Queen Mary
University of London

School of Physics & Astronomy

Research Student Handbook

Session 2016-2017

Nothing in this Handbook over-rides the general Queen Mary Regulations and Code of Practice which always take priority

This Handbook is for all Research Students in the School of Physics & Astronomy

1 WELCOME AND INTRODUCTION FROM THE HEAD OF SCHOOL

Welcome to the School of Physics & Astronomy at Queen Mary, University of London (QMUL). You are joining a School committed to providing the highest standards of research across a broad spectrum of activity including Astrophysics, Condensed Matter, Particle Physics and String Theory. The staff aim to offer outstanding research and training support that will help you develop the knowledge and skills necessary to obtain a PhD and subsequent employment.

This Handbook provides helpful information about the School and carrying out research. I hope that it will be useful to you and that it will answer many of your questions.

If you have any queries or issues about any aspect of your time at QMUL, we are always willing to listen and respond. Your first contact will normally be with your supervisor and then the Director of Graduate Studies (Dr Eram Rizvi), an appointment with whom can be arranged by the Research & PhD Officer (Karen Wilkinson) responsible for research students.

I wish you well in your research and hope that you have an enjoyable and productive time as a research student here.

Professor David Arrowsmith
Head of School – Physics & Astronomy

2 SUMMARY OF ESSENTIAL INFORMATION

2.1 INTRODUCTION

When you start life as a research student, you will need to familiarise yourself with the School and the College. Your supervisor will introduce you to other members of your research group and School, and help you to find your way around. You will need to register with the College and the Library. The Finance Officer (John Sullivan), will provide you with keys to your office, and the Research and PhD Office (Karen Wilkinson) is available to assist you with anything PhD related.

All research students are registered directly for the Ph.D. programme. On starting the studentship, the supervisor and student should:

- Choose an appropriate course of study, possibly including some examined courses. Each research group has their own policy on lecture courses, which are summarised further below.
- Ensure the student is aware of the various procedures described in this handbook
- Ensure that the student is aware of Health and Safety at Work requirements
- Ensure that the student is aware that a full-time PhD is expected to be completed within three years, unless there is an approved extension by the graduate degrees committee
- Ensure the student understands that the *maximum* time allowed for a full time student to submit their thesis is four years
- Ensure that part-time students are aware they are required to submit their thesis within seven years of beginning their studies, with an aspiration that submission is within six years

2.2 UPON ARRIVAL

Most students will arrive at the end of September. The College runs a one-day, cross-faculty induction event which takes place in the first week of October. The Year 1 PhD induction is now on the Course Booking System which students will need to sign up for in advance https://www.esdcourses.org.uk/listcourse.php Search for course code DC100.

In addition to the College event, the School of Physics & Astronomy will be holding an Induction event for all students, which all new students should attend. A timetable of the various events can be found on the following page:

Event	Time	Location	Outline of session
Meeting Research Group Heads and advisors	11:00 – 11:30	Physics Museum, 1st Floor, G. O. Jones Building	Coffee and networking within groups. An opportunity for new students to meet with their groups and supervisors where allocated.
Research student induction meeting	11:30 – 13:00	Physics Museum	Introduction to key staff from the school and other important areas
BREAK	13:00 - 14:00		
Campus Tours	14:00 - 15:30		Tour of campus including detailed tour of library. Meet at GO Jones Lecture Theatre, Foyer
Social Event	15:30 - 17:00	Physics Museum	A social event for new and current postgraduates

At induction, students will be introduced to the key members of staff within the school. New research students who are unable to attend this meeting should go on arrival to the first floor in the G.O. Jones building and introduce themselves to the School Research & PhD Officer (Karen Wilkinson).

All offices and laboratories for the School of Physics & Astronomy are located in the GO Jones Building (Physics); access for which will be included on your student card which you should carry with you at all times. Please ensure you adhere to the Health and Safety policies of the College at all times.

Please ensure you comply with the Safety Regulations at all times.

Research in the School is split into four research groups:

- Centre for Condensed Matter and Materials Physics (CCMMP)
- Centre for Research in String Theory (CRST)
- Particle Physics Research Centre (PPRC)
- Astronomy Unit (AU)

The School stores are in room UG5 and are managed by the School Finance Officer/Stores Supervisor John Sullivan. Pigeonholes for Research Students' post are located outside stores (UG5). Please keep the pigeonhole tidy and attended on a regular basis. Please note that it is mandatory that you check your mail regularly, since many official communications from the College are sent via internal mail.

In addition to the above, you are provided with access to a photocopier which scans and prints, and a shredder, all located in the resource room on the first floor of GO Jones building.

2.3 KEY STAFF & CONTACT DETAILS

Contact details for all staff are on the school website: http://www.ph.qmul.ac.uk; below is a table of key contacts.

Name	Role	Room	Email
David Arrowsmith	Head of School	108	d.k.arrowsmith@qmul.ac.uk
Terry Arter	School IT Manager	210	T.R.Arter@qmul.ac.uk
Lucie Bone	Student Support Officer	110	L.Bone@qmul.ac.uk
Kathy Boydon	Executive Officer	108	K.Boydon@qmul.ac.uk
David Burgess	PGR Tutor & Admissions: AU	519	D.Burgess@qmul.ac.uk
Sarah Cowls	School Manager (on secondment for 1 year from October 2016)	107	Sarah.Cowls@qmul.ac.uk
Jessica Henry	Teaching Administrator & Travel	110	j.henry@qmul.ac.uk
Theo Kreouzis	PGR Mentor	115	T.Kreouzis@qmul.ac.uk
Alston Misquitta	PGR Tutor : CCMMP	216	A.J.Misquitta@qmul.ac.uk
Eram Rizvi	PGR Admissions: PPRC and Director of Graduate Studies	409	E.Rizvi@qmul.ac.uk
Depa Sharmin	Administrative Assistant	110	d.sharmin@qmul.ac.uk
John Sullivan	Stores & Finance Manager	UG5	J.C.Sullivan@qmul.ac.uk
Steve Thomas	PGR Admissions: CRST	611	S.Thomas@qmul.ac.uk /
Cozmin Timis / Alex Owen	Physicist Programmers PPRC	408	c.timis@qmul.ac.uk / r.a.owen@qmul.ac.uk
Kostya Trachenko	PGR Admissions: CCMMP	226	K.Trachenko@qmul.ac.uk
Gabrielle Travaglini	Head of Research Committee	605	g.travaglini@qmul.ac.uk
Karen Wilkinson	Research & PhD Officer	110	k.wilkinson@qmul.ac.uk
Jeanne Wilson	PGR Admissions – PPRC	415	j.r.wilson@qmul.ac.uk
Isabel Wood	School Manager (Acting up for 1 year from October 2016)	107	i.s.wood@qmul.ac.uk

The Research & PhD Officer Karen Wilkinson will be able to advise general school procedures, as well as those specific for Postgraduates. In the event of absence, notification can be made to any of the administrative team at the 1st floor reception.

The Stores Supervisor/Finance Officer John Sullivan, will be able to help with any financial aspects, including stipend payments and the placing of orders. Jessica Henry and Depa Sharmin are able to arrange travel (School business), although students should check with their supervisors before making any bookings.

For computing and IT services please contact Terry Arter. Particle Physics students please contact Alex Owen or Cozmin Timis.

2.4 Supervisors and Mentor

All research students are assigned to a member of staff (First Supervisor) who will supervise their research and act as thesis adviser. Students are also assigned a Second Supervisor, who will be available as a deputy to the principal thesis adviser and may also assist in the general supervision of your research. Depending on your research topic, you may find yourself a member of a team that includes other students and/or Research Assistants and Fellows, as well as other members of staff. You will no doubt find that discussion with them will make a valuable contribution to your research.

Each research group has their own policies on supervisor assignment:

- Particle Physics students will be formally assigned supervisors approximately six weeks after starting the PhD, once they have chosen which experiment to work on.
- Condensed Matter students will normally have their supervisor formally assigned prior to arrival, although changes can occur after this date.
- Astronomy students will normally have their supervisor formally assigned on arrival, although changes can occur after this date.
- String Theory students will have their supervisors assigned before arriving (in some circumstances supervisors will be changed upon arrival).

The first line of contact for any queries regarding your research is your supervisory team. You should ensure to make arrangements to meet with your Supervisor/s, usually on a weekly basis to monitor your progress. You can agree a system between yourself and your supervisor or just to pop in to his or her office.

For any issues that cannot be resolved with your supervisor/s, you can contact the Postgraduate Mentor **(to be recruited)**, who will be available to offer advice and guidance on general research matters. If there are still any unresolved issues, Karen Wilkinson can arrange an appointment for you to meet with the Director of Graduate Studies, Dr Eram Rizvi.

2.5 Funding

Each studentship varies in length depending on a number of factors, such as the funding body, individual circumstances and level of funds available. Length of funding is made clear in your offer letter, and is between three and four years. Any queries should be made to your supervisor or John Sullivan. **In the majority of cases, funding will be limited to three years and the School will not be expected to provide extra support if three years study is exceeded.**

2.6 ACADEMIC OFFENCES

All work submitted in connection with your thesis, including the abstract, must be your own work, expressed in your own words. Plagiarism – the presentation of another's thoughts, words or experimental results as if they were your own – must be strictly avoided. Where you use quotations from published or unpublished works of other persons, they must always be clearly indicated by being placed inside quotation marks, with the source indicated in some way (for example, in a footnote), and the source work listed in the bibliography at the end of your thesis. Equally, if you refer to another person's ideas, judgements or experimental results, you must acknowledge their origin in the same way. The average person reading your thesis should be able to distinguish quite clearly between your own contribution to the research, and the ideas and information that have been obtained from other sources.

If you ignore these rules, and fail to acknowledge material or ideas obtained from other sources, you could be accused of plagiarism (the theft of another person's work, with the intent to pass it off as your own). There is no need to prove that you intended to plagiarise: the fact that you have used another person's words or ideas without acknowledgement is an offence. Therefore sloppy referencing or poor proof-reading can have potentially serious implications. All cases of plagiarism will be treated extremely severely: the punishment for plagiarism in a major piece of work such as a thesis would normally be expulsion from the College.

Scientific fraud is defined as one of the following:

- the falsification of results
- the 'invention' of experiments or surveys
- the invention of source material in order to support the argument in your thesis

This is a one of the most serious of academic offences: a person who is prepared to fabricate results shows that they cannot be trusted to undertake independent research. This will be regarded extremely seriously by the College and, if proved, will almost certainly result in your expulsion.

