University of Cambridge

Centre for Mathematical Sciences

The

Cambridge Centre for Analysis

First Year Handbook

Contents

Chapter 1

Welcome to CCA

The beginning of the academic year is drawing close. We would like to take this opportunity to welcome you, the fourth cohort of CCA research students, to the University of Cambridge and to tell you how much we are looking forward to seeing you all.

This guide provides some basic, useful information about your first year of studies at CCA, about settling into life as a PhD student and about what to expect when you arrive here. It also contains some rules and regulations pertaining to the CCA course.

If there is anything else that you would like to know that's not covered in this booklet, just ask: `cca@maths.cam.ac.uk`.

Chapter 2

The home of CCA

2.1 Centre for Mathematical Sciences

CMS is home to the two departments which make up the Faculty of Mathematics at the University of Cambridge – the Department of Applied Mathematics and Theoretical Physics (DAMTP) and the Department of Pure Mathematics and Mathematical Statistics (DPMMS), which also home to StatsLab. CMS also houses the Betty & Gordon Moore Library and the Issac Newton Institute.

There are several buildings, or 'pavilions', centred around the main 'core' building, which is where you can find Reception and the Maths Café. There are also lecture theatres in the lower ground floors of each pavilion and in the main core which host numerous lectures and seminars throughout the year. On Fridays at 4pm, the main core plays host to the weekly 'Happy Hour' and lots of other social events which you'll receive emails about in due course.

2.2 Pavilion F

Pavilion F of the CMS is home to the CCA students, the CCA administrator plus several members of the CCA staff. Access to the building, as with all the CMS buildings, is by swipe card outside of office hours and during vacations. The first year CCA students' offices are grouped together on the ground floor, in offices F0.01–F0.05. The majority of the second, third and fourth years along with several key member of CCA staff also have their offices in Pavilion F, with some in Pavilion D.

There is a common room equipped with a large whiteboard, coffee tables, a great big sofa, a kitchen (with microwave, kettle, cutlery and fridge for you to make use of) and a coffee maker. Make yourself at home there.

Pods for the coffee maker can be bought from Reception, though you are welcome to bring in your own supplies. You can get hot and cold food from the Maths Café from 9am-4pm on weekdays and from the vending machines in the main core.

The nearest cashpoint/ATM to CMS is in the Hauser Forum[1] about 30 minutes walk from CMS or in the centre of town, but you can pay by card at the Café as long as the transaction is over £3.

There are toilets on each floor (except the second floor): those on the ground floor are toward the back of the building, near the exit.

- Men's toilet: F0.20

- Women's toilet: F0.21

- Disabled toilet: F0.22

- Shower room: F0.23

- Photocopier and stationery room: F0.19

2.3   Your office, email account & computer

There are three CCA students to each office. You will each be provided with a workstation and there is also provision for you to connect your laptop to the CMS wi-fi and network. At the end of the first year, you will all move office to make way for the next cohort, but you'll keep the same officemates.

Your email and computer log-in details will be ready for you upon arrival at CCA on your first day: you can get these from Emma. Likewise, your email address will already be set-up and running by the time you arrive.

You'll be able to access your email account from anywhere using the Hermes webmail system: just go to `http://webmail.hermes.cam.ac.uk` and log in.

There are two printers for CCA students to use, in the alcoves close to the Common Room: 'f0' and 'f0c', which is the colour printer.

There's also a photocopier room which has plenty of stationery supplies in it for you to make use of. If there's stationery that you need but you can't find, speak to Emma who has access to the large stationery cupboard elsewhere in the department or can place an order with the stationers.

If you have any problems with your office, or need extra furniture, or break something (which happens sometimes), you can contact the Facilities manager who will help you: `facilities@damtp.cam.ac.uk`

2.4   Room numbers

CMS has a standard way of naming offices to help you navigate. There are seven pavilions, named A–G. The first letter tells you which pavilion it is in; the first number tells you which floor the office is on; the last two digits tell you the room number. For example, office F0.08 is in Pavilion F, on the ground floor (0) and is room number 08.

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[1] `http://www.hauserforum.com/`

Offices with names beginning LG are on the 'Lower Ground floor' which is the basement, basically, though we aren't supposed to call it that.

The exceptions are rooms like MR14, which are lecture theatres. These are signposted throughout CMS and can all be found ~~in the basement~~ on the Lower Ground floor.

2.5 Post

CCA students share communal pigeon-holes (postboxes that is) for incoming mail; labelled A–Z and post is filed by your surname. The pigeon-holes are in the main core, just opposite the Reception Desk.

If you receive EPSRC funding, then this is paid to you by cheque, in your pigeonhole, at the start of each term (usually in the second week).

