with as and when you need to. Built around individual personal development plans, skills audits and self-reflection, our face-to-face and online training enables you to gain and enhance those skills that best meet your development needs.


15.2. Other Training

15 http://www.cs.manchester.ac.uk/our-research/seminars/
15.2.5 Research Computing

The Research Computing is a part of the University’s IT Services, which offers computing services to researchers. They offer courses which are sometimes appropriate to PGRs. Some of these courses may cost the Department money, so you will need to get permission before you take them. Talk to your supervisor.

15.2.6 Manchester Enterprise

The Manchester Enterprise Centre offers a course in Innovation and the Commercialisation of Research, which may be available to PGRs. This costs the Department money, so, as above, talk with your supervisor.

15.2.7 The Graduate and Researcher Development

The GRD unit runs a number of short courses (one-day, half-day, two-hour) which are relevant to the final stages of the Doctorate, including: “Planning Your Final Year”, “Writing Up Your Thesis”, and “Viva Survivor”.

15.2.8 Publications

You should acknowledge the grant from which you are paid on any publications, including those grants which are from your own sponsor (who will likely have their own requirement) but also from the Department or the EPSRC RCUK via the Departmental awards allocation allocation. If you are a CDT student you would also acknowledge that too.

Note: ‘The authors would like to thank the EPSRC Manchester Centre for Doctoral Training in Computer Science (EP/I028099/1) for supporting this work’ or ‘The authors would like to thank the Department of Computer Science Kilburn Scholarship for supporting this work’ or ‘This work was supported, in-part, by The University of Manchester Presidents Award.’

15.3 Engagement

Every PGR is expected to remain “engaged” with the programme. That means, being very committed to the research, maintaining contact with their supervisor, and participating in the mandatory elements of the programme. Each month, your supervisor is asked whether they met with you as expected and whether they judge that you are engaging with the research. More details on this are given in section.

15.3.1 eProg

*eProg* is the University-wide progression system and skills training catalogue for PGRs. It is used to document your interactions with your supervisors and other members of your support and assessment teams, so its use will be central. It is located at [eProg](http://www.eprog.manchester.ac.uk).

*You are required to use eProg*. At various points in your programme, you will record your objectives and progress in eProg. For example, quarterly reports on progress are recorded here. When you have successes, such as publishing a paper, attending a conference, participating in a training programme, etc. you should record this on eProg. It is also used by your supervisors to record any issues which they might have, and to record the attendance. Your supervisors and the Department will record your progress through eProg, including the yearly review process.

Every PGR on eProg is on a pathway. Your pathway will be something like

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10 [http://www.eprog.manchester.ac.uk](http://www.eprog.manchester.ac.uk)
PhD Comp 3YR FT Sept19

which means you are on a 3-year PhD programme in computer science, studying full time, starting in September 2019. If you click on the Pathway menu item, it will show you the milestones for your pathway. If you click on the Progression menu item, it will show a table of links to the forms you need to fill out, as eProg tracks you as you progress. Most forms are filled out by you, following or leading on to discussions with your supervisor(s). However, there are also forms filled out by your end of year assessors, and the attendance monitoring forms are filled out by your supervisor.

There is a facility to add documents and add meetings, and many supervisors will record every meeting in eProg.

As mentioned in Section, you can also access the training catalogue from eProg.

15.3.2 Public Engagement and STEM ambassadors

The Department is very involved in “public engagement”, which means promoting science and computer science to the general public. Our Department is particularly involved in two areas. The first is promoting computing in schools. The second is working with the Museum of Science and Industry (MOSI) to promote science in science fairs and events. MOSI provides training to scientists and science PGRs in public engagement by qualifying them as “STEM ambassadors” (STEM stands for Science, Technology, Engineering, and Mathematics). As a PGR, you should take the opportunity to get trained as a STEM ambassador and to participate in public engagement events. The School’s public engagement are run by Dr. Giles Reger\(^3\).

15.4 Research Training Support Grant (RTSG)

It is not enough for researchers to do significant research; we also must go out into our research communities to communicate it. The Department provides a small amount of money (called a Research Training Support Grant; RTSG - next) for each PGR which is currently £333 per annum (to be spent at any time over the programme length minus the submission pending period and any interruptions or extensions), so, for example, a 3 year PGR will accrue £1000 total, for travel and training. We typically do not provide this funding to any PGR who has separate means (typically via sponsorship) to attend conferences or buy equipment; for example, EPSRC Knowledge Transfer Partnership Accounts and the like.

**Danger: COVID 19** - This has been reduced from £1000pa (£3000 total) to account for the fact that conference travel is mostly paused. However, once COVID 19 is addressed then these amounts will be revisited in an attempt to increase them to pre-COVID 19 levels. For more information have a look at the COVID 19 Update.

The policy of the Department for spending this money is as follows:

15.4.1 £1000 Over the 3 Years

**The money follows the PGR.** The money is placed in the group RTSG account of the main supervisor and can only be used for the PGR activity. The money is to be used to best enhance the research training of the research PGR. However, the PGR should not feel that they can spend anyway they like, it is up to the supervisor and PGR to jointly decide the best use of the money. If there is a disagreement then Simon Harper (HoPGR)\(^1\) or Dr Bijan Parsia (DHoPGR)\(^2\) are consulted for the final say.

\(^3\) mailto:giles.reger@manchester.ac.uk
\(^1\) mailto:simon.harper@manchester.ac.uk
\(^2\) mailto:bijan.parsia@manchester.ac.uk
15.4.2 Computer Equipment

Every PGR should be provided with a new machine of the standard Department spec or higher

After your first semester, all PGRs will move from PGR Home (which has machines) to your home labs. Prior to this move, PGRs should discuss with their supervisors what machine is required for their proposed research and order new machines. It is important that students take responsibility for discussing their compute requirements as early as possible with their supervisor and for ordering their machine.

This should have a specification which is equivalent to or exceeds IT Services standard desktop PC. There is no expectation that this be upgraded in subsequent years, unless the supervisor deems that necessary. Of course, the supervisor may judge that a particular PGR’s project requires a much higher spec desktop, or other equipment, and may spend more of the budget on that PGR. We want to avoid PGRs being given three year old machines which happen to be lying around the lab.

In this case, each student is automatically allocated funding for a machine in addition to their RTSG. Our advice is in most case to choose the Lenovo ThinkStation (P520c - at the time of writing) option (unless a laptop is needed) from the IT Services Extended Catalogue16. Supervisors will need to make the case in the order that your PGR has non-standard requirements (which I would expect all CS PGRs to have - as standard requirements are considered to be low compute administration tasks). Supervisors should make it clear on their order form that you are a Postgraduate Researcher and your machine will be used for research purposes. More information on IT Purchasing17 is available.

If the PGR is going to use a laptop, consider purchasing a monitor and keyboard to protect them from upper limb disorders, repetitive strain injuries, and so forth.

Machine purchases can be discussed with IT services but this may well increase the time an order takes; and the simplest answer for a request arising from a discussion of non-standard equipment is ‘no’. We would suggest conforming to the catalogues if at all possible.

In cases where a higher specification of machine is required we suggest the workstation is ordered and then the upgrades are performed in house by using funding from the PGRs RTSG to purchase the additional parts (outside of the IT Services loop).

**Danger:** All machines must be purchased through IT Services. If a fully-spec’ed non-standard specification machine is purchased via IT Services then the PGR RTSG will be liable for the entire cost of the machine not just the difference between the Workstation and the non-standard machine.

15.4.3 Funds for Working from Home

PGRs are able to ask their supervisor and local budget holder if they can purchase items up to the value of £50 to help them work from home. Items may include things like footrests, keyboards, a mouse etc. You must gain approval from your budget holder before making any purchases. You can use the usual expenses process to claim back what you have agreed can be spent using the reference: ‘Small items for working from home’. Please bear in mind before making a request to your budget holder that they will have to fund any equipment from existing budgets so they may not always be able to approve your request. It will also not be possible for staff who have purchased and paid for small items themselves to retrospectively claim for these through the expenses process.

The University’s Furniture Store has invested in new supplies of recycled office desks and chairs – please visit the StaffNet site or email simon.atkinson@manchester.ac.uk for more information. If you require an item from the Furniture Store please speak with your supervisor first to gain their approval before contacting the Furniture Store directly. If the Furniture Store can supply the item you will have to arrange collection from campus, taking into consideration

16 http://documents.manchester.ac.uk/display.aspx?DocID=34496
17 http://www.itservices.manchester.ac.uk/ourservices/popular/purchasing/work/
the current national restrictions on travel and our coming on to campus guidance. If you are unable to go to the Furniture Store to collect items you should speak to your line manager who may agree to fund delivery of items to your home.

15.4.4 Conference, Workshop, Summer School Travel

| Danger: COVID 19 - Most conferences are currently online at a much reduced rate. Have a look how to attend remote conferences at: https://www.sharpic.eu/post/10-pointers-for-distributed-participation/. For more information have a look at the COVID 19 Update. |

Every PGR should have the opportunity to attend at least one conference or workshop.

It is an important part of research training that PGRs get the opportunity to participate in conferences and workshops and network with other researchers in their fields. It is preferred that some of these experiences are outside the UK. Although it is reasonable to wait until the PGR has a poster or oral presentation accepted, this is not a requirement. The supervisor and PGR might together decide to send the PGR to a workshop or summer Department in an early stage in the PGR’s research. The fact that a particular PGR has not managed to get a conference or workshop paper accepted by the end of the doctorate should not preclude the opportunity to attend one. You’ll need a Travel risk assessment https://www.staffnet.manchester.ac.uk/compliance-and-risk/travel/flowchart/ And complete export control approval (if required) https://www.staffnet.manchester.ac.uk/compliance-and-risk/export-controls/.
The Department of Computer Science runs a PGR Symposium (organised by Dr. Ian Pratt-Hartmann\(^1\)) which brings all the PGR students together to present their research and learn about what their fellow students are doing. This is a symposium in which the research students in the Department present their research to each other and the wider community. Every PGR is required to participate as follows:

**Year 1:** First year doctoral students will be given specific tasks to carry out during the Research Symposium as part of their training. These involve attending and evaluating some of the presentations. There will be a meeting to discuss these tasks prior to the Symposium.

**Year 2:** Students in year 2 of the doctoral will make posters describing their research and their results so far, and will participate in a poster session in which they stand in front of their poster and discuss it with interested people. Prizes are given for the best poster.

**Year 3:** Students in year 3 will give a 20 minute talk describing their research and results. And if you are presenting here or in a research conference you may want to first read ‘Tell me a story! A plea for more compelling conference presentations’ https://bioone.org/journals/The-Condor/volume-119/issue-2/CONDOR-16-209.1/Tell-me-a-story-A-plea-for-more-compelling-conference/10.1650/CONDOR-16-209.1.pdf.

This gives all new Doctoral students opportunities to meet more senior research students and their supervisors, and more senior doctoral students practice at research communications. In addition, it is an important mechanism whereby we advertise the latest research which is going on in the Department.

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\(^1\) mailto:ian.pratt@manchester.ac.uk
17.1 Steve Furber Medal for Outstanding Doctoral Thesis in Computer Science

Each year, at the Research Students’ Symposium, a prize is awarded for the outstanding thesis for which a PhD has been awarded.

Rules for entry are as follows:

- The PhD must have been awarded between January 1st of the preceding calendar year and the deadline (below) for submission.

- If the work falls within what is commonly understood as computer science, then the thesis must meet all the criteria for entry in the CPHC/BCS Distinguished Dissertations Award [http://academy.bcs.org/content/distinguished-dissertations](http://academy.bcs.org/content/distinguished-dissertations).

- People eligible to take part must have been registered as students at the School of Computer Science, University of Manchester.

- The thesis must have been submitted within four years of registration.

- Each research group can submit at most 2 theses for consideration by the panel. If more than two theses are submitted from a single research group the committee will discuss this with the supervisors and head of the research group.

- An electronic copy (in PDF format) of the thesis to be considered for the prize must be submitted to Dr. Ian Pratt-Hartmann [mailto:ian.pratt@manchester.ac.uk](mailto:ian.pratt@manchester.ac.uk) early February to fit in with the CPHC/BCS timetable but submissions can be made throughout the year. The following supporting evidence should be provided as a zipped file:

1. The author’s written agreement.

2. An indication as to whether the dissertation is being considered for publication elsewhere.

3. Written justification by one of the examiners - preferably the external - explaining the dissertation’s claim to distinction.

4. The names and contact details of at least three suggested reviewers from outside the School who are independent of the supervision and examining of the thesis, and who have explicitly agreed to provide a review upon request by the BCS.

5. Any other material available as evidence of merit and impact (e.g., papers that are directly related to the results in the dissertation – with acceptance rate/impact factor, if possible, for, resp., conference and journals –, esteem indicators such as invited research seminars/research visits, etc.)

