Laboratory for Foundations of Computer Science

Research Committee Meeting

2-4pm Friday 30 November 2001
Room 2511, JCMB, King's Buildings

General information about the Research Committee

Agenda

1. Minutes of previous meeting and matters arising.
2. Arrivals and departures; budget; grant portfolio (Monika Lekuse).
3. Larger grant proposals (Colin Stirling).
4. Theory Postgraduate Course (John Longley).
5. Interactions with the rest of Informatics (Colin Stirling).
6. Summer studentships; Postgraduate assistants (Ian Stark).
7. Any other business.

Other material:

- International Review and EPSRC response;
- IT/CS platform grants;
- EPSRC regional seminar.

The collected papers for the meeting are available to members of the committee.

Laboratory for Foundations of Computer Science

Research Committee Meeting

Friday 22 June 2001
Room 2511, JCMB, King's Buildings

Minutes

The meeting opened at 10.00am.

Present: Stuart Anderson, David Aspinall, Julian Bradfield, Javier Esparza, Massimo Felici, Martin Grohe, Paul Jackson, Monika Lekuse, Bill Orrok (minute secretary), Gordon Plotkin, Don Sannella, Ian Stark (chair), Perdita Stevens, Colin Stirling, Kostas Tourlas.

Ian Stark welcomed everyone to the meeting.

Apologies: John Longley. Apologies were also presented on behalf of Perdita Stevens who would arrive late due to another commitment.

1. Minutes of the Previous Meeting

Martin Grohe had attended the previous meeting on the 16th March but was not listed in the minutes.

1.1 Milner Lecture This took place and was very well attended. There is a video available, and we have been promised a digital version that we can put on the web for viewing online. We are now looking for someone to do the next lecture. There is a list of previous suggestions and we are looking for new ones to add to the list.

ACTION: Ian to arrange selection meeting

1.2 PhD Studentships Paul Jackson had carried out his action to assign studentship, by holding a meeting of potential supervisors.

1.3 TPG There was an action on John Longley to re-present proposals with some modifications on the TPG course at this meeting, but he has not carried this any further forward nor is he here. He proposes to make the smaller changes agreed at the last meeting, such as seeing supervisors and their PhD students at the beginning of the year to arrange what courses they do. This should fit in with a better first week for students.

ACTION: John to bring back the more substantial review proposals at the next meeting.

1.4 Lectureships Colin spoke about the teaching positions to say the situation was very complicated. Two adverts were drawn up ages ago but have been delayed because of University financial considerations. A long discussion ensued on the financial aspects, the positions needing to be filled, quality of candidates required, the priority list within the division and the need for adherence to the priority list. There is a necessity for superb applicants for the posts.

2. Arrivals and Departures; Grant Portfolio

Monika listed some people who have arrived: Javier Esparza, Martin Grohe, Monika Maidl, Stefan Schwoon, Claus Schröter and Alin Stefanescu. Javier briefly elaborated on their areas of interest.

Martin Hofmann has left, Alex Rabinovitch is leaving in July, Masahito Hasegawa is leaving at the end of June and Eric Vigoda has also left. Arnaud Carayol is a visitor, Hiroshi Watanaba is arriving as a visitor for about a year, and two other visitors are due to arrive in August. Matias Menni will stay for another 6 months.

We have around £2.9M in grants currently. There are only two grants about to run out, and there are several in the pipeline. Javier's fast track grant is to pay for Alin, and his European grant is in the process of coming here. Julian Bradfield mentioned the DEGAS project, and Don Sannella spoke on MRG. These are substantive projects employing staff, not just networks. MRG will employ 2 people here and two in Darmstadt and it will start in January.

3. TPG Course

John could not attend, and so sent a paper which was circulated. Mentioned in the first paragraph is Ulrich Schoepp. Ulrich is an MSc Student who turned up at the TPG course and was recommended by Daniele who said he would make a very good PhD student. He is starting next year as a PhD student next year.

John is not taking forward the controversial proposals to start next year but will re-visit them. Javier expressed concern about only having four first year PhD students in a year. Ian pointed out we don't normally have a great deal more than that and the numbers are made up with visitors etc. He also said it is much easier to get overseas PhD students than it is to get UK ones.

David raised the question from previous minutes about TA posts and a complaint about overloading. He described the work assigned to this PhD student, and did not feel that he was overloaded. A short discussion ensued on the actual hours worked by TA's, and the merits of registering PhD students as part-time.

4. Graduate school and PhD admissions

Paul Jackson presented a report on PhD admissions and graduate school issues.

We had 23 applications for PhD places this year, made 9 offers, and all were accepted. Eight students will be starting their PhD this year at LFCS, with one (Brotherston) beginning in 2002. The Division as a whole had received 132 applications and made 31 offers with 19 acceptances.

The LFCS studentship for this year is going to Fedor Fomenko.

James Brotherston wishes to take a few months out first but from January onwards he would be interested in any part time research opportunities, with or without funding.

Gordon pointed out that none of these students came with their own funding, which used to be quite common. There was a discussion about which countries the applications were coming from, with no applications from USA and few from the UK. It was mentioned there was a similar situation all over the UK.

Colin reported that from next year the EPSRC doctoral training account ("quota") studentships will operate under the same rules as project studentships, so we can offer them to EU students not just UK ones.

5. Extending committee membership

Ian presented a paper on this, carried forward from the last meeting. He proposed that we extend membership of the committee to senior research staff: those classified as "independent researchers" who may write research grants and assist in supervising PhD students.

In discussion it was suggested the committee be further extended to include all RAs. This was rejected. Don suggested that we include research staff on the promoted AR2 scale and above, and Perdita suggested we also keep a representative of other RAs. These points were agreed by consensus.

ACTION: Ian to rewrite web page and notify new members

6. Interactions with the rest of Informatics

Colin reported on a proposal by Javier to have a "Logic Day". Javier agreed to organise this but disagreed on the title. He asked if anyone objected to the 2nd week in July. During discussion Javier said he did not want to make it too formal, it shouldn't be over complicated and it was said it was better to be held sooner rather than later. He suggested calling it "Automatic Verification". This was fixed for the 2nd week in July.

ACTION: Javier to organise a verification day

7. Summer studentships; Postgraduate assistants

Ian opened by saying last year James Brotherstone worked for us over the summer and is now to start as a PhD student at the end of next year. At the time it was agreed that this was a good thing to do but it should be broadened and the advertising opened up. This year Ian advertised to our 3rd going into 4th year students with three suggested projects. So far we have a student interested in one. He will be working with Paul Jackson for 8 weeks over the summer.

Students start enquiring if there are any summer project places available early in the academic year, so Ian asked if anyone had any projects for next summer. He needs new suggestions, as it is not necessarily sensible to carry them over automatically from year to year.

Ian circulated descriptions of three postgraduate assistants positions. For a year now we have had PhD students doing these fairly modest jobs, well within the size that their funding body allows them to do. We have two during 2001/2002:

Software Support

Marco Kick: to install and maintain software packages supporting LFCS research. Marco has agreed to do this for another year.

Reports

Lennart Berringer: to maintain the online archive of LFCS technical reports, with integrated access to old and new reports. Lennart is not willing to take it on for another year so we need someone for the position next year. Ian has already advertised this.

Web

This position is open for 2001/2002. Its purpose is to help maintain the LFCS web site `http://www.lfcs.informatics.ed.ac.uk`

A lively discussion developed over the merits of technical reports, alternative and as to whether there was a need for two posts covering Reports and Web.

8. Any other business

Monika raised the point that Roni Khardon's grant is still around and still has roughly £20k

The matter was raised about computer user names for PhDs and visitors. New PhD students are given only numeric user names, and visitor user names now include the data of leaving. There was concern about this downgrading of PhD status, at a time when we are asking students to do more and more teaching and support work.

