

# Centre for Doctoral Training

# Mathematics of Random Systems

EPSRC Centre for Doctoral Training in Mathematics of Random Systems:

Analysis, Modelling and Algorithms

2020 - 2021 Cohort Imperial College Handbook





Imperial College London

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### Welcome from the Directors

Welcome and congratulations for your admission to the EPSRC Centre for Doctoral Training in the Mathematics of Random Systems! Our Centre was launched in 2019 through a partnership between UK Research and Innovation (UKRI) and three world-class departments in the area of probabilistic modelling, stochastic analysis and their applications: the Oxford Mathematical Institute, the Oxford Department of Statistics, and the Department of Mathematics, Imperial College London, with the ambition of training the next generation of academic and industry experts in stochastic analysis, stochastic modelling, advanced computational methods and Data Science. Our Centre also benefits from the generous support of several industry partners.

You are about to commence a 4-year comprehensive training programme, delivered by a pool of 50 researchers in our 3 partner departments, with the aims of bringing you to the frontier of scientific research in Probability, Stochastic Analysis, Stochastic Modelling, stochastic computational methods and applications in physics, quantitative finance, biology and data science.

Our goal is to prepare you for your research project by providing you with solid training in core skills in probability theory, stochastic analysis, mathematical modelling, data analysis, stochastic simulation and probabilistic algorithms. In the first year, you will follow four Core courses on Foundation areas as well as three Elective courses and undertake a supervised research project starting the 2nd term. This research project is then expected to evolve into a PhD thesis, which will be the focus of the next 3 years.

This handbook is designed to help you understand the course structure, the requirements of the course, the key contacts and who you can go to if you need support. Please be aware that details may be subject to change, especially in light of the Covid-19 measures. We encourage you to check the CDT website for the most up-to-date information:

https://www.randomsystems-cdt.ac.uk/

https://www.imperial.ac.uk/study/covid-19/

We wish you every success in your studies!



Prof Rama Cont

Director, University of Oxford



Dr Tom Cass

Co-Director, Imperial College London

# **The CDT Steering Committee**



**Professor Rama Cont, Director:** 

(director@randomsystems-cdt.ac.uk)

Rama Cont is Professor of Mathematical Finance at the University of Oxford and Head of the Oxford Mathematical and Computational Finance Group. Rama's research focuses on stochastic analysis, stochastic processes and mathematical modelling in finance, in particular the modelling of extreme market risks and

systemic risk. Areas of study include stochastic analysis (pathwise methods in stochastic analysis, functional ito calculus), mathematical modelling in finance, systemic risk and financial stability, mathematical foundations of data science and data-driven decision systems.

### Dr Thomas Cass, Academic co-director:

### (thomas.cass@imperial.ac.uk)

Thomas Cass is a Reader in the Mathematics Department at Imperial College London. Thomas' research interests relate to the study of random phenomena. His research writings span both classical areas of stochastic analysis such as Malliavin calculus, and newly-emerging disciplines such as Rough Path Theory.



He is also interested in the way in which deep insights in Pure Mathematics can spur developments in Mathematical Finance, especially numerical techniques.



### **Professor Ben Hambly, co-director:**

### hambly@maths.ox.ac.uk

Ben Hambly is Professor of Mathematics at the University of Oxford. Ben's research interests are in probability, stochastic processes, financial mathematics and fractals. In particular pricing American style options, credit and correlated default, electricity price modelling and swing options, stochastic partial

differential equations models for systemic risk and limit order books, diffusion processes on fractals, spectral problems for fractal domains, geometry of random fractals, rough paths and levy area, branching processes, general branching processes, branching random walk, and particle systems and random matrices.

### **Dr Melanie Witt, CDT Administrator**

<u>info@randomsystems-cdt.ac.uk</u> / 01865 270501 / Room S0.37, Mathematical Institute, University of Oxford

Melanie Witt joined the Department of Mathematics at Oxford University in July 2019. Melanie previously worked as a postdoc in the Department of Earth Sciences, University of Oxford investigating emissions of mercury from volcanoes,



before moving to the Department of Physiology, Anatomy and Genetics, Oxford as research administrator for the Oxford Parkinson's Disease Centre and the Alzheimer's Research UK Network Oxford.

### Lydia Noa, CDT Administrator, Imperial

<u>lydia.noa@imperial.ac.uk</u> / 020 7594 8532/ EPSRC Centres for Doctoral Training Suite, Level 4 ICSM Building, South Kensington Campus, Imperial College

Lydia Noa joined the department of Mathematics at Imperial College in June 2019. She previously worked at Imperial College as a Grants administrator within the Joint Research (IRO) at Imperial and as a Research group administrator at the National Heart & Lung Institute.

Office (JRO) at Imperial and as a Research group administrator at the National Heart & Lung Institute (NHLI). Please contact her regarding any queries relating to Imperial College.

### Dr Pietro Siorpaes, Year 1 Cohort Mentor

(p.siorpaes@imperial.ac.uk)

Pietro Siorpaes is a Lecturer in Mathematical Finance at the Department of Mathematics, Imperial College London. Pietro's interest lie at the intersection of mathematical finance, probability theory and convex analysis. In particular, he has been working on optimal investment and utility-based pricing; on semimartingale theory; on pathwise notions of martingale inequalities and local-time; on martingale optimal transport.



Professor Julien Berestycki, Coordinator for Department of Statistics (julien.berestycki@stats.ox.ac.uk)

Julien Berestycki is Associate Professor of Probability in the Department of Statistics University of Oxford. Julien's research is in probability theory and focuses essentially on models and situations which involve tree-like structures and branching phenomena. Examples include coalescent processes, branching processes, continuous random trees, branching random walks. These models are not only endowed with a remarkably rich mathematical structure that connects them to many area of mathematics, but they

also occur naturally in physical sciences, in population genetics and in biology

### Professor Xue-Mei Li, Management Committee Member

(xue-mei.li@imperial.ac.uk)

Xue-Mei Li is Chair in Probability and Stochastic Analysis in the Mathematics Department at Imperial College London. Xue-Mei works in the intersection of Probability, Analysis, and Differential Geometry. She is interested in the evolution of physical quantities approximated by solutions of differential equations, with special interests in the intrinsic geometry of stochastic (random) processes and uses this understanding for complexity reduction and for multi scale and asymptotic analysis.





### **Professor Jeroen Lamb, Management Committee Member:**

(jeroen.lamb@imperial.ac.uk)

Jeroen Lamb is Professor of Applied Mathematics in the Mathematics Department at Imperial College London. Jeroen's main research interest concerns bifurcations in dynamical systems: transitions between different types of dynamical behaviour when parameters are varied. His recent work has been concerned with dynamical systems

that are influenced by noise. His research interests include local and global bifurcation theory, aperiodic tilings (quasicrystals, tiling dynamical systems), random dynamical systems and network dynamical systems.

# **Professor Christoph Reisinger, Management Committee Member:** (Christoph.Reisinger@maths.ox.ac.uk)

Christoph Reisinger is Professor of Applied Mathematics at Oxford University's Mathematical Institute. His research covers various aspects of the development, analysis and implementation of numerical algorithms for partial differential equations and stochastic (partial) differential equations, such as those arising in financial engineering. As well as his specific interests in numerical analysis Christoph's mathematical finance research includes

work on derivative valuation and counterparty credit risk (in particular, large pool contagion models), quantification of hedging errors, model calibration (FX, equity, credit) and investment and incomplete markets.



### **Professor Jared Tanner, Management Committee Member:** Jared.Tanner@maths.ox.ac.uk

Jared Tanner is Professor of the Mathematics of Information at the Mathematical Institute, University of Oxford. Jared's focus is on the design, analysis, and application of numerical algorithms for information inspired applications in signal & image processing. Specific contributions include the derivation of sampling theorems in compressed sensing using techniques from stochastic geometry and the design and analysis of efficient algorithms for

matrix completion which minimise over higher dimensional subspaces as the reliability of the data warrants. These techniques allow more efficient information acquisition as well as the ability to cope with missing data. Recent interests include new models for low dimensional structure in heterogeneous data and topological data analysis.

### **About the CDT**

In the first year, students follow four Core courses on Foundation areas and three elective courses, and choose a main research topic and a research supervisor. This research project will then be expected to evolve into a PhD or DPhil thesis in years two to four. An Early Stage Review Progress will be assessed at approximately 12 months and Late Stage Review at approximately 18-24 months. These assessments involve the submission of written work and an oral examination.

As part of your 4-year doctoral programme in addition to your main research projects you are required to take part in CDT activities. These include a CDT spring retreat, the annual summer school as well as regular seminars, workshops and training in transferrable skills such as communication, ethics and teamworking. Failure to attend compulsory CDT activities may result in the loss of your funding.

### The 2020 Cohort

Students will be registered students at either the University of Oxford or Imperial College London. Transfer between institutes will not be possible.

### **University of Oxford**

Matthew Buckland Marcello Monga

Andrea Clini Milan Pache

Filippo De Angelis Aldair Petronilia

Martin Geller Thomas Tendron

Michael Giegrich Aymeric Vie

Philipp Jettkant Ziheng Wang

Benjamin Joseph Fabrice Wunderlich

Laszlo Mikolas Wei Xiong

Deborah Miori

### **Imperial College London**

Dan Leonte Yuriy Shulzhenko

Matheus De Castro Luca Gerolla

### **CDT Timeline**

An up to date timetable for CDT activities can be found at:

https://www.randomsystems-cdt.ac.uk/calendar

Below is a timeline for key milestones during your PhD.

September 21 <sup>st</sup> – October 2 <sup>nd</sup> 2020	Foundation courses
Autumn Term (Oct-Dec) 2020	Four Core Courses: Tuesdays at Remote Imperial lectures, Thursdays in person Oxford lectures
By the end of week 6 in Autumn term in year 1 (20 <sup>th</sup> November 2020)	Confirmed elective choices and enrolled on courses
By End of December 2020	Research Plan confirmation (RPC)
Before start of Spring term 2021	Confirmed supervisor for PhD and have a firm plan in place for structure of research thesis
Spring Term (Jan-Mar) 2021	Three elective courses
March/April 2021	Spring Retreat (3-4 days residential/remote course)
May 2021	Two week group mini-project
September 2021	Early Stage Assessment ( <b>ESA</b> ) + Graduate School Professional Skills courses
September 2021	5 day Summer school
Spring term 2022	Late Stage Review (LSR)
Autunm term 2023	Year 3 Progress Report (Y3PR)
From Autunm term 2023	Exam Entry Form ( <b>EEF</b> ) Complete and submit at least 4 months before thesis submission
End of Summer Term 2024	Submission of thesis

Please let us know if you have a disability that requires accommodations, a health or economic challenge that may impact your time in the CDT or a preferred gender pronoun. If you have a schedule conflict due to your religious holiday, or other concerns that impede your ability to be effective on the CDT please tell us. We want to create a welcoming, inclusive and equitable environment for all our students and welcome your input on how to achieve this.

### **Course structure**

### **First Year**

In the first year, each course will have appropriate assessment and students will be awarded a pass or fail. Students will be required to pass every module; those failing any course may need to do additional work to demonstrate competence. Those obtaining a fail may be required to discuss their performance with the course directors.

### Term 1

### **Introductory courses**

Students follow mandatory coursework involving one 16 hours and two 8-hour introductory courses held in Oxford in the first 2 weeks (Sept 21<sup>st</sup>- Oct 2<sup>nd</sup>). There will not be a formal assessment for these.

The lectures and classes will take place in the Mathematical Institute in Oxford, for those unable to attend in person we will be offering an online alternative to follow the material.

You will be required to wear a face covering when entering the Mathematical Institute. For details and updates on this please see: https://www.ox.ac.uk/coronavirus/health/face-coverings

- Foundations of Stochastic Analysis (Prof. Ben Hambly, 8 hrs)
- Foundations of Data Science (Prof. Mihai Cucuringu, 16 hrs)
- Function Spaces and Distributions (Dr Matias Delgadino, 8 hrs)
- Tutorials in Stochastic analysis and Data Science (Dr Renyuan Xu)

### **Core Courses**

For the rest of the first term students take four compulsory advanced courses taught by Oxford and Imperial.

These courses will have an assessment which students will need to pass to progress on the PhD programme. Normally assessment will be a short written report of up to 10 pages. The current plan is for Oxford courses to be taught in person. Imperial's courses will be presented via video-link to a lecture theatre in Oxford. This is subject to change as guidance is updated.

- Advanced Topics in Stochastic Analysis (Dr Andreas Sojmark, Imperial College)
- Advanced topics in Stochastic Processes (Prof Xue-Mei Li, Imperial College)
- Advanced Topics in Data Science: Deep Learning (Prof Jared Tanner, Oxford)
- Simulation Methods and Stochastic Algorithms (Prof. Mike Giles, Oxford)

Further details on the course content in the first term can be found at: www.randomsystems-cdt.ac.uk/core-courses

### Terms 2 and 3

### Elective courses

- Students follow three elective courses at Oxford or Imperial College London. You will be required
  to pass an assessment for each of the three electives. Normally assessment will be a short
  written report of up to 10 pages. This should be discussed with the lecturer prior to the start of the
  course.
- We have selected a range of courses relevant to the CDT projects. These can be viewed at <a href="https://www.randomsystems-cdt.ac.uk/electives">https://www.randomsystems-cdt.ac.uk/electives</a>
- Chosen electives must be confirmed with the CDT administrator by the end of your first term in year 1 (20<sup>th</sup> November 2020). Prior to this, you should meet with one of the course directors to discuss your choices.
- Should you wish to choose a subject for your elective not on this list this must be agreed with your supervisor in advance.
- If there are courses of interest occurring in the subsequent years you are permitted to take these, provided your supervisor has confirmed there is sufficient time for your core research. However, you must have completed three elective courses by the end of your first year.

### Year 1 Mini-Projects

A two-week group project will be assigned to groups of 5 or 6 students to work on collaboratively in May of year 1. These may be academic or industrial projects. Students will be required to produce a group report at the end of the project for the project partners.

### Year 1 Spring Retreat

Students need to attend a residential **3-day** course which will take place in the Easter break of the first year. They will consist of talks relevant to the CDT and student presentations. Students will be required to give an oral presentation on their research project plans. Feedback will be given on these talks. We hope to be able to run this as a residential course, but may run as an online event depending on quidance at the time

### Year 1 Summer School

We hope to be able to hold the 2021 Summer School on Mathematics of Random Systems overseas in September. Students may be required to prepare a presentation on their research for the school.

### **CDT Monthly Events**

There will be monthly CDT events, which will roughly alternate between Oxford and Imperial. These are likely to be a mix of seminars, workshops and tutorials. Students will be required to attend these events.

In addition to the Mathematics courses described above you are required to take part in the professional development skills courses detailed below.

### **Year Two to Four**

Years 2, 3 and 4 are dedicated to students research project, under supervision of the advisor.

Throughout the 4-year period students are required to participate in cohort activities such as the monthly CDT seminars/workshops in Oxford and London.

### Failure to attend compulsory CDT activities may result in the loss of your funding.

All those involved with research at Imperial are expected to read and abide by the University's Code of Practice and Procedure for Academic Integrity in Research.

https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-integrity/

# General advice for you time in the CDT

- Work together. You will learn as much from each other as you will from anyone else.
- Don't struggle in silence. Make use of your peers, and departmental and college support. If there's a problem, let someone know (e.g. your cohort mentor Pietro Siorpaes <u>p.siorpaes@imperial.ac.uk</u>, the CDT administrator <u>lydia.noa@imperial.ac.uk</u> or your mentor).
- Stay on top of your workload. There is a lot to do.
- Pass on comments and suggestions to the directors and administrators so that the CDT experience is continually improved.
- Make the most of your interactions with industry. They provide stimulation for your research projects (and the company might want to employ you).