TRAINING

2.7 INTRODUCTION

Each group offers a tailored programme of training, comprising specialist lecture courses containing material specific to your PhD topic that is often not covered in undergraduate degrees, as well as a "transferable skills" training programme. In addition, the College offers a range of courses, whose appropriateness can be discussed with your supervisor.

2.8 LECTURE COURSES

Most new research students will be advised about (and maybe required) to attend lecture courses at Queen Mary or elsewhere in the University of London. These are as follows:

- **PPRC**: An intensive lecture program for first year postgraduate students

(http://pprc.qmul.ac.uk/postgraduate/postgraduate-lectures), given jointly with UCL, RHUL and Brunel University, must be attended. In 2016/17, lectures will commence in the last week of September and held every Monday and Tuesday with some Wednesdays here and there until mid-December. These take place at UCL from 10am until 5pm, with lunch break at 1pm. This programme forms part of the PPRC 1st year progression criteria – failure to attend (and the achievement of a satisfactory mark) will result in deregistration. Details are given to students when they arrive (contact Marcella Bona for more information).

- **CCMMP**: A comprehensive in-house lecture course must be attended, which forms part of the 1st year progression criteria – failure to attend will result in deregistration. The course covers (but is not limited to): muon spin spectroscopy, organic semiconductors, plastic electronics/spintronics, electrical characterisation techniques, X-ray and neutron scattering, optical spectroscopy, X-ray spectroscopy, Raman spectroscopy, high pressure techniques, atomistic simulations, from empirical to quantum mechanical modelling, LaTeX, presentation and writing skills, computer programming, project management and laboratory safety. Students may also be advised by their supervisor to attend any relevant lecture courses from the MSci final year. Laboratory training is given, specific to the PhD project as agreed with the supervisor.

- **CRST**: Students may be advised to attend lectures offered at Imperial College in their MSc programme, or courses in the final year of the University of London MSci programme. Depending on the student's previous background, the supervisor will decide whether it will be required for them to take the corresponding exams. Unsatisfactory performance in these exams can result in termination of PhD status. Students will also be required to attend the Graduate programme in String/Field Theory offered at Queen Mary, and to attend all regular seminars and journal clubs.

- **AU**: PhD students in the Astronomy Unit will normally be required to take two taught modules either from the MSc in Astrophysics or from modules offered by other colleges in London if they are of particular relevance to the PhD project. Students who arrive at QMUL with relevant qualifications or experience may be exempt from at least some of the above requirements. Performance in the taught courses is one component considered in the PhD first year assessment.

There are also courses administered by EPSRC and STFC during the summer vacation which you may find helpful.

2.9 RESEARCH METHODS

The College is currently reviewing training to be provided to research students in the light of the requirements from the UK Research Councils; therefore, training offered to you may change during your time at QMUL. You may expect to be required to take courses on key skills, such as writing papers and presenting papers. Details can be found at the Centre for Academic and Professional Development (CAPD) and via circular emails sent to all students advertising courses.

2.10 SEMINARS

Departmental seminars are held throughout the year, intended for all members of all the research groups in the School. Speakers are a mix of internal and external guests, and they are invited to talk in a colloquium style. Topics covered are meant to be of general interest to physicists. All students are expected to attend.

In addition there are more specialised seminars.

- Particle Physics Research Centre (PPRC) seminars take place on Friday afternoons during the teaching term at 13:30 in room 410 on the 4th floor of the G O Jones building: http://pprc.qmul.ac.uk/research/pprc-seminars/all
- Astronomy Unit (AU) seminars take place on Friday afternoons during the teaching term at 14:30 in room 610, except for those Fridays that coincide with meetings of the Royal Astronomical Society http://astro.qmul.ac.uk/seminars/series
- The Cosmology group has a cosmology and relativity discussion group at 3pm on Wednesdays during term time (including exam term), and a seminar follows at 4.30pm.
- The Centre for Research in String Theory (CRST) weekly seminar takes place on Thursdays at 2pm in GO Jones room 610.
- The Condensed Matter and Materials Physics Group (CCMMP) hold weekly seminars on Tuesdays at 2pm in 610 (invited) and internal seminars on Thursdays at 2pm in 410 (http://ccmmp.ph.qmul.ac.uk/seminars/ccmmp-events).

Attendance at these seminars is considered to be a compulsory part of your training and development.

All PhD students are fully expected to attend the School Colloquia. These events are an opportunity to widen the breadth of your physics knowledge, are an essential part of your training, and offer you the chance to network and meet others from outside of your own research groups.

2.11 PERSONAL DEVELOPMENT

The Doctoral College (http://www.doctoralcollege.qmul.ac.uk/) is here to support the life-cycle of Postgraduate Research Degrees at Queen Mary University Of London by working with both postgraduate research students and staff to support a thriving research community. The Doctoral College provides a number of events and activities of its own, tailored specifically to PhD students – including the college wide induction for all new students, cohort training days, and an annual Graduate Festival – designed to further develop your research skills, foster conversations and collaborations between our research students and staff, and promote a cohesive and supportive PhD community.

