**School of Physics & Astronomy**

Queen Mary University of London

# Research Student Handbook

## Session 2011-2012

**Nothing in this Handbook over-rides the general Queen Mary Regulations, which always take priority**

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

**Please refer also to the College Handbook for Research Students**

## 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. The staff aim to offer outstanding research support that will help you develop the knowledge and research skills necessary to obtain a PhD.

This Handbook provides helpful information about the School and doing 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 complaints about any aspect of your time at QMUL, we are always willing to listen and to try to help and to deal with issues promptly. Your first contact will normally be with your supervisor and then the Director of Graduate Studies (Dr A.J. Drew), an appointment with whom can be arranged by the Admissions/Recruitment Administrator (Ms Moura) responsible for research.

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

Professor William Spence
Head of School

# 2 SUMMARY OF ESSENTIAL INFORMATION

## 2.1 INTRODUCTION

When you start 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 also with the Library. The Admissions/Recruitment Administrator (Jazmina Moura) will guide you through this, and the School Manager (Sarah Cowls) will provide you with keys and access cards, etc.

All research students (from Autumn 2010) are registered directly for the Ph.D. programme. On starting the studentship, the Supervisor and student should:

- Choose an appropriate course of study including possibly some examined courses. Each research group has their own policy on lecture courses, which are summarised below.
- Ensure that the student is aware of Health and Safety at Work requirements
- Ensure that the student is aware of the various procedures described here
- 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 that the student is aware that the *maximum* time allowed for a full time student to submit their thesis is four years.

Research students should read the handbook "*Research Student and Supervisor - an approach to good supervisory practice*", published by STFC and EPSRC. It is expected that supervisors will also take note of the excellent advice to be found in it. It can be found:

http://www.scitech.ac.uk/Grants/Studs/Supervision/SupervisoryHandbook.aspx

## 2.2 UPON ARRIVAL

Most students will arrive at the end of September, so the College has arranged an induction event on the 5th and 6th of October. More details can be found on the Learning Institute website (please note that you must register to attend):

http://www.learninginstitute.qmul.ac.uk/resdev/pg/research-student-induction-2011/

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. It will be held on **Friday 7th October 2011**, and a timetable of the various events is below.

| Event | Time | Location | Outline of session |
|---|---|---|---|
| Meeting Heads of Groups and advisors | Morning | Research groups will arrange this. | Coffee and networking within groups. An opportunity for new students to meet with their groups and supervisors where allocated. Students will be contacted by group heads to inform them of the event. |
| Campus Tours | 11:30 | Physics Museum (1st floor G. O. Jones Building) | Tour of Campus including detailed tour of library. |
| BREAK | 13:00-14:00 | | |
| Research student Induction meeting | 14:00-15:00 | Physics Museum (1st floor G. O. Jones Building) | Introduction to key staff from the school |
| Social Event | 15:00-17:00 | SCR | A social event for new and current postgraduates |

At this meeting, students will be introduced to the key members of staff within the school. Staff will explain how to obtain office keys and computer accounts on the School of Physics and Astronomy network. New research students who are unable to attend this meeting should go on arrival to the room 112 in the G.O. Jones building and introduce themselves to Ms Jazmina Moura who is the Admissions/Recruitment Administrator. She will then arrange appointments with the School Manager (Sarah Cowls) and Director of Graduate Studies (Alan Drew).

## 2.3 THE SCHOOL

Most rooms, offices and laboratories for the School of Physics & Astronomy are located in the GO Jones Building (Physics), although for the foreseeable future, most Astronomy activities will remain in the Maths Building. With the appropriate access on your ID card, you can enter either building at any time. **However, please make sure you comply with the Safety Regulations** (available from **http://ph.qmul.ac.uk/intranet/postgraduates/information-postgraduates**)

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 (supervisor John Sullivan). The pigeonholes for research students' post are located outside stores (UG5). Please keep the pigeonhole tidy. Please note that it is important that you check your mail regularly, since many official communications from the College are sent via internal mail. Please also note that it is mandatory to check your College provided email regularly.

In addition to the above, you will find there a photocopier and a shredder on the first floor, which are available to research students for sensible use. There is a fax in stores (room UG5).

### 2.4 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 |
|---|---|---|---|
| Jazmina Moura | Admissions/Recruitment | 112 | J.Moura@qmul.ac.uk |
| John Sullivan | Stores & Financial Manager | UG5 | J.C.Sullivan@qmul.ac.uk |
| Lucie Bone | Student Support Officer | 110 | L.Bone@qmul.ac.uk |
| Sarah Cowls | School Manager | 107 | Sarah.Cowls@qmul.ac.uk |
| Roger Massey | Teaching Administrator & Travel | 110 | R.P.Massey@qmul.ac.uk |
| Kathy Boydon | Executive Officer | 108 | K.Boydon@qmul.ac.uk |
| Terry Arter | School IT Manager | 210 | T.R.Arter@qmul.ac.uk |
| Predrag Micakovic | School Web Manager | 209 | P.Micakovic@qmul.ac.uk |
| Bill Spence | Head of School | 108 | W.J.Spence@qmul.ac.uk |
| Steve Lloyd | Director of Research | 508 | S.L.Lloyd@qmul.ac.uk |
| Alan Drew | Director of Graduate Studies | 503A | A.J.Drew@qmul.ac.uk |
| Gabriele Travaglini | Postgraduate Admissions: CRST | 222 | G.Travaglini@qmul.ac.uk |
| Richard Nelson | Postgraduate Tutor: AU | Maths | R.P.Nelson@qmul.ac.uk |
| David Tsiklauri | Postgraduate Admissions: AU | Maths | D.Tsiklauri@qmul.ac.uk |
| Eram Rizvi | Postgraduate Admissions: PPRC | 401 | E.Rizvi@qmul.ac.uk |
| Kostya Trachenko | Postgraduate Admissions: CCMMP | 304 | K.Trachenko@qmul.ac.uk |
| Alston Misquitta | Postgraduate Tutor: CCMMP | 308 | A.J.Misquitta@qmul.ac.uk |
| Theo Kreouzis | Postgraduate Mentor | 308 | T.Kreouzis@qmul.ac.uk |

Please note: whilst correct at time of writing, due to the ongoing building work in the School, offices may change over the academic year.

The Admissions/Recruitment Administrator is Jazmina Moura, who will be able to advise on many issues about general School procedures, as well as those specific for postgraduates. If she is absent, then general enquiries can be made to any of the administrative team on the 1st floor reception. They are all extremely helpful and professional, and will do their very best to help you in any way they can.

First line of contact for any queries to do with your research is your supervisory team. For any issues that cannot be resolved with your supervisory team, you should discuss first with your Mentor (for most students this will be Theo Kreouzis). If there are still any unresolved issues, then Jazmina Moura can arrange an appointment with the Director of Graduate Studies, Alan Drew.

The stores manager is John Sullivan, who will be able to help with any financial aspects, including grant payments, ordering items and travel. The departmental manager is Sarah Cowls, who can provide access passes and keys.

Roger Massey is able to arrange travel (on School business), although students should check with their supervisors before making any bookings.

For computing and IT services – Terry Arter or Predrag Micakovic. For particle physics - Alex Owen / Cozmin Timis. PhD students whose desk is located in the Mathematics building should contact Rob Horton for IT support.

## 2.5 Supervisors and Mentor

All research students are assigned to a member of staff who will supervise their research and act as thesis adviser. Students are also assigned to a second supervisor who will be available as a deputy to the principal thesis adviser and may also assist in the general supervision of the 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. Your supervisor will make arrangements to meet with you on a regular basis to keep an eye on your progress.

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 they are going 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).