Outgoing post should be put in the trays behind the reception desk.

2.6 Safety & security

CMS is safe and secure: access to the building is by swipe card (your University of Cambridge student ID card). That said, you should still lock your office when you are not in it and you are responsible for keeping all your belongings safe.

Emma has a master key for the Pavilion so can help if you get locked out or lose your key.

The fire alarm is tested every Wednesday morning between 8-9am. Should the fire alarm sound continuously (it is a long, loud continual alarm), please make your way quickly to the fire evacuation point by the bike racks at the back of the Pavilion F building. Stay there until you are told it is safe to go back into the building.

There is a Health and Safety Induction course available on CamTools: just search for 'Health and Safety Induction' on your CamTools homepage and you can familiarise yourself with the CMS Safety policy online: `http://www.cms.cam.ac.uk/safety/safetypolicy/`.

2.7 Pavilion F etiquette & grievances

We share our Pavilions with a number of other research groups and academics. Please be mindful of this and remember that noise travels easily throughout the building, especially as the first floor is a mezzanine floor.

Likewise, please help keep the kitchen area clean and tidy by washing up your own plates and cutlery (even the teaspoons) and other communal areas.

The University Grievance procedure is set out at:
`http://www.cam.ac.uk/staffstudents/studenthandbook/complaints.html`

Chapter 3

Arriving at CCA

The University of Cambridge academic year starts on Tuesday 8 October 2013 and ends on Friday 13 June 2014. The CCA course formally starts on Wednesday 9 October 2013. Teaching will commence on Thursday 10 October.

Teaching always starts on the Thursday of each term [1]. There are no lectures during Easter term.

Once in Cambridge, those of you who have studied here before will take little time to settle, whilst it might take a while longer for newcomers. Obviously, your first port of call will be your college, but we trust that you will make your way to CMS shortly after arriving.

3.1 What to expect, what to do and where to go on your first day

If you already have your University ID card, go straight to Pavilion F, office F0.08 to meet Emma who will show you to your office and give you your computer login details. If you don't have your University card, go to reception in the main core and ask them to call Emma Hacking; she'll come and meet you to bring you over to the Pavilion and get you a guest passcard.

Your card allows you 24-hour access to all of the CMS buildings out of office hours and during holidays. You should arrange to get your card (usually from your college) as soon as you can after you arrive in Cambridge. This card is also your library card.

On your first day you should also go and visit John Turner in office B1.27 to collect your office key: there is a £10 deposit for this which you'll get back when you return the key, so please remember to bring some cash with you.

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[1] The terms at Cambridge are named Michaelmas, Lent and Easter

3.2   The first few weeks

On Wednesday 9 October there will be a CCA briefing in the Common Room of Pavilion F at 10am. We expect to see you all there.

On the same day, prepare to have your photo taken at 3pm along with the rest of the CCA in the time-honoured Cambridge fashion, when we hope for a dry day and gather outside the Pavilion for a group photo[2].

The first few weeks of term will also include a Pavilion F party, a Graduate Welcome Day with the other DPMMS and DAMTP PhD students and a dinner that all CCA staff and students are invited along to. Details of all these events (and more) will be emailed to you nearer the time.

Classes will start on Thursday 10 October 2013 – to work!

Other events that will take place at the start of the academic year include a Pavilion F welcome party, a CMS welcome party and a CCA welcome dinner – in short, a lot of eating and drinking. And a lot of cake.

3.3   Your CCA web page

Before you arrive in Cambridge, please could you email Emma with a jpg photo of yourself and brief biography for the CCA website where each of you will have a web page. You might like to include information such as:

- Where you're from

- Previous study: where and what you studied

- Mathematical areas of interest

- Links to any publications you have had or blogs that you write

- Other info: hobbies, non-mathematical interests, etc.

A CCA student webpage will be made for you ahead of your arrival here. You can see current students' webpages at `http://www.maths.cam.ac.uk/postgrad/cca/people/studentprofiles.html`

3.4   CCA contacts

The core CCA personnel (Professor James Norris and Professor Arieh Iserles, the two co-Directors; Dr Anders Hansen, Professor Clément Mouhot and Dr Carola Schoenlieb, lecturers; Dr Jonathan Ben-Artzi and Dr Shiwu Yang, CCA post-doctoral fellows) will be available for an informal chat during the first week.

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[2]You can see previous year's photos on the Pavilion F walls

3.4.1 The CCA administrator

Emma Hacking is the CCA administrator. Her job involves organising the CCA and helping out staff and students. If you have any queries or questions of any kind, about CCA , the University or about Cambridge, then feel free to ask. Her office is F0.08 and email address is `e.e.hacking@maths.cam.ac.uk`. Her office hours are: Monday – Thursday 8.30 – 5.00; Fridays 8.30 – 4.00. You can drop by anytime.

3.4.2 Your CCA mentor & fellow students

You have each been allocated a mentor from the second year of CCA students, to act as an informal contact and source of information. Details about your mentor will be emailed to you shortly.

As well as the 'Welcome to CCA' CamTools site which you have already been emailed about, there will be an informal emailing list available to you from October 2013, set up so you can email your fellow students to organise social events, promote interesting talks you've heard about, etc. Send your email to `maths-cca-2013@maths.cam.ac.uk` and it will be sent to the whole cohort of 2013 students.

You'll also be added to mailing lists for DAMTP, DPMMS, Pavilion F and for the Cambridge University Graduate Mathematics Society (CUGMS)[3] which runs events and talks throughout the year.

3.4.3 Your director of studies

You will be allocated a Director of Studies for the duration of your first year. Contact details will be supplied by Emma and we strongly suggest that you talk with your DoS as soon as possible, not least to agree on your study plan for the first year and supplementary/Part III courses that you would like to take. Your DoS can also help you select and decide upon a thesis topic towards the end of the first year.

3.4.4 CCA portal and online calendar

The CCA portal has masses of CCA-specific information on it: forms, links to CamTools sites, abstracts and notes from previous years' short courses, a directory of CCA students, etc., etc.

Make yourself familiar with this site and bookmark it:
`http://www.maths.cam.ac.uk/postgrad/cca/private/index.html`

The University has a shared calendar service provided by Google apps. There is a CCA shared calendar which lists your lectures along with other events. **It is the main site for scheduling information about your course, so please ensure that you have access to it**.

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[3]`http://www.srcf.ucam.org/cugms/`

Information on how to use Google Apps @ Cambridge can be found `http://www.ucs.cam.ac.uk/googleapps/`.

Chapter 4

Your first year of studies at CCA

A complete list of all CCA key dates and deadlines can be found in the appendices at the end of this booklet.

4.1 Core courses

The CCA core courses are entirely unique and perhaps unlike any other course you may have taken. The courses are solely for CCA students, and are made up of a combination of lectures, group tasks, student presentations and individual assignments. You will all be put into groups and will be given tasks and assignments to work on as a group. There are no examinations for CCA core courses, neither oral exams nor written. Instead, expect course assessment to be via your performance individually, as a team member and through presentations and written work.

More information will be given to you by the core course tutors.

Each course has a CamTools site which you should check regularly: it will host group assignment work and other information pertaining to the courses.

4.1.1 Lecture dates and times

Please note that these listings are subject to change.

From time to time, there will be additional lectures for core courses along with additional mini-project presentations and assessments. Any changes or additional lectures will be communicated to you by email so please refer to the times below as a rough schedule only.

Information about what, when and where CCA lectures are taking place can also be found on the CCA noticeboard by office F0.02 or via the CCA Google calendar which you will be emailed about at the start of the year. Notification about any changes to lecture times will be emailed to you.

Please take the time to ensure you know how to access the Google calendar as it is the best way for you to check lecture times along with other CCA seminars and events.

All your core course lectures take place in MR14, on the Lower Ground floor of Pavilion F. Teaching begins on the first Thursday of each term.

- Partial Differential Equations
  Michaelmas term: Tuesday 8 October – Friday 6 December 2013
  Tutor: Professor C. Mouhot

  - Tuesday 2-3

  - Wednesday 2-3

  - Friday 2-3

- Stochastic analysis
  Lent term: Tuesday 14 January – Friday 14 March 2014
  Tutor: Professor J.R. Norris

  - Monday 2-3

  - Tuesday 2-3

  - Thursday 2-3

- Computational analysis
  Lent term: Tuesday 14 January – Friday 14 March 2014
  Tutors: Professor A. Iserles, Dr C. Schoenlieb & Dr A. Shadrin

  - Monday 3-4

  - Wednesday 2-3

  - Friday 2-3

4.2 Supplementary courses

Supplementary courses are typically taken from the Part III[1] list of courses which is available online at `http://www.maths.cam.ac.uk/postgrad/mathiii/`. Some courses may be chosen from the Graduate list of courses.

If your knowledge and experience of a key topic is very weak, you may benefit more from taking courses from the Part II[2] list, available from `http://www.maths.cam.ac.uk/undergrad/course/coursesII.pdf`.

The aim of taking the courses is to cover significant gaps in your knowledge of mathematical analysis. Please discuss your options with your Director of Studies. You should not take courses that have substantial overlap with ones you have already taken – we would like you to be outside of your mathematical

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[1]Part III of the Cambridge Mathematical Tripos: Part III is the University of Cambridge postgraduate one-year course in Mathematics

[2]Part II is the last year of the undergraduate mathematics degree

comfort zone, though of course you are free to attend any courses which do not conflict with your other obligations.