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1 mailto:ian.pratt@manchester.ac.uk
17.1.1 Steve Furber Medal winners

- 2019: **Henry Reeve** - Learning in high dimensions with asymmetric costs
- 2018: **Sarah Nogueira** - Quantifying the Stability of Feature Selection
- 2017: (joint winner) **Sukru Eraslan** - Eye tracking scanpath trend analysis on web pages; and
- 2017: (joint winner) **Nikolaos Nikolaou** - Cost-sensitive boosting: a unified approach
- 2016: (joint winner) **Patrick Koopmann** - Practical Uniform Interpolation for Expressive Description Logics
- 2016: (joint winner) **Konstantinos Sechidis** - Hypothesis Testing and Feature Selection in Semi-Supervised Data
- 2015: **Georgios Kontonatsios** - Automatic Compilation of Bilingual Terminologies from Comparable Corpora
- 2014: **Maytham Alabbas** - Textual entailment for modern standard Arabic
- 2013: **Adam Pocock** - Feature Selection via Joint Likelihood
- 2012: **Yavor Nenov** - Computability of Euclidean Spatial Logics
- 2011: **Pavel Klinov** - Practical Reasoning in Probabilistic Description Logic
- 2010: Not Awarded
- 2009: **Gwenn Englebienne**, Animating Faces from Speech
- 2008 (joint winner): **Birte Glimm**, Querying Description Logic Knowledge Bases
- 2008 (joint winner): **Paolo Missier**, Modelling and Computing the Quality of Information in e-Science
- 2006: **Chris Armstrong**, CFG: A CSP-Based Framework Generator for Scientific Coupled Models
- 2005: **Tomaz Felicijan**, Quality-of-Service for Asynchronous On-Chip Networks
- 2004: **Konstantin Korovine**, Knuth-Bendix Orders in Automated Deduction and Term Rewriting
- 2003: **Nicola Gambino**, Sheaf Interpretations for Generalised Predicative Intuitionistic Systems
- 2001: **Sergio Tessaris**, Questions and Answers: Reasoning and Querying in Description Logic
- 1999: **Simon Gibson**, Efficient Radiosity Simulation using Perceptual Metrics and Parallel Processing
- 1998: **Ian Horrocks**, Optimising Tableaux Decision Procedures for Description Logics
- 1997: **Rizos Sakellariou**, On The Quest For Perfect Load Balance in Loop-Based Parallel Computations

17.2 Carole Goble Medal for Outstanding Doctoral Paper in Computer Science

Each year, at the Research Students’ Symposium, a prize is awarded for the outstanding paper by a research student. The rules for entry are as follows:

- People eligible to take part must be registered as students at the School of Computer Science, University of Manchester.
- Papers must either have been published externally or accepted for publication in the preceding twelve months.
• The research student must either be the first author, or the submission should be made with a covering letter explaining the role of the research student in the production of the paper.

• A copy of the paper to be considered for the prize must be submitted to Dr. Ian Pratt-Hartmann early February. This will be a hard deadline (the same as the above thesis deadline) but submissions can be made throughout the year. Submitted papers will also be considered for other awards (e.g. at the faculty level). The following supporting evidence should be provided as a zipped file: 1. At least three, substantial anonymous referee reports. (More are welcome.) If a conference paper, the reports needed are those notifying acceptance. If a journal paper, the reports needed are the most substantive ones, from any round of revision (if any). If so wished, all the reports from all rounds can be submitted. 2. The number of papers published in the conference or journal (preferably in the year of publication, or else the historical average). 3. The acceptance rate (resp., impact factor) of the conference (resp., journal) (preferably at the publication year, or else the historical average).

Note that if there aren’t as many referee reports as required above or if they’re not substantial or if the data about number of papers accepted and acceptance rate/impact factor are not known, then the Research School considers that there is a lack of a priori evidence for the nomination. In this case, the supervisor(s) is/are welcome to make a case for exemption in writing, especially in cases of journals whose impact factor is not available at all. In particular, the supervisor(s) may wish to ask prominent researchers in the area to write to the panel in support of the paper. In this case, it is the supervisor(s) responsibility to make it evident to the panel how these invited expressions of support complement the referee reports and are also both authoritative and unbiased.

17.2.1 Carole Goble Medal winners


• 2018: Mantas Mikaitis - Neuromodulated Synaptic Plasticity on the SpiNNaker Neuromorphic System


• 2015: Fan-Lin Meng - A Profit Maximization Approach to Demand Response Management with Customers Behavior Learning in Smart Grid, Fan-Lin Meng and Xiao-Jun Zeng, accepted for publication in IEEE Transactions on Smart Grid 2015


• 2012: Hugh Steele - Constructing Fully Complete Models for Multiplicative Linear Logic, Andrea Schalk and Hugh Steele, in Logic in Computer Science 2012 (LICS2012), the 27th Annual IEEE Symposium.


17.3 Nomination Process

17.3.1 Eligibility Conditions

In all cases, prizes are for research students that are, or were, registered as such at the Department of Computer Science, University of Manchester.

For a thesis nomination, the submission date must have fallen with four years of registration and the PhD must have been awarded between January 1st of the preceding calendar year and the deadline for submission (see below).

If the thesis falls within what is commonly understood as computer science, then it must meet all the criteria for entry in the CPHC/BCS Distinguished Dissertations Award (https://www.bcs.org/).

For a paper nomination, the paper must have been either published or accepted for publication in an external scholarly outlet (typically, a conference of a journal) between January 1st of the preceding calendar year and the deadline for submission (see below).
The PGR must be the primary and most significant author of the paper (which is typically and implicitly signalled by a placement as first author in the list of authors), otherwise the nomination must also include a covering letter explaining the role of the PGR in the production of the paper.

Nominations can only come from the supervisory team and must have the consent, in writing, of the PGR.

No more than two nominations for a prize can come from the same research group.

### 17.3.2 Deadline

The deadline for nominations normally falls in mid-February and is always widely advertised through a call sent by the academic responsible for the PGR Symposium in the Department team (typically at the start of the year).

Nominations are sent to the academic named for that purpose in the call for nomination and consist of the items described below, separately, for theses and for papers.

#### 17.3.3 Items for Nominating Theses

The nomination of a thesis must include the following items:

1. An electronic copy (in PDF format) of the thesis
2. The author’s written agreement to participate in the Department’s competition and, if the panel so decides, the CPHC/BCS Distinguished Dissertations Award as well.
3. A statement as to whether the dissertation is being considered for publication elsewhere.
4. Written justification by one of the examiners - preferably the external - explaining the outstanding nature of the thesis.
5. The names and contact details of at least three suggested reviewers from outside the Department who have no had any participation in either the supervision or the examining of the thesis, and who have already explicitly agreed to provide a review upon request by the BCS in the context of the CPHC/BCS Distinguished Dissertations Award.
6. Any other material available as evidence of merit and impact, e.g., (a) papers that are directly related to the results reported in the thesis – with acceptance rate/impact factor, if possible, for, resp., conference and journals, (b) esteem indicators such as invited research seminars/research visits, etc., (c) patents awarded, etc.

Note that it is the supervisory teams’ responsibility (not the panel’s, nor the Department’s, more broadly) to nominate the winner thesis (and possibly selected others) to the CPHC/BCS Distinguished Dissertations Award, the deadline for which typically falls sometime towards the end of March, possibly up to the end of April.

#### 17.3.4 Items for Nominating Papers

The nomination of a paper must include the following items:

1. At least three substantive, anonymous, referee reports (but see below). For a conference paper, the reports needed are those notifying acceptance. For a journal paper, the reports needed are the most substantive ones, from any of the possibly many refereeing rounds. If so wished, all the reports from all rounds can be submitted.
2. The number of papers published in the conference or journal (preferably in the year of publication, or else the historical average).
3. The acceptance rate (resp., impact factor) of the conference (resp., journal) (preferably at the year of publication year, or else the last one available accompanied by the corresponding year of measurement).
Note that if there aren’t as many referee reports as required above or if they’re not substantive or if the data about number of papers accepted and acceptance rate/impact factor are not known, then the Department considers that there is a lack of a priori evidence for the nomination.

In this case, the supervisory team is welcome to make a case for exemption in writing, especially in cases of journals whose impact factor is not available at all, but also in cases where there are fewer referee reports than required.

In particular, the supervisory team may wish to ask prominent researchers in the same technical area that are from outside the Department and have no had any participation in the supervision to write to the panel in support of the paper. In this case, it is the supervisor(s) responsibility to make it evident to the panel how these invited expressions of support complement the referee reports and are also both authoritative and unbiased.

17.4 Award Process

17.4.1 The Panel

The nominations are judged by a panel of academics who are members of the Department team, typically with three members.

17.4.2 The Brief

Because a member of the panel is, more often than not, not an expert in the research areas to which the thesis or paper contributes, the panel does not judge the technical quality of the submissions.

The panel aims to identify an outstanding thesis or paper on the basis of the compelling nature of the evidence amassed from expert in the research areas to which the thesis or paper contributes: this is the role, therefore, of the referee or examiner reports required for a nomination to be valid.

This means that the more compelling the testimonies, as gleaned from the referee or examiner reports accompanying the nomination, the stronger the claim to exceptional achievement.

17.4.3 The Outcomes

The panel aims to award one prize of outstanding thesis, but has, exceptionally, announced joint winners in the past.

For the purposes of a Department submission to the CPHC/BCS Distinguished Dissertations Award, the winner is automatically submitted to the external competition and the panel often recommends the submission of other submitted theses when they are judged worthy of representing the Department externally.

The panel awards one prize for outstanding paper and names two joint (i.e., non-ranked) runner-up papers.

17.4.4 The Prizes

An award comes with a certificate and a prize sponsored by an external organization (such as, in the past, Oracle, and, more recently, IBM), the origin and value of which are announced in the call for nominations.

The prizes are given to the winners at the annual PGR Symposium.
17.4.5 An Approximate Timeline

1. beginning of January:
   • call for nominations is sent
   • eligible students discuss potential nominations of eligible papers and theses with supervisory teams
2. from beginning of January to mid-February:
   • students and supervisory teams construct the cases (see, in particular, the list of items above)
3. mid-February:
   • deadline for nominations
4. end of February
   • awards panel meets
5. beginning of March
   • awards announced
   • supervisory team(s) of winner thesis (and possibly selected others) construct the case(s) for nomination to
     the CPHC/BCS Distinguished Dissertations Award
6. mid-April
   • prizes are given in the annual PGR Symposium
7. between end of March and end of April (depending on an external deadline)
   • supervisory team(s) of winner (and possibly selected others) complete the Web-based process of nominating the thesis(es) to the CPHC/BCS Distinguished Dissertations Award
8. between September and November
   • CPHC/BCS announce their Distinguished Dissertations Award(s)
EXTERNAL SPONSORSHIPS, PRIZES AND AWARDS

All Sponsorships, Awards, and Prizes are external to the University and at Internationally Recognised Events. And all Sponsorships or Travel Grants are competitively awarded. Awards are to PGRs who are part of our Research Community.

2014

- **Ilia Pietri**, Rizos Sakellariou (supervisor), Best Poster Award (Winner), 7th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2014).
- **Kostas Sechidis**, Gavin Brown (supervisor), Best Student Paper (Winner), European Conference on Machine Learning (ECML).
- **Ayesha Naureen**, Deans Award.
- **Pin Shen Teh**, Presidents Doctoral Scholarship.

2015

- **Julia Mueller**, Chris Todd, Caroline Jay, & Simon Harper (supervisors), Best Poster Prize (Runner Up), British Psychological Society.
- **Nikos Nikolaou**, Gavin Brown (supervisor), Best Poster (Winner), AERFAI Summer School.
- **Dongjiao Ge**, Presidents Doctoral Scholarship.
- **Farideh Jalalinajafababi**, 3MT People’s Choice Award.
- **Mahdi Jelodari Mamaghani**, DATE best paper Award.

2016

- **Patrick Koopmann**, Renate Schmidt (supervisor), E. W. Beth Dissertation Prize of outstanding dissertations in the fields of Logic, Language, and Information (Short listed).
- **Julia Mueller**, Chris Todd, Caroline Jay, & Simon Harper (supervisors), W4A Travel Award, Web for All.
- **Hao Zhou**, Deans Award.
- **Efstathia Christopoulou**, James Elson Award and Presidents Doctoral Scholarship.

2017

- **Mariam Alqasab**, Suzanne Embury & Sandra Sampaio (supervisors), Best paper award (Winner), 12th International Digital Curation Conference (IDCC17).
• **Alex Bogatu**, Norman W. Paton & Alvaro A. A. Fernandes (supervisors), Best student research paper (Winner), Data Analytics - 31st British International Conference on Databases.

• **Henry Reeve**, Gavin Brown (supervisor), Best Student Paper (Winner), European Symposium on Artificial Neural Networks (ESANN).

• **Ahmed Bhayat**, James Elson Award and Presidents Doctoral Scholarship.

• **Siok Wah Tay**, Deans Award.

2018

• **Damian Arellane**, Kung-Kiu Lau (supervisor), Best Paper (Winner), 3rd International Conference on Internet of Things, Seattle.

• **Charlotte Bull**, Paul Nutter & Tom Thomson (supervisors), Summer School Sponsorship and Travel Grant (Ecuador), IEEE Magnetics Society.

• **Charlotte Bull**, Paul Nutter & Tom Thomson (supervisors), Poster (Highly Commended), IoP Magnetism.

• **Fenia Christopoulou** (in collaboration with Thy Thy Tran), Sophia Ananiadou (Supervisor), n2c2 Shared Task on Challenges in Natural Language Processing for Clinical Data (3rd Place), Harvard Medical School Department of Biomedical Informatics (DBMI).

• **Fenia Christopoulou**, Sophia Ananiadou (Supervisor), ACL Walker Fund Travel Award, Association for Computational Linguistics.

• **William Griggs**, Tom Thomson (supervisor), International Travel Grant, M-SNOWS.

• **William Griggs**, Tom Thomson (supervisor), Full Sponsorship, ISIS Neutron Training Course.

• **Meizhi Ju** (in collaboration with Nhung T.H. Nguyen), Sophia Ananiadou (Supervisor), n2c2/UMass Track on Clinical Concept Normalization (3rd Place), Harvard Medical School Department of Biomedical Informatics (DBMI).

• **Orion Papadakis**, Christos Kotselidis (supervisor), Full Travel Grant, ACACES Summer School.

• **Michail Papadimitriou**, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google Compiler Summit.

• **Michalis Papadimitriou**, Christos Kotselidis (supervisor), Full International Travel Grant, ACACES Summer School.

• **Anuj Vaishnav**, Dirk Koch (supervisor), Best Paper (Nomination), International Conference on Field-Programmable Technology (FPT).

• **Harry Waring**, Tom Thomson & Ivan vera Marun - Physics (supervisors), Summer School Sponsorship and Travel Grant (Ecuador), IEEE Magnetics Society.

• **Maria Xekalaki**, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google compiler summit.

• **Maria Xekalaki**, Christos Kotselidis (supervisor), Full International Travel Grant, ACACES summer school.

• **Atefeh Heydari**, Deans Award.

• **Ruba Allassaf**, Deans Award.