### From year 2

- Come to seminars whether in person or online. As well as broadening your scientific knowledge, attending seminars is useful for developing your own presentational skills. If a seminar strikes you as good or bad think about what makes it so. Don't worry if the seminar is not in your research area it's still worth attending.
- Keep talking to each other, both within your cohort or to those in other years.

# Supervision, mentoring and support

As part of your welcome and induction into the department we have allocated a 'buddy' from Oxford and Imperial for each of you. These buddies are students entering the second year on the CDT. We hope that you will meet with your "buddy" a few times over your first three weeks. The list of assigned buddies are as follows:

		Oxford Buddy	Imperial Buddy
Matthew	Buckland	Terence Tsui	Benedikt Petko
Andrea	Clini	Mateusz Mroczka	Lancelot Da Costa
Filippo	De Angelis	Alain Rossier	Alessandro Micheli
Martin	Geller	Zheneng Xie	Julian Sieber
Michael	Giegrich	Julian Meier	Zan Zuric
Philipp	Jettkant	Felix Prenzel	Zan Zuric
Benjamin	Joseph	Jonathan Tam	Lancelot Da Costa
Pan	Liu	Ross Zhang	Victoria Klein
Laszlo	Mikolas	Mateusz Mroczka	Lancelot Da Costa
Deborah	Miori	Jonathan Tam	Victoria Klein
Marcello	Monga	Mateusz Mroczka	Alessandro Micheli
Milan	Pache	Felix Prenzel	Remy Messadene
Aldair	Petronilia	Zheneng Xie	Julian Sieber
Thomas	Tendron	Terence Tsui	Benedikt Petko
Aymeric	Vie	Alain Rossier	Alessandro Micheli
Ziheng	Wang	Felix Prenzel	Remy Messadene
Fabrice	Wunderlich	Ross Zhang	Benedikt Petko
Wei	Xiong	Julian Meier	Zan Zuric

We have also allocated you a faculty mentor who you should aim to meet with at least twice in the first term to discuss your progress. By the start of your second term you should have a confirmed supervisor and a plan for your initial research project. Your main supervisor must be based at Imperial College London.

The supervisory relationship is one of the most crucial ingredients underpinning successful research. The relationship is two-sided with obligations on supervisors as well as the student. Like any relationship, it has to be worked at and nurtured. It is therefore important to establish clear and explicit mutual expectations in order to minimise the risks and possible difficulties of personality clashes. You should ensure you meet with your supervisor regularly and be proactive in arranging meetings. It is suggested that the programme of meetings is drawn up well in advance and that supervisors and students avoid rescheduling.

Mathematics PhD offer holders website (<u>mutual expectations for the research degree student supervisor partnership [pdf]</u>) is useful to PhD students although it is also aimed at research supervisors. The EPSRC also provides advice for students on their website (<a href="https://www.epsrc.ac.uk/skills/students/help/quidance/">https://www.epsrc.ac.uk/skills/students/help/quidance/</a>).

Each cohort will also have a mentor for their first year, yours is Pietro Siorpaes (p.siorpaes@imperial.ac.uk). He will meet informally with you to check that you are on track. Throughout your PhD others in the CDT are available for support, in addition you can approach your research group

members, and others in the department for support. If in doubt, the CDT administrator can help with identifying routes for finding help and guidance.

# **Logistical Information**

Your first year in the CDT is likely to be hectic and demanding. You can expect to need to work some evenings and weekends to keep on top of the material in the courses and get your assignments completed. For work undertaken in small groups you will need to collectively organise your time. The timetable for the CDT runs independently of the universities' term. It is important to maintain a presence in the department and with your cohort as well as attend the various skills training and CDT activities.

To keep updated with current guidance including social distancing and face covering policies please visit <a href="https://www.imperial.ac.uk/safety/safety-by-topic/laboratory-safety/biological-safety/covid-19-guidance/">https://www.imperial.ac.uk/safety/safety-by-topic/laboratory-safety/biological-safety/covid-19-guidance/</a>

### **Travel and Financial Information**

Travel may be required

Students will regularly be required to travel between London and Oxford as part of their course to attend CDT lectures, seminars and other events part of the CDT. To facilitate this the CDT will contribute up to £25 per return journey. You will be able to claim back the cost of a railcard for only this year ( but due to the current situation with Covid-19) this has been suspended. Please note this is a maximum amount and we expect travel costs to be kept to a minimum wherever possible by booking fares in advance, making use of railcards/purchasing multi-ride tickets for the Oxford Tube or X90 bus routes. Your claim may be queried if you are regularly requesting the cost of on-the-day fares to be reimbursed.

Travel has been greatly impacted by Covid-19. For updates on departmental travel policies check the website <a href="https://www.imperial.ac.uk/natural-sciences/research/support-for-researchers/funding-opportunities/collaborations-and-travel/">https://www.imperial.ac.uk/natural-sciences/research/support-for-researchers/funding-opportunities/collaborations-and-travel/</a>

Advanced train fares, flights, and accommodation should be bought well in advance, see your CDT administrator for details. If you do need to claim back travel costs you will need original valid receipts and relevant paperwork. Photos/scans are not acceptable. If you are claiming funds for meals, please keep the part which details what was eaten rather than just the final amount. Please contact the CDT administrator for assistance.

Students will have a limited travel budget for travel to UK and overseas conferences and other meetings not organised by the CDT. Attendance at these should be discussed with your supervisor and approval sought for travel funding. We expect you make every effort to be as economical as possible. In particular, you should approach your College for matching funding for each conference where you will make a presentation.

While you are travelling, your personal safety and welfare are very important to us. The University provides travel insurance for students travelling on University business and has many guidelines on your safety when abroad. These can be found on the University's travel insurance webpage: <a href="https://www.imperial.ac.uk/staff-travel-and-expenses/planning-a-trip/travel-insurance/">https://www.imperial.ac.uk/staff-travel-and-expenses/planning-a-trip/travel-insurance/</a>

If you do not fill out the form you will not be covered by the University's Travel Insurance.

# **Academic Misconduct Policy and Procedures**

It is important that you learn how to properly attribute and acknowledge the work, data and ideas of others. Plagiarism is scientific misconduct, and students whose assessments can be shown to contain plagiarism are subject to penalties as outlined in the College's Misconduct Policy and Procedures.

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline

### **Academic Misconduct Policy and Procedures**

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www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline

### **Logistical Information**

Your first year in the CDT is likely to be hectic and demanding. You can expect to need to work some evenings and weekends to keep on top of the material in the courses and get your assignments completed. A reasonable number of activities will need to be undertaken in small groups and you will need to collectively organise your time.

### **Academic support, Absence and illnesses**

### **General**

Academic support comes primarily from the course lecturers, cohort and personal mentors, the other academic staff associated with the CDT and project supervisors. Students are actively encouraged to go directly to course lecturers and other staff with academic questions on an informal basis. Students with concerns about their Cohort Mentors, or about their project supervisor, should notify their co-Director of Studies (Find out who there are ) at once. The Centre Managers will be your point of contact for all administrative or logistic issues. Once these channels have been exhausted, matters should be raised with the CDT Directors, Prof Rama Cont & Dr Tom Cass.

### **Feedback**

Students will obtain feedback via the following routes:

- Marked coursework
- Tutorials and extended activities during MPE Wednesdays
- Meetings with research project supervisors
- Feedback on presentations from Kick Off Camp
- Feedback on provisional project report

- Meetings with Cohort Mentors
- Meetings with the Directors of Studies as necessary.

Any assessed coursework done as part of a course will be marked promptly, students are encouraged to discuss difficulties with the course lecturer. For the research project, students will meet their supervisor at least weekly to discuss their progress. If the Cohort Mentors, Personal Mentors or student supervisor should report any problems with the student's progress, either on the project work or on the other parts of the course, the Co-Directors of Studies will discuss these with them and the student. The management team is keen to gather student feedback in order to improve the running and the content of the course. Students should therefore complete the course surveys at the end of each term.

The core courses are assessed via the Imperial College Online system PG Sole (https://www.imperial.ac.uk/students/academic-support/student-surveys/pg-student-surveys/pg-sole/)

### **Absence and illness**

Students are required to report any extended periods of absence or illness (three days or more) to the Course Director and Centre administrator. If the absence is prolonged, normally four weeks or longer, it will be necessary to request an interruption of studies. This includes any absence during the summer term. In the case where this may affect assessment of part of the course, a medical certificate is normally required. If an absence from an examination is to be taken into account by the Examiners, a medical certificate is essential. Students should also be aware that their bursary is for a full-time employment up to the end of September 2024.

If the illness or absence causes you to miss a coursework or exam deadline, please speak to your supervisor who will advise you on the actions to be taken.

Annual leave is dependent on the student's status, and each student should discuss this at the start of their research degree with their supervisor. All annual leave must be requested from and approved by the supervisor and students must provide adequate notice.

Leave of absence during term time needs to be kept to minimum. A leave of absence must be agreed in advance. When there is an absence of more than a week, the student is required to get permission from the Directors of Studies.

### **Study leave**

If you plan to carry out research away from College for a period of 2 weeks or more as part of your PhD student registration, your department can approve study leave using the External study leave form (which is then submitted by your department to the Registry Records Team for recording). Study leave is normally pursued either as a placement under the supervision of a third party organisation (placements are managed by your department and are subject to College Placement Learning Policy, Good Practice under the College's overall off-site working protocols) or fieldwork managed by your department under off-site working protocols. Contact your departmental postgraduate administrator for further guidance if you and your supervisor wish to have study leave considered

www.imperial.ac.uk/student-records-and-data/for-current-students/research-degrees/administration/

### **Ethics**

The College has an overall Ethics code which sets out key behaviours which the College expects of all its members in order to facilitate a leading academic community which demonstrates integrity in all its activities, and which manages relationships with third parties appropriately. These behaviours include honesty, fairness and transparency. The Code is intended to provide a starting point to help members of the College identify and tackle ethical issues faced in the course of their activities. It also describes routes available for members of the College community to escalate ethical concerns where appropriate.

www.imperial.ac.uk/research-ethics-committee

### **Interruption of studies**

An Interruption of Studies (IoS) should be requested when a personal emergency or other circumstance arises that requires you to take a break from your studies. No fees are payable during such a period and research registration is effectively suspended. It is important that IoS is applied for immediately after a relevant situation arises so that registration and your PhD milestone timeline can be suspended until you return and so that you do not exceed the maximum registration period and thesis submission deadline.

Interruption of Studies (IOS) should be put in place for any compassionate leave, maternity and paternity leave, personal emergency, lack of funding, and other appropriate reasons. You may apply for Interruption of Studies by discussing your situation with your supervisor; then, email Dr Ryan Barnett – the <u>Director of PG Studies</u> – copying the supervisor and the centre manager , with proposed dates and reason for interruption.

For fee-paying students, no fees are payable during IoS. It should also be noted that registered student status, and the payment of any stipend, will also be suspended for the duration of IoS.

Where an interruption of studies is taken on health grounds, a condition of the interruption being granted is that you will be required to provide medical evidence as to your fitness to return to your studies and you will need to arrange to be seen by the College Health Centre prior to your return.

If you are an international student on a Tier 4 student visa, you might have to leave the UK if the interruption period is more than 8 weeks. An exception to this would be if you had been declared unfit to travel. Please see further information for international students on how your visa may be affected by an interruption of studies.

http://www.imperial.ac.uk/study/international-students/visas-and-immigration/changes-to-course-of-study/

More details can be found in:

Mitigation / Extenuating Circumstances Policy and Procedures:

http://www.imperial.ac.uk/about/governance/academic-governance/regulations/

### **Student Responsibilities**

- ➤ Work ethics Students are expected to organise, conduct and present their research project in an independent fashion. The supervisory role is to guide and advise the student intellectually as well as technically, but it is not the supervisors' responsibility to do the thinking or the work for the student. All projects will have at least two supervisors who should be approached for guidance. It is the student's responsibility to make an effort and seek contact with their supervisors on a regular basis.
- ➤ Cheating and plagiarism Students should be aware of the need to give proper credit for the work of others when writing papers, reports, theses, etc. This is particularly important when the work is in collaboration with other persons. Please see Appendix 5 for more details regarding plagiarism. Allegations of academic misconduct will be dealt with in accordance with Imperials' Cheating Offences Policies and Procedures: <a href="http://www.imperial.ac.uk/about/governance/academic-governance/regulations/">http://www.imperial.ac.uk/about/governance/academic-governance/regulations/</a>
- Complaints Any complaint raised by a PhD student shall be dealt with by the Party against whom the complaint has been raised, according to the appropriate procedures: the Student complaints procedure at Reading and the Procedure for Dealing with Complaints by Students at Imperial. Complaints relating to the overall programme will be dealt with jointly by Reading and Imperial in accordance with Imperial's Procedure for Dealing with Complaints by Students <a href="https://www.imperial.ac.uk/media/imperial-college/administration-and-support-services/registry/academic-governance/public/academic-policy/complaints-from-students/Student-complaints-guidance-to-students.pdf</a>
- ➤ Student withdrawals and appeals Students must attend to the satisfaction of both the Head of Department of Mathematics and Statistics at Reading, and the Head of Department for the Department of Mathematics at Imperial. Students who have been asked to leave the programme due to unsatisfactory academic progress will have a right to appeal under Imperial's procedure Student Withdrawals and Appeals Procedure for Dealing with Cases of Unsatisfactory Academic Progress <a href="http://www3.imperial.ac.uk/registry/exams/studentappeals">http://www3.imperial.ac.uk/registry/exams/studentappeals</a>
- ➤ Conduct Students must behave in a reasonable way at all times on Campus. Allegations of non-academic misconduct will be dealt with under Imperial's Code of Student Discipline and Reading's Regulations for Conduct. For additional information, <a href="https://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline/">https://www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-and-discipline/</a>
- ➤ Use of calculators in written examinations Only Imperial-owned approved non-programmable calculators can be used in written examinations. Students are advised to either purchase an appropriate calculator or practise on an Imperial Collegeowned calculator before the written examinations.

### **Laptops – warranty**

Users can check the warranty status on their HP devices including Laptops, Desktops and Monitors by following the instructions found on the HP product warranty check page. If you believe your device is faulty, please raise a generic request on ASK (https://imperial.service-now.com/ask).

Please contact the CDT Administror in the first instance as you will need to have the invoice number to make a claim.

### **Imperial Students**

The University provides travel insurance for students travelling within the UK and abroad on University business and has many guidelines on your safety when abroad. These can be found on the University's travel insurance webpage <a href="https://www.imperial.ac.uk/staff-travel-and-expenses/planning-a-trip/travel-insurance/">https://www.imperial.ac.uk/staff-travel-and-expenses/planning-a-trip/travel-insurance/</a>

Before every trip you should complete the online travel insurance form and "save as a draft". Email the PDF of the form the CDT Administrator at least 5 days in advance for approval. Once you receive approval, upload the approval email into the "risk assessment" section of the form and submit. If you do not fill out the form you will not be covered by the University's Travel Insurance.