You will be assigned to a Mentor (Dr Kreouzis will act as mentor for most students), who will be available to offer general advice and guidance on research matters in general. During the transitional period in which the Astronomy Unit is moving from the Mathematics building and into the Physics building, Astronomy PhD students should contact Richard Nelson for general advice and guidance.

You should arrange to see your supervisor regularly and this is normally done without any formality; you can agree a system between yourself and your supervisor or just to pop in to his/her office. If you are having a problem, again your supervisor would normally be your first contact, but if you would prefer to discuss it with someone else then please make an appointment to see your Mentor or the Director of Graduate Studies. Appointments to see the Director of Graduate Studies can be made through Jazmina Moura.

## 2.6 FUNDING

Each studentship is funded for a different length of time, depending on a number of factors, such as the funding body, individual circumstances and the funds available. Length of funding will be 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 most cases your funding will be limited to three years and you cannot expect the School to provide extra support if you go beyond the three years.**

# 3 TRAINING

## 3.1 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 "soft skills" training programme. In addition, the College offers a range of courses, whose appropriateness can be discussed with your supervisor.

## 3.2 LECTURE COURSES

Most beginning research students will be advised (or required) to attend lecture courses at Queen Mary or elsewhere in the University to help get them started. These are as follows:

- PPRC: An intensive lecture program for first year postgraduate students, given jointly with UCL and RHUL, must be attended. This forms part of the 1st year progression criteria – failure to attend (and achieve a satisfactory mark) will result in deregistration. Details are given to students when they arrive.
- 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 previous background, the supervisor will decide whether it will be required for them to take the corresponding exams. Unsatisfactory performance in these exams implies 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 at least four taught modules from the MSc in Astrophysics offered by the AU. Students may also be advised by their supervisors to attend modules offered by other colleges within the University of 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.

There are also courses administered by EPSRC and STFC during the summer vacation that you may find helpful. In addition, you may be advised to attend courses on IT or other transferable skills by your supervisor.

## 3.3 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 so that the training offered will change during your period 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 on the Learning Institute website (http://www.learninginstitute.qmul.ac.uk/) and via circular emails sent to all students advertising courses.

## 3.4 SEMINARS

There are Departmental Seminars during each semester, intended for all members of all the research groups in the department. Speakers are usually from outside the department, 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. The Condensed Matter Physics group meets most Wednesdays. The String Theory group has lunchtime seminars most Tuesdays or Wednesdays (depending on room availability) and afternoon seminars (often jointly with Kings' College and Imperial) most Thursdays. The Particle Physics group arranges seminars on alternate Fridays during teaching semesters. The Astronomy Unit organises seminars on Friday afternoons at 2:30pm, except for those Fridays that coincide with meetings of the Royal Astronomical Society. Attendance at these seminars is considered to be a compulsory part of graduate training.

## 3.5 PERSONAL DEVELOPMENT PLANS (PDP)

You will need to have a Personal Development Plan and you are encouraged to make use of the Plan in conjunction with your supervisor. It provides an important opportunity for you to reflect on the skills you already have and identify any gaps that exist. You and your supervisor can then plan for you to attend training activities to develop any further key skills. The College has created an electronic PDP (ePDP) to afford you greater flexibility. To register to use this, please email Dr Cara Owens (c.owens@qmul.ac.uk). Alternatively, a version of the PDP document can be downloaded from the Postgraduate Research Students' page on the ESD website www.esd.qmul.ac.uk.

Each year you and your supervisor should review your PDP and agree what training, etc, you will be undertaking in the current year.

In addition to the Research Methods course that you must take, the College Educational and Staff Development (ESD) runs training courses for research students and other young research workers. You are strongly encouraged to attend these and details will be on the ESD web site: www.admin.qmul.ac.uk/staffdev/

Remember you have to book these courses and once booked you must attend, or remember to cancel.