ACTION: David Aspinall to raise this at Computing Committee and bring a report to the next meeting

The meeting closed at 12 noon.

Comments and corrections to: Bill Orrok
Last modified: Monday 12 November 2001

LFCS budget report

Prepared for the 30 November 2001 Research Committee meeting

All figures are given to the nearest thousands of pounds. These relate only to the LFCS cash accounts, and include nothing belonging to individual grants.

Review of 2000/2001

Income	Planned	Actual
Cash	10	10
Reserves	15	15
Overheads	15	15
Miscellaneous	15	12
	--	--
	55	53

The cash budget comes from the Division, and is based on the numbers of staff and research students. The Division also passes on a portion of grant overheads to institutes. Miscellaneous income comes from grants, and is often linked to specific expenditure.

Expenditure	Planned	Actual
Studentships	25	31
Travel, workshops	7	3
Equipment	16	8
Seminars, events	5	6
Small projects, misc.	5	6
	--	--
	58	54

The excess expenditure on studentships includes support for Miki Tanaka which is to be collected from GDP grant.

Reserves

From 1999/2000	46
Withdrawn	15
Overspend on year	1
	--
To 2000/2001	30

Plan for 2001/2002

Income estimates

Cash	10
Overheads	16
Miscellaneous	30
	--
	56

I have left out the infrastructure charge on grants, which is collected by LFCS and spent by the CO's.

The unusually large miscellaneous figure includes closing some grants; also charging various LFCS PhD students to existing grants (under negotiation).

Expenditure

Studentships	30
Travel, workshops	6
Equipment	8
Seminars, events	6
Small projects, misc.	6
	--
	56

The studentships are for Martin Lange, Shin-ya Katsumata and Ted Fomenko. Other estimates are approximately in line with actual expenditure for last year.

We are carrying forward £29.5k reserves from last year, and do not plan to draw on it this year.

The cash budget devolved from the Division, together with our overhead fraction, is broadly sufficient to cover general LFCS expenditure, but not studentships. For this year, we expect to make up the difference without drawing on reserves, which is good news. This is unlikely to be possible every year.

Ian Stark
November 2001

EPSRC Academic Regional Seminar
Heriot-Watt, 7 November 2001

This month Monika Lekuse and I attended the EPSRC Academic Seminar, visiting Scotland on its termly roadshow. The lead speaker was the new head of EPSRC, John O'Reilly. Main points:

- EPSRC is going to get a "Strategic Framework".
- Everyone wants individual grants to be larger; no-one knows how.
- EU PhD students should be properly funded from next year.
- Fast track grants are going to have some restrictions.

Details below. I have slides and notes if anyone wants to know more.

Ian

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Professor O'Reilly has been EPSRC Chief Executive since October, taking over from Richard Brook, and this was his first such seminar. The other person in the audience from Informatics was Alan Bundy.

Strategic Framework

O'Reilly wants one of these; meaning a presentation of research activity in terms of "themes linked to society - energy and sustainability, crime prevention and security, transport, health, etc". He suggested that this is chiefly a presentation exercise, in order for EPSRC to tell the Government that it had a strategy. For researchers, he does seem to believe in the value of responsive-mode (funding things that are good, not just matching buzzwords); although he didn't rule out asking grant proposers to say whether their applications fitted such themes.

Size of Grants

Every grant is now 150k for 3 years; both EPSRC and researchers want some of them to be bigger. Suggestions include "platform grants", or somehow rolling together the existing grant portfolio of large departments. The aim is to provide greater stability and less bureaucracy for both research teams and EPSRC administrators. It's not clear that anyone has a scheme that works: current requirements for milestones and work packages just don't encourage big open-ended programmes. Alan Bundy, in particular, doesn't think the proposed platform grants are large enough or flexible enough to support the kind of research team that his old rolling grant could maintain.

On the positive side, it seems that any strong research group (LFCS, say) that comes up with a novel approach for a big grant will be taken seriously. EPSRC have identified a problem, and are open to offers of a solution.

Doctoral Training Accounts

Barring surprises, from October 2002 these will be open to all EU students, with stipend. Confirmation of this should come in the new year.

Fast Track Grants

It's a fine scheme, but EPSRC is a bit tetchy about all the applications from new professors moving from chairs overseas or from industry directorships. They will think up some hurdle.

College of Peers

O'Reilly likes this, replacing the old standing committees for proposal assessment. There is likely to be more involvement of such researchers in EPSRC policy, possibly through Advisory Panels matching programme areas.

Life Sciences Interface

This is partnership scheme for EPSRC to joint projects with BBSRC/MRC. It has gone quite well, and is being seen as a model for enabling successful interdisciplinary research.

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Platform Grants Guidance
IT and Computer Science (ITCS) Programme

- Rationale
- Nature of the scheme
- How to apply
- Criteria
- Contact

Rationale

The ITCS Programme aims to develop and enhance a strong UK computer science base in academe. In order to achieve this a number of mechanisms will be used. One mechanism will be the introduction, from 1 April 2001, of a relatively small number of "Platform Grants" to provide world leading groups with continuity of funding for key staff, the opportunity to undertake short term adventurous research and enhanced national and international networking. The intention is to earmark £3M per annum, initially over the next three years. This should enable the issue of about 7 awards per annum through the ITCS Programme.
Further details of the objectives and aims of the ITCS Programme can be found in the EPSRC Landscapes document.

Nature of the scheme

Awards will be used to provide baseline funding for world leading groups. They will typically be for a maximum of £400k in total, for periods of up to 5 years. The funding is not intended to be restrictive, and groups would be free to apply for other EPSRC grants. The intention is that the Platform Grants would provide groups with the stability to enable them to take a more strategic view of their research. Awards could be used as continuity support for key researchers, and/or to allow researchers to move in and out of the baseline support into other specific projects as funding became available. The support could be used in part to allow scoping studies or adventurous research to be undertaken which are then developed into separate research proposals. "Platform Grants" will be people dominated and will, typically involve named RAs within the group. Support could be requested for un-named senior research assistants, where justified. "Platform Grants" would normally be expected to include a significant travel element to allow national and international links to be enhanced. Where appropriate, Platform Grant holders should consider applying for additional network and visiting fellowship awards.

How to apply

Potential applicants are required to seek further advice on preparation of the case for support from the Programme Manager and to prepare a two-page outline case against the stated criteria.
Where invited, full proposals should be submitted using the standard form and guidance for proposals for consideration by the most appropriate responsive mode peer review panel. Extra guidance on the rationale and criteria for platform grants will

be provided to referees and panels. The guidance for referees is attached here for information.
As the purpose of the scheme is quite different from standard research grants the application case for support should concentrate on justifying the extent to which the applicants' research team meets the assessment criteria. The maximum 8 page limit still applies, although some additional details on current research projects can be provided in a short technical annex.

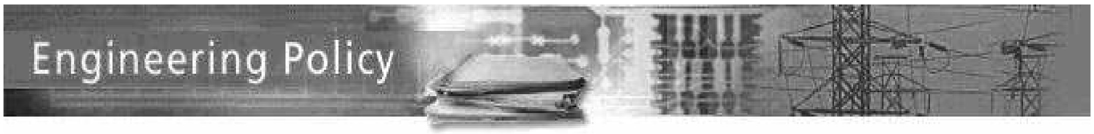
Criteria

Proposals should meet the following criteria:

- The proposal must demonstrate that the group has an internationally leading reputation.
- The proposal must demonstrate that the group has a track record in obtaining support from multiple funding sources, including strong support from industry.
- The proposal must demonstrate that the group would use the "platform grant" as an opportunity to take a more strategic view of its research. The proposal should detail how the group intends to develop in future, including training links and links with other world leading groups internationally.
- The proposal must demonstrate the group's need for a "Platform Grant", such as retaining key people currently supported on short term contracts, and must show that a "Platform Grant" is timely at the point of application (for example a number of grants coming to an end).
- The proposal must demonstrate the importance of the research area or the relevance to the user community which the group underpins.
- The proposal should describe the management arrangements for the group, and include a projected plan of current and anticipated support to show how the "platform grant" would fit into the group's portfolio.