2.12 QMUL Post Graduate Research Student Development Programme

The Researcher development programme is delivered by the Centre for Academic and Professional Development (CAPD), located in the Bancroft Building on the Mile End Site. All training is aligned to the Researcher Development Framework, which has been developed by Vitae in collaboration with the UK Research Councils www.vitae.ac.uk. The CAPD provide specific development programmes for research students. The programme has 3 levels addressing the needs for each of the years 1 to 3 of your PhD studies. The team also manage the PhD Points System and maintain the database for recording points for engagement with this university-wide programme, and for any training you undertake within your school and/or institute. Information about training can be found at the following link: http://capd.qmul.ac.uk/what-we-offer/researcher-development/postgraduate-research-students/

The training and development activities you take part in should be recorded using the Skills Points System. Places on any course must be booked by you, and must also be cancelled by you if you can no longer attend the session. Non-attendance at training courses run by the CAPD incurs a charge to the school, which is passed on to the research group of the candidate. This can affect future funding for the non-attending student. Ensure that you provide as much notice as possible if you are unable to attend the course.

Every PhD student is expected to take part in approximately 210 hours of development activities over the course of their studies. This is advised by the UK Research Councils, and is roughly equal to two weeks training and development for each full-time year of study.

Queen Mary Diploma of Researcher Development – Q-Dip
The Doctoral College at Queen Mary University of London (QMUL) now awards the Queen Mary Diploma of Researcher development (Q-Dip) in recognition of the completion of 210 hours of researcher development activities over the course of a PhD.

Upon successful completion of a PhD, all QMUL students who log 210 hours of researcher development activities on the Skills Point Database will be awarded the Queen Mary Diploma of Researcher Development by the Doctoral College.

Once the Doctoral College receives notification of PhD students passing their PhD, students who have met the requirements of the Queen Mary Diploma of Researcher Development will automatically receive the Q-Dip along with their PhD certificate. This process will be administrated by the Doctoral College.

To log researcher development points please go to:
https://webapps2.is.qmul.ac.uk/sps/ - your log details are the same as your usual QMUL log in details.

GRADnet, run by SEPnet (South East Physics Network) Graduate School offers lectures to postgraduate students: http://ph.qmul.ac.uk/research/sepnet-postgraduate-lectures. They also offer courses aimed at improving transferrable skills and increasing employability. Further information can be obtained at www.sepnet.ac.uk/vre.

2.13 CONVERSATIONAL ENGLISH

We have arranged for the Language Centre from the School of Language Linguistics and Film to run a custom course on conversational English for our PhD students. This course is compulsory for all students with English as a second language. The course (2 - 4 hours /week) is run for 8 weeks in Semester A (October – December) and 10-weeks in Semester B (January - March). The timetable will be distributed in the PhD Induction Event and a course outline is given below.

Semester A

Week	Topic	Focus
1	Getting what you want	Making enquiries, making complaints, getting customer satisfaction, being insistent while being polite. Needs analysis – getting to know you – a questionnaire to ascertain needs and wants
2	Going out	Making social arrangements, changing and cancelling plans and making suggestions. Giving feedback on experiences and making recommendations
3	Asking questions	To be able to use the right kind of question for the circumstances. Listening to utterances where students respond; choosing the right way to ask a question; interview exercise: role play
4	Improving speech delivery	Pronunciation: stress, rhythm, weak forms and contractions. Comparison of stress-timed and syllable timed language.
5	Colloquial language usage	Idioms, phrasal verbs, colloquial language – using clips from popular programs– to disseminate / deconstruct language and its meaning
6	Understanding inferred meaning	Hidden meaning: reading between the lines – using sample dialogue – TOEFL examples – connecting previous lessons on intonation and stress to decipher hidden messages in conversational speech.
7	Discussing opinions	Agreeing, disagreeing, making your point and asking for clarification – discussion language –

		offering opinions
8	Understanding rapid speech	Extensive listening: raising awareness to discuss differences between weak forms and their equivalent in full forms. Listening to news reports. Strategies in coping with rapid speech. Listening comprehension. Discussion on Globalisation. Reading text and/or video of John Pilger's account Globalisation in Indonesia.

Semester B

Week	Topic	Focus
1	Socialising	A questionnaire to ascertain needs and wants. Students use phrases to lubricate social interchange. Greetings, exchanging news, goodbyes and other social niceties through listening and responding, using intensive dialogue practice then free practice.
2	Seeking clarifications	Awareness raising-difference between fluency and accuracy - students are introduced to various expressions to repair conversation.
3	Conversational etiquette	Comparison of stress-timed and syllable timed language. Extensive listening: raising awareness to discuss differences between weak forms and their equivalent in full forms. Listening to news reports. Strategies in coping with rapid speech.
4	Pronunciation: stress, rhythm, weak forms and contractions.	Pronunciation: stress, rhythm, weak forms and contractions. Comparison of stress-timed and syllable timed language.
5	Likes, dislikes and preferences	To extend variety of language within this area for students to use confidently. Listening comprehension. Discussing types of holiday students prefer/dislike; intensive dialogue practice; discussions on ideas for a good meal, film, job, place to live etc.
6	Speculations/ degrees of certainty	To understand the degrees of strength certain phrases have when speculating. Listening dialogue: speculating about a present; intensive dialogue practice by building as a group; discussion work on 'weightier' speculations such as future of the world etc.