## 3.6 LANGUAGE & LEARNING INSTITUTE

The Language & Learning Institute offer a range of courses and service for current students and staff. One such workshop is the urban writing retreat. The retreat is for

postgraduate students who may be writing an upgrading document, a thesis chapter or a journal article. The aim is to support students in their writing projects through structured writing time. More detail is available on the website (www.languageandlearning.qmul.ac.uk). You will also be sent further details of dates and time via email from Lucie Bone.

### 3.7 CONVERSATIONAL ENGLISH

We have arranged for the Language & Learning Institute run a custom course on conversational English. This course is compulsory for all students with English as a secondary 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 programmes– 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. Ss 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- Ss 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 Ss 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, disagreement. |

| | | |
|---|---|---|
| | | Expressing these by using a phrase bank of exponents; re-ordering a dialogue; controlled discussion; interview exercise where Ss 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 |

## 3.8 CAREERS

Queen Mary Career's 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 student from one to one advice to training workshops and online guides. Details are available on the following website; (www.careers.qmul.ac.uk/Researchers/)

# 4 ATTENDANCE

## 4.1 INTRODUCTION

It is important that you attend the School buildings on a regular basis within normal working hours and 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, is highly encouraged. However we recognise the value of working from home, especially in periods of writing or data analysis, but even in these periods regular contact with your supervisor is essential.

The requirement to attend the School buildings does not apply to students doing their research remotely. Supervision in these cases is normally done via staff in the institute you are working at, although regular contact with QMUL supervisors normally takes place via video link and/or institution visits. Up-to-date contact information must be notified and there must be a detailed working arrangement agreed between you and your supervisor, with a written copy should be given to Jazmina Moura. You should also ensure these details are correctly recorded in mySIS the electronic Student Information Service.

All students must ensure that up-to-date contact details are given to your supervisor and the departmental offices (Kathy Boydon and Jazmina Moura).

## 4.2 ILLNESS

You are expected to notify the Department of all periods of illness in the same way as for staff. Basically this means that 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.

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 overshoot (e.g. deregistration, full fees payable, etc. – full details can be found in the College regulations) and 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 very important that it is done whilst you are ill or just after you return. If you are in this situation, the School will do everything it can to ease the process of suspending your studies and ease the transition back. Please contact the your supervisor, Admissions/Recruitment Administrator, your Mentor, or the Director of Graduate Studies as soon as possible to discuss options.

## 4.3 HOLIDAYS

There are no formal requirements for research students' holiday entitlement, apart from those funded by the Research Councils. However, the School's view is that research students should have the same holiday entitlement as research assistants, which is 30 working days, plus public/College holidays. You need to take holidays in

order to ensure that you relax: you will be much more productive in your research if you do! Before taking/booking any holiday, please inform your supervisor.

### 4.4 Pastoral Support

Most research students complete their PhD without any problems whatsoever. However, there are occasional personal problems that arise. In such cases the best person to advise you would be your supervisor and you should aim to develop sufficient rapport with him/her that you feel comfortable in discussing these problems. The School employs a Student Support Officer Lucie Bone, who can advise on what help is available, inform you of the most appropriate person to talk to and arrange appointments on your behalf, if this is most suitable. You can also talk to the Postgraduate Administrator, your Mentor, or the Director of Graduate Studies.

Do not let problems linger thinking that they will right themselves; it is much better to talk about them to someone early rather than later. Remember that we are there to help you get your PhD and if something is worrying you we cannot do anything about it if we do not know.

