

Minutes of APTS Advisory Committee meeting (AC11) on 14th September, 2017

Present: David Croydon (APTS co-director), Adam Johansen (APTS co-director; chair), Sergio Bacallado (Cambridge; by skype), Stuart Barber (Leeds; by skype), Chris Brignell (Nottingham), Jochen Einbeck (Durham), David Elston (BioSS, over Skype), Christina Fell (Student Representative; by skype), Francis Garuba (Student Representative; by skype), Wilfrid Kendall (Warwick), Finn Lindgren (Edinburgh; by skype), Geoff Nicholls (Oxford), Brendan Murphy (UCD; by skype), Dave Wood (Southampton)

Apologies: Chris Ferro (Exeter), Kanchan Mukherjee (Lancaster), Richard Wilkinson (Sheffield)

Meeting held at: C1.06, Zeeman Building, University of Warwick

Meeting Began: 14:00

Meeting Ended: 15:40

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1 Minutes of Advisory Committee meeting on 15th September 2016

The previously circulated minutes were agreed approved as a true record of the meeting.

2 Matters arising

2.1 From Advisory Committee Meeting AC10

AC10/3.1: The collaboration agreement has now been signed.

AC9/4: A two way table of student perception of difficulty vs. time spent on preparation has been trialled this year, but does not seem informative. A mechanism for the exchange of student contact details amongst willing students was been provided after the first APTS week and 39 students took advantage of this; next year we will provide such a mechanism after each week. The APTS website still needs review.

2.2 From Executive Committee Meeting EC11

EC11/5: The phrasing on feedback questionnaires has been tweaked as agreed. We will aim to increase the level of IT support for week 1.

FINN LINDGREN agreed that the *Statistical Computing* labs were not very helpful; not just because of the amount of material, but also because the material needs updating. This will be done this year. Also agreed that extra help in the classroom would be helpful.

EC11/9.2: Claire Miller and Tereza Neocleous has agreed to succeed Adrian Bowman and Ludger Evers and will deliver a module on *Flexible Regression*.

EC11/9.3: Paul Jenkins will join Adam Johansen in leading *Computer Intensive Statistics* this year; David Croydon succeeds Stephen Connor in the delivery of *Applied Stochastic Processes*.

EC11/10: A curriculum review will take place over the next year. Any input would be welcome — see item 7.

3 Report of APTS 2016–2017

Feedback. CHRISTINA FELL: nobody asked for the form at Glasgow which may partially explain the low response rate.

GEOFF NICHOLLS: is there any feedback on local arrangements. ADAM JOHANSEN: there is, it's usually sent directly to the local institutions.

SERGIO BACALLADO: Was there any feedback on the *Statistical Computing* module which might explain in more detail what could be done to improve the student experience of the computer labs in the future.

Action: To forward any relevant feedback. (APTS PROGRAMME MANAGER)

JOCHEN EINBECK: Registration numbers are rather skewed; there is a triple effect, early dates are better, “more relevant in some sense” courses come earlier as do potentially more appealing locations. Should we be concerned about this or attempt to do something about it? ADAM JOHANSEN noted that we're largely constrained by which places have capacity at particular times in the year and the need for modules to come in a logical order. Besides which, it's not always clear which institutions will be more attractive to the student cohort.

Action: Emphasize that later weeks tend to be smaller in the call for bids to host weeks. (APTS Management Team)

FRANCIS GARUBA: assessments. I also attended some other doctoral training; for all of them, assessment is done immediately. I was comparing with multiple choice questions. ADAM JOHANSEN: noted constraints on resources, and the fact that additional assessment within a week would make already very dense weeks more stressful for some participants.

WILFRID KENDALL: how much more expensive have APTS weeks become since the start? ADAM JOHANSEN gave a rough indication; subsequent checking indicates that the average cost of an APTS week for a student registered with accommodation and food in 2007/08 was £317.50 whereas in 2017/18 it will be £487.50. (This amounts to an annual increase of slightly less than 4.4%, in part due to the pump-priming funding provided by EPSRC for the first years of APTS operation.)

Alumni questionnaire: WILFRID KENDALL it's a shame you can't use this for publicity. By memory very small numbers used to be working in industries other than academia. It might be worth noting the date on which the survey was sent out — it may be that response rates are higher when it is earlier.

GEOFF NICHOLLS is there any mileage in using linked in or something like it? Industrial people are more likely to make use of it. ADAM JOHANSEN we do have such a group for alumni (<https://www.linkedin.com/groups/4819679/>); we'd welcome any suggestions about how best to make use of it.

WILFRID we could use twitter for publicity.

ADAM JOHANSEN Billing and cancellation — raising appropriate purchase orders in advance of accepting places for students is the responsibility of senders.

GEOFF NICHOLLS: has there been an issue with institutions not paying? ADAM JOHANSEN: Not thus far.

CHRISTINA FELL: length of the lectures – 90 minutes is very long. It is tolerable with a short break in the middle.

Action: Encourage module leaders to give serious consideration to providing such a break. (APTS PROGRAMME MANAGER)

4 Programme for APTS 2017–2018

1. Cambridge 11–15 December, 2017
Statistical Computing (Finn Lindgren)
Statistical Inference (Jonty Rougier)
2. Nottingham 16–20 April, 2018
Applied Stochastic Processes (David Croydon and Amanda Turner)
Statistical Modelling (Antony Overstall)
3. Southampton 9–13 July, 2018
High-dimensional Statistics (Rajen Shah)
Computer Intensive Statistics (Paul Jenkins and Adam Johansen)
4. Glasgow 20–24 August, 2017
Design of Experiments and Studies (Dave Wood)
Flexible Regression (Claire Miller and Tereza Neocleous)

ADAM JOHANSEN extended the thanks of APTS to both Cambridge and Glasgow for their long commitment to the hosting of APTS weeks.

5 Dates and Locations for APTS 2018–2019

1. Cambridge 10–14 December, 2018
2. Southampton 8–12 April, 2019
3. Durham 8–12 July, 2019
4. Oxford 2–06 September, 2019

6 Elections

6.1 Advisory Committee representative to the Executive Committee

Nominees were: ANTONY OVERSTALL, JOCHEN EINBECK.

Jochen Einbeck was elected by majority.

7 Curriculum Review

ADAM JOHANSEN gave a brief oral report on the context of the forthcoming curriculum review, noting that one key area for consideration was how best to deal with the increasing diversity of the student cohort. WILFRID KENDALL by diversity do you mean students who are not first year students in statistics/applied probability? DAVE WOODS: and also the diversity arising from DTC students? WILFRID KENDALL one has to continually restate a typical APTS student to come and discover a significant amount of material is things they already know. ADAM JOHANSEN some students have been pleasantly surprised that they have learnt things in topics they thought they already knew. CHRISTINA FELL I found it broadening. I am on computer science side, so found it good to broaden my statistics and enjoyed it because of that. GEOFF NICHOLLS Interesting applications can also keep well-trained students entertained. CHRISTINA FELL Non-parametric

statistics had two labs – one theoretical, one more applied. This worked well. ADAM JOHANSEN Although the module leaders adopted that solution with enthusiasm, it is not clear that it was beneficial to all participants.

GEOFF NICHOLLS Oxford R material might be dated. There is no natural update, as there is for course content with lecturer changes. FINN LINDGREN I have been thinking about that issue, even though the statistical computing unit does not rely on knowing 'modern' things. In particular, it might be good somewhere, but probably not in the first unit. ADAM JOHANSEN It would not be good to push too much onto individual lecturers. GEOFF NICHOLLS Perhaps the material already exists somewhere.

WILFRID KENDALL What proportion of what the leading American institutions offer is APTS providing? What are they changing?

GEOFF NICHOLLS Are we okay on machine learning? WILFRID KENDALL One approach to provide more would be to tell student to read the Hastie, Tibshirani and Friedman book. DAVE WOOD there would be space for a very light touch introduction in statistical modelling now that the design of experiments lecture can be omitted.

FRANCIS GARUBA: if you're thinking about machine learning; how about a course on big data? Also recent applications of statistics – many students come from different backgrounds and it would be good to see applications in other areas and connections with recent events in industry. CHRISTINA FELL supported this.

CHRISTINA FELL: my PhD is in Machine Learning, but I think I was at one end of the range of experience.

DAVID ELSTON: Experimental design and data collection might be better than design in order to cover experiment design. DAVE WOOD: It is going to be slightly broader than experimental design and it will try to link to related topics, based on available time.

GEOFF NICHOLLS: Do we take people from industry and are they charged on the same basis as students from academia? ADAM JOHANSEN Yes; and they are charged on the same basis.

FRANCIS GARUBA: An hour or so presentation from people in industry could be useful.

ADAM JOHANSEN: We'd be happy to hear any other thoughts people have in the next few months.

8 Any other business and general feedback

8.1 Date of Next Meeting

Planned date 13th September 2018, 14:00.

8.2 Technology

In response to the increased number of remote participants, the APTS management team will advertise a single preferred platform for remote participation well in advance of the next AC meeting. We will discuss at that meeting whether moving to a purely virtual meeting is desirable in light of our experience during that meeting.

Any suggestions for appropriate software platforms should be sent to the APTS Management Team. At the time of the meeting, appear.in is a candidate for such a platform.

JOCHEN EINBECK go.to works well. DAVE WOOD webex has been by far the best software I've experienced. FINN LINDGREN internet connections are not always very stable. Audio only is usually much safer, but that requires that everyone does this. Muting audio when not talking can also help. ADAM JOHANSEN Video is useful for identification purposes, and preventing clashing in larger groups.

CHRIS BRIGNELL Perhaps the election procedure should be revised. WILFRID KENDALL One possibility would be to use email voting in advance.

8.3 Software List

A draft list of software likely to be useful to PhD students in Statistics has been assembled and can be found at <http://www2.warwick.ac.uk/fac/sci/statistics/apts/resources/software> — any feedback would be welcomed by THE APTS PROGRAMME MANAGER.