### Resources available to CDT Students

In the first year you will all be based in the CDT space. You will all be given a CDT laptop which we will expect you to use for you coursework and will be useful when you visit companies. It remains the property of the Math Department and needs to be returned at the end of your time with us. You will also be assigned a locker, please make use fo it to keep your stuffs safe. In later years, you will be physically located within the research group of your primary supervisor.

As members of the department, all CDT students have access to

- Department bench collections with a screen
- Libraries
- Bookable teaching space
- Black & white and colour printers throughout the building.
- Social spaces including the common room and the café

We encourage you to make use of all of these resources.

### **English Center for Language**

International students, whose first language is not English, are strongly advised to visit the University Language Centre to find out more about the courses on topics such as Academic Writing and Advanced Communication Skills which run during term time. Details are available:https://www.imperial.ac.uk/academic-english

# General advice for your time in the CDT

- 1. Work together. You will learn as much from each other, and students in other Cohorts, as you will from anyone else.
- 2. Don't struggle in silence. Make use of your peers, and departmental and college support. If there's a problem, let someone know (e.g. your cohort mentor, the CDT administrator).

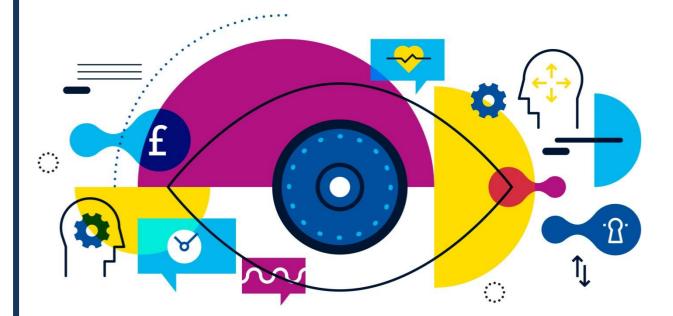
- 3. Stay on top of your workload. There is a lot to do.
- 4. Pass on comments and suggestions to the Directors and administrators so that the CDT experience is continually improved.
- 5. Make the most of your interactions with industry. They provide stimulation for your research projects (and the company might want to employ you).

# **Wellbeing and Support**

### > Student Space

The Student Space website is the central point for information on health and well-being.

- www.imperial.ac.uk/student-space
- http://www.imperial.ac.uk/students/new-students/



### The Graduate School

The Graduate School is for all Master's and Doctoral students at Imperial College London and you automatically become a member when you register as a postgraduate student at Imperial.

The Graduate School has been set up to support all postgraduate students at the College through:

- Training and development courses
- Networking activities, social and academic events to encourage cross- disciplinary interactions
- Forums to represent the views of postgraduate students throughout the College

### Professional skills courses

You can see the full range of free professional skills courses for postgraduate students on the Graduate School website:

www.imperial.ac.uk/study/pg/graduate-school/students/doctoral/professional-development/

All courses can be booked online.

### Contact us

□ Level 3, Sherfield Building, South Kensington Campus

020 7594 1383

graduate.school@imperial.ac.uk

www.imperial.ac.uk/graduate-school

### Advice Services

The tutor system is complemented by a College-wide network of advice and support. This includes a number of specialist services.

### Careers Service

The Careers Service has strong links to your Department and you will have a named Careers Consultant and Placement and Internship Adviser who will run both group sessions and individual meetings within your Department. You can arrange to meet with your linked Careers Consultant or Placement and Internship Adviser either in your Department or centrally at the South Kensington Campus on Level 5, Sherfield Building where the Careers Service is based.

Visit the Career Service's website to:

- Book a careers appointment
- Find resources and advice on successful career planning
- www.imperial.ac.uk/careers

### Counselling and Mental Health

The Student Counselling and Mental Health Advice Service offers short-term counselling to all registered students. The service is free and confidential. Counsellors are available at the South Kensington, Hammersmith and Silwood Park Campuses.

### www.imperial.ac.uk/counselling

If you suddenly find yourself in financial difficulties or experience an unexpected change in circumstances, you may be eligible to apply for emergency financial help through the Student Support Fund. The Fund offers a one-off payment of up to £2,000 to cover such emergencies as last minute accommodation and travel necessities, equipment and childcare. It does not have to be repaid.

### Imperial College Union (ICU) Advice Centre

Imperial College Union runs the Advice Centre independently of the College with advisers on hand to provide free, confidential, independent advice on a wide range of welfare issues including housing, money and debt, employment and consumer rights, and personal safety.

www.imperialcollegeunion.org/advice

### > Student Hub

The Student Hub represents a single point of contact for all key administrative information and support. The Student Hub team can help you with enquiries about:

- Accommodation (including checking contracts for private accommodation)
- Admissions
- International student enquiries
- Research degrees
- Student financial support
- Student records
- Tuition fees
- Level 3, Sherfield Building, South Kensington Campus
- 020 7594 9444
- student.hub@imperial.ac.uk
- www.imperial.ac.uk/student-hub

### Accommodation

Imperial offers a wide range of accommodation to suit a range of budgets and in a variety of locations.

The Student Hub team can help you find the right place to live, whether it's the College accommodation or private accommodation.
Level 3, Sherfield Building, South Kensington Campus
020 7594 9444
student.hub@imperial.ac.uk
http://www.imperial.ac.uk/study/campus-life/accommodation/
> Health Services
NHS Health Centre and finding a doctor
Even if you're fit and healthy we recommend that you register with a local doctor (GP) as soon as you arrive in London. For help finding your nearest GP see the Student Space website:
www.imperial.ac.uk/student-space/here-for-you/find-a-doctor
There is the Imperial College Health Centre on our South Kensington Campus which you may visit during clinic hours if you're feeling unwell. Students living within the practice catchment area are encouraged to register with the Centre.
www.imperialcollegehealthcentre.co.uk
> NHS Dentist (based in the Imperial College Health Centre)
Imperial College Dental Centre offers a full range of NHS and private treatment options.
https://www.imperial.ac.uk/student-support-zone/your-health/
Disability Support
Disability Advisory Service
The Disability Advisory Service provides confidential advice and support for all disabled students and students with specific learning difficulties.
If you think you may have dyslexia or another specific learning difficulty but have never been formally assessed, the Disability Advisory Service offers initial screening appointments.
Room 566, Level 5, Sherfield Building, South Kensington Campus
020 7594 9755
disabilities@imperial.ac.uk
www.imperial.ac.uk/disability-advisory-service
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# **➤ Departmental Disability Officers**

Departmental Disability Officers are the first point of contact within your department. They can apply for additional exam arrangements on your behalf, and will facilitate support within your Department. Please contact (pgr.welfare@imperial.ac.uk) if you need more informations.

contact (pgr.welfare@imperial.ac.uk) if you need more informations.
More information on Departmental Disability Officers is available at:
www.imperial.ac.uk/disability-advisory-service/support/ddos
More information on procedures for the consideration of additional exam arrangements in respect of disability is available at:
www.imperial.ac.uk/media/imperial-college/administration-and-supportservices/registry/academic-governance/public/academic-policy/exam-arrangements-and-resits/Exam-arrangements-in-respect-of-disability.pdf
➢ Library and IT
Information and Communications Technologies (ICT)
If you're having problems with technology (including computers, laptops and mobile devices), you can get help from ICT's Service Desk.
020 7594 9000
www.imperial.ac.uk/ict/service-desk
Personal Development Opportunities for Research Degree Students
Graduate Teaching Assistants (GTA)
Many research students across the College are involved with teaching, supervision and assessment (in the form of marking) of both undergraduate and Master's level students. Working as a GTA provides research students with an opportunity to broaden their experience at Imperial College, and develop further skills. These include learning to teach, convey complex technical concepts, writing/communication skills, etc. Furthermore, research students may find that acting as a GTA helps improve their own technical abilities (both theoretical and practical), enables them to broaden their knowledge base, and gain communication and task management experience. When considering a career in academia, teaching experience is important and GTA work allows building up a teaching portfolio and even becoming aware of one's own teaching style.  http://www.imperial.ac.uk/staff/tools-and-reference/quality-assurance-enhancement/roles-and-indication and interest an
responsibilities/

### Imperial Outreach

The Outreach team at Imperial has been established for over a decade. It is responsible for delivering a wide range of exciting and inspiring activities for students from disadvantaged backgrounds.