Contact

Any groups considering applying for a "Platform Grant" must, in the first instance, contact the Programme Manager (vince.osgood@epsrc.ac.uk) or relevant Associate Programme Manager.



EPSRC

Event, Savoy Place, 11 December 2001

Report [PDF format]

Engineering Policy

International Review of UK Research in Computer Science

IEE-backed report offers solution to computer science brain drain

Low academic salaries, poor working conditions and inadequate research funding are behind an exodus of the UK's best compute scientists that could have far reaching consequences, according t a major study that has been carried out with support from the IEI

The International Review of UK Research in Computer Science was conducted by a panel of experts from all over the world on behalf of the Office of Science & Technology, the Engineering & Physical Sciences Research Council, the IEE, the British Computer Society and the Royal Society.

The 14-strong panel, chaired by Prof Fred B. Schneider of Corne University and including some of the top figures in the world of computer science, carried out its work earlier this year. Using a combination of analysis of existing data, international assessmen and site visits, it sought to assess the standing and potential of research at UK universities, as well as discussing its likely impac on the UK science base and the nation's wealth. The panel also tried to compare the situation with that in other countries.

A final report published this month confirms the traditional high quality of UK computer science, but warns that the nation's position as a world leader is by no means assured. Declines in certain fields are already evident, it claims, and more will follow given current levels of support and the nature of today's universi research environment.

'Industry in the UK and elsewhere, and universities in the US an Europe, are eager to hire talented people,' the report points out. 'Academic salaries and working conditions in the UK, however, are not competitive. So the talent pool in UK universities is shrinking, with senior researchers leaving and students foregoing advanced degrees for lucrative industrial positions.'

The report is also critical of the level of EPSRC research funding low by international standards - and the manner in which it is distributed. The current approach makes it 'unnecessarily difficult' to be an effective researcher in a UK university, it claims. Infrastructure is inadequately supported, funding to build research platforms is difficult to obtain, and the process by which funding decisions are made is perceived to discriminate against proposals in new areas which involve high-risk or interdisciplinary projects.

The expectation that funded research should have industrial tie-in is often counterproductive too, according to the experts, with truly significant industrial impact usually requiring the formation of new companies.

One of the most significant measures that the Panel suggests should be implemented to tackle the situation is for computer scientists themselves to provide significantly more input to decisions about funding levels, research programmes and individual grants. Participation by practitioners in EPSRC advisory panels should be mandatory, and computer scientists need to be involved in day to day management, possibly through some form of secondments to the EPSRC. At the same time, separating the existing IT/CS programme into separate elements for computer science and physical layer technology would allow the two disciplines to enjoy increased visibility, better control and independent budgeting

Identifying several broad areas in which UK research strength is particularly at risk - including programming language design, artificial intelligence, human-computer interaction and bio-informatics - the panel highlights algorithms and complexity research as key areas of potentially massive future importance where research needs to be encouraged. Given the opportunities that will be created by the recently announced three-year e-Science initiative, it adds, the absence of funding within the scheme for longer-term computer science research seems ’ill considered’ at a time of declining UK research activity in high-performance scientific computing.

The computer science review was overseen by a steering group led by Prof John Midwinter. Prof Midwinter, who at the time wasThe IEE President was joined by the then EPSRC Chief Executive Prof Richard Brook, British Computer Society Vice-President Prof Wendy Hall, and Prof Roger Needham, Fellow of the Royal Society. Secretariat support for the exercise also came from the IEE, in the shape of a staff team headed by Director of Knowledge Services Dr Mike Rodd.