If you have not previously taken courses in Advanced Probability or Numerical Solution of Differential Equations then you must take the Part III courses in these topics during the Michaelmas term.

Please email Emma with a complete list of the Supplementary courses that you intend to take for Michaelmas term.

4.2.1 Oral examinations for supplementary courses

All students **must** offer two courses for oral examination in the Michaelmas and/or Lent term. Your choices must also be approved by the CCA directors. You can elect to do both oral examinations at the end of the Michaelmas term, or one examination in each of the Michaelmas and Lent terms.

If you have never previously taken courses in Advanced Probability you **must** take the Part III Advanced Probability course and take an oral examination in it during Michaelmas term.

The same expectation holds in respect of the Numerical Solutions of Differential Equations Part III course: if you have not previously studied this area you **must** take this course and be examined in it.

Please finalise your choice for the Michaelmas term oral examination(s) by email to Emma as soon as you can. If it happens that you will be taking your second oral examination in Lent term, please confirm this as early as possible.

4.2.2 Key dates & deadlines for CCA Supplementary courses and oral examinations

A complete list of all CCA key dates and deadlines can be found in the appendices at the end of this booklet.

4.3 Mini-projects

You will be given a booklet of mini-projects very early in the start of Michaelmas term.

You should consult with your DoS as soon as possible about possible mini-projects and arrange informal meetings with individuals who have set mini-projects that have elicited your interest. The deadline for confirming your choice of short mini-project is Friday 11 October 2013. The deadline for confirming your choice of second mini-project is Friday 29 November 2013.

Please send a first and second choice for each. We will try our best to ensure that as many people as possible get their first choice of project.

However, the 'pool' of available mini-projects is limited and no two students can do the same project: therefore, the number of mini-projects to choose from is greater the earlier you select them. It is therefore strongly recommended that you choose your second mini-project as early as possible.

Your two mini-projects should be as mathematically distant from each other as possible. Your choices will be approved by the directors to ensure breadth of study.

If you would like to propose your own mini-project for study, please speak to either one of the CCA directors who will be able to advise you.

4.3.1   Mini-project assessment

Both of the mini-projects are assessed by a written report on your research findings and by a presentation to your fellow students.

The first mini-project is assessed via a 20-minute presentation in January 2014 and a 10-page (approx) report.

The second mini-project is assessed by a 30 minute long conference-style presentation in June 2014 and a substantial final written report, approximately 30 pages in length and in the style of a journal paper.

The feedback for each of your mini-project will be conducted by a second year CCA student - a 'rapporteur' - who is working in a similar field to you. Your rapporteur will prepare a feedback report for you on your presentation skills and the mathematics you presented. When you are a second year student, you'll be a 'rapporteur' for the next cohort of students.

4.3.2   Key dates & deadlines for CCA Mini-Projects

A complete list of all CCA key dates and deadlines can be found in the appendices at the end of this booklet.

4.4   Transferable Skills Training

There is a full programme of transferable skills training available to all Faculty of Mathematics students. You can find details of these courses: `http://www.damtp.cam.ac.uk/internal/graduate/tstadvertising.html`

We expect **all** of our students to participate as frequently as possible in Public Engagement events, such as the CMS open day, the CCA open day or the Festival of Science. Emails regarding these events will be sent to you regularly throughout the academic year.

4.4.1   Supervision training

We recommend that you all supervise Part IA, Part IB and Part II students during your time at CCA.

For those of you who are familiar with the Part III courses already and who continuing University of Cambridge students, we recommend that you attend one of the Supervision Training sessions held during October.

Those of you who are new to the University should wait until your second year before doing any supervision: this will give you time to become acquainted

with the Part III course material and supervision system. You can find out more about the University of Cambridge supervision system on the BGS website (`http://www.admin.cam.ac.uk/offices/gradstud/prospec/whycam/benefits.html`) or from your CCA mentors who will all have supervised in the colleges.

4.5 CCA events

4.5.1 Cake meetings

Every Thursday during term time we have a CCA cake meeting at 4.15pm in the Common Room. It's a chance for you and your fellow first year students to all to have a cup of coffee and some cakes/biscuits whilst we chat and catch up on the week's events and work. As well as CCA announcements and news, we also have a short presentation (called a 'mathematical nugget') on an exciting, interesting area of mathematics from CCA first year students and staff.

Previous mathematical nuggets by our students have included:

- Exchangeable partitions

- Real trees and Gromov–Hausdorff distance

- Hypercomplex numbers: are complex numbers the only natural numbers?