• **Thayaparan Mokanarangan**, Deans Award.

• **Tolijian Trajanovski**, Deans Award.

2019

• **Ahmed Bhayat**, Giles Reger (supervisor), Woody Bledsoe Student Travel Award.

• **Charlotte Bull**, Paul Nutter & Tom Thomson (supervisors), International Travel Grant, IEEE MMM/Intermag (Washington DC).
• Michail Papadimitriou, Christos Kotselidis (supervisor), Best Paper Award (Winner) and Prize Winner with Full International Travel Grant, AccelCloud workshop at Hipecac.

• Michalis Papadimitriou, Christos Kotselidis (supervisor), HiPEAC collaboration grant award.

• Cameron Shand, John Keane, Richard Allmendinger (supervisors), Best Paper (Nomination), Evolutionary Machine Learning Track at the Genetic and Evolutionary Computation Conference (GECCO).

• William Woof, Ke Chen (supervisor), Kaggle Challenge (4th Prize), CyberSec & AI Prague.

• Maria Xekalaki, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google compiler summit, 2019

• Orion Papadakis, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google compiler summit, 2019

• Andreas Andronikakis, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google compiler summit, 2019

• Michalis Papadimitriou, Christos Kotselidis (supervisor), Invitation with Full Sponsorship, Google compiler summit, 2019

• Conor Sheehan, James Elson Award.

• Connor Abraham, James Elson Award.

• Jiyong Lee, Deans Award.

• Mengya Li, Deans Award.

• Ahmad Zareie, Deans Award.
CHAPTER

NINETEEN

PROGRESSION AND ASSESSMENT

Each year, there are a set of activities you have to go through to demonstrate that you are making good progress in your research, and have a good plan to complete on time.

There is a less formal review, called the Research Progress Review where your supervisory team and an independent assessor will evaluate your work, and give you feedback and suggestions. They may also give you remedial actions, which you will have to complete before the end of your current year. You may be required to produce a larger piece of work, such as the long report during the first year. This would be assessed by your supervisor and an independent assessor.

Note: It is a requirement that all postgraduate researchers at the University of Manchester create an ORCID (Open Researcher and Contributor ID) and make it known to the University. ORCID is a non-profit organisation supported by a global community of organisations with interest in research. Your ORCID provides a unique research identifier that distinguishes you from every other researcher and links your professional activities. Registration to ORCID is free and will mean that research outputs can be tagged and tracked more easily throughout your career. ORCID is now routinely being requested by publishers and funders and it is therefore important that all researchers create an ORCID and make it available to the University. Registering for an ORCID is quick and easy and we have set up a dedicated web page to help you to claim your ORCID. You can create your ORCID and connect it to your PGR record by following a few simple steps. If you have any questions about how to claim your ORCID please contact the Library’s ORCID Support Service.

At the end of years 1 you have a formal end of year examination in front of a panel consisting of one (or in some cases, two) Internal Examiner(s). This end of year assessment will take into account the outcome of the research progress review and updates on your performance from your supervisor(s), the report from the second reader, as well as your performance during the end of year exam. Evidence concerning your level of engagement, such as failure to participate in the required modules, could also be taken into account.

Warning: Your independent Assors must be independent of your supervisory team. They cannot be directly involved in your supervision.

The possible outcomes from the end of year examinations are: proceed into the next year, withdraw from the programme, but with the possibility of submitting for a lesser degree, typically MPhil, or withdraw.

If by the end of year 3 you are not ready to submit your thesis, you may request a change of registration to ‘submission pending’. This is to allow extra time to prepare the thesis up to six months.

Danger: The submission of the thesis must take place within 3 years and 6 months of the start of registration of the PhD.

19.1 Progression Overview

Each PGR will go through yearly examinations in order to demonstrate that they are making satisfactory progress towards production of novel research results leading to a Doctorate. In each of these years, the PGR will produce a Summary report which is a short report summarising the research and whatever progress has been made, and a plan for the subsequent year(s).

At month 9 of year 1 the PGRs will go through an interview called a Research Progress Review with their supervisor and an independent assessor. The purpose of this interview is to provide an initial assessment of the PGR’s progress, and provide feedback, and if necessary, assigned remedial actions or achievement milestones to help get a faltering PGR back on track.

At the end of years 1 and 2 there is a so-called End-of-Year (EoY) interview. This should be viewed as an exam, because it makes the formal decision whether the PGR progresses into the next year. Possible outcomes are: progress into the next year or do not progress. In the case of non-progression, the possibility of submission for a lesser degree may be offered, typically and MPhil.

Warning: This describes the procedure for full-time PGRs. The procedure for part-time PGRs is described in the ‘Part-Time’ Chapter.

19.2 1st Year

The PGR will present the work (including slides) to an End of Year Examination Panel. They will make the ultimate determination whether the PGR can progress to the next year, has to withdraw, or has to withdraw but can register for MPhil, using evidence provided by the PGR’s performance, the supervisor, the independent assessor, and other information available on eProg.

19.2.1 1st year ‘Research Progress Review’:

• [Month 8] Research Progress Report (sometimes called the ‘Short Report’ or ‘Summary Report’)

  1. (prompted by eProg), the supervisor informally recruits the Independent Assessor, who should be a domain expert or in a closely related domain to the PGR. And is selected by the supervisor in consultation with the PGR. This assessor will also examine the PGR’s ‘additional work’ if needed.

  2. The PGR submits Research Progress Report (via eProg) comprising a research proposal, a brief summary of the research so far, and a research plan, and also emails to both the Independent Assessor and the Supervisory Team.

  3. This report should be 1500 words excluding references - 500 words to include the social / technical / research impact explicitly (along with the PGR’s ORCID4). The supervisory team and the assessor will check the format and length and can return this to the PGR unread if it does not meet specification.

Note:

Research Progress Report: The Research Progress (Summary or short) Report is primarily a research proposal. It needs to make clear: what is the research problem, why it is important or interesting to address it, what is the approach the PGR intends explore to try to address it, and how success or failure is going to be evaluated. It should also contain a brief summary of progress so far and a plan for how the research is going to be carried out. The report should be 1500 words (if you exceed this the report may be returned and/or your assessor can

4 https://orcid.org/
refuse to conduct the review) excluding references (along with the PGR’s ORCID). *Ultimately, it will need to readable by the end of year examiners, who will not necessarily be experts in your branch of computer science. Thus, it needs to be readable by an well-educated, general computer science audience*

In addition to the summary, the report should include:

1. Impact of the Research be that social / technical / research impact (500 words to include the explicitly)
2. a research plan for the next year, concerning how the research should be carried out,
3. A plan as to how this will lead to a thesis (e.g. proposed structure of a thesis at the level of chapter and section headings),
4. a list of publications, published or submitted,
5. a plan for other activities, including any visits, internships, targeted conferences or journal publications, and public engagement activities.

• [Month 9] Research Progress Review:

1. This is organised by the supervisor and could take place in the supervisor’s office or a small meeting room. The review times and locations are set between the interested parties (the independent assessor will inform SSO of the time/date/location). The review gauges the fitness of a PGR for continued study and assesses progress to date.

2. This event will last about one hour with 15-20 min presentation given by the PGR, followed by questions and discussions led by the independent assessor. This presentation is pitched to the independent assessor, who, it is assumed, will not know the motivation of the research. This should be viewed as a research talk, and the discussion can be technical in nature. The outcome is documented via eProg and can be 2-fold:

3. Progress is as expected, PGR is on good path towards completion: no further action required.

4. Progress is unsatisfactory/questionable: the PGR will have to submit additional work (via eProg), which is assessed by the independent assessor. This work is by default the Long Report, however, the independent assessor can assign remedial action (any reasonable additional work if it is explicitly documented), such as writing a paper, performing a critical review, etc. The remedial action being stored in the PGR’s eProg document store, and emailed to the supervisory team and internal assessor 1 month before the progression interview. This is reevaluated by the independent assessor for Progression (Research Progress Update eProg-COMPM2000). This assessment report being available one week preceding the progression interview and sent to SSO (who will pursue reports not returned) for onward distribution to the Progression Examiner.

Note: The Long Research Report is a substantial document at the level of an MPhil thesis or a journal paper with no page limit and ample space for literature review and technical details. The latter is particularly appropriate if an alternative format thesis is planned. A typical length would be around 15,000 – 20,000 words.

2 http://www.eprog.manchester.ac.uk
Additional Notes and Checklist

The Research Progress Report (aka the short report) is a key piece of evidence about whether you should progress to the next year. However, you really want the short report to be usefully informative. We see a lot of unhelpful short reports in spite of massive amounts of supervisor effort and the Academic Writing Class. It’s a good idea to keep your report in a source control system like Gitlab, so a simple thing to do is to add a version of this document as your README.md.

**Remember the audience:** It depends on whether you’re doing a 9 month Research Progress Review or an End of Year interview! Consult with your supervisor about the examiner’s background. Don’t hesitate to contact the examiner!

Some problems are big and some small, but you want to minimise them. So here’s a quick checklist.

**Checklist**

1. [ ] **LENGTH:** Is/Does your short report
   - [ ] short, that is, 1500±150 words (excluding references - if you exceed this the report will be returned and/or your assessor can refuse to conduct the review).
   - [ ] contain appropriate number of diagrams/charts/images?
   - [ ] contain approximately 500 words explicitly describing the impact (social/technical/research)?

2. [ ] **MECHANICS:** Did you:
   - [ ] put the title, your name, year (e.g., EOY1 CDT), and ORCID on the report?
   - [ ] proofread the report?
   - [ ] check paragraph size/shape? is the purpose of each paragraph clear?
   - [ ] use enough lists/tables/diagrams (but not too many)?

3. **PROBLEM SPACE:** What is the range of problems we should be thinking about?
   - [ ] What is your **area**?
   - [ ] What is the **subarea**?
   - [ ] Roughly what **sort of problems** are investigated in your subarea?
   - [ ] What **sort of methods** are standard in this area?

4. **PARTICULAR PROBLEM:** What is your project?
   - [ ] What’s your **goal**?
   - [ ] What kind of **methods** will you use?
   - [ ] What will be **different** about the world and our knowledge of it after your thesis?
   - [ ] What’s the **state of the art** (if any)?
   - [ ] What are the **parts** of your project and how do they form the content of a **thesis** (see thesis outline)?

5. **PROGRESS:** How far along are you?
   - [ ] Which parts of your thesis outline can you **flesh out**?
   - [ ] What **took longer or shorter** than you anticipated?
   - [ ] What are your **publications** or other tangible evidence of progress?

6. **THESIS OUTLINE:** Have one!
7. PLAN: How are you hoping to complete the project?
   • [ ] Did you focus on the contribution chapters no sub-bullets for intro or conclusion, minimal for background)?
   • [ ] Did you put estimates at least on your private version?
   • [ ] Are you ready to discuss the weight of each point?

8. RISK MANAGEMENT: What do you do if things go wrong?
   • [ ] What are likely risks to complete?
   • [ ] What are some possible mitigations?

9. REALITY CHECK:
   • [ ] Your supervisor has read the near final draft?
   • [ ] Someone else (other PGR or member of staff) read the near final draft?

The Three Questions Remember, the short report (along with interviews, supervisor meetings, etc.) helps to answer three questions:
1. [ ] Is the proposed project big enough for a PhD?
2. [ ] Is the proposed project small enough to be completed on time?
3. [ ] Is this PGR going to be able to complete on time?

Every part of your report should help answer one of these questions. If you can’t say how each part does, that’s a signal to rethink that part.

19.2.2 End of Year Examination:

An End of Year (EOY) interview is one of several progress monitoring mechanisms designed to check whether you are on track to on time submission and successful defense of your dissertation. It is a bit high stakes as it is the canonical point for involuntary leaving the program (i.e., “failing out”). That being said, almost everyone passes their EOY interviews, so the main normal purpose is twofold:
1. force you think hard about your progress and planning
2. get feedback from people uninvolved in your supervision

The Three Questions Remember, the interview is the last point to answer three questions:
1. [ ] Is the proposed project big enough for a PhD?
2. [ ] Is the proposed project small enough to be completed on time?
3. [ ] Is this PGR going to be able to complete on time?

Every part of your presentation should help answer one of these questions. If you can’t say how each part does, that’s a signal to rethink that part.

By the end of month 12 some clearer plan is required. Think of it as a scientific paper - a background literature review leads you to an evidence- and argument-based hypothesis, you plan an experiment to test the hypothesis, then you conduct the experiment and you publish the results and the conclusions of your work. At month 12 you are expected to have the hypothesis and the plan of the experiments, but not necessarily to have started doing them (although you will probably have done some preliminary studies). The experiment may not prove the hypothesis or may prove more difficult than you expect, in which case your plans will change but that is no reason to not have a clear plan now.
19.2.3 Examiners

Examiners are not required to assess the technical achievements of the PGRs, this is why the supervisors have to be there and are invited to comment at the end. I expect that each examiner will spend 45 minutes preparing for the exam by reading the short report and, comments on remedial action, and the Independent assessors report detailing their happened (or not) with how the PGR has addressed those remedial actions. 45 minutes will be spent on the interview and a further 30 minutes writing the progression report.

The progression interviews/examinations are intended to determine whether the PGR has suitable plans for their PhD, and you are expected to explain things like: what the problem or research question is; what approach are you planning to use to solve it; how long do you think it might take; what risks are there and what are you doing to mitigate the risks; what publications do you hope to generate as well as a statement of progress; what your thesis plan is (which bits of work will go where in a thesis); and how far along have you gotten, for which some reporting of results to date is required.

You are expected to explain this in terms that can be understood by any academic from any of the far reaches of the Department, and that is a significant part of the challenge for the PGR (not for the interviewer/examiner - if the interviewer/examiner can’t understand then the failure is the PGR’s). Part of the benefit for the PGR is that when confronted with this hard challenge you are forced to pull out of the detail of your work and look at the bigger picture from a distance, and try to explain what you are doing from that perspective.

Doing this sometimes helps you to see problems when you would otherwise remain too deep in detail to think about, or where you have formed the view that your task is to build something really complicated without really thinking about what it is for and who will care when it’s done.