The third in a series of exercises to assess international perceptions of UK research in different areas, the review follows 1999 review of engineering and a further study in 2000 covering physics and astronomy. Members of the international panel will be among a large audience expected at the IEE’s Savoy Place headquarters in London this month for a forum in which the wide

computer science community will be able to discuss the findings
Details of the meeting, which has attracted senior figures from government, research councils, industry and academia, and will b broadcast live over the Internet, and although attendance in perso and online is by invitation, members can find the report on the Web at www.iee.org/policy/csreport/cs_report.pdf

Read the report here.

EPSRC welcomes the findings of the report of the International Review of UK Computer Science Research

In June 2001 the EPSRC, in association with the IEE, the British Computer Society and the Royal Society, sponsored an international review of UK research in Computer Science. Under the Chairmanship of Professor Fred B Schneider (Cornell University, USA), the Panel, made up of some of the world's leading computer scientists from both industry and academia, undertook a week long study to effectively evaluate the standing and potential of computer science research in the UK. Their report is published today.

John O'Reilly, Chief Executive Officer of EPSRC said: "I am very grateful to the Panel, and especially to its Chairman - Professor Fred Schneider of Cornell University- for this report. It provides a very clear exposition of the nature of research in Computer Science and it's importance to Science and Society as a whole. The report identifies that UK Computer Science Research has significant strengths in many areas, and acknowledges that a number of the foundations of the discipline were established by the UK science base.

Among the particular areas of strength in which the UK has a leading position are Semantics, Logic, Programming Languages and formal methods. Many other areas of internationally competitive research include real time systems, dependability, software engineering, speech recognition and computational linguistics, machine learning, human computer interaction and bio-informatics.

The report also points out some imbalances in the research capacity within UK Computer Science Research such as algorithms and complexity in which the UK has never exhibited great strengths, experimental systems which is seen as an area in decline, and the need to encourage more explicit engagement of computer scientists in high performance computing applications.

A number of suggestions are made regarding the levels of funding for UK Computer Science Research compared with other countries and the organisational arrangements within EPSRC for raising the profile of computer science within the EPSRC portfolio.

The report is now published for comment by the community, including those cognate disciplines such mathematics, electronics and electrical engineering, psychology, which interface with computer science. And we are especially interested to hear from industry and commerce. A Town Meeting has been arranged for 11 December to initiate the discussions; Fred Schneider will attend to present the Report. I look forward to this and continuing dialogue with the community over the coming months in order to help shape EPSRC's thinking and activities in this area in light of the report.

Finally, I would like to thank the IEE for the positive and professional way in which it has supported the Review."

For the full version of the report visit http://www.iee.org.uk/Policy/CSreport/cs_report.pdf

Notes for Editors:

The Engineering and Physical Sciences Research Council (EPSRC) is the largest of the United Kingdom?s seven government-funded research councils. Its mission is to support the highest quality research and related postgraduate training in engineering and the physical sciences. EPSRC aims to advance knowledge and technology and to provide trained engineers and scientists for the benefit of the United Kingdom and the quality of life of its citizens. It has the further role of promoting public awareness of engineering and the physical sciences. Website address for more information : www.epsrc.ac.uk/

The full launch of the report to the wider science community will take place on Tuesday, 11 December, 2001 at the IEE, Savoy Place, London WC2. The report will presented by Professor Schneider with a response from Professor O'Reilly followed by a question and answer session. Full details are available at: http://www.iee.org/Events/a11dec01.cfm

The event will be transmitted live via the Internet - if you would like to attend either in person or virtually, please Email or phone the IEE Media Relations Manager, Christina Dagnall, as soon as possible as space is limited.

Contact details are:
Email: cdagnall@iee.org.uk
Phone: 020 7344 8403

TPG Course Report

John Longley, 30 November 2001

Here is a brief report on what has been happening in the TPG course this year, and in particular on my efforts to implement some of the changes that I proposed at the Research Committee meeting in March 2001. Although no specific motion was passed at that meeting, I felt that there was sufficiently broad endorsement of the spirit of my proposals to justify certain changes in that direction.