- Why you should believe in ghosts: ghost solutions and pseudospectra

- Brouwer's Fixed Point Theorem in Infinite Dimensions and an application thereof

We hope that you will each volunteer to do a 'mathematical nugget' – it's a great way to develop and polish your presentation skills in a small, supportive environment.

4.5.2 Short courses & industrial seminars for 2013–14

There will be a short course and two industrial seminars each term: we are currently finalising details of these for 2013/14.

4.5.3 Workshops

This academic year there will be two workshops.

The first, Industrial connectivity Week, is be a two–three day long workshop with a mathematician working in industry and will be held in May 2014. The first such workshop was from Dr Robert Lees of the Smith Institute and presented teams of PhD students from across CMS with real-life industrial problems to solve.

The second workshop is a three-day collaborative effort with our 'sibling' Centre for Doctoral Training at Warwick University, MASDOC[3]. This workshop

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[3] `http://www2.warwick.ac.uk/fac/sci/masdoc/`

is held annually in Warwick or Cambridge and focusses on the work of second year students. For 2013/14, the workshop will take place in Cambridge during March 2014. The event is co-organised by second year students from both CDTs.

4.6   The end of the first year

4.6.1   First year review

At the end of your first year, you will have formal meeting with the CCA Directors to review your progress over the academic year. *Progression to the second year of CCA is dependent on the satisfactory outcome during this meeting.* The Directors will review all the feedback you have received over the course of the year and must be satisfied that you are able to progress onto the next year of study. During this meeting you will also finalise your thesis choices, so it is important to prepare for this meeting ahead of time by considering your thesis and supervisor options (see the 4.6.2 below).

The meetings will last around 20 minutes and your Director of Studies will be invited to attend and/or contribute feedback on your first year of study here.

Your meeting will take place during June 2014.

4.6.2   Choosing your thesis and supervisor

Choosing a thesis topic and supervisor for your next three years of work is a big decision.

Some students come to CCA with a clear idea of what they would like their PhD topic to be; some have no firm ideas about their thesis; others might have their preconceptions changed.

There is no right or wrong way to come to a final decision but we recommend that over the course of your first year you keep an open mind and look out for topics which excite and interest you.

Furthermore, bear in mind that you will be starting a three-year academic relationship with your supervisor: they should be someone you respect, can communicate well with and can work with. One person's working methods are another person's nightmare! Think about your preferred ways of working and about how you prefer to work with others, when you are thinking about your potential supervisors and draw upon your experiences working on the your CCA mini-projects.

If it comes to Easter term and you have no clear idea of the path you would like to take for your thesis, you should make an appointment with James or Arieh for informal advice. Alternatively, you could discuss this with your mentor or DoS.

By the end of the Easter term, you will need to have decided upon your Supervisor and PhD topic. Please let Emma know your speculative choice of PhD supervisor by 30 May 2014. We will then approach the faculty member specified about supervising you.

4.6.3 Onwards into the second year and beyond

C.A.K.E.

There is a seminar series run entirely by CCA second, third and fourth year students called Cambridge Analysts' Knowledge Exchange. It takes place every week at 4pm on Wednesdays in MR14.

The seminars are organised by CCA students as a platform for graduate students and post-docs of the analytic persuasion to present their work to the wider analysis community. Speakers are from CCA, DAMTP, DPMMS and across the UK. The ultimate goal being to encourage cross-fertilisation of ideas between people working in the many different fields of analysis.

Discussion and collaboration forms an integral part of the series. As such the aim is to have talks which stimulate questions and lead to interesting discussion over coffee and cake.

The seminar series has an organiser to keep the seminar series running. This post changes each term, so towards the end of your first year expect an email asking for volunteers to continue this seminar series.

If you'd like to give a talk, and you are very much encouraged to do so, you should talk to the organizer at the start of term to arrange this.

4.6.4 Mentoring and the Smith-Knight Essay prize

During the long vacation at the end of your first year, we will also ask you to act as mentors to the next cohort of students.

Finally, during the long break, you should also consider entering the Smith–Knight Essay prize during your second year, which has its closing date for entries on the first day of the Lent term 2013–14. More information about the Prize can be found `http://www.maths.cam.ac.uk/news/11.html` and you should discuss this matter with your supervisor(s). We will, of course, email you about this nearer the time.

Chapter 5

Conference travel

5.1 Rules and guidelines

CCA students receive up to £400 per academic year for travel to conferences in their areas of interest.

Once you find a conference you'd like to attend, if you are requesting less than £400m please pass your request to your DoS for comment and then forward this onto Emma. Along with the statement of support from your Director of Studies or mini-project supervisor (whichever is more appropriate to comment), you will also need to let us know a rough budget of your expected expenditure.