The team's focus is on science, technology, engineering and mathematics (STEM) learning and progression to higher education including access to medicine and support for post-16 student choices.

The team work with schools, colleges and community organisations across the Greater London area to raise aspirations, change perceptions, support teaching staff and stimulate interest in STEM subjects from primary through to A-Level education, as part of Imperial's widening participation and outreach agenda.

As part of the team's commitment to the Office For Fair Access (OFFA), they have a specially targeted portfolio of activities that form part of the College's Access Agreement to ensure that every academically talented pupil has the opportunity for support, regardless of their background or situation.

http://www.imperial.ac.uk/be-inspired/student-recruitment-and-outreach/

### Outreach Postgraduate Ambassador (OPA)

The Outreach Postgraduate Ambassador (OPA) scheme provides an opportunity for you to work with local schools to inspire a young audience to consider studying science, technology, engineering, mathematics and business subjects.

Some activities will draw on your subject expertise, giving you the chance to communicate your research in a way that is suitable for a school age audience. Other opportunities may be more generally focused on your experience of higher education through talks about student life for sixth form students or mock interview sessions for potential applicants.

http://www.imperial.ac.uk/be-inspired/student-recruitment-and-outreach/imperial-students-and-staff/volunteer/ambassador-schemes/opa/

### English Language Requirement

If you are not a native English speaker you must meet the College's English language requirements.

See the Admissions website for details:

	www.imperial.ac.uk/study/pg/apply/requirements/english
For	information on English language support available while you're here:

http://www.imperial.ac.uk/academic-english/current-students/doctoral/

### Professional Skills

All doctoral students are expected to complete a number of our Professional Development courses as part of their doctoral degree registration.

The Graduate School's Professional Development attendance requirement exists in order to ensure that all students receive some professional development training while at Imperial and have the opportunity to engage with the programme, alongside their research work.

See the Graduate School's website for details:

Į		www.imperial.ac.uk/study/pg/graduate-school/students/doctoral/professional-
(	dev	velopment/attendance-requirement/

# **Doctoral Milestones & Departmental requirements**

# **Doctoral Milestones and Progress Reports**

**Department of Mathematics Milestones for Research Degrees** 

### **Research Plan Confirmation (RPC)**

Department of Mathematics PhD students, both part-time and full-time, are required to produce a Research Plan and have it assessed within 3 months of initial registration.

### Content

- Brief description of your research area / topic
- Length typically 2-4 pages
- A list of mathematics <u>postgraduate courses/activities</u> and <u>Graduate School courses</u> you plan to take in your first year.

### How does it work?

- Discuss your plan in detail with your supervisor(s)
- Submit the RPC through the Maths PhD Milestones online system (you will receive an autoreminder email with a link one month prior to the due date).

### Possible outcomes

- Progress
- Re-submission

# **Early Stage Assessment (ESA)**

The College requires that, following the RPC, a student's progress during PhD registration must be assessed. The next stage is the Early Stage Assessment (ESA). This Milestone should be completed by:

• 12 months (full-time students) for Random Systems CDT students | 18 months (part-time students) after the date of initial registration.

### Content

- Gives a clear but concise account of the most relevant background material you have learned so far. This should include a survey of the literature on the topic you are working on.
- Describes the research problem which is to form the core of your thesis.
- Length typically no more than 15 pages
- Ideally the report can be made into an introductory chapter of your thesis, or even, perhaps with more work, turned into a published paper.
- The report should not be a complete account of your work so far. It should show the background your research is based on, and where the argument is intended to go. The assessors should be able to see that you have a good idea, for this stage, of what you will need to do.
- Students who started their postgraduate research degree on or after 24 September 2019 will need to follow the College's policy on using Turnitin as part of the ESA submission process.

### Before the ESA

Students should have met the Graduate School requirement at ESA.

### The ESA Process

- Submit the ESA report through the Maths PhD Milestones online system (you will receive an auto-reminder email with the link to the system, one month prior to the due date).
- The assessor(s) recommended by your supervisor will read your ESA report, and during the exam that will be arranged by your supervisor they will decide:
- To what extent you are in command of the background material you need to solve the problem;
- Whether you understand the problem and are likely to be able to progress with it (if you have already obtained some results, even if preliminary ones, you should describe these);
- Whether you can write clearly about a scientific topic.

### Possible outcomes

Progress

If the assessors do not approve the report, there are three possibilities:

- Re-submit. Full-time within 2 months, part-time within 4 months of original ESA due date.
- Transfer to MPhil registration.
- Fail/withdraw. If the College determines that your progress is such that you cannot continue, you may be required to withdraw from the College at this stage.

### Important notes!

• It is the student's responsibility to check that they have indeed passed this Milestone by checking their record on Student e-Service.

# Late Stage Review (LSR)

The College requires that, following ESA, a review of a student's PhD research ability must be undertaken:

• 18-24 months (full-time students) | 30-36 months (part-time students) after the date of initial registration.

### Content

- You should describe the research problem which is to form the core of your thesis;
- You should also describe what you have achieved so far on this problem, and what you need to
  do to complete the work.
- **Length** typically no more than 30 pages
- Ideally the report can be turned into a published paper, or into a chapter of your thesis.
- The report should not be a complete account of all the background you have learned, nor does it
  need to be a first draft of the final thesis. It should show the background your research is based
  on, and where the argument is intended to go. The assessors should be able to see that you
  have a good idea, for this stage, of what you will need to do.

### **Before the LSR**

- Students should have met the Graduate School requirement at LSR
- If applicable, non-native speakers should have undertaken courses recommended by **Centre for Academic English** and followed their recommendations.
- To pass the LSR, you must show you have completed 100 hours of courses/activities. See below for details.

### **100 Hours of Postgraduate Courses/Activities**

All students are required to have taken 100 hours of PG courses/activities in their first 2 years of study. Students should discuss courses/activities with their supervisor (s).

You should aim to take a wider range of courses than just those specific to your thesis topic: Taught Courses in Mathematics (TCC, LTCC, Mathematical Finance Graduate School, Imperial College MSc programmes). Attendance of summer schools, conferences, seminars, reading groups or similar activities (all appropriately assessed) counts towards this requirement. Active participation as a solver at the Math Helpdesk can also count towards the 100 hours if agreed by your supervisor. The aim is to broaden, as well as deepen, your mathematical education.

LTCC courses (15 hours)

TCCcourses (generally 20 hours)

Mathematical Finance Graduate School, (8-15 or 20-30 hours)

Imperial College MSc programmes (30 hours of lectures)

Students progressing from the programmes below can count hours from courses taken in year 1 towards these 100 hours:

- CDT Mathematics of Planet Earth (Imperial)
- CDT Geometry Number Theory (UCL)
- CDT Financial Computing Analytics (UCL)

### The LSR Process

- Submit the LSR report through the Maths PhD Milestones online system (you will receive an auto-reminder email with the link to the system, one month prior to the due date).
- Your supervisor will appoint two independent assessors and arrange an exam.
- The assessors will read your LSR report, and after meeting you they will decide:
- Whether you are in command of the material you need to solve the problem;
- Whether you understand the problem and are likely to be able to solve it;
- Whether you can write clearly about an advanced scientific topic:
- Whether you can explain and defend the work in an oral examination;
- Whether your plan for completing the work within the deadline is realistic.