### 4.5 Advice and counselling

The Advice and Counselling service offers a free and confidential service to all Queen Mary Students. Experienced counsellors, group therapists and psychologists provide support on a range on emotional and psychological issue. Alongside this Trained Welfare advisors offer professional advice on a range of financial, practical and legal issues allowing you to concentrate on your academic progress

The Advice and Counselling Service runs a PhD Student Group. This aims to provide a safe, confidential space in which participants can support each other with personal, emotional and relationship issues that are holding one back. It also offers an opportunity to identify more effective ways of managing the tension between personal and emotional issues and academic demands. Through sharing with others who may be having similar experiences one can gain a clearer perspective and disentangle from thesis writing, emotional and personal issues that are impeding its progress. More information and dates of the group meetings are available via the following page; (www.welfare.qmul.ac.uk/counsellingservice/Workshops/)

# 5 ENSURING YOUR PROGRESS

## 5.1 INTRODUCTION

It is as important to us as it is to you that you complete your research and submit your thesis in a timely manner. For full time students, the College requires you to submit your thesis within 4 years of beginning your studies, with the aspiration that you submit your thesis in three years. Part-time students will, naturally, take longer, depending on what proportion of their time they devote to research, and College regulations take this into account.

Your supervisor will be directly responsible for keeping you on track, but there is a system to allow the School to monitor your progress. This is there for your benefit and you should take it seriously. The system has been made as simple as possible so it really should not take up much of your time, but it will allow your Head of Group, Director of Graduate Studies and Head of Department to know how you are progressing. Details of the monitoring procedure can be found below.

## 5.2 WORKING WITH YOUR SUPERVISOR

You should normally see your supervisor at least once a week as it is important that you develop a rapport with him/her so that you feel comfortable discussing all aspects of the work or personal problems that 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, especially if they are particularly busy at that time. Whatever form the meetings take it is important to have some record of those meetings that can be considered strategic in nature. It is thus strongly recommended that after such a meeting the student summarise the research strategy agreed and to email this to the supervisor. In that way you are both clear on the way forward and so avoid any misinterpretation or misunderstanding. You and your supervisor may agree to record most of your meetings this way. As a bare minimum, you are expected to follow this recording of strategic meetings by email at least four times per year.

All research students must get a hard-back handbook (from stores, UG5) to record things they wish to raise when they see their supervisor. The purpose of this is to stop such things getting lost so the book should be used to record working notes, not something that is “best copy”.

## 5.3 POSTGRADUATE POSTER COMPETITION

All students are required to present a poster at the annual poster competition. This is normally held on the Wednesday in reading week of Semester B although you will be notified of the exact date by e-mail. Posters should aim to communicate the work to a non-physicist such as the College Principal. There are prizes for the best posters.

## 5.4 GRADUATE DEGREES COMMITTEE

Your progress will be kept under review at the regular meetings of the School’s Graduate Degrees Committee, based on biannual reports written by your supervisor. You may request to see copies of these reports. The members of the Committee are:

Dr Alan Drew (Chair; Director of Graduate Studies)
Dr Kostya Trachenko (CCMMP)
Dr Gabriele Travaglini (CRST)
Dr Eram Rizvi (PPRC & Deputy Director of Graduate Studies)
Dr Richard Neslon (AU)
Ms Jazmina Moura (Secretary)
Ms Sarah Cowls (School Manager)
Mr John Sullivan (Finance Manager)

In addition to the regular reviews of progress, a more thorough review of progress is made annually (see below).

### 5.5 First year progression

In the 9th month of study, students will be required to submit a piece of written work and will have an interview with at least two members of academic staff (known as a progression panel meeting). Each research group have different criteria for assessment, outlined below.

- PPRC: Lectures take place from October till 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 the end of June. All students are progressed or deferred after this viva. Students are required to write a 1st year report before the last week of August. 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 viva'd 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 only for the coming year, and 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, which will be read and evaluated by a panel consisting of two members of staff independent of the student and project. 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 deemed appropriate, students may also be required to pass exams in the IC MSc programme or in the final year of the MSci programme, as mentioned earlier. The written report shall be no more than 10,000 words long, 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 only for the coming year, and 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).