If you would like to request more than £400, your request will need to be approved by the Directors. Send a budget and statement of support from your DoS to Emma, and she will pass the details to the Directors.

You must get approval before making any firm plans or booking anything.

5.1.1 Budgeting

When you apply for conference funding you'll need to provide us with a reasonable estimate as to how much everything will cost. You'll need to consider: travel costs, accommodation costs, food costs whilst you are away and any registration fees levied by the conference organisers.

Please bear in mind that early travel plans are typically significantly cheaper! If you would like help and advice budgeting for your trip, please speak to Emma, but websites such as Ryan Air, Easyjet, STA travel and thetrainline.com are good places to start.

We also run a 'mortgaging' system: if you don't spend all your conference funding in one academic year, it rolls over to the next. Likewise, if you would like to spend more than your allotted amount in a given year, you can 'borrow' the money from your allocation for next year.

5.2   Step-by-step: How to apply for and claim conference travel funding

[1] Identify which conference you want to go to - check with your Director of Studies for options. Investigate other funding opportunities such as the Cambridge Philosophical Society, your colleges or the conference organisers who frequently offer bursaries to students.

[2] Get comments on the suitability of the conference from your DoS and pass to Emma along with a rough estimate of the costs involved.

[3] If your application is approved, you can then register, book transport and make the necessary arrangements. When everything has been booked, print our your receipts and complete a University claim form (available from Emma or online at `http://www.admin.cam.ac.uk/offices/finance/forms/expenses/expenses.pdf`. Emma can advise you on how to complete the form if you are unsure. In some cases, we can arrange for payment to be made directly to the conference organisers from the CCA if the organisers are willing to send a purchase order or an invoice for the cost of your attendance.

[4] The university provides free travel insurance for postgraduate students which you can apply for online at `http://www.admin.cam.ac.uk/offices/insurance/travel/students/bgs/index.html`

[5] During your trip, keep hold of all your receipts. You will need these to attach to your expense claim form when you return. If you are travelling with other CCA students, try to keep your receipts and expenses separate from each other as much as possible. If you share an expense, such as a meal out, make a note of this on the back of the receipt.

[6] Upon your return, fill out a claim form. Pass this and your receipts to Emma and she will arrange for you to be reimbursed. Remember that you must provide receipts for everything you claim for. We will convert foreign currencies back into for you when your claim form is processed, so please do not convert currencies on your claim form: i.e. if you paid in Euros for some things and GBP for others, note this clearly on your claim form and include a total amount for each currency.

5.3   Completing an expense claim form

You can find a sample completed expense claim form overleaf. Some brief pointers:

- You can only claim for your own expenses, not someone else's.

- You'll receive reimbursement by cheque in your pigeon-hole. Please note it can take up to six weeks for expenses to be reimbursed to you.

- If you pay for a group lunch or dinner, you'll need to list the names of those present.

- Complete all sections of the form except for those with "Accounting codes" and "authorisation".

- Pass your forms to Emma, or alternatively pass your receipts to Emma and she will prepare a form for you if your claim is complicated/if you are not sure what to do.

- Emma keeps copies of all the completed expense claims and receipts for CCA records.

- Please note it can take up to six weeks for the cheque to be issued to you.

A sample expense form:

FD1A

UNIVERSITY OF CAMBRIDGE

Expenses incurred on University Business: Application for Refund

NAME (BLOCK CAPITALS)   ADDRESS

TRAVEL (*see Chapter 5b of the Financial Procedures Manual for guidance on completion and the Finance Division website for current rates*)

Date	Purpose of Journey	From Time Left	To Time Arrived	Method e.g. Air/Rail/Car	Mileage claimed @ 40p	£	p

I certify that I have actually incurred expenses of

£……………………………. Supporting vouchers are attached. I

hereby apply for a refund of   £………………………………..…

Signature of Claimant   ………………………………………..

Date   ……………………

SUBSISTENCE/ACCOMMODATION ALLOWANCE/OTHER EXPENSES
(For business entertainment *claims please attach details re the purpose of the entertainment, the names of all those in attendance and their institutions*)

Date	Nature of Expense	£	p

ACCOUNTING CODES	AMOUNT

TOTAL EXPENSES	
LESS ADVANCES TAKEN	
TOTAL CLAIM	

Authorisation: …………………………………………   Date:…………………..