### Possible outcomes

### **Progress**

- If the assessors do not approve the report, there are three possibilities:
- Re-submit within 3 months of original LSR due date
- Transfer to MPhil registration

• you cannot continue, you may be required to withdraw from the College at this stage.

### Important notes!

- You must contact your supervisor and section tutor for feedback.
- Badly written or badly thought out reports will need to be improved and re-submitted.
- It is the student responsibility to check that they have passed this milestone, by checking their record on **Student e-Service**.

### **Year Three Progress Report**

When approaching their final year, students and their supervisors should meet to discuss their progress and complete the Y3PR forms. The report should describe achievements and immediate goals.

Students will receive an auto-reminder email one month before the due date via Maths PhD Milestones online system.

### **Examination Entry**

After completing all above Department of Mathematics Milestones for Research Degrees students should aim to submit their examination entry forms at least four months before submitting a thesis, or four months before the final submission deadline

# **College Academic Policy for Research Degrees**

www.imperial.ac.uk/about/governance/academic-governance/academic-policy/research-programmes/

# **Mathematics PhD Progression flowchart**

	Department of Mathematics Milestones for Research Degrees	Part-time	
Full-time study	Please read full guidelines on the Mathematics  Milestones for Research Degrees page  Sign-in to Student e-Service to check milestone due dates	study	
RPC 3 months	Research Plan Confirmation (RPC)  A brief description of your research area (2-4 pages) for discussion with supervisor(s)  Complete Plagiarism Awareness online course  Non-native speakers take English Assessment 1 (EA1)	RPC 3 months	
ESA 9 months	Early Stage Assessment (ESA)  Written report of research problem which is to form the core of your thesis (no more than 15 pages) orally examined by at least one independent member of academic staff.	ESA 18 months	
	Must have completed Plagiarism Awareness online course + attended Graduate School Professional Skills courses  Non-native speakers with Level 1 or Level 2 in English Assessment 1 (EA1) must take English Assessment 2(EA2)		
LSR 18-24 months	Late Stage Review (LSR)  Written report of research problem (no more than 30 pages) orally examined by two independent member of academic staff  Must have completed Graduate School Professional Skills courses  Must have satisfied 100 hours of PG courses/activities	LSR 30-36 months	
30 months	Year Three Progress Report (Y3PR)  Year three progress report describing achievements/immediate goals for discussion with supervisor(s).	54 months	
30-48 months	Exam Entry Form (EEF)  Completed/submitted at least 4 months before thesis submission date	54-72 months	

Submit thesis via <u>e-thesis</u>

### **Examination Procedure**

### **Examination Entry**

You should aim to submit your examination entry forms at least four months before you would like to submit your thesis, or four months before your final submission deadline.

This means submitting your forms no later than 44 months after your start date if you are a full-time student, or 68 months after your start date if you are a part-time student.

Please note that submission of your thesis is not permitted until you have completed the minimum registration period.

Before you submit the examination entry forms, you should ensure that you have completed all your milestones and that the Registry have received all relevant documentation.

Instructions for examination entry can be found here:

www.imperial.ac.uk/student-records-and-data/for-current-students/research-degrees/examination-information/examination-entry-forms/

### **Thesis Submission**

Once you have submitted your examination entry forms, you will be told when your entry has been processed and advised of the next stages. Please note: you are required to submit your thesis by your submission deadline, regardless of whether you have been contacted by Registry or not at this stage. For all students who started on or after 28 September 2019 only, you will be required to submit your Thesis through Turnitin for a plagiarism check. This check will be made after you have submitted your theses so that there is no further time pressure added to your workload.

Please read the relevant submission requirements to ensure that you submit in the correct format:

www.imperial.ac.uk/student-records-and-data/for-current-students/researchdegrees/examination-information/thesis-submission--vivas/

### **Vivas**

Once you have submitted your thesis, the Registry will ensure that copies are provided to your examiners, in advance of your viva examination.

Your supervisor, or another member of staff in your department/division, will be responsible for organising the viva and making all the necessary arrangements.

When your viva has taken place, you may be informed of the outcome by the examiners. You may be asked to make some minor corrections to your thesis before submitting the final copies and being awarded your degree.

Please read the Success Guide for postgraduate research students for more advice on preparing for your viva:

www.imperial.ac.uk/students/success-guide/pgr/progression-and-feedback/thesis-submission-and-viva/preparing-for-your-viva/

### E-theses: Requesting an Embargo

In some cases it may be necessary to delay the release of a thesis to the public by applying for an embargo.

If you decide that your thesis should have an embargo, discuss this with your supervisor and tick the appropriate box on the <a href="https://example.com/resis-declaration-form">Thesis declaration form</a>

Reasons for requesting an embargo include:

You plan to publish your thesis

- To avoid invalidating a potential patent application, see Intellectual Property
- It contains commercially sensitive research or research with confidentiality obligations
- It contains information collected under the promise of confidentiality and anonymity e.g. patient information
- It shows evidence of animal experimentation and release to the public would pose a significant risk to the researchers involved or to Imperial staff and students
- It contains information of significance for national security

For further information please contact the Research Degrees team

www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarlycommunication/open-access/theses/requesting-an-embargo/

### **Plagiarism**

Plagiarism is the presentation of another person's thoughts, words, images or diagrams as though they were your own. Another form of plagiarism is self-plagiarism, which involves using your own prior work without acknowledging its reuse. Plagiarism may be intentional, by deliberately trying to use another person's work by disguising it or not citing the source, or unintentional where citation and/or referencing is incorrect

Plagiarism is considered academic misconduct and must be avoided, with particular care on coursework, essays, reports and projects written in your own time and also in open and closed book written examinations.

Where plagiarism is detected in group work, members of that group may be deemed to have collective responsibility for the integrity of work submitted by that group and may be liable for any penalty imposed, proportionate to their contribution.

For further information, please see:

www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate- and-taught-postgraduate/exams-assessments-and-regulations/plagiarism-academic- integrity--exam-offences/

TurnitinUK is an online text matching service which assists staff in detecting possible plagiarism. The system enables institutions and staff to compare students' work with a vast database of electronic sources.

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www.imperial.ac.uk/admin-services/ict/self-service/teaching-learning/elearning-services/turnitin/about-turnitin/

The Graduate School, in conjunction with the Library, has developed an online plagiarism awareness course. It aims to equip Imperial PhD students with a working knowledge of the concept of plagiarism and how to avoid it. This enables students to use and share information ethically, with academic integrity and in accordance with Imperial College's

Examination & Assessment: Academic Integrity Policy.

www.imperial.ac.uk/study/pg/graduate-school/professional-skills/doctoral/online-courses/

### Conclusion

This is the term used for work that has been conducted by more than one individual, in contravention of the assessment brief. Where it is alleged that there has been collusion, all parties will be investigated under the Academic Misconduct procedure.

You should note that whilst the College encourages students to support each other in your studies you should be careful to ensure that you do not exceed any assessment brief with regards to individual work, acknowledge the contributions of others in your work, and do not leave yourself open to allegations that you have supplied answers to enable another student to commit academic misconduct.