A report is then prepared by the panel members, which is submitted to SITS and form part of the student's record. There are two possible outcomes of this procedure – progression and 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 workplan 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 report is then written by the panel members, which is submitted to SITS and forms part of the student's record. There are three possible outcomes – progression to 2nd year, downgrade to M.Phil or deregister.
- All outcomes at all stages will be signed off by the Director of Graduate Studies. If the outcome is downgrade or deregistration, then the Director of Graduate Studies will meet those involved to ensure the process has been fair and that regulations have been followed.

The report uploaded to SITS will also include a Personal Development Plan by the student where they will list all courses and seminars they have attended in addition to any other training they have received. Please note that the inclusion of the a Personal Development Plan is a mandatory part of College regulations and that failure to submit a sufficiently detailed Plan could result in failure to progress to Year 2.

It is important that supervisors bear in mind that only students for whom there is reasonable expectation that they will complete within a maximum of four years (three years plus one on "writing-up status" – see below) are recommended to be allowed to proceed.

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 then the mechanism for requesting a review of that decision can be found in the College Handbook for Research Students.

## 5.6 YEARLY PROGRESS MONITORING

Each group has their own internal progress monitoring at year 2 and 3, outlined below.

- PPRC: Near the end of their 2nd year students are required to give a 15 min presentation of their recent work and their plans to complete and will be examined by two academic members of staff on their presentation for a further 15 mins.
- CCMMP: Second-year students are required to submit a plan for their thesis, consisting of a set of chapters with outline descriptions of work completed and work planned 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: The 2nd year students are required to give a group seminar on their research; this will be used to determine satisfactory progress. It is also expected the students have published by this stage; if this is not the case then the graduate degree committee may request what publications are planned.
- AU: For both the second and third year reviews, students are required to submit written reports, will be interviewed by two assessors.

  **Second year review:** At this stage we are looking for evidence of all the qualities necessary for the production of a successful PhD thesis. An obvious sign that the PhD is progressing well will be the existence of a paper that has been submitted for publication in a refereed journal. Students who have a paper that has been submitted should write a brief report (no more than four A4 pages) that summarises the paper (briefly), and lays out plans for future research and a realistic timetable for writing and submitting the PhD thesis. A copy of the paper should be submitted along with this report. Students who have not submitted a paper by this stage are expected to produce a longer report (no longer that 15 A4 pages) that describes the results of research obtained so far, as well as laying out plans for future research and a timetable for writing and submitting the thesis. If a good draft of a paper exists at this stage, the submission of a brief report as outlined above will suffice (with the supervisor's agreement), along with a copy of the draft paper.

  **Third year review:** Some students will submit their theses during their third year. For those that do not, the third year review provides a chance to assess progress and determine courses of action with respect to funding and payment of fees. The focus of this 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 pages) that describes the structure of the thesis (i.e. table of contents), what has been completed already, and what needs to be done. An important consideration at this stage is whether or not the student is in a position to transfer to Writing up status (see below for more details).

## 5.7 THESIS

### 5.7.1 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 aimed at completion by the end of the third year. The handbook "*Research Student and Supervisor - an approach to good supervisory practice*", includes a 24-week countdown to completion.

It is to be stressed that postgraduates must regard three years as the normal time in which to complete their research and related coursework, and that they should start writing up parts of the thesis well before the end of the three years.

Your registration as a research student normally terminates after three years (unless otherwise approved by the Graduate Degrees Committee or is a condition of your funding), but you may be permitted to continue to use college facilities after this period in order to write up your thesis. This requires transfer to writing up status, which entitles the student to 12 months free from tuition fees. The following is needed from you before you will be transferred:

- A correctly filled out transfer form, available from the Research Degrees Office.
- A thesis plan, including chapter headings
- A realistic timetable for completion of thesis
- A signed and written certificate from your supervisor, verifying that all research work has ceased (e.g experimental work for experimentalists or calculations for theorists) and that the student is writing up on a full-time basis
- 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 this transfer does not occur, then the student is liable to pay fees at the relevant rate until their thesis is submitted or they are transferred to writing up status. When funding is terminated 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”.