7	Opinions	To activate a range of language which expresses opinion, agreement, and disagreement. Expressing these by using a phrase bank of exponents; re-ordering a dialogue; controlled discussion; interview exercise where students are prompted to offer their own opinions.
8	Relationships	Identifying topic, speaker, attitude and opinion in listening, listening comprehension; describing someone who has been an important influence on one's life.
9	Style and register	Identifying formality and informality in English
10	Revision and consolidation	Test of all language areas for the course

2.14 CAREERS

Queen Mary Careers Service offers professional advice to help students choose a career, present themselves favorably to prospective employers and provide facilities for students to look at job vacancies online. As well as this comprehensive assistance they have targeted support aimed at Research students from one to one advice to training workshops and online guides. Details are available on the following website; (http://www.careers.qmul.ac.uk/researchers/index.html)

3 ATTENDANCE

3.1 INTRODUCTION

It is important that you attend the School buildings on a regular basis within normal working hours and essential to be in regular contact with your supervisor. This should include informal contact as well as formal or arranged meetings. Interactions with other members of the research centre, both staff and students are highly encouraged. However, we recognise the value of working from home, especially in periods of writing or data analysis, but during these periods regular contact with your supervisor is still fundamental.

The requirement to attend the School buildings does not apply to students doing their research remotely. In this case, supervision is normally carried out with staff at the institute where you are working, although regular contact with QMUL supervisors normally takes place via video link and/or institution visits. Please notify your Research and PhD Officer Karen Wilkinson of changes to your contact and location information and there must be a detailed working arrangement agreed between you and your supervisor, copied to Karen. You should also ensure that your contact details are correctly recorded in MySIS, the electronic Student Information Service, and provided to your supervisor and the School Executive Officer (Kathy Boydon).

3.2 ILLNESS

You are expected to notify the School of all periods of illness. If you are away from College for a period of up to seven days (including weekends and Bank Holidays) then you are allowed to "self-certificate" your absence. For periods of illness longer than seven days you must provide a medical certificate to the Research & PhD Officer.

If you are absent for more 30 days, it is vital that you suspend your studies. The College has a policy of PhD submission within 4 years, with sanctions for students who exceed this time (full details can be found in the College regulations), and include sanctions on the School (e.g. loss of future studentships, fines etc.). Suspending your studies could give you vital extra time at the end of your PhD, meaning the sanctions will not be applied. Since it is very difficult to retrospectively suspend your studies, it is essential that you request a period of interruption at the time of your absence (although flexibility is possible in exceptional circumstances). If you find yourself in this situation, the School will do everything it can to ease the process of suspending your studies, and facilitate your smooth transition back to study. There may be other reasons why students might need to interrupt their studies that are not covered by the category of illness, such as maternity leave, financial difficulties or bereavement. Please contact your supervisor, the Research & PhD Officer, your Mentor, or the Director of Graduate Studies as soon as possible to discuss your options.

3.3 HOLIDAYS

Holiday allowances for research students are between four and six weeks per year, inclusive of public holidays and Queen Mary closure dates. You need to take holidays in order to ensure that you relax: you will be much more productive in your research if you do so. Before taking or booking any holiday, please liaise with your supervisor.

3.4 PASTORAL SUPPORT & STUDENT WELLBEING

Most research students complete their PhD without any complications; however, personal problems may arise during the course of your studies. In such cases, your supervisor will provide first line support and advice. The School Student Support Officer, Lucie Bone, can advise you what help is available, inform you of the most appropriate person to talk to, and arrange appointments on your behalf if this is necessary. You can also talk to the Research & PhD Officer, your Mentor, or the Director of Graduate Studies.

On top of the advice and support you will get from your supervisors, mentors and academic schools, QMUL offers extensive pastoral support services.

3.4.1 **The Advice and Counseling Service**

The Advice and Counselling Service provides confidential appointments for personal and practical advice on all aspects of student life. Alongside this, trained Welfare Advisors also offer professional advice on a range of financial, practical,

legal and immigration issues, allowing you to concentrate fully on your academic progress.

3.4.2 **The Disability and Dyslexia Unit**

The Disability and Dyslexia Unit offers support and access to learning for students with all types of disability.

3.4.3 **The Mental Health Coordinator**

The Mental Health Coordinator provides one-to-one appointments for any student with mental health concerns.

3.4.4 **Student Health Service**

We have an on-campus health centre. Students can register with the Student Health Centre during term-time to make an appointment with a doctor or nurse.

3.4.5 **Faith**

QMUL has a Multi-Faith Centre based in the Student Hub. The Centre can be used for quiet reflection, contemplation and prayer.

If you need help, please seek it out as soon as possible – we are here to support you throughout your PhD.

4 ENSURING YOUR PROGRESS

4.1 INTRODUCTION

You are required to complete your research and submit your thesis within four years if you are a full time student, with the aspiration that you submit your thesis within three years, or completion within seven years if you are a part time student. Your supervisor will be directly responsible for monitoring your progression, a record of which will be retained by the School and accessible through MySIS.

4.2 WORKING WITH YOUR SUPERVISOR

You are expected to meet with your supervisor at least once a week, and it is important that you develop a good relationship with them so that you feel comfortable discussing all aspects of the work, and any problems which may arise. The arrangement for working with your supervisor will generally be informal, but some supervisors might require you to make appointments to see them. Whatever form the meetings take, it is essential to keep a record of these meetings that can be considered strategic in nature (see point 2.4 above).

Current QMUL regulations require full-time PhD students to meet officially with their supervisor/s not less than six times a year, but it is advisable to meet with your supervisor on a much more regular basis. It is mandatory for all PhD students to

maintain a record of at least six meetings using the electronic Supervision Log available on MySIS. The Supervision Log will serve as useful tool when reviewing any actions for future supervisions, and provide a valuable record of work when completing end of semester or end of year reports.

