



SAMBa CDT: aiming for inclusivity in recruitment and training

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Structure of SAMBa

- Remit of *Statistical Applied Mathematics*: research along the continuum of statistics, applied mathematics, computation, stochastics
- Taught first year (including reading courses, summer thesis) leading to MRes qualification
- Students identify and scope their own PhD research during their 1st year
- Form deep and productive relationships with partners and all students exposed to working with industry/non-academic partