

Welcome to SMSTC

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Background to SMSTC

- The Scottish Mathematical Sciences Training Centre (SMSTC) provides courses for PhD students on behalf of a consortium of Scottish universities.
- The SMSTC consortium is Aberdeen, Dundee, Edinburgh, Glasgow, Heriot-Watt, St Andrews, Strathclyde plus Stirling as an associate member.

Why?

- International Review of (UK) Mathematics 2004 questioned the competitiveness and breadth of the UK PhD.
- The UK Engineering and Physical Sciences Research Council (EPSRC) issued a call offering funding to address this.
- Answered by formation of SMSTC in 2007, along with similar groupings in the rest of the UK.
- In EPSRC-speak SMSTC (and similar in the UK) are Taught Course Centres.

SMSTC people — lots of them

- SMSTC Administrator — Johanna McBryde at ICMS
- Stream lecturers — 40-50
- Stream leaders — 8
- Local tutors and PG coordinators
- Local technical officers
- Local SMSTC student representatives — **VOLUNTEERS NEEDED**
- Student Liason Officer — currently Tom Leinster (Edinburgh)
- SMSTC technical officer — currently Dave Thom (Glasgow)
- Deputy Director — Tom Leinster (Edinburgh)
- Director — Dugald Duncan (Heriot-Watt)
- External advisors — 3
- Academic Steering and Management Group

Cooperation across 8 universities allows us to do far more than any institution could do alone.

What is on offer?

- SMSTC offers 8 streams of standard courses across the main areas of the mathematical sciences.
- The streams are split into free-standing and independently assessed 10-week modules which can be taken together or separately depending on previous experience.
- We operate a 2 “semester” year with 10 weeks of lectures Oct-Dec and 10 weeks Jan-Mar.
- The stream talks at this Symposium will explain the content and the prerequisite knowledge needed for each module.
- Most students will find that there are courses which are interesting to them, and which cover important material they have not seen before.
- Most students study from 3 streams simultaneously and are encouraged to take the opportunity to broaden their knowledge and experience.
- **Specific requirements determined by your department, not SMSTC.**

- The **lectures** are delivered by interactive video-conference to a dedicated local room in Aberdeen, Dundee, St Andrews, Strathclyde, Glasgow and ICMS (combining classes for Heriot-Watt and Edinburgh students). So far, students at Stirling have travelled to one of the other sites.
- Each stream has a two-hour teaching slot each week.
- The lectures are generally backed up by detailed lecture notes, lecture slides, tutorial problems and all these materials are available on our content management website www.smstc.ac.uk
- Check what is expected for each stream since e.g. some make the slides available before the lectures and are designed so that you fill in the gaps as you go along.
- Interactivity is increasing - flipped classroom teaching has arrived!
- **Local tutorial support:** each university provides this for its own students. This might be a scheduled class, a drop-in anytime arrangement, office hours etc.. Check with your local PhD coordinator for details.

Video-conference display

- You see two screens, one with lecturer and the other classrooms, the other with a content display.
- You hear what is being said by the lecturer.
- Interactive - you can ask questions. Usually keep your microphone off!

Screen 1 — People

Lecturer
in Aberdeen

HWU
students

Strath
students

Dundee
students

Screen 2 — Content

Display of slides (like this)
or document camera
or interactive whiteboard
or computer output
or ...

- Each 10-week module is assessed in either 1 or 2 take-away assignments.
- You get feedback on the assignments, and **the marks are returned to you and to your departments.**
- The stream talks give details of their format for assessment.
- Departments and SMSTC management want this to be “light touch”: keep up with the courses and you should be able to make a good attempt at the assignments without spending a vast amount of time on them.
- Keep up with the courses: study the materials, try the exercises, follow up on suggested texts etc..
- Generally people get very little out of a course if they do not actually try the exercises and assessment.

Overall workload

- The **average workload per stream** is designed to be about 25% of your time. That is 10 hours per week if you do a 40 hour week and roughly 75% of your time over the first 6 months of your studies if you do 3 streams.
- Each 10-week module is assessed in either 1 or 2 take-away assignments. Hence assignment deadlines for the various SMSTC modules tend to cluster together around the middle and end of semesters. You may find that you have several deadlines in quick succession. Please be prepared for this to happen, and manage your time accordingly.
- **Make sure that you supervisor does not overload you with project work during the courses and peak assessment periods.**

Feedback (to us) and periodic review

- We have an **annual exercise in the Spring to gather detailed feedback** on each module/stream from you, and value your comments. Constructive feedback helps future cohorts of students.
- However, feedback from you to us is welcome at any time. It would make sense to discuss it with your local Student Representative and then the Student Liason Officer.

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- Major review of our academic activities carried out in May 2013 by a team of external assessors chaired by Prof Fulvio Ricci of Scuola Normale Superiore, Pisa, Italy. Management reviewed in 2011.
- Changes recommended in the 2013 academic review have now all been implemented. e.g. splitting our old 20-week streams into self contained 10-week modules to increase the range of different topics you can study.
- 2013 academic review, 2011 management review and recent annual feedback exercise reports are available — on www.smstc.ac.uk

Questions

- Questions about individual lectures should go to the local tutorial support and then the lecturer.
- Questions on a bigger scale about a module/stream should go to the Stream Leader.
- Questions about what you need to or should do are for your own department and not SMSTC.
- Failing all that, contact Johanna McBryde at ICMS. e-mail addresses on www.smstc.ac.uk
- Any right now???

This event

- An introduction to each stream & module: content, prerequisites and assessment
- Broaden your knowledge by getting a overview of many of the main topics in mathematics, even if you do not choose to study them further
- Change (or make up) your mind on module selection because of an inspiring stream presentation
- Presentations on other vital skills for PhD students
- Ask questions
- Meet your classmates from other universities
- Meet the stream leaders and other lecturers on the streams
- **Some fun** — curling and dinner

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- **Some fun** Team building and networking opportunities — curling and dinner