### 5.7.2 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 at 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 University of London regulations.

### 5.7.3 Practice Viva

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

### 5.7.4 Examinations entry form

About six months before you intend to submit your PhD thesis you should submit an Examination Entry Form to the College Registry (via the Administrative Secretary for Research), which amongst other things requires the thesis title and an abstract. IF YOU LEAVE THIS TO THE LAST MINUTE YOUR EXAMINATION DATE IS LIKELY TO BE DELAYED.

### 5.7.5 Prompt Submission Prize

Any postgraduate student in the Queen Mary School of Physics & Astronomy will receive a cash prize of £250 if s/he submits her/his PhD thesis within 3 years of the date of starting research, and then is awarded the PhD degree as a result of that submission. For students supported by UK research Councils the date of starting research is defined as the date on which their grant starts, for others as the date of arrival at Queen Mary as a postgraduate research student. The date of submission is defined as the date on which the completed thesis is received at Senate House.

## 6 COMPUTING AND IT

The following Departmental Computing Regulations are a supplement to the College's IT regulations and JANET 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, then the 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 inform a computer manager or refill the printer by getting paper from stores.

4. *Laptops.* Departmental laptops, those that are purchased by the department or a grant to a specific person, remains the property of the department and are subject to these regulations and those of the College and JANET. 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 JANET. Users of laptops should pay all due care and attention to their security and ensure 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.

## 7 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 to the left of the main entrance to the Queens' Building; telephone extension 5000. Use this number also if you find you are accidentally locked in the building.

For property lost in the Physics building contact the Teaching Laboratory technicians; for property lost elsewhere on campus 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 *Statement of Health and Safety Policy* of which the Departmental Safety Adviser and your adviser, have copies. The following is an extract:

*Students of the College, whilst engaged in any College activity within or without the College, must take all reasonable steps to ensure their own safety and that of others who may be affected by their activities. In particular, they shall:*

*2.6.1 comply with all relevant safety rules and arrangements issued by the College and with all statutory regulations,*

*2.6.2 report unsafe conditions or activities to their supervisor or appropriate College officer,*

*2.6.3 make proper use of any necessary safety measures, protective clothing or equipment,*

*2.6.4 not interfere with or misuse anything that is provided in the interest of health and safety,*

*2.6.5 seek the advice of the College Environmental Health and Safety Adviser where there is any special personal or medical condition which may affect safe working*

It is impossible to indicate all of the possible hazards that might arise during laboratory work. Where necessary the member of staff teaching a particular course will give you details of any special hazards and the correct procedures to adopt during a practical exercise. Further information can be obtained from the Departmental Safety Adviser, Prof D.J. Dunstan, who has access to a range of safety information and specialist safety advisers. See Mr M. Somerton for matters of safety in working with chemicals. Until you have been suitably trained, laboratory work must only be carried out when there is an academic supervisor or a teaching laboratory technician present.

## 8 DEMONSTRATING AND TUTORING

There are no minimum requirements for PhD students to undertake ancillary teaching, unless you are paid via a School teaching studentship. Research students may be employed by the department for up to six hours a week for ancillary help in teaching (laboratory assistance, marking homework, etc.), provided that this has the approval of their 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 you do not do the work satisfactorily then 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.

# 9 OTHER INFORMATION

## 9.1 STUDENT/STAFF LIAISON COMMITTEE

There is a committee where student and staff can discuss issues relating to research students. Information about election of a postgraduate student representative to that committee will be circulated during the year. Meetings take place once per term.

## 9.2 IOP MEMBERSHIP

You may wish to join the Institute of Physics as an Associate Member, and can find information on how to apply at http://www.iop.org. EPSRC funded students do not need to pay their own subscriptions.

## 9.3 BEING A GOOD NEIGHBOUR

All research workers in the Department work in fairly 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 due 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 company like OneTel where you can call a free telephone number and then enter an account number and PIN. 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.