Instructions for the log can be found here:
file:///C:/Users/kwi/Downloads/Research%20Degree%20Supervision%20Log%20-%20Student%20Guide.pdf

4.3 Postgraduate poster competition

All students are required to present a poster at the annual poster competition. Posters should aim to communicate your work to a non-physicist, and prizes are awarded for the best posters. This event usually takes place in April.

4.4 Graduate Degrees Committee

Individual progress will be reviewed at meetings of the School's Graduate Degrees Committee, based on bi-annual reports written by your supervisor.

The members of the Graduate Degrees Committee are:
Dr Eram Rizvi (PPRC & Director of Graduate Studies, Chair)
Ms Karen Wilkinson (PGR Administrator & Secretary)
Ms Isabel Wood (School Manager, Acting-Up)
Mr John Sullivan (Finance Officer)
Dr Gabriele Travaglini (CRST)
Prof David Burgess (AU PGR Admissions)
Dr Kostya Trachenko (CCMMP PGR Admissions)
Dr Alston Misquitta (CCMMP PGR Admissions)
Dr Jeanne Wilson (PPRC PGR Admissions)
Dr Steve Thomas (Strings PGR Admissions)

In addition to the regular reviews of progress, we also carry out an annual review in the first year or your research degree.

4.5 First year progression, or 9 month progression report

Within the first nine months of study, students will be required to submit a piece of written work to their Progression panel, and attend an interview or viva with at least two members of academic staff (progression panel meeting). Each research group have different criteria for assessment, as outlined below, but all groups are required to submit the panel meeting report form and a comprehensive Personal Development Plan/training record to the Research and PhD Officer at least one week prior to the nine month (from date of registration, and twelve month if applicable) deadline.

- PPRC: Lectures take place from October to January and there are formal examinations in January that form part of the assessment. All students are required to submit a poster for the Queen Mary Physics & Astronomy poster competition. Students prepare a 10 minute presentation for a viva exam with two academics at

in the middle of June. All students are progressed or deferred after this viva. Students are required to write a 1st year report by the end of June. The report should be between 25 and 40 pages and should include a theory and detector section, a section on future work and a thesis plan and it should be clear what work was actually carried out by the student. The examiners will read the report and make suggestions for corrections which should be implemented. Note that submitting a report is mandatory (as are any corrections) and students who were deferred in June will be subjected to a second viva again based on the report.

- CCMMP: The written report shall be no more than 10,000 words long, written using LaTeX, containing: 1) A review/background of the scientific problem or area. 2) A review of the relevant scientific literature, covering both very recent work and also pertinent historic references to enable the student to understand the perspective of recent literature. 3) Report on the research carried out so far. 4) Plans for the coming year (but not the remainder of the studentship). The interview will be with two academic staff independent of the student and project. Account will also be taken of performance in exercises set as part of the graduate course of lectures.
- CRST: Students will be required to prepare a written report (maximum 10,000 words), which will be read and evaluated by a panel consisting of two academic members of staff. In addition, they will be asked to present their work in a seminar attended by all members of CRST, followed by questions by members of the group. Progression to the next year is linked to a satisfactory report and seminar presentation as decided by the panel. When appropriate, students may also be required to pass exams in the IC MSc programme or in the final year of the MSci programme. The written report should contain: 1) A review/background of the scientific problem or area, 2) A review of the relevant scientific literature, covering both very recent work and also pertinent historic references to enable the student to understand the perspective of recent literature, 3) Report on the research carried out so far and 4) Plans for the coming year (but not the remainder of the studentship).
- AU: The student should produce a short report (usually no more than six A4 pages) outlining the problem they are addressing, the background reading they have undertaken, progress made in research, and plans for the future. This report should also list course modules they have taken and the corresponding exam results (if known). The supervisor will prepare a short report on the student's work, engagement and progress, with an evaluation of potential for successful completion of the PhD. The student will be interviewed by two staff members who have not been involved in direct supervision of the student. The interview will be used to test the student's knowledge of the material in the report and ability to explain it clearly. The interview will also assess the student's progress in understanding the motivation and background material for their research, including basic material from relevant courses or background reading. The student will be questioned on their work plan for the second year and towards completion of the thesis.

A report is then prepared by the panel members, which is submitted to SITS by the School Research & PhD Officer, and which form part of the student's record. There are two possible outcomes of this procedure – progression or referral:

- Progression: The student progresses to the 2nd year of study, although the report may contain areas where improvement is necessary, with suggested courses of action. Detailed feedback may also be given in oral form by the panel members.
- Referral: The student, supervisory team, panel members and Director of Graduate Studies must agree on a specified piece of work to be completed before the end of the 11th month of study. The agreed work, plus a work plan with a realistic timetable should be agreed between all involved. The written work could be, for example, a re-write of the original progression work, or a specified piece of research; the exact nature depends on the outcome of the original progression panel meeting. The student will then normally have a second panel interview with the same academics as before. A second written report is then produced by the same panel. There are three possible outcomes – progression to 2nd year, downgrade to M.Phil. or deregistration.

All outcomes at all stages will be signed off by the Director of Graduate Studies. If the outcome is downgrade or deregistration, the Director of Graduate Studies will meet those involved to ensure the process has been fair and regulations have been followed.

The report uploaded to SITS will include your Personal Development Plan, which will list all courses and seminars which have been attended, in addition to any other training which has been received.