A sample completed expenses form:

FD1A

UNIVERSITY OF CAMBRIDGE

Expenses incurred on University Business: Application for Refund

NAME (BLOCK CAPITALS) EMMA HACKING

ADDRESS CCA, CMS, Wilberforce Rd, Cambridge CB3 0WB

TRAVEL (*see Chapter 5b of the Financial Procedures Manual for guidance on completion and the Finance Division website for current rates*)

Date	Purpose of Journey	From Time Left	To Time Arrived	Method e.g. Air/Rail/Car	Mileage claimed @ 40p	£	p
1/10/11	Attend summer school: "Getting started with PDE" Sept 18-22, 2011 in Paris	18 - 22 Sept		Air (return flights)		£84-	37

I certify that I have actually incurred expenses of

£184·37 + €250·00 Supporting vouchers are attached. I

hereby apply for a refund of £184-37 + €250·00

Signature of Claimant   Emma Hacking

Date   1/10/11

SUBSISTENCE/ACCOMMODATION ALLOWANCE/OTHER EXPENSES
(For business entertainment *claims please attach details re the purpose of the entertainment, the names of all those in attendance and their institutions*)

Date	Nature of Expense	£	p
18-22 Sept	Accomodation @ €50 a night for 4 nights	€200-	00
18/9/11	Registration fee	£100-	00
20/9/11	Subsistence	€50 -	00

ACCOUNTING CODES	AMOUNT

TOTAL EXPENSES	£184-37	€250-00
LESS ADVANCES TAKEN		
TOTAL CLAIM	£184-37	€250-00

Authorisation: …………………………………………   Date:…………………..

Chapter 6

New student checklist

6.1 Before you get to Cambridge

☐ Send Emma a jpg photo and a biography for the CCA website, student directory and prospectus.

☐ Email Emma to let her know roughly what date you are likely to arrive at CMS.

☐ Log into the CamTools 'Welcome to CCA' site and say hello to the rest of the 2013 cohort: `https://camtools.cam.ac.uk/site.html?siteid=138884e4-3336-4921-8637-4b2b43ffeefb`

☐ Join our Facebook page for quick news and updates: `http://www.facebook.com/CambridgeAnalysis`

☐ Say hello to your mentor.

☐ Log onto the PDE core course CamTools site and revise preparatory material:
`https://camtools.cam.ac.uk/site.html?siteid=7249770a-8c62-4b55-b41c-fcb624f27935`
☐ Get access to the CCA calendar `http://www.ucs.cam.ac.uk/googleapps/`
called "Cambridge Centre for Analysis"

6.2 On your first day

☐ Bring £10 for your office key deposit.

☐ Go to office F0.08 and meet Emma who'll give you your computer and email passwords.

☐ Login to your Hermes Webmail account and check your emails.

☐ If you haven't already done so, arrange to get your University card printed.

6.3   In your first few weeks

☐ Meet your DoS.

☐ Select your supplementary courses.

☐ Select your mini-project(s).

☐ Edit your departmental homepage (here's how: `http://www.damtp.cam.ac.uk/internal/computing/internet/profile.html`)

☐ Get to work! Have fun!

Chapter 7

Appendices

7.1 Acronyms & glossary

- BGS or BoGS - Board of Graduate Studies
- CAKE - CCA analysis seminar series, not to be confused with the 'Cake meeting' (see below)
- Cake meeting - every 4.15pm on Thursdays during term time, the first year students have a meeting to catch up, drink tea and eat cake/biscuits. And talk about mathematics.
- CamTools - University of Cambridge e-learning portal
- CCA - Cambridge Centre for Analysis (you should really know this one by now)
- CDT - Centre for Doctoral Training
- CMS - Centre for Mathematical Sciences
- CUGMS - Cambridge University Graduate Mathematics Society
- DAMTP - Department of Mathematics and Theoretical Physics
- DoS - Director of Studies
- DPMMS - Department of Pure Mathematics and Mathematical Statistics
- Easter term - the third and final term of the year
- EPSRC - Engineering and Physical Sciences Research Council
- Happy Hour - a phenomenon in which people gather together for cheap (typically alcoholic) drinks, usually early evening on a Friday. Posters advertising Happy Hour mysteriously appear in the Pavilion every Friday morning during term time.
- Lent term - the second term of the year

- Main core, or Central Core - the main CMS building

- Mathematical nugget - a short talk on an exciting area of mathematics, presented during the weekly CCA cake meetings held for the first years

- Michaelmas term - the first term of the year

- Pavilion - each building in CMS is called a Pavilion

7.2   Useful contacts and links

- Betty & Gordon Moore Library `http://www.lib.cam.ac.uk/BGML/`

- CamTools `https://camtools.cam.ac.uk/`

- CMS Reception desk: 65000 or `reception@maths.cam.ac.uk`

- DAMTP Graduate Students' pages: `http://www.damtp.cam.ac.uk/internal/graduate/`