# **College Policies and Procedures**

# **Regulations for students**

All registered students of the College are subject to the Regulations for Students, the College Academic and Examination Regulations and such other regulations that the College may approve from time to time.
www.imperial.ac.uk/about/governance/academic-governance/regulations
www.imperial.ac.uk/students/terms-and-conditions
Academic Integrity You are expected to conduct all aspects of your academic life in a professional manner. A full explanation of academic integrity, including information on the College's approach to plagiarism is available on the College website:
www.imperial.ac.uk/student-records-and-data/for-current-students/undergraduate-and-taught-postgraduate/exams-assessments-and-regulations/plagiarism-academic-integrityexamoffences
Academic Misconduct Policy and Procedures  It is important that you learn how to properly attribute and acknowledge the work, data and ideas of others. Plagiarism is scientific misconduct, and students whose assessments can be shown to contain plagiarism are subject to penalties as outlined in the College's Misconduct Policy and Procedures.  www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-
and-discipline
Appeal and Complaints Procedures  We have rigorous regulations in place to ensure assessments are conducted with fairness and consistency, claims for mitigating circumstances have been considered reasonably and in line with the regulations of the College, and that the decisions of the Boards of Examiners maintain the integrity of our academic awards. In the event that you believe that you have grounds to appeal these decisions, we have laid out clear and consistent procedures through which appeals can be investigated and considered:
Student Complaints The College strives to ensure that all students are well supported in their studies and receive a good
experience of their programme and the wider College activities. If you feel that your experience has not lived up to these expectations the College has an agreed Students Complaints process through which your concern can be investigated and considered.  www.imperial.ac.uk/about/governance/academic-governance/academic-policy/complaints-appeals-
and-discipline

# **Student Disciplinary Procedure**

The College has the right to investigate any allegation of misconduct against a student and may take disciplinary action where it decides, on the balance of probabilities, that a breach

of discipline has been committed. The general principles of the Student Disciplinary Procedure are available on the College website:  www.imperial.ac.uk/admin-services/secretariat/college- governance/charters/ordinances/students
Copyright
Copyright is an automatic right given to creators that allows them to control who copies, adapts, translates and makes public their work. Unless you have the copyright holder's permission, you canno do these things unless permitted by law or licence.
www.imperial.ac.uk/admin-services/library/learning-support/copyright-guidance/
Intellectual Property Rights Policy
For further guidance on the College's Intellectual Property Rights Policy is available on the College website:
www.imperial.ac.uk/students/enterprising-students/intellectual-property/

# Statement of Expectation for UKRI students

The Research Councils have released a single statement on how research organisations, students and their respective training environments must operate for all students funded by UKRI. <a href="https://www.ukri.org/skills/policy-and-frameworks/">https://www.ukri.org/skills/policy-and-frameworks/</a>

# **Publications & Research Outputs**

### **Research Fish**

The UK Research and Innovation (UKRI) ask students supported by EPSRC studentships to provide, via researchfish®, up-to-date information about the outputs and outcomes arising from their research. It is important that doctoral students are able to tell EPSRC about their research activities and successes, and the information helps UKRI understand how students contribute to their respective areas of research and engage with partner organisations and other communities. It allows the UKRI to acknowledge and further promote students' achievements and to make the case to Government for continue public funding of similar studentships in the future. Such activities can include invited talks, poster/oral presentations, outreach activities, awards and publications.

EPSRC submission Period in researchfish® usually takes place in February each year.

When you register for a researchfish account you have to set up your own username and password and should use these to login at <a href="https://www.researchfish.com/">https://www.researchfish.com/</a>. For advice on this please contact the CDT administrator in the first instance.

### **Acknowledgements in publications**

### Please include the following acknowledgement in all papers:

"This publication is based on work supported [or partially supported] by the EPSRC Centre for Doctoral Training in Mathematics of Random Systems: Analysis, Modelling and Simulation (EP/S023925/1)"

### **Deposit on acceptance**

Imperial's academics, researchers, staff and students are free to publish in journals of their choice. Where funders encourage or mandate open access, green open access (within the permitted embargo periods) should normally be the preferred route, unless funding for gold is available. <a href="https://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/open-access/oa-policy/">https://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/open-access/oa-policy/</a>

By depositing your accepted manuscript in Spiral now, your final published journal article or conference paper will be eligible for submission to the REF 2021. To do this, you must upload a copy of your accepted manuscript to Symplectic, or ask a proxy to do so. The Library's open access team will manage all accepted manuscript submissions to ensure you have provided sufficient information, and that the submitted manuscript meets the REF 2021 eligibility requirements. <a href="https://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/open-access/post-2014-ref/">https://www.imperial.ac.uk/research-and-innovation/support-for-staff/scholarly-communication/open-access/post-2014-ref/</a>

### **Use of IT Facilities**

View the Conditions of Use of IT Facilities:

http://www.imperial.ac.uk/admin-services/ict/self-service/computers-printing/staff-computers/conditions-of-use-for-it-facilities/

### **Employment During Studies**

If you are studying full time, the College recommends that you do not work part-time during term time. If this is unavoidable we advise you to work no more than 10–15 hours per week, which should be principally at weekends and not within normal College working hours.

Working in excess of these hours could impact adversely on your studies or health.

If you are here on a Tier 4 visa you can work no more than 20 hours a week during term time. Some sponsors may not permit you to take up work outside your studies and others may specify a limit. If you are considering part-time work during term time you are strongly advised to discuss this issue with your supervisor or Section PG Tutor. If you are on a Tier 4 visa you should also seek advice from the International Student Support team regarding visa limitations on employment.

The College's examination boards will not normally consider as mitigating circumstances any negative impact that part-time work during term-time may have had on your performance in examinations or in other assessed work. Examinations or vivas cannot be rescheduled to accommodate your part-time working arrangements.

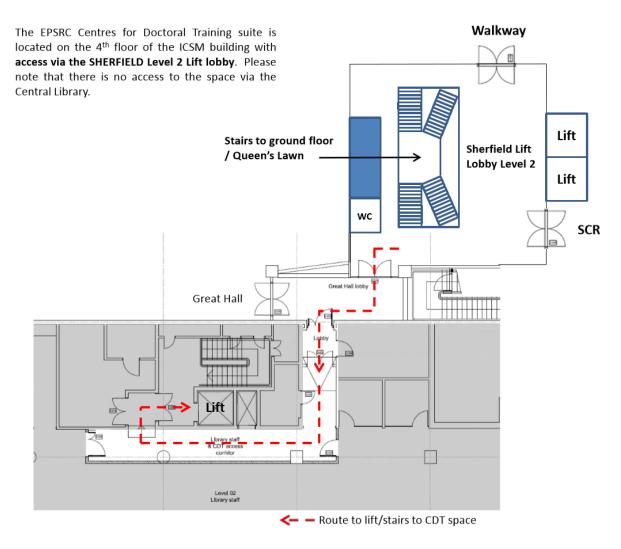
# **General Information - Imperial College London**

Imperial College is located south of the Albert Hall in South Kensington. The nearest tube stationare South Kensington and Gloucester Road on the District/Circle Line and High Street Kensington on the Circle Line. South Kensington and Gloucester Road are also on the Piccadilly Line which goes directly to Heathrow airport <a href="https://www.imperial.ac.uk/media/imperial-college/visit/public/SouthKensingtonCampus.pdf">https://www.imperial.ac.uk/media/imperial-college/visit/public/SouthKensingtonCampus.pdf</a>



# The CDT in Random System hub

The CDT hub is housed mainly on the 4th floor of the Central Library building (number 26 on the South Kensington Campus Map). The entrance to the EPSRC Centres for Doctoral Training is through level 2 of Sherfield building lobby (number 22 on the Campus Map). The space is shared with other EPSRC funded CDTs. The EPSRC CDTs hub facilities comprise: three mixed seminar/ teaching /meeting rooms, lectures theatre(Imperial) with two-way video link via Access Grid Technology, kitchen, common area, support staff office (room 407) and an office space for over 80 students. All CDT students will be allocated a desk and lochabke filling cabinet in the open office space.



Most teaching in the Autumn Term takes place in the CDT Hub - notably in the Access Grid Room. Half of the lectures will be given at Imperial College, and the other half at the University of Reading, using a live video cast system so that students will be able to attend the lectures at either location.

# When you arrive

CDT students should first register uin the support office in the EPSRC CDT hub (EPSRC CDTs administration office, room 407,level 4, Central Library Building, Ext 48532).

# College registration, ID cards and safety induction

You will need to register online via the Student e-service facility as soon as possible after arriving, If you have not done so already. Instruction on how to do this should have been sent to you by the postgraduate administrator.