There are procedures for review of recommendations. A student who wishes to invoke these procedures, should first discuss the matter with the Director of Graduate Studies.

If you are dissatisfied with the recommendation, the mechanism for requesting a review of that decision can be found in the College Appeal Regulations.

4.6 YEARLY PROGRESS MONITORING

Each group has their own internal progress monitoring during years 2 and 3:

- PPRC: Towards the end of the second year, students are required to give a 15 minute presentation of recent work to two academic members of staff, and to discuss their plans to reach completion.
- CCMMP: Second year students are required to submit a plan for their thesis, consisting of a set of chapters which outline descriptions of work completed and planned work for the third year. The thesis plan should highlight work that has either already been written up for publication or identified as such; manuscripts submitted for publication should accompany the thesis plan. Students will meet with the same two members of staff who conducted their first year review to discuss the thesis plan and the plan for publication of papers. Students will be expected to give a group seminar during their third year, but this will not form part of the progression review. However, the meeting with the two members of staff should include a discussion of the content of the planned seminar.
- CRST: Second year students are required to give a group seminar on their research: this will be used to determine satisfactory progress. It is expected that students will have published by this stage; if this is not the case, the Graduate Degree Committee may request to see what future publications are planned.

- AU: For both second and third year reviews, students are required to submit written reports, and will be interviewed by two staff members who have not been involved in direct supervision of the student.
  2nd year review: At this stage we are looking for evidence of all the qualities necessary for the completion of a successful PhD thesis. Students should submit a report (no longer than 15 A4 sides) describing research results obtained so far, plans for future work and a timetable leading to completion of research work and submission of the thesis. An obvious sign that the PhD is progressing well will be the existence of a paper either submitted or in draft form. Students who have such a paper should write a brief report (no more than four A4 sides) that summarises the paper, give plans for future work and a timetable leading to completion of research work and submission of the thesis. A copy of the paper should be attached to the report
  3rd year review: The third year review provides a chance to assess progress and take action to ensure a timely and successful completion of the PhD. The focus of the review is to ensure that a realistic plan exists to complete and submit the thesis within the four year limit. Students should submit a short report (no more than six A4 sides) that describes the planned structure of the thesis (i.e. table of contents), what has been completed already, and what needs to be done.

4.7 THESIS

4.7.1 Writing up status

For students approaching the end of their second year of research, it is helpful to erect milestones and lay out a critical path aiming for completion by the end of the third year.

Postgraduates must regard three years as the normal time in which to complete their research and related coursework, and they should start writing up parts of the thesis well before the end of the three years (or the period for which funding has been awarded).

Once students are writing up their thesis full-time, it is advisable to transfer status to that of 'writing up', which entitles students to 12 months free from tuition fees. This is an academic progression point, and is unrelated to funding length and whether or not it has expired. The following link contains useful information regarding writing-up: http://www.arcs.qmul.ac.uk/research-degrees/research-degree-students/writing-up/index.html

In order to change status, you will need to do the following:

- Complete the application form for transfer to writing up status, available via the MySIS Research Students Details page in the My Details section
- Attach a thesis plan, including chapter headings and a realistic timetable for completion of thesis
- Attach proof that writing up has begun, in the form of chapter drafts

At the end of this 12 month period the student becomes liable to pay full fees at the relevant rate until such time as their thesis is submitted. If a transfer to writing-up

does not occur, the student is liable to pay fees at the relevant rate until the thesis is submitted or they are transferred to writing up status. There may be a period between the expiration of funding and the transfer to writing-up, where fees are liable. When funding expires, eligible students often apply for government unemployment benefits – bear in mind that government agencies do check that such applicants are available for work by asking the department if the student has been transferred to "writing-up status".

4.7.2 Thesis structure

Whilst there are some general guidelines for thesis structure and content, it is important to note that every research topic is different and that in the first instance, advice should be taken from your supervisory team on what form your thesis should take. For specific regulations on thesis formatting etc., please consult the Research Degrees Office webpages.

The college also runs a Research Writing Course in Semester 2. This is a 10 week long (20 hours) course which focuses on study skills, writing and language aspects of a PhD dissertation and is open to 1st, 2nd and 3rd year PhD students.

4.7.3 Practice Viva

It is advisable for students to take a practice viva, which can be organised by the supervisor, prior to the final viva examination.

4.7.4 Examination entry form and thesis submission

Around six months before you intend to submit your PhD thesis, you should submit an Examination Entry Form to the Director of Graduate Studies (via the Research & PhD Officer). If you leave this until the last minute, your examination date is likely to be delayed.

All theses submitted (both examination and final versions) must include within the body of the thesis a 'Statement of Originality'. The statement has a set form of words, which is included as an appendix to revised guidance on thesis presentation.

Candidates are required to submit two printed and bound (can be soft-bound) copies of their thesis to the Research Degrees Office, prior to the examination for dispatch to the examiners. Information about thesis submission, viva and award are available on the Research Degrees Office website.

On submission of your thesis to the Research Degrees Office, you will be given a receipt for your submission. Please bring this to the School Research & PhD Officer who will take a scanned copy for school files. It is essential that the school keeps records of submission dates, as this affects future studentship allocations from the research councils.

Once the examination has taken place and a successful outcome approved by the examiners, candidates are required to submit a digital copy of their final approved

thesis which will be passed to the Library for inclusion in their online repository (this can be before their award is confirmed), unless candidates have requested that the thesis is embargoed, in which case, it will not be available on the repository until the embargo has expired.