The supervisor should be doing that but even supervisors can sometimes be engrossed in technical challenge.

The interview should force the PGR to think about significance or purpose, and impact - for a PhD you are required to make a contribution to knowledge and understanding, but not just to do something that hasn’t been done before so you should be able to explain possible impact - do you understand that and have they got a clear picture of what you are trying to bring to the world, who might use it and what use it will be? If you can’t explain that to a third-party in a way that they understand then there is possibly a problem.

The progression interviews were also set up to try to reduce the chances that the PGR is just pursuing directionless research without clear objectives or is undertaking a sequence of semi-random tasks for the supervisor that won’t lead to a coherent body of work that can be written as a thesis by the end of the programme.

..Warning:: You can think of progression as a gate that is closed. It is up to yo to convince the examiner to open it for you. If you are not able to convince the examiner, then you will exit the programme here.

19.2.4 Process

- [Month 11] End-of-year interview The Short Report (eProg-COMPM1998) - uploaded via eProg, with 15 min presentation (including slides), followed by 30 min Q&A – with 1 (or 2) examiners, PGR, supervisor(s). Organised by the supervisor/examiner, reported in eProg.

  1. If significant additional work has been requested by the Independent Assessor, then two examiners are required;
  2. If no significant additional work has been requested by the Independent Assessor, then one examiner is required;
  3. If the the examiner is new to the duty, then two examiners are required;
  4. Examiners are randomly allocated to a PGR (and their supervisory team), by PGR Support. In this case, it should be assumed that the examiner is not an expert in the particular research field, and the technical level should be pitched accordingly.
5. The Supervisor and Examiner arrange a time/date/location between themselves and at a minimum the examiner and supervisor are present (optimally the supervisory team is present) to conduct the examination (the Examiner will inform SSO of the time/date/location). SSO will issue prompts if arrangements have not been made, and the PGR will not progress or be able to register without this interview.

6. The PGR will give a 15 minute oral presentation describing the goals of the research, why the research is important, a summary of work complete, work underway, and future direction. This will be followed with questioning by the examiner and supervisory team and include technical question by the supervisory team. The interview is not intended to be a rubber stamp but an in depth presentation, Q&A, and discussion which both assesses the PGR’s progress and gauges the PGR’s ability to complete, while also providing the PGR with a learning experience of answering detailed questions in examination conditions. It should be assumed that the examiner(s) are not experts in the particular research field, and the technical level should be pitched accordingly.

7. The PGR will leave and the examiner and supervisor, informed by the supervisor and independent assessor reports, will reach a conclusion. If any remedial action was given at the Research Progress Review, the supervisor will inform the panel whether it was satisfactorily completed (and the work stored in eProg may be accessed - Research Progress Update eProg-COMPM2000). The goal of this examination is to ascertain whether the PGR has made sufficient progress and is on track to succeed at producing a doctorate in time.

8. If they are satisfactory, the PGR progresses to the 2nd year. If not, the PGR may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the PGR is not able to progress. There is no ‘conditional progression’ subject to remedial action at this stage.

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**Note:** **What is the Short Report** The Short Report is repurposed from the Research Progress Report with small changes made based on the experiences of the RPR. Notably you will now include an extra section ‘RPR Responses and Comments’ (outside the word count) which lists all of the comments from the RPR and a detailed description of how you address them. Not just changes to the report but in real life - think of responses to a paper review. For example (1) if a comment was that the presentation was poor, you might have made efforts to go on presentation courses, to give presentations to lab members, and to spend more time doing presentations. You’d then detail this in the responses to the RPR. Or (2) if your evaluation plan was not as expected, you might detail changes you have made to make it successful. Remember, the Short Report is how your evidence the thing you have done, it is not the thing itself.

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### 19.3 2nd Year

The PGR will present the work to an End of Year Examination Panel comprising the supervisory team. They will make the ultimate determination whether the PGR can progress to the next year, has to withdraw, or has to withdraw but can register for MPhil, using evidence provided by the PGR’s performance and the supervisory team, and other information available on eProg.
19.3.1 2nd year ‘Progression’:

- [Month 23] All PGRs submit a short report only. via eProg, and repurposing that created in year 1 with updates and changes clearly identified.

1. Examined via a 20 minute interview by the supervisory team. A decision is generated and recorded in eProg.

2. If progress is as expected, PGR is on good path towards a Doctorate: no further action required. If not, the PGR may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the PGR is not able to progress. There is no ‘conditional progression’ subject to remedial action at this stage. The decision as to recommendations of MPhil or no possibility of progress will be via a Departmental Examination comprising two examiners in a similar format to the first year progression.

1. The student will prepare a Short Report, with 15 min presentation (including slides), followed by 30 min Q&A – with 2 examiners and supervisor(s). Organised by the supervisor/Examiners, reported in eProg.

2. Examiners are randomly allocated to a PGR (and their supervisory team), by PGR Support. In this case, it should be assumed that the examiner is not an expert in the particular research field, and the technical level should be pitched accordingly.

3. The Supervisor and Examiners arrange a time/date/location between themselves and at a minimum the examiner and supervisor are present (optimally the supervisory team is present) to conduct the examination (the Examiner will inform SSO of the time/date/location). SSO will issue prompts if arrangements have not been made, and the PGR will not progress or be able to register without this interview.

4. The PGR will give a 15 minute oral presentation describing their progress towards their PhD, the plans they have to finish, the timeline, and the novelty and impact of the work they will produce along with the goals of the research, why the research is important, a summary of work complete, and work underway. This will be followed with questioning by the examiners and supervisory team and include technical question by the supervisory team. It should be assumed that the examiner(s) are not experts in the particular research field, and the technical level should be pitched accordingly.

5. The PGR will leave and the examiners and supervisor will reach a conclusion. The goal of this examination is to ascertain whether the PGR has made sufficient progress and is on track to succeed at producing a doctorate in time.

6. If they are satisfactory, the PGR progresses to the 3rd year. If not, the PGR may be offered the opportunity to complete an MPhil, otherwise if progress is not sufficient for an MPhil then the PGR is not able to progress.

7. As previously stated, there is no ‘conditional progression’ at this stage.

19.4 3rd Year

Many PGRs are aiming to finish by the end of year 3 (typically your funding will have run out). In this case, you need to submit a form indicating your intention to submit and nominating your examiners (via eProg). Your main supervisor will select the examiners in consultation with you. See the ‘Submission’ section for more details.

However, some PGRs may not have completed after 3 years because their programme is longer than this, or because they are delayed for some reason. If you are delayed then you should request a transfer to the additional 6 month ‘Submission Pending’, which is a writing up period.
In order to do this, you need to submit a End of 3rd Year report form, along with a plan for achieving what is necessary within the 6 months available to you. This form will need to be signed by the main supervisor and the PGR Director (if the supervisory team thinks it necessary), via eProg.

19.4.1 3rd year ‘Progression’

- [Month 35] All PGRs who have not completed an eProg ‘Notice to Submit’ must submit a Completion Plan, comprising a brief report describing what they have completed, what they have yet to do, and outline a detailed plan for completion (via eProg), email the plan to Simon Harper (HoPGR)¹ and discuss this with the supervisory team (recorded via eProg).

1. If progress is as expected, the PGR is on good path towards a Doctorate Simon Harper (HoPGR)¹ will confirm by email that the move to Submission Pending is approved and that no further action is required.

2. At the request of the Supervisor or the Head of PGR the PGR will also have a 1 to 1 interview with the Head of PGR (or their nominated representative). If the Completion Plan is approved the PGR can move to submission pending.

3. If the Supervisor or Head of PGR deems the PGR is not making progress as expected when either my refer the PGR for a Departmental Examination; comprising two examiners in a similar format to the first year progression.

   1. The student will prepare a Short Report, with 15 min presentation (including slides), followed by 30 min Q&A – with 2 examiners and supervisor(s). Organised by the supervisor/examiners, reported in eProg.

   2. Examiners are randomly allocated to a PGR (and their supervisory team), by PGR Support. In this case, it should be assumed that the examiner is not an expert in the particular research field, and the technical level should be pitched accordingly.

   3. The Supervisor and Examiners arrange a time/date/location between themselves and at a minimum the examiner and supervisor are present (optimally the supervisory team is present) to conduct the examination (the Examiner will inform SSO of the time/date/location). SSO will issue prompts if arrangements have not been made, and the PGR will not progress or be able to register without this interview.

   4. The PGR will give a 15 minute oral presentation describing their progress towards their PhD, the plans they have to finish, the timeline, and the novelty and impact of the work they will produce along with the goals of the research, why the research is important, a summary of work complete, and work underway This will be followed with questioning by the examiners and supervisory team and include technical question by the supervisory team. It should be assumed that the examiner(s) are not experts in the particular research field, and the technical level should be pitched accordingly.

   5. The PGR will leave and the examiners and supervisor will reach a conclusion. The goal of this examination is to ascertain whether the PGR has made sufficient progress and is on track to succeed at producing a doctorate in time.

      1. If they are satisfactory, the PGR progresses to the 4th year or Submission Pending.

      2. If progress is not satisfactory and there is a viable Thesis available (as determined by the examiners) the student may submit this for examination.

      3. The PGR may be offered the opportunity to complete an MPhil,

      4. Otherwise if progress is not sufficient for an MPhil and there is no viable thesis to submit, then the PGR exits the programme.

¹ mailto:simon.harper@manchester.ac.uk
6. As previously stated, there is no ‘conditional progression’ at this stage.

19.5 Submission Pending

Your PhD programme period is 3 years (if it is 4 years then there is no Submission Pending). The Submission Pending period is not guaranteed and is supposed to be granted in exceptional circumstances. All Research Work must be complete by the end of year 3 (by University Regulation); There are no interrupts allowed in Submission Pending - there are in certain cases extensions granted by the Faculty; and, you can’t get any extra time for internships and the like in Submission Pending.

19.6 Submission

• [Month 42] The PGR will submit. The only exception is for an interrupt period or Programme Extension.

• [Month 48 - if your programme is 4 years] The PGR will submit. The only exception is for an interrupt period or Programme Extension.

19.7 Progression Limit

You must submit within 3 years and 6 months - 3 years ‘In Programme’ and a further 6 months in ‘Submission Pending’. Extensions and Interruptions will always add the additional time to the ‘In Programme’ portion and in cases of illness and will typically extend the ‘Submission Pending’ portion. We would expect that internships etc would be only granted to good students who would be able to complete in 3 years and 6 months total.

Note: There are also circumstance where is may be appropriate to extend the 3y 6m. This could happen, for example, if you have a breakdown of equipment or are unexpectedly awaiting for delayed equipment which is essential to your research. In these circumstances, an extension can be requested to FSE Graduate Panel. Again, look at the policy document for more details.

19.8 EPSRC Doctoral Prize Fellowships

Application Deadline: usually start of the summer each year

Interviews take place in August for a September start (although candidates can start their project up to 12 months after first submission).

The EPSRC Doctoral Prize is a prestigious scheme aimed at developing the very best EPSRC funded students beyond the end of their PhD and help them launch a successful career in research as potential future research leaders.

Successful applicants will be expected to take their research to the next level and undertake significant new research; the Prize must not be viewed merely as an opportunity to continue/complete PhD work although continuation of specific work from the applicants’ PhD that will result in publications may be permitted. Benefits

The University will provide Fellows with excellent research and training environments including a first class and challenging career development training programme. In addition to a Project Sponsor (a research - active member of The University’s academic staff who is willing to support an applicant’s project and, where appropriate, host the project in their lab), recipients of a Prize will also have access to an academic mentor who will offer advice and support regarding the mentee’s research and career development.
throughout the duration of the award. Successful applicants will be awarded a tax-free living allowance of £24,370 per annum (pro rata).

Award duration

Awards of up to 12 months in the first instance are available to successful candidates. How to apply

All applications should be made in accordance with the scheme’s guidelines, which can be found at the end of the application form (see links to application documentation below). Applicants must include a work plan that takes into account the impact of COVID 19 on the project deliverables.

Candidates must have been funded for their PhD by the EPSRC in the form of fees and/or stipend and have submitted their PhD thesis no more than 12 months before commencing the EPSRC Doctoral Prize fellowship.

The deadline for application is typically start of November.

Full applications, including application form and a letter of support from the Head of Department where the EPSRC Doctoral Prize research will be carried out should be returned by e-mail to epsgraded@manchester.ac.uk. Please note that the word counts and page limits listed on the application forms are not flexible.

Candidates will be shortlisted and interviewed by a panel of senior academics. The decision of the panel is final.

Contacts

If you have any queries regarding the University’s EPSRC Doctoral Prize scheme please contact the Postgraduate Research Services Team (epsgraded@manchester.ac.uk; +44 (0)161 306 8694).
TEACHING ASSISTANTSHIPS (TA)

A teaching assistant is a PGR who helps with teaching in some way, usually in a lab demonstrating some aspects of what needs to be done, helping the students understand it and perform it, and marking the work. Teaching assistants are either paid to do this, or have to do it to fulfil a requirement of their funding.

The term teaching assistant is the Department’s new term for the what we used to call “demonstrators”. So you will still hear the phrase “demonstrator” for a while until people get used to the new term.

In order to become a teaching assistant, you will need to respond to a call for the subjects you know about. This is so we can put the right students in the right labs (there is always a need for TAs to know JAVA). You will also need to take the Graduate Teaching Assistantship course which is put on by the Faculty of Engineering and Physical Sciences.

20.1 Leadership in Education Awards Programme (LEAP)

The Leadership in Education Awards Programme (LEAP\(^1\)) supports you in documenting and evidencing your teaching excellence, and is an opportunity for you to receive a formal, national qualification for your teaching.

The programme is accredited by AdvanceHE (formerly the Higher Education Academy or HEA) and can award Associate, Fellowship, Senior and Principal HEA Fellowships.

If you join LEAP you’ll be assigned a mentor and a peer support group. You will also have access to a range of online resources and optional support workshops.

All PGRs must produce a thesis, which describes in full detail the wider context of the research field including a literature review, the motivation for the research, the research which was carried out, an evaluation of the results, and a discussion of the contribution made to the field by the research and what should be done in the future. This needs to be submitted by three days before the end of the fourth year. For the relevant University policies, see ‘Policies’ Chapter.

There are two formats in which the thesis can be produced: traditional format and alternative format. Traditional format is probably what most people imagine a thesis is like, a very substantial report presented as a self-contained exposition. The alternative format thesis “... allows a postgraduate doctoral or MPhil student to incorporate sections that are in a format suitable for submission for publication in a peer-reviewed journal.” Presentation of Thesis Policy\(^2\). The alternative format thesis is often thought of as a collection of publications, with a short commentary associated with each one, tying the works into a unifying thread, or “thesis”.

Which you use is a decision you will need to make with your supervisor.

The advantages of the alternative format thesis are that if you already have several papers, you can more easily produce a thesis out of them. Also, if you have plans to write several papers, you can write your thesis in such a way that it will be easier to facilitate these plans, because writing the thesis will be build around writing papers. The papers can be submitted after the thesis.

\(^1\) https://www.staffnet.manchester.ac.uk/bmh/ps-activities/training/education/leadership-in-education-awards-programme/

\(^2\) http://documents.manchester.ac.uk/display.aspx?DocID=7420
The disadvantage of the alternative format is that it is less widely used in the UK, so many supervisors and examiners may be less comfortable with it.

A Q&A on the Alternative Format Thesis\textsuperscript{1} can be found here. Note that it says in Section 4,

“...it may not be until year 2 or 3 that you feel you are in a position to use the alternative format.”

but it says in Section 5 that a request must be made in writing by the end of year 2. Thus, \textit{if you are considering using alternative format, apply for it by the end of year 2}. You can revert to traditional format without asking permission formally.

\textsuperscript{1} http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=15216
All PGRs should make sure they are familiar with what the university expects from its PGRs. **All PGRs are also required to complete a plagiarism course.**

In view of the serious consequences of plagiarism and academic malpractice, it is essential that all PGRs familiarise themselves with the accepted format for referencing work in their discipline, and that they start using the accepted form as soon as possible.

Danger: Ignorance of the proper format, or ignorance of the definitions of plagiarism and academic malpractice used by the university, is not a valid defence against a possible claim of plagiarism or other instance of academic malpractice.
CHAPTER
TWENTYTWO

WRITING ADVICE

Whichever format you choose, you must give yourself sufficient time to produce the thesis. You must know yourself, and how quickly you are able to write. Six months is a minimum time for most people. Some may need nine.

Be sure to leave enough time in your planning to write the thesis. Most people take between 6 and 8 months, depending on how quickly they write and how much of the writing already exists in papers and reports. Your supervisor can give you advice on how to write the thesis. It’s a good idea to use the LaTeXstyle\(^3\) file for University of Manchester Thesis format.

Do not feel that you need to write it in order; start with the easiest parts first. Usually the technical sections on the research done by you are the easiest, because you know them well. The literature review may be next easiest. The introduction is usually the hardest to write, and many advise that it be written last.

Danger: The University COVID 19 Statement below can be included.

22.1 COVID Statement

Acknowledging the impact of COVID-19 on postgraduate research programmes: guidance for PGRs, Supervisors and Examiners on inclusion of a COVID-19 impact statement with theses submitted by PGRs at the University of Manchester.

The University of Manchester recognises that the COVID-19 pandemic, and consequent closure of our campus (18th March 2020) and national and international lockdowns, has directly or indirectly impacted the work of many of our postgraduate researchers (PGRs). Although the campus began re-opening from mid-June 2020, some researchers will be disrupted until all campus research facilities are open, and operational at adequate capacity, fieldwork can resume safely and/or personal circumstances become more manageable.

Many of our PGRs have been/will be able to accommodate the disruption to their research plans by changing the scope, phasing or design or their project; others have/will have circumstances that necessitate an extension to programme or to the thesis submission date.

We encourage PGRs who wish to make their Examiners aware of the impact COVID-19 has had on their research plans and thesis to prepare an Impact Statement for consideration during the examination process.

The University recommends that Examiners take the Impact Statement into account when assessing the thesis, and PGR at viva, albeit without compromising standards as set out in the University’s ordinances and the QAA’s expectations of doctoral outcomes, which emphasise that doctoral degrees should be awarded based on the quality, rather than quantity, of research undertaken and the candidate’s acquisition of intellectual and practical competencies.

Examiners should use their academic judgment when deciding whether, as set out in the Examinations of Doctoral Degrees Policy, the following criteria have been met:

\(^3\) http://studentnet.cs.manchester.ac.uk/resources/latex/MUThesis/
• the candidate possesses an appropriate knowledge of the particular field of learning within which the subject of the thesis falls;
• the research which is reported in the thesis contributes a substantial addition to knowledge;
• the results of the research show evidence of originality and independent critical judgement;
• the thesis is presented in a lucid and scholarly manner;
• the thesis and the work reported in it are the candidate’s own;

whilst bearing in mind that they should judge the ‘substantial addition to knowledge’ in relation to what can be reasonably expected within a period of study (3, 3.5 or 4yrs FT) that has been conducted in the context of disruption caused by COVID-19. The Impact Statement should include the following information:

1. Details on how disruption caused by COVID-19 has impacted the research (for example, an inability to collect/analyse data as a result of travel restrictions/restricted access to labs/additional caring and health responsibilities - 500 words maximum);
2. A description of how the planned work would have fitted within the thesis’ narrative (e.g. through method development, development of analytical skills or advancement of hypotheses - 500 words maximum);
3. A summary of any decisions / actions taken to mitigate for any work or data collection/analyses that were prevented by COVID-19 (500 words maximum).

PGRs are encouraged to discuss the statement with their supervisory team before submitting the statement within the thesis presented for examination and should refer to section 6.3 in the Presentation of Theses Policy for details.

22.2 Thesis Writing Advice

Sage advice from Prof Bill Buchanan OBE, PhD, FBCS - Professor at Edinburgh Napier University:

**Say up-front what the problem is, what other people have done, and how you have added to it.** The Introduction chapter is the most important chapter of all, and you need to grab the reader, and tell them what the problem is, and how you have solved it. If the examiner understands the thesis after the Introduction, you are half way there. I’ve read a few thesis’ where I had no idea what the point was until I actually got to the end, and the contribution was revealed on the last page. This is a major gamble, as some readers may give up before that point, and not know the end contribution. Be fair on the reader and tell them the contribution, and keep telling them.

**Get rid of those typos!** You wouldn’t believe the number of PhD thesis’ I have read that have a typo in the very first line of the thesis. A reader becomes annoyed if they have to keep correcting typos, and the more annoyed the reader, the more time they are taking away from actually reading the content. Try and start off on a good footing, so that the Abstract and Introduction chapter have been read over several times - typically talking them out loud. If possible get someone else to read the Introduction, and see if they understand what the point of work is.

**Bad grammar shows bad practice and a weak supervision.** Part of doing a PhD is learning how to write and present ideas, and how to review and edit. One of the most important things that you learn in a PhD is how to write, so that others can understand your ideas. A good part of this is for supervisors to get involved reading the work, and in giving detailed feedback. It is often a good idea for supervisors to mark up early drafts with red pen, so that PGRs get an idea on the amount of checking and editing that is often required.

**Superlatives are not very good!** A PhD is a scientific study, and the usage of superlatives should be avoided, along with weak words like “big”… “the measure gives a very big number”. If a number is large, define what large actually means, as everything is relative.
Significance matters. I’ve read thesis’ that draw a graph, and then gives me values of 10 decimal places, and then to be told that there is an importance of one thing to another. But is it significant? If I move from 100.01254632 to 100.1263241, is that a massive change and why do we need so many decimal places? Every measurement has an accuracy, and this should always be included in the presentation of the values. Examiners want to know the significance of something, and if it isn’t significant, then just tell them.

One table tells much more than a whole lot of numbers. Again I’ve read so many thesis’, where the writer continually presents a whole series of numbers and graphs, and where they could all be moved into an appendix, and compiled into a single table (or graph). A good supervisor should be able to spot how to collapse lots series of tables into a single one, as they often have to do it for papers. Many PGRs rely on drawing graphics for presenting trends whereas tables are often better, especially in defining changes within the figures presented. A great tip is to normalise values, and show how the values vary between each other. Relative values are often easier to understand than absolute ones - remember too that most values have units, and that units matter. I’ve quizzed many PGRs on whether they are talking about Mbps or MBps - there’s a difference of eight in there!

Draw some pictures. There is no place for trivial graphics and clip art in a PhD thesis, but there is a place for the abstraction of complex ideas, especially in the introduction. There no real need to just copy the graphics from others, as they should come from the ideas inspired by the writer. I’ve read quite a few thesis, where the text just goes on and on. Break the text up every now and then, and give the reader something to ponder over.

Break up and but keep a narrative. There’s a careful balance here. If you keep your sections short, it becomes to “bitty”, and if you make them too long, they become long and unwieldy. I personally read whole sections in a single sitting, and try and take in the ideas, and I won’t move on until I understand it. A long section, especially where there are no sub-sections, often introduces too many concepts which can make it difficult to read. I normally recommend a maximum of a page and a half of text before there should be a break (such as a sub-section break). Long paragraphs are not a good thing as it becomes difficult to take in all the concepts introduced. Try, if possible, not to make them too short, but not too long. A paragraph that goes on for half a page is probably too long, and one that has only two sentences is probably too short. Along try and avoid too many sub-sub sections, as it becomes difficult for the reader to put it all into context.

Avoid using the words of others too much. A thesis is written by the writer, and it is their words. A long series of indented text items of quoted material becomes fairly generic, where you get little of the sense of the thoughts of the writer. If you must reference others, pull it out, and indent.

Be precise. A PhD thesis should be a scientific document which abides to certain standards for the articulation of ideas. It is always sloppy to see a candidate writing $9*6^3$, where the “$*$” is a sloppy way of writing a multiply symbol (x) and $^3$ should be “to the power off”. If it’s an equation, it should be pulled out of the text, and a proper equation editor should be used, with a proper numbering system for the equation.

Every diagram and table should be referenced in the text. I have read many thesis’ (typically drafts) where the writer just assumes that the reader knows how a diagram or table should integrate with the narrative. Every figure and table should thus be referenced in the text, so that the reader knows when to look at it. If possible don’t break up your narrative with a diagram, and move it a little later on, as long as it is after then text which is referring to it. Don’t ever put a diagram in the text before it is actually referred to, as the reader is left confused as to why the diagram is there.

Be critical of yourself and others. One of the key things within a PhD is the ability to critically appraise the work of others, both for the strengths and weaknesses of their work, and also of the candidate’s work. I often circle the first signs of critical thought in a thesis. If it happens on Page 50, there’s a problem in not being able to critically appraise work. Along with this some candidates can think that everything is perfect with their work, and that it addresses every single problem in their field. Try to always define both the strengths and weaknesses your own work, and identify how these could be improved. The scope of the impact should never be overestimated, but also not underestimated. If you’ve developed something
that completely changed something, be up-front and tell the reader. Most of the times, be honest to say that you are just enhancing something a little bit.

A thesis is not a diary! I have read so many thesis’ which are basically just a chronological flow of their research. You can often spot this as the literature review runs out of references which are up-to-date. I have read several thesis’ where the latest reference in the literature review is two years ago, and it points to the fact that it has not been updated since it was initially written. A literature review should be written for the thesis, and many parts of the original literature can be dumped, and replaced with newer references which fit in with the contribution.

Focus the literature review on the contribution. One literature review of PhD thesis I read was almost 200 pages long, and my head was spinning at the end of it. It covered so many points, and few of them actually went anywhere in the following chapters. Try and focus the literature review on covering the 4 or 5 key concepts involved in the thesis, and not in the research project. A good supervisor can often spot redundant sections, and advise for them to be cut. If the thesis is still the same by taking something out, there’s no need for it to be there, as every paragraph and every word should count, and be carefully crafted as part of the whole story.

Make sure the aim is “of the thesis, and not “of the initial research project”. Many thesis’ start with “The aim of this research project is …” which often is a sign that the original project aim has not changed in the writing of the thesis. Overall the aim is the aim of the thesis, as the research project has finished. Every should be written from a point-of-view that the work has finished, and this is the write-up.

Get the flow right. A strong flow of literature, method, build and evaluation helps the flow of the thesis, and where you often see references to literature tailing off as the thesis develops. I’ve seen some thesis’ where there are whole chapters that lack any form of reference to other work. This is poor practice as a PhD thesis should show how every aspect of the work fits in with the work of others. I like to see a reference to other work in the introduction of a chapter, as it shows some key influences for the work. I personally don’t like an introduction that says “Section 1 says this, and Section 2 says that, and Section 3 says something else”, as I can see from the table of contents what the contents are. If possible the reader should tell the reader what is likely to be revealed and what the significance is. A reinforcement of the main drive of the work also helps to bring the focus onto the main contribution of the work.

If you don’t know it … don’t say it! This one seems so obvious, but you won’t believe the number of times that you ask in a Viva about the detail of a paper, and the method used, and for the answer to be that they don’t actually know what it does. You always increase your exposure to probing if you include things you don’t quite understand, so dump them (if they are not a core topic).

Explain it simply. There’s nothing nicer for an examiner when the candidate takes a complex idea and gives their own viewpoint on it, in a simple way, using new material. It shows that they can articulate complex ideas in a simple way. The standard test for any thesis is that a 14-year old child should, at least, be able to read it, and understand some of the key concepts in it.

Show that you love the subject and that it is relevant. Three years is a long time, but the sustainment of interest is a key part of the work, so try and show that this is an important topic and that your thesis is exactly what is required, and in the impact that it could have. Again the Introduction chapter is a great place to grab the reader, and show how important the work is. If possible try and find something that has just happened in the news in the introduction that shows how important your work is. The Introduction chapter, at least, should be readable by all, and where, at the end of it, most readers would want to read on, as it sounds so interesting.