- EPSRC Studentships webpages, with information about finance, transferable skills training from the EPSRC and a statement of expectation for EPSRC-supported students: `http://www.epsrc.ac.uk/funding/students/Pages/default.aspx`

- Facilities/maintenance (if your windows break or light bulbs blow – any problems to do with the building): email `facilities@damtp.cam.ac.uk`

- Hermes webmail: `http://webmail.hermes.cam.ac.uk/`

- IT assistance (for computer-related queries, software installations and other IT mishaps): `help@damtp.cam.ac.uk`

- Language Resources at the University of Cambridge Language Centre: `http://www.langcen.cam.ac.uk`

- Newton library catalogue `http://www.lib.cam.ac.uk/newton/`

- Part III course pages: `http://www.maths.cam.ac.uk/postgrad/mathiii/`

- CCA Portal `http://www.maths.cam.ac.uk/postgrad/cca/private/index.html`

- Talks at Cambridge (a centralised list of talks, seminars and lectures taking place across the University, searchable by keyword or subject): `http://talks.cam.ac.uk/`

- University of Cambridge lookup directory: `http://www.cam.ac.uk/global/search/`

- University of Cambridge student handbook: `http://www.cam.ac.uk/staffstudents/studenthandbook/`

7.3   The CCA year

A note about deadlines: please meet the deadlines below. If you feel you are unable to, for whatever reason, please speak to Emma and let her know. It is prudent to be open and realistic about your workload rather than put undue pressure on yourself.

The deadlines for written work are 12pm (noon) on the dates listed below.

There will also be other work during Michaelmas and Lent terms for each of the core courses.

These are all duplicated on the CCA calendar.

- *8 October 2013*: Academic year starts

- *8 October 2013*: DPMMS/DAMTP induction day

- *9 October 2013*: CCA induction meeting, 10am

- *9 October 2013*: CCA group photo, 3pm

- *9 October 2013*: CCA welcome dinner, 6pm-ish

- *10 October 2013*: Teaching starts

- *18 October 2013*: confirm your choice of supplementary courses for Michaelmas term; confirm your choice for the short mini-project (and, optionally, your long mini-project choice).

- *31 October 2013*: confirm your selection(s) for supplementary course oral examination(s).

- *29 November 2013*: CCA open day for prospective students - we will email and ask you for help with the Open Day.

- *29 November 2013*: If you haven't already done so, confirm your choice for the long mini-project.

- *6 December 2013*: your supplementary course tutors will be in touch with you to arrange an oral examination by this date.

- *10 January 2014*: Submit your short mini-project final report to your supervisor(s)and to Emma.

- *15 – 17 January 2014*: Presentations of your short mini-project work to the cohort.

- *20 January – 7 February 2014*: Michaelmas term oral examinations period. Please aim to have your examination(s) during this period, but as the oral exams are by arrangement with the course tutors, these dates are guidelines only.

- *31 January 2014*: confirm your choice of supplementary courses for Lent term.

- *31 January 2014*: You will receive feedback on your short-mini-project report and presentation by this date.

- *7 February 2014*: confirm your selection for supplementary course oral examinations for Lent term, if appropriate.

- *28 February 2014*: You will receive feedback on your Michaelmas term oral examination(s) by this date.

- *Mid March 2014, tbc*: CCA –MASDOC conference

- *21 March 2014*: your supplementary course tutors will be in touch with you to arrange an oral examination by this date.

- *24 April – 2 May 2014*: Lent term oral examinations period. Please aim to have your examination during this period, but as the oral exams are by arrangement with the course tutors, these dates are guidelines only.

- *30 May 2014*: You will receive feedback on your Lent term oral examination by this date.

- *30 May 2014*: Submit your long mini-project final report to your supervisor(s) and to Emma.

- *Throughout June 2014*: Your end-of-year meetings with the CCA directors

- *2 – 13 June 2014*: Presentations of your long mini-project work to the cohort.

- *3 – 28 June 2014*: Period of the end-of-year review meetings

- *13 June 2014*: End of the academic year (yes! There will indeed be a party - date tbc)

- *20 June 2014*: You will receive feedback on your long-mini-project report by this date.

- *20 June 2014*: You will receive feedback on your long mini-project presentation by this date.

7.4 Directory of key CCA staff and students

Name	CCA role	Office	Email
Ashton Anthony	Thesis supervisor	F1.20	A.C.L.Ashton@damtp
Bastounis Alex	2nd year	?	A.Bastounis@maths
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Calatroni Luca	3rd year	F0.12	L.Calatroni@maths
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Driver David	1st year	F0.??	D.Driver@maths
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Jones Alex	3rd year	F0.12	A.D.Jones@maths
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