The RDPEB (Research Degree Programmes and Examinations Board) has approved a policy on editorial assistance for research degree theses. This is intended to ensure that students and staff are aware of the issues of using editorial help in the production of a thesis. The policy is also attached and will also be available online via the QMUL Policy Zone (http://www.arcs.qmul.ac.uk/policy/index.html).

5 COMPUTING AND IT

The following Departmental Computing Regulations are a supplement to the College's IT regulations, and are subject to changes at no notice.

1. *Computer Accounts*. Each member of the department has their own computer account on one of the departmental servers and is accessed using a username and password. These should not be given to a third party, even if they are a member of the college or department. Furthermore, a user should not allow their account to be used by a third party.

2. *Computer Security*. When a user has finished for the day, s/he should leave the computer in a secured state by logging off. If the user is going to be away from a computer for an extended period during the day, their computer should be locked. Access to the departmental computers is decided by a member of the Physics academic staff or a Computer Manager.

3. *Printers.* The departmental printers are there for the use of everyone in the department. A person should not monopolise a printer and he/she should ensure that there is sufficient paper for their printing needs. Furthermore, if a printer runs out of paper, they should refill the printer with paper from stores.

4. *Laptops.* Departmental laptops, those that are purchased by the department or a grant to a specific person, remain the property of the department and are subject to these regulations and those of the College and eduroam. Personal laptops are permitted to be used on the departmental network at the discretion of the Computer Managers. Laptops are, while connected to the network, subject to these regulations and those of the College and eduroam. Users of laptops should pay all due care and attention to their security, ensuring that all software licenses are paid for and up to date. Laptops should not run P2P file sharing software and copyrighted material (software, music, etc.) should not be downloaded or stored on departmental computers.

5. *Hacking.* No user should attempt to access resources that is denied to them. Any attempt to break the administrator/root passwords or to gain the privileges of these accounts will be treated as hacking and dealt with as a breach of regulations. No user should use department resources or their personal laptops to access resources off campus that they are not entitled to access. This will be seen as hacking and dealt with appropriately.

6. *Software.* All software installed on departmental computers must be approved by a Computer Manager. The computer managers reserve the right to remove any software that violates licenses agreements or that poses a security threat.

The use of P2P file sharing software is not allowed on departmental computers.

7. *Hardware.* The removal, upgrading or changing of hardware is the responsibility of a computer manager. Such action by anyone else may be seen as theft or hacking and dealt with appropriately.

6 HEALTH AND SAFETY

You should familiarise yourself with the advice and information on Safety to be found in the Departmental Handbook for Students.

Personal property is the responsibility of the individual and it is prudent to guard against theft at all times. Any theft which occurs should be reported to the College Security Staff as soon as possible. The Security Lodge is located on the ground floor of France House at Mile End; telephone extension 5000. This number can also be used if you find you are accidentally locked in the building.

For property lost in the Physics building please contact the Teaching Laboratory technicians or reception. For property lost elsewhere on campus please contact College Security.

EVERYONE working in the College has a legal responsibility for health and safety and it is essential that you realise the extent of that responsibility.

The health and safety procedures adopted in College are set out in detail in the *Health and Safety Policy Guide* of which the Departmental Safety Adviser and your adviser have copies.

involved.

7 DEMONSTRATING AND TUTORING

Research staff and Research Fellows may, during normal working hours, undertake teaching and demonstrating work, including associated training, preparatory, marking and examination duties, for up to an average of 6 hours a week, provided that this has the approval of the supervisor.

The extent of these duties will be defined by the Module Organiser at the start of the session and training will be provided. It is compulsory that you attend this training. The amount paid will depend upon the amount of work and the number of students in the class and will be notified to you before you start. If your work in considered unsatisfactory, your role as an assistant tutor will be terminated.

Advice on getting a National Insurance Number so that you can be paid can be found at: http://www.direct.gov.uk/en/index.htm

The local address and telephone numbers for appointments is:

52-58 Arcola Street, LONDON E8 2DL; telephone no: 020-7275-2109.

8 OTHER INFORMATION

8.1 PHD FORUM

There is a termly meeting where students can discuss their PhD program with the SPA PhD Officer. Actions are taken forward, and any changes made incorporated into a 'You Said, We Did' webpage.

8.2 IOP MEMBERSHIP

You may wish to join the Institute of Physics as an Associate Member; you can find information on how to apply at http://www.iop.org.

8.3 BEING A GOOD NEIGHBOUR

All research workers in the school work in close proximity to each other so it is only polite to be considerate to those around you:

1. Having social visitors in your laboratory or office can be disruptive to other people. While it is recognised that very occasionally you may have family or friends to visit you, please keep these visits to a reasonable level.

2. Be aware that when you need to relax in your laboratory or office, others in the same area may still require quiet for concentration. You are encouraged to make use of social areas for conversations rather than your laboratory or office. It is important to appreciate that your neighbour may have a very different expectation of the working environment to yourself; for example, for some people the laboratory is the primary working space and the office is for less intense work, whereas for your neighbour the office may be the primary space for concentrated thinking.

3. Telephones are provided for work-related use only, and generally will be barred from making external calls. If you wish to make personal calls you can either use your own mobile or set up an account with a specialist company. Please also remember that engaging in social telephone calls in the working environment can adversely affect those around you. If the telephone in your research area is not barred then please remember it is for work calls only.