Make your thesis a sandwich. With a good thesis, we open with the Introduction and close on the Conclusions. The bit in-between justifies what you have opened with and the conclusions should show what you have uncovered to justify your argument. The same goes for each chapter, where the introduction (half a page, typically) shows what you’re going to tell them, and the conclusion confirms it. Do not make conclusion into a summary, as the reader has no time to read summaries, and just wants you to conclude the most important things that go forward (and so they can dump all the other things that you covered). If
possible say why you are not taking some things forward in the conclusions (and justify using the work of others, if possible).

**Don’t just pick without reviewing and justifying.** There is no justification in a thesis for picking something just because it is easy to get. If possible all the things that are selected have at least been reviewed, and a sensible solution is selected (and justified). Try always to select a few competing methods and tools and put them against each other.

**Validate before Evaluate.** You won’t believe the number of Vivas that I’ve done where I’ve asked if they validated their system or software before they went onto evaluating it. So “How do you it takes 5 milliseconds to get from here to there?, the wrong answer is “... because the package said it was 5 milliseconds”. Good experimenters will do “fag packet” calculations, to estimate things and know the limits of what they expect. I always like to see validation tests within the test data, so that the researcher knows that their system is working correctly. There’s nothing work in finding there is a bug in your results, after you have published them ... so always have a sanity check.

**Get that scientific method.** There are so many occasions in a thesis where you have no idea what a graph is telling you, as the axis’ are not numbered properly, or where they are poorly scaled. If the variation is between 990 and 1000, don’t draw a graph which goes from 0 to 1000. Work out what the graph is trying to say, and pick the graph type (eg pie chart to show significant of one method against another) to show this.

**Must be based on a method and be repeatable.** There must be a method in the processes used, and designed in a scientific way. Along with this the thesis should outline the procedure in a repeatable way, so that someone else can perform the same evaluation and get the same results. So candidates should always say to themselves... “Is there enough information for someone to build the artefact?”, “Is there enough information to repeat the experiment?”, and “Do I have the data that the examiner can look at, in order to verify the evaluation?”

**Evaluate your method against others.** The standard method to show a contribution is to take your method and evaluate it against other competing methods. The best approach is to use the best competing method and show an improvement. This can sometimes be difficult, so, at least, there is an evaluation against other methods. Showing an improvement is obviously a good thing, but there is often nothing wrong with an evaluation which shows a negative impact, especially if it is backed-up with a strong critical appraisal.

**Be fair and honest with your experiments.** Often an experimental procedure is selected to benefit your own method. If possible be fair on all the methods and do not bias your approach to your one. It does no harm to show weaknesses and downsides to your own contribution, as it gives you a chance to critically appraise and show how future work could improve things. Your experimental procedure and the associated data collection should be repeatable and verifiable, so don’t delete that data you have gathered.

**If possible, know your examination team.** While the thesis should stand-alone you should also know your examination team before the Viva, so avoid patronising them with background theory which they know inside-out, or provide some background which might help the examiners to understand the area. Often an examiner, as part of the Viva, will give advice on moving things between the core material and appendices, in order to address the target audience for the thesis.

**Show that you are now an expert in your area.** People expect those with a PhD to be an expert in the area of study, so make sure you know your core principles in the subject area. If you are doing a cryptography PhD read around the subject, and know the core principles of the most important methods. For me, anyone doing a PhD in electrical engineering, for example, should know Ohms Law, and the same should go for other subjects.

**Use appendices.** Many PhD thesis’ are full of material that is irrelevant to many of the key arguments, and writers are often too sensitive about removing material. If you can, put unrelated material in an appendix, and just refer to it. As a measure, if any material doesn’t help your core arguments, then remove it, as you are wasting the reader’s time.
**Quality is better than quantity.** Some of the best thesis’ I read have been relatively short and sharp, but where the quality is high. A good eye for moving material in appendices is important and helps the examiner. For some reason, candidates like to produce a thick thesis, and they think that the more pages there, the better the material. This is often the opposite, and a thesis written with self-contained papers for chapters - which link together - are often the best in their presentation.

**Define published work.** A key part of PhD study is the dissemination of the work, especially with peer reviewed. The examiner often needs to know what has been published.

**Watch those unreliable references.** In a PhD thesis, the references should be credible and verifiable references, and references to industry-focused white papers or general Web pages cannot be trusted providing credible viewpoints.

**Look for small-scale to large-scale experiments.** A good researcher will often start small scale and prove the principle, and then look for a large-scale experiment. The sign of small experiments, along with a large-scale experiment which properly evaluates the methods presented, is a good sign of a strong research ethos.

**Few abstracts are actually any good in first draft.** For some reason most PGRs struggle to write an abstract, and often it is written more as an introduction rather than a distilled version of the thesis. Remember that the abstract is the first thing that the reader reads, so if it is not focused on presenting the whole of the thesis, you have missed an opportunity to get the reader on your side. If possible an abstract should be a page in length, and outline the problem, the contribution, the most significant methods, the thing that has been designed/modelled, what has been evaluated, and what the most significant result is.

**Conclusions should conclude the whole thesis.** Often the thesis just verifies aims and shows the significance of the results, but it should also recap the key parts of the literature and the other chapters.

**Mind those commas.** Commas seem to be a dying breed, but are there to help speak directly to the reader. Try and read out loud, and if there’s a slight pause, add a comma.

**End on a high!** Don’t spoil your thesis, by adding another chapter after the main contribution. Leave the reader on a high, and get them into the Conclusions, and leave the stage. I’ve read a few thesis’ where the last chapter is a real let-down, and contributes very little to the overall focus of the work. If you want, put your lovely new models in an appendix, and refer them in the main chapters, but try and finish the main chapters with the answer to the question posed at the start. The last dot of the last main chapter cements the argument, so don’t run on into something else that you just happens to be which you are currently looking at, as just feel your thesis isn’t thick enough yet!

**Sign post your work.** Remember the thicker the thesis, the longer it takes to read, and if it doesn’t get to the point, the more annoyed the reader becomes in actually showing how you have addressed the problem and your main contribution. The more focused the thesis, the shorter time it will take to understand it, and the happier the examiner will be when they are reading it. Add pointers to “wake up” the reader and tell them that they really should read this bit . . . as I’m telling you something important.

**Guide but stay on the academic track.** Guide them through difficult areas, and allow them to learn from your love of the topic and your new insights, but stick to well-defined academic principles for writing a thesis . . . such as not adding your own opinions in literature review parts. Leave your thoughts for the conclusion section with a chapter. Try not to hint that you’ve solved every problem in the area, and rely on showing your contribution on the back of others, including within the main conclusions.

**Be humble.** Show that you are humble in your writing and respect (and know) the most important people in your area (including your external examiner), and that you want to be an active part of your community, and help them. The PhD is not an end-stop, but shows how you will work in the future . . . either in academia or industry. So just because you are off to a job in industry, doesn’t mean that your research career ends at the graduation . . . you have standards and methods to set for others to follow.
You must submit your thesis within three years and six months (allowing for any interruptions or extensions that you may have been granted). When you are ready to submit your thesis you need to complete a *Notice of Submission Form* not less than six weeks before submission. This form is available in eProg in the Examination Summary section.

You will also need to read Regulations for the Presentation of Theses and Dissertations. Giving notice of submission triggers the process of appointing the examiners, who are then expecting the thesis to arrive on time.

If a thesis is not submitted before the end of the programme or submission pending period, you will not be able submit your thesis without exceptional circumstances.

You must submit an electronic copy of your thesis no less than 3 days before your final submission deadline. You must submit two hard copies to the Faculty Graduate Office by the deadline. The electronic and hard copies must be identical.

If you wish to submit a thesis more than 3 months before the end of your programme (or 6 months if part time) you will require a permission of your supervisor and the University. If you are granted permission to submit early then you will still be required to pay full fees for the degree period for which you originally registered.

Using eProg for everything. You first need to submit a notification that you are ready to submit within 6 weeks - a submission ‘window’ will then be opened. You can then submit at anytime within that six weeks. If you do not submit you have failed.
You will need to defend your thesis in an oral examination which is often called a ‘viva’ (for viva voce). You will typically have two examiners comprising either (i) an internal examiner (a member of academic staff from Manchester who has expertise in your research area) and an external examiner (a member of academic staff from another university or another suitably-qualified and research-active expert), or (ii) two external examiners and an internal independent chair. The internal examiner or independent chair will arrange the date and time of your oral examination. There may also be an independent chair when one of the examiners lacks experience in examining doctorates and in other situations.

In the oral examination you will be examined orally on the content of your thesis and its wider context. After the examination the examiners will make a recommendation to the Faculty PGR Degrees Panel on the outcome of the exam. The examiners may communicate what their recommendation is to you, but it should be clear that this is unofficial and the final decision is made by Faculty.

The outcomes are:

A(i): recommend the award and no corrections are necessary.

A(ii): recommend the award subject to minor corrections being completed.

B(i): refer: the thesis is satisfactory in substance but defective in presentation; allow resubmission without the need for a further oral examination.

B(ii): refer: the thesis is satisfactory in substance but defective in presentation; allow resubmission and require a further oral examination.

B(iii): refer: the thesis requires further research to be done; allow resubmission and require a further oral examination.

C(i): award MPhil on the basis of the thesis presented.

C(ii): award MPhil on the basis of the thesis presented, subject to minor corrections being completed.

C(iii): reject, but invite the candidate to revise and resubmit the thesis for the degree of MPhil within six months. A candidate will be permitted to resubmit on only one occasion. A fresh examination of the thesis will be required and may include a further oral examination.

C(iv): no award be made to the candidate and no resubmission be permitted.

The most common outcome is A(ii). Normally minor corrections required under A(ii) must be completed within 4 weeks of the result being communicated to you by the Faculty PGR Degrees Panel. Likewise with the outcome C(ii) the minor corrections required for award of MPhil must be completed within 4 weeks.

PGRs with outcomes B(i)–B(ii) and C(iii) normally have up to six months to resubmit their thesis (in the latter case for MPhil). PGRs with outcomes B(iii) have one year to resubmit their thesis. A resubmission fee is charged.
24.1 Viva Advice

Further advice from Prof Bill Buchanan OBE, PhD, FBCS - Professor at Edinburgh Napier University:

Be ready to defend, up to a point. You are unlikely to ever win with a debate with the External Examiner, as they typically have the experience to know when they are right. The Examiner does want to see you putting up arguments against theirs, and not bend. A strategy is often to debate the case, and try different routes of explanation, but then to take on their advice for any changes that would be required.

Draw it out and keep it simple. Drawing diagrams and abstracting is a great way to explain your ideas, so wherever possible try to draw an abstraction to show a key point. Try not to over complex things, as they examiner is often looking for you to article complex ideas in a simple and understandable way.

The simplest things are often the most difficult to explain. Many candidates go into a Viva thinking they will get probed on the complex areas of their work, but end up having to justify an extremely simple concept, that they have taken for granted. An examiner can often spot a weakness in some fundamental areas and probe around that, in order to see how the candidate thinks through a problem. So candidates should also try and be well versed on the fundamentals areas, especially when it involves maths.

Know your examiners. Every examiner is different, and they have their own style. Some go from page to page, others read generally around significant parts of the work. They will generally have expertise in certain areas, so try and understand their motivations in their research, and some of their specialities, as they are likely to draw on these for questions.

Don’t leave it too long for the Viva. The best time for a Viva is straight after you’ve written your thesis, so try and don’t leave it too long for the Viva, as you will forget a few things.

Stay calm and enjoy. It is your opportunity to lock horns with an expert in their field, so enjoy it, as you’ll probably never have the chance to do something like this in your career.

Be humble. A PhD is a long road, and you learn along that road. The end result should setup you up for the even longer road ahead, but you now have all the tools to be ready for a career in research. None of us truly knows the formula for a successful PhD, but the methods applied by examiners and supervisors have stood the test of time, and do actually result in something that can contribute to the body of science.

Remember that you are standing on the shoulders of giants. A key thing is knowing whose shoulders you are standing on, and help the others who could stand on your shoulders.

Enjoy your time! And finally, for a bit of advice, have a look at Ralph Merkle’s time. He invented key exchange while an undergraduate, but his professor rejected his ideas because he didn’t articulate them properly, and Ralph then tried to publish a paper on it, but it was rejected because he had no literature in the paper. So, try and write well . . . and perfect the art of speaking directly to the reader, and also follow the rules of research that have been laid down over the centuries, and you’re halfway there.
Once you have had your viva you will typically get corrections. Once you have completed the corrections, they send a PDF copy of the corrected thesis directly to the internal examiner for approval.

Once the examiner is happy the corrections have been completed, they need to fill out the Corrections Sign Off Form on eProg. Once that's been completed, we can open a Final Submission Window for you to submit in eThesis. Once received and acknowledged, We can then produce an award letter and complete your studies on Campus Solutions.
Danger: COVID 19 - Obviously, we’re all probably be working from home! For more information have a look at the COVID 19 Update. But if are on campus remember that the Safety briefing and regulations now include COVID 19 2m distancing and mask wearing. Check the central University advice on all aspects of Health and Safety in a COVID 19 world.

This Health and Safety section provides a summary of the major Health and Safety issues of which all staff and PGRs should be aware; for further details see the School Health and Safety Policy Document\(^2\).

### 26.1 Fire, Emergencies and First Aid

#### 26.1.1 Fire Safety Arrangements and Requirements

All staff and PGRs are expected to respond promptly to all fire alarm activations (except the weekly tests at specified times). Staff who are responsible for groups of PGRs or visitors at the time of an alarm are expected to stop teaching or speaking, and to lead the whole group in the evacuation procedure.

**Fire Detection**

Kilburn and IT Buildings are fitted with automatic detectors supplemented by break glass points located throughout each building. These activate the buildings audible alarm in the event of fire or smoke. The automatic detectors allow early detection of any developing fire.

If you discover a fire and the building alarm is not sounding, activate the nearest break glass point on your escape route and evacuate the building immediately. Make your way to the building assembly point and await further instruction. If possible you should inform security of the event and supply them with as much information as possible in order for them to evaluate the risk and to take appropriate action.

\(^2\) [http://staffnet.cs.manchester.ac.uk/acso/healthpolicies.php](http://staffnet.cs.manchester.ac.uk/acso/healthpolicies.php)
Fire Alarm

The audible alarm for Kilburn building is a two stage system:

**Stage 1** An intermittent alarm — be prepared to evacuate the building.

**Stage 2** A continuous alarm – evacuate the building immediately.

The audible alarm for IT building is a single system. Upon hearing the fire alarm it is necessary to evacuate the building.

In the event of the alarm being activated Security will attend in the first instance.

Fire Evacuation Procedure

On hearing the fire alarm all occupants should evacuate the building immediately by their nearest available exit.

- Do not use lifts.
- Do not return to offices to collect belongings.
- Go to Building Assembly Point.

Fire action notices are located throughout all buildings on campus summarising the specific local fire safety arrangements. Local fire notices also indicate the nearest fire assembly point. Evacuation Marshals are located throughout the building (identified by hi-vis visibility vests in an alarm situation) and are instructed to provide assistance and direction in the event of the fire alarm being raised.

**Danger:** DO NOT RE-ENTER THE BUILDING UNTIL THE EMERGENCY SERVICES OR SECURITY HAVE ADVISED YOU THAT IT IS SAFE TO DO SO.

Means of Escape

Means of escape are signed throughout the building. Green running man signs indicate the nearest emergency exit. You should familiarise yourself with the nearest means of escape within your local working area, as well as alternative routes should your main means of escape become inaccessible.

Fire Alarm Test

The fire alarm is tested weekly at the following times, and should last for no longer than 20 seconds:

- IT Building - Thursday at 2:00pm.
- Kilburn Building - Wednesday at 1.45pm.

Fire Extinguishers

Fire extinguishers are provided extensively through out all University buildings and should only be used by personnel specifically trained in their correct operation.
Automatic door closers

Throughout the Kilburn and IT buildings many of the fire doors are allowed to remain open during the day by means of an automatic fire detection door closing system. These units are designed to release the door following a continuous constant sound of 65 decibels and above, for a period of 20 seconds or more.

Link bridge

The Kilburn and IT buildings have separate fire alarm systems in place. The link bridge between the Kilburn and IT buildings has been fitted with a flashing beacon, connected to the fire alarm system, which is activated during an emergency situation. A Marshal will be stationed on the bridge to assist occupants of the vulnerable building to escape in an orderly manner and to prohibit reentry.

26.1.2 Emergencies

In the event of any emergency, medical or otherwise, please contact the emergency services by calling 9999 internal or 999 external line. The University Security Office must also be informed once the emergency services have been alerted by calling 69966 internal or 0161 306 9966 external line. The Department Health and Safety Advisor must be notified of any emergency by calling 56118 internal or 0161 275 6118 external line.

University Security telephone number can be found on the reverse side of your University staff/PGR card.

The Department Health and Safety Advisor must be notified of any emergency by calling 56118 internal number 0161 275 6118 if dialled externally (07917558862 mobile number).

26.1.3 First Aid

The Department has a number of trained first aiders in the Kilburn and IT buildings able to provide basic first aid as required. Details of current first aiders are available on first aid notices located next to each fire notice and can be found near to every exit point of the building, on notice boards throughout the buildings. If local first aiders are not available or assistance is required outside normal working hours, Security can be contacted to provide first aid by calling 69966 internal or 0161 306 9966 external line.

26.1.4 Emergency Evacuation Marshals

The University requires that all Departments appoint suitable numbers of emergency evacuation marshals to assist in the evacuation of all occupants from the buildings should an emergency situation arise. The criteria used for identifying the number of evacuation marshals required is one marshal per floor per protected stair case. In the Department of Computer Science a Marshal is also required to be posted on the link bridge between the Kilburn and IT buildings to ensure no one enters one building from the other during an emergency situation.

26.2 Accidents and Incidents

All accidents, dangerous occurrences and near misses must be reported in the first instance to the Department Safety Advisor and documented as necessary using the correct form. Accident and incident forms are available via Safety Services.

Reporting of accidents and incidents are necessary for the following reasons:

3. http://www.healthandsafety.manchester.ac.uk
• To comply with legal requirements depending upon the nature of the accident or incident.
• To investigate the accident / incident and take steps to prevent recurrence.
• To keep records in case of possible future litigation.
• To allow collation of accident statistics.

Near misses should also be reported to your Department Safety Advisor as acting upon near misses will prevent accidents occurring.

26.3 Electrical Equipment

Any electrical equipment brought into the Department for use in offices, laboratories or workshops must be suitable for the intended purpose, meet UK requirements for safety, and display the CE universal quality standard mark. The Department Health and Safety Advisor must be informed if any electrical equipment is brought into the Department other than via the normal purchasing system. For the Department to comply with health and safety legislation it is essential for all portable appliances, including those built at The University of Manchester, to be checked and tested on a regular basis. The Department carries out Portable Appliance Testing in accordance with university guidelines and maintains a database of all such equipment. Checks and tests are carried out at regular intervals. High risk portable appliances (Heaters, power supplies, electric drills, kettles, etc) are checked and tested annually. Lower risk items like computer workstations, which are classed as semi-permanent fixtures, are checked and tested every four (4) years.

All portable appliances, including separate mains cables will be clearly labelled upon completion of the test. A recommended retest date will be indicated on the label.

Please ensure that ALL heaters and high load non-essential appliances within your working area are switched off before you leave the building.

26.4 Lone Working and Out of Hours Working

26.4.1 Lone Working

Lone working is defined as working without close or direct supervision, and without contact form others.

To reduce the risks associated with lone working it is the policy of the Department of Computer Science not to permit any lone working activity beyond normal office based activities without first completing a risk assessment for the activity.

The requirements of the University guidance on Lone Working⁴ should be followed at all times.

Out of Hours Work

Entry to the Kilburn Building outside of normal hours (before 08.00 and after 18.00 Monday to Friday, plus all day at weekends and bank holidays) requires an out of hours pass (which can be obtained from the PGR Support Office). During this time the presence of security or Department staff members cannot be guaranteed. It is therefore extremely important that all occupants know what to do should an emergency situation occur within the Department such as a fire, or the need for medical attention.

⁴ http://documents.manchester.ac.uk/display.aspx?DocID=13891
Kilburn Building

Use of the Kilburn building outside normal working hours will be permitted following successful completion of the out-of-hours induction online training course. Upon successful completion of the out-of-hours induction training, the following access times will be made available for masters PGRs: 6pm — 11.30pm Monday – Friday, 8am — 11.30pm Saturday and Sunday.

Outside normal working hours the Kilburn Building is to be used for study and research (office based) purposes only, and access is restricted to the Lower First floor. No social events or gatherings will be permitted unless an appropriate member of staff has been notified and has agreed to the event. Depending upon the details of the event it may be necessary to complete a risk assessment (see out of hours events section below). Please contact the Department Safety Advisor, Tony McDonald\(^1\), for guidance and further information.

Information Technology Building

Outside normal working hours access into the IT building is gained via the south entrance door only. Swipe access is required and the out-of-hours book must be signed by all users detailing name, work location and times of entry and exit. The swipe card access system for the IT building is only enabled for staff and postgraduate PGRs based in the IT building who have undertaken the necessary local and health and safety inductions.

Occupants of the buildings remaining on site after normal working hours

Any person wishing to remain in the buildings outside normal working hours must sign the appropriate out-of-hours books. The out-of-hours book for the Kilburn Building is located at the porter’s lodge; the out-of-hours book for occupants of the IT building is located in the foyer of the building by the main entrance.

This procedure is necessary should an emergency situation occur. Responding emergency services must be able to account for all personnel on site during an emergency situation such as a fire or bomb scare.

The Department reserves the right to spot check anyone on site outside normal working hours to ensure that this procedure is being followed. Anyone found not to have followed the correct procedure may be asked to leave the building, and may be suspended from out-of-hours activities for a period.

Please remember that authorisation to use The Kilburn and IT buildings outside normal working hours is a privilege, and not an automatic right, and that there is no right of appeal for anyone excluded from out-of-hours access to these buildings.

26.5 Chemical Safety

Any chemical(s) brought into the Department for experimental, practical or general use must be controlled and a risk assessment carried out to ensure that the chemical is used, stored and disposed of safely.

\(^1\) mailto:tony.mcdonald@manchester.ac.uk
26.6 Department smoking policy

To comply with current Government legislation The University of Manchester promotes a no smoking policy within all buildings, irrespective of their use or location. This policy also applies to e-cigarettes. To safeguard staff, PGRs and visitors from the adverse effects of second hand smoke, and to show unity with other Departments, the Department of Computer Science has adopted a no smoking exclusion zone within 5 meters of all Department entrances and exits of the Department buildings. Smoking is also prohibited directly outside open windows where smoke may drift into Department premises. Your assistance in keeping the Department of Computer Science a safe and healthy place to work and study in is much appreciated.
PhD study is a very difficult, stressful and often lonely endeavour in many ways by necessity, because if successful, at the end of your work you will be the world expert on your particular research topic. Because of these characteristics our work may sometimes cause us to be stressed, anxious, depressed or generally unhappy. The first thing you should realise is that you are not alone, these feelings are not just experienced by you, many people have these feelings and experience these situations (at some point in our careers - probably all of us). As a Department (and wider University) we realise that many people are confronting loneliness, pressure and are questioning their ability to complete their PhD.

You should realise that I (Simon) confronted stress when completing my PhD - I was working at a full time job and was also trying to complete the PhD at the same time - I was ‘idea rich’ but ‘time poor’ and because I was outside the Department I had no peer support (or at least I felt weird about attending social and peer support events). It took me some time to realise that my PhD thesis was not the end point of the work, and that in some ways it was just an artificially imposed milestone. I was placing a lot of emphasis on writing a perfect Thesis and ‘finishing’ the work on time. I realised that the thesis would never be perfect and that the work in total could not be completed in 3-4 years. I decided to be pragmatic and do just enough work to get me an OK thesis. So you see, my PhD is not stellar, it is good enough to get me the PhD. I just continued the work after the thesis submission date by doing all the things I wanted to do in the four years after I’d submitted (in my own time). I published zero papers in my PhD but published 14 over those four years after I’d finished it. In my opinion you have to be pragmatic about these things - sometimes you are able to publish papers and write a really good thesis - sometimes you can’t (personal circumstances, caring responsibilities, and the topic can all affect that). And I don’t know of any Post Doctoral Researchers who are happy with their thesis five years after submitting it, not one. There will always be more to do and more work to undertake, that is what the rest of your life is for.

So please, do realise that you are not alone and we are here to help and support you. The first thing to do is to talk to someone you can trust - this may be your supervisor, advisor, or any of the PGR Academic Team.

 Whoever you decide to talk to you should also contact the University Support Services and you might find the (we have a subscription) Big White Wall (free online mental health and wellbeing support 24/7) helpful. There is also useful advice on the PGR Life wellbeing page. There are also some excellent ideas about how to manage and stay well. The Counselling and Mental Health Service have this on their website: https://www.counsellingservice.manchester.ac.uk/buildyourmentalhealthexpertise/ Which has some interactive “treatment” resources like Moodgym, ECouch etc. We have booklets which have some self-help CBT based tasks, http://www.selfhelpguides.ntw.nhs.uk/manchester/; also there are some additional resources here: https://www.counsellingservice.manchester.ac.uk/interactive-resources/. And a page specific to PGR that includes some Apps that were trialled by PGRs as part of an OfS project https://www.counsellingservice.manchester.ac.uk/pgr/.

The University has a wealth of resources, support and advice on Wellbeing1 for postgraduate researchers ranging from online resources on reducing stress and tension through to talking to counsellors at times of greater need. These resources and support are there for you to use – if you feel well, you will do well.

1 http://www.studentsupport.manchester.ac.uk/taking-care/wellbeing/
27.1 In General...

Based on research by the New Economics Foundation, the University has identified the six ways to wellbeing: six actions to build into your day-to-day life in order to feel good and function well.

Being well doesn’t need to be hard work, it could be taking a walk, meeting a friend for a coffee or simply smiling at someone. Have a look at these pages to see how you can implement these ways into your daily life, you may even be doing some of them already.

We need PGRs to be closely involved and inform the work and outcomes of the project so over the next few months we will be asking you to join group discussions and provide us with your ideas and opinions on wellbeing and mental health.

27.2 Discrimination, Bullying, and Harassment

Discrimination, bullying and harassment come in many guises, all of which are unacceptable to the University and which have no place in a civilised working and learning environment.

Any cases of harassment, discrimination and bullying will be taken very seriously by the University and, where necessary, the appropriate procedure will be used to investigate complaints. The documents below outline the roles and responsibilities of the University, staff and PGRs in constructing a non-discriminatory learning environment.

27.3 Support for trans students

The student support team are the point of contact within the Department for confidential support and advice to all trans students - we realise that for some students, it may be the first time they contact anyone. We can help you communicate a new name and your pronouns (he/she/they/other) to teaching staff, support staff and your tutorial group. We can also advise on how to update your university records and final degree certificate to reflect your gender identity, and arrange for a new student card, pictures and email address. If you’d prefer to speak to somebody outside of the Department, you can contact:

- LGBTQ society
- Trans Officer
- Report and Support

27.4 Imposter Syndrome

Across the world, millions of successful people are pursued by fears of inadequacy, despite achieving great things. The psychological thread that runs between all these people is called the impostor syndrome and it makes it hard -often impossible- for people to internalize their accomplishments. And although some people battle through, others are not so lucky. https://blog.dropbox.com/topics/work-culture/imposter-syndrome.

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2 https://manchesterstudentsunion.com/groups/lgbtq-society–2
3 https://www.reportandsupport.manchester.ac.uk/
27.5 Extensions and Interruptions

**Danger:** COVID 19 - You can get an Extension or Interruption for non specific COVID related reasons with very minimal (read none) evidence. If you are a University or UKRI (EPSRC, BBSRC, MRC, etc) sponsored PGR then some of this may be funded, if not then you will need to contact you sponsor about funding but the extension or interruption can still be granted unfunded by the University. In this case, please contact the relevant person for an update after you have read this Handbook, the COVID 19 Update, and looked at the PGR COVID 19 FAQ https://www.staffnet.manchester.ac.uk/coronavirus/faqs/pgr/.

If you become unable to function as a PGR for any reason, the first thing you should do is to make sure your main supervisor knows. Alternatively, you may choose to talk with your advisor, the PGR tutor or PGR director, someone from the counselling service, or your GP, as appropriate. If you need to interrupt your studies for a period of time, you can request an interruption. The relevant policy is also in Circumstances Leading to Changes to Postgraduate Research Study Policy.

**Danger:** In many cases we still expect you to complete within the Progression Limit.

You need to apply to FSE Faculty Graduate Panel and some documentary evidence may be required. This may be due to your own ill health, illness or death of someone close to you, or similar types of issues which prevent you from carry on with your research for a time. It cannot be for reasons associated with your research not going well and cannot be used just to extend the time to get the degree.

It is best to apply for an interruption as soon as you recognise the problem and are able. Retrospective applications are less likely to succeed, unless the nature of the mitigating circumstance made it very difficult for you to apply at the time. Once you pass through an End of Year progress point, you cannot apply for a mitigating circumstance which took place before the progression.

Currently the Department can approve:

1. Interruptions for internships and field work
2. Interruptions for maternity/paternity leave (or Extension of submission pending due to maternity leave, if the PGR is in the SP period)
3. ATAS-related interruptions
4. Interruptions due to hospitalisation
5. Failure of research equipment

(Retrospective requests for maternity leave must be considered by the Associate Dean)

**Danger:** Interruptions or Extensions are not granted merely to give you more time to write-up and they must be supported with evidencediary documentation.
STUDENT SUPPORT AND GUIDANCE

28.1 Department & Postgraduate Support Staff

Head of Department: Prof Robert Stevens\textsuperscript{2}, Room: IT Building 114, Phone: 0161-275 6251.

Head of PGR : Simon Harper (HoPGR)\textsuperscript{3}, Room: Kilburn Building 2.60, Phone: 0161-275 0599.

Deputy Head of PGR: Dr Bijan Parsia (DHoPGR)\textsuperscript{4}, Room: Kilburn Building 2.88, Mobile: 0792 717 9742.

Student Support Office: Student Support\textsuperscript{1}, Room: LF21 Kilburn Building, Phone 0161 306 8155 (internal extension 68155)

Disability Advisory and Support Service (DASS): The DASS provides support for disabled staff and students in the University and also offers support and advice to prospective students and employees. They provide a confidential service and enable management of the level of disclosure within the University in order to provide agreed support. They work with a wide range of students, including students with specific learning difficulties (such as dyslexia), mental health difficulties (such as anxiety), medical conditions (such as epilepsy and arthritis), deaf and hard of hearing students, blind and partially sighted students, and students with autism/Asperger syndrome. Disability Advisory and Support Service\textsuperscript{5} (DASS\textsuperscript{6}) Phone: 0161 275 7512 Location: 2nd floor, University Place.

Student Guidance Service (formerly known as the Academic Advisory Service): This offers confidential advice on any matter relating to your studies or any issue affecting you and your academic progress. It is independent from Faculties and Departments, completely confidential, and is run by a small team of part-time advisors, some of whom are members of academic staff.

Housing & Accommodation Issues: The Accommodation Office deals with student accommodation in the University Halls of Residence. Separate halls are available for undergraduates and postgraduates, but the University also has halls comprising a mix of both.

Manchester Student Homes: is a service for students, owned and run by the University, along with Manchester Metropolitan University (MMU). The services are free to students. They list a large number of privately-rented accredited houses, flats and rooms and are also there to give you housing advice if you need it.

Students Union: The University of Manchester Students’ Union (UMSU) is an organisation, independent of the University, to which all students automatically belong. The Student Union building houses a wide range of services for students, including welfare and legal advice.

\textsuperscript{2} mailto:robert.stevens@manchester.ac.uk
\textsuperscript{3} mailto:simon.harper@manchester.ac.uk
\textsuperscript{4} mailto:bijan.parsia@manchester.ac.uk
\textsuperscript{1} mailto:compsci-sso@manchester.ac.uk
\textsuperscript{5} http://www.dass.manchester.ac.uk
\textsuperscript{6} http://dass@manchester.ac.uk
Health & Health Care: Upon arrival in Manchester, all students should register with a local General Practitioner (GP). In order to receive National Health Service (NHS) treatment whilst you are in Manchester, you must be registered with a local doctor.

Registering with the doctor will enable international students, their spouse and children (but not visiting relatives) to receive free medical care, provided that they are in the UK for six months or longer.

A list of GPs can be obtained from the staff in University Accommodation. Alternatively, a complete list of GPs, dentists, and pharmacies in Manchester can be obtained online from the NHS Services Directory. Further advice on health issues and health services for students can be found on StudentNet and on the University pages for international students.

Student Counselling Service: This is a team of professional counsellors and psychotherapists offering confidential help with any personal issues affecting work, self-esteem, relationships, mental health or general well-being. They are available to all University of Manchester students.

Careers Advice: The University Careers Service provides careers information, advice, and guidance to all Manchester students.

Immigration Advice: Advice on UK immigration legislation is offered by the International Advice Team based at the Student Services Centre.

International Students: International students at the University are especially fortunate to have the support of a dedicated International Advice Team based in the Student Services Centre and the International Society based on the Oxford Road. With over 4,000 members from over 130 countries, the International Society is the best place for you to make new friends from all over the world including the UK. Among the things we do are trips around the UK during the weekend, language classes, cultural evenings, social events, cultural awareness project (Rocketworld), hospitality scheme and families group. Our Families Group offers a warm and supportive atmosphere for the partners and children of students. The group meets every Thursday and is a great way for people in a similar situation to meet and make friends. They regularly celebrate children’s birthdays, go on trips and have visiting guest speakers to share information and give advice. For those still learning English it’s a great place to practice in a supportive environment. For more information, check out International Society. Finally, the Students Union provides the services of an International Students Officer as well as a large number of international societies.

University Language Centre: The Manchester University Language Centre offers courses in some 18 languages for personal, professional and academic purposes at various levels to prospective and current students. In particular, it provides programmes for students wishing to improve their English language skills for academic or professional reasons.

28.2 University Learning Resources

28.2.1 The University Library

The University of Manchester Library is both the University’s library and information service and supports all subject areas taught by the University. It provides its members with a large number of services and resources, including the most extensive range of electronic resources of any UK Higher Education library, including on-line subscriptions to journals and data sources. Many of these resources are only available to computers on the University network, so you should use them from on campus, or using the campus VPN.

The University Library consists of the Main Library and several site libraries. Locations, and full details of the services provided and how to access them can be found on their website.

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7 http://www.internationalsociety.org.uk
28.2.2 Central Authentication Service

One advantage of this central system is that when accessing online journals, rather than having to remember a whole list of different passwords and usernames, you instead just use the CAS. The journal website typically directs you to the Manchester CAS page, where you login, and are then returned to the journal, where you can then access the journal content to which we have a subscription.

The login can also be accessed directly by going to the University Portal: and then pressing the login button.
The University Ordinances and Regulations: Degree of Doctor of Philosophy (PhD) are many and complex - but you can get help at Student Support\textsuperscript{1} Office to find what you are looking for.

### 29.1 Submission and Completion

A crucial policy for you to know is that you must submit your thesis within three years and 6 months of starting, unless you have an approved extension or interruption (see next section). Both an electronic copy and a hard copy of the thesis is required, and the submission date is defined as the date that the hard copy is received. The closing date for the electronic copy to be received is two-days before the final submission date.

If you take longer than your degree time (e.g. you are on a three-year PhD and you haven’t finished your degree after three years), you cease being registered on your degree programme and will need to request permission to register as “submission pending”. The relevant University policy is Circumstances Leading to Changes to Postgraduate Research Study Policy.

You will need to fill in a End of Year 3 form, available on eProg\textsuperscript{2} or from the Student Support\textsuperscript{1} Office.

There is no submission pending for four-year degree courses.

### 29.2 Plagiarism and Academic Malpractice

Reputation is the most valuable commodity a researcher has. By extension, it is most valuable to a research-led University. Therefore, the University of Manchester takes academic malpractice including plagiarism extremely seriously. So, don’t do either of the things mentioned in the title of this section.

Examples of academic malpractice are: presenting work of others as your own, and presenting work which has not really been done as having been done (e.g. falsifying data). Remember, plagiarism can mean copying words, but also copying ideas. Also, you will need to discuss with your supervisors how to deal with their ideas in your thesis, since only your name is on the title page.

Academic malpractice is defined by the University in this Guidance to Students on plagiarism and other forms of academic malpractice.

> Academic malpractice is any activity — intentional or otherwise — that is likely to undermine the integrity essential to scholarship or research. It includes plagiarism, collusion, fabrication or falsification of results, and anything else that could result in unearned or undeserved credit for those committing it. Academic malpractice can result from a deliberate act of cheating or may be committed unintentionally. Whether intended or not, all incidents of academic malpractice will be treated seriously by the University.

\textsuperscript{1} mailto:compsci-sso@manchester.ac.uk
\textsuperscript{2} http://www.eprog.manchester.ac.uk
All PGRs should read this document. You should also read Regulation XVII ‘Conduct and Discipline of Students’. Another relevant document is “Academic Malpractice (Collusion, Fabrication and Plagiarism)”. The consequences of academic malpractice are very serious. For an assessment, you may receive a mark of zero for that unit, with no opportunity to resist. For a research degree, penalties can be as great as expulsion from the University without the award of the degree. If it is discovered after the degree is awarded, it can result in being stripped of the degree, as well as a loss of ones job and reputation. There have been several recent, high-profile examples, such as the 2011 case of a German defence minister (http://www.bbc.co.uk/news/world-europe-12566502).

A basic progress guide to referencing and avoiding plagiarism, and links to more comprehensive resources are available.

All PGRs should make sure they are familiar with what the university expects from its PGRs. **All PGRs are also required to complete a plagiarism course.**

In view of the serious consequences of plagiarism and academic PGRs with the accepted format for referencing work in their discipline, and that they start using the accepted form as soon as possible. **Ignorance of the proper format, or ignorance of the definitions of plagiarism and academic malpractice used by the university, is not a valid defence against a possible claim of plagiarism or other instance of academic malpractice.**

Some PGRs want to run their theses through TurnItIn to see if there is too much overlap with their publish work or other works they have cited. The University will not allow PGRs to use its license for this, but you can do it from the TurnItIn student site [https://www.writecheck.com/static/home.html](https://www.writecheck.com/static/home.html). You have to pay for this. You should do this in such a way that your thesis does not get stored in the TurnItIn database, otherwise if you (or anyone) every runs it through again, it will return a 100% match. This information is not a recommendation for you to do this; it is simply here in case you want it.

### 29.3 Finding a policy document

Unfortunately, the University has a host of policy documents pertaining to Postgraduate Researchers, and it can be daunting to go through them to find what you are looking for. Here are some useful places to look.

**University PGR Code of Practice:** The University has a code of practice which is sort of a road map of the relevant policy documents which describe what you can expect from the Department and your supervisors, and what is expected of you.

**Department Charter:** The Department has produced a PGR charter, which gives the Department’s view on what can be expected from us and from you. It is short and worth reading.

**eProg expectations form:** During your first few weeks here, a form will appear on eProg (see section eProg) called the expectations form. The first part of this contains links to 9 relevant policies, which you are asked to read and discuss with your supervisor. This will help ensure you know what the policies are.

### 29.4 PGR Representation

There are several ways in which PGRs can give feedback to the Department and University. First, there are the mentors; and mentors act as PGR representatives. So, if you have an issue about how the Department is run, you can bring it up to one of the mentors. Or become a mentor. You can also discuss it with the PGR Director.

There is a Postgraduate Research Experience Survey (PRES) conducted yearly across all Universities. We get the results broken down by Department. In the past the University has changed its procedures (notably its orientation procedures) based on the outcome of this, so do fill it in when you hear about it. It usually takes place in the late spring.
29.5 Ethical Approval

All research involving human or animal subjects has to be approved by the University Ethical Approval mechanism. This includes usability studies for software and hardware systems and HCI evaluation of systems. To get approval, contact the Ethical Approval Officer in the Department.

29.6 Complaints Procedure

The University has a formal Complaints Procedure. Most complaints are most quickly and effectively dealt with locally. Contact your supervisor, advisor, PGR tutor, or PGR Director. If it is of a general nature (e.g. resource allocation), mention it to one of the mentors, so it can be raised at a PGRSSCC meeting. If it involves the environment (e.g. heating), send an email to any of the local CS estates staff. If it involves an IT problem, raise a ticket on the CSIS system (see section [item:CSIS]). If you are dissatisfied with the response, put the complaint in writing to the Head of Department, unless it involves actions taken by the Head of Department, in which case put it in writing to the Dean of the Faculty of EPS. If you still dissatisfied, you should refer the matter formally and in writing to the University Registrar and Secretary. See the complaints procedure document for instructions how to do this.

If you need help using the procedure or guidance on where to refer your complaint, you can seek advice from any of the following: The Academic Advisory Service, the appropriate Faculty or Department Secretary, the office of Student Support and Services, or the Students’ Union Advice Centre (Students’ Union, tel. 275 2930).

The Complaints Procedure does not cover the following:

- disciplinary issues (for which a separate procedure exists)
- matters where other separate procedures apply, e.g. harassment, academic appeals relating to examinations or assessments, appeals against exclusion on academic grounds, or against refusal to be issued with a Certificate of Satisfactory Work and Attendance, or Complaints about the Students’ Union.

Information on these separate procedures can be obtained from the University’s policies webpage.
INDICES AND TABLES

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