This year's students

The number of participants on this year's TPG course is unusually large. We have 8 postgraduate students proper, plus 2 long-term visitors, who are engaged more or less full-time on the course. Besides this, a few other people (e.g. a couple of students from Maths) are sitting in on particular courses (although in some cases their attendance has tailed off throughout the term). Many of the students have come with strong backgrounds in theoretical computer science. They all seem committed to the courses, there is a good group ethos, and they generally report that the course so far is demanding, but not excessively so.

This year's courses

The basic objectives of the TPG course have remained as before:

* To provide students with a broad background in theoretical computer science and in particular the work done in LFCS;
* To prepare students to work on their thesis.

To meet these objectives more effectively, I proposed that the course contents should be brought more up-to-date, and in particular that the selection of courses offered should not be regarded as fixed from year to year, but should try to reflect the balance of the research that is actually done in LFCS at any given time.

In fact, in order to meet the first objective, it seems one cannot really get away from the traditional selection of first term courses, although this year the contents of some particular courses (e.g. FPLS and, I believe, Concurrency) have been significantly updated. As regards the second term courses, however, this year I am putting together a selection of courses with a greater emphasis on live research topics - hopefully this will feature a larger number of shorter courses. I am also hoping that in view of their timeliness, these courses will also be of interest to other members of LFCS.

The Term 1 courses (this term) have been:

Category Theory	(Daniele Turi)
Computation and Logic	(Matias Menni)
Concurrency	(Colin Stirling and Javier Esparza)
Functional Programming / Formal Program Development	(Don Sannella)
Formal Programming Language Semantics	(John Longley)

The following (traditional) courses will *definitely* run in Term 2

Complexity Theory	(Mark Jerrum)
Advanced Logic	(John Longley)
Type Theory and CAFR	(Randy Pollack)

In addition, Javier Esparza has in principle agreed to give a course on a current research area of interest to him. This would seem a good opportunity for Javier to share his research vision with the rest of LFCS!

I am also working on a number of other individuals whom I hope to persuade to give courses (possibly very short, e.g. 6 or even 4 lectures) on current research topics.

Supervisor involvement

There was broad agreement in March that it would be good to make the course a little more flexible and tailored to the needs of the individual student; also that the student's supervisor should have a little more involvement in planning a course suitable for the student.

This year, in Week 0, I held meetings with each student and (in almost all cases) their supervisor, to discuss the course generally, how the student should approach it, and what selection of courses he/she should take. These typically only lasted about 20 minutes and I think they worked well as a simple way of getting the supervisor "on board". In fact, in almost all cases, the recommendation was for the student to do basically all the courses - though in some cases, where students already possessed a strong background, the advice was e.g. "you might not need to go to the first 6 lectures of course X, but you should consult with the course lecturer yourself on this".

I have retained the nominal distinction between Compulsory and Optional courses in this year's handbook, but with the qualification that these labels are for general guidance only - in practice, what is "compulsory" for a particular student is ultimately decided by agreement between the student, his supervisor and the TPG course organizer.

Timetabling

In accordance with a suggestion received from some previous TPG students, this term I timetabled the courses so that one day (Wednesday) was left free of lectures. The intention was to allow the students to organize their own time more effectively and make it easier for them to find time to pursue their own research interests etc. I haven't yet had any feedback on whether this is proving useful, but it doesn't seem to be doing any harm.

Outside courses

We have again made an effort to encourage students to take at least one (usually Informatics M.Sc.) course outside LFCS, either in the first or second term. The choice of course was one of the things discussed in the meeting with the supervisor at the beginning of term.
However, in practice we often found ourselves beset with timetable clashes, and it is not clear what should be done about this.
Possibly I could have spent more time looking at the M.Sc. timetables and thinking about which courses people were likely to want to go to; but I think my efforts were hampered by the fact that other course organizers tended to leave things just as much to the last minute as I did.

I do not know how many of the students have so far actually been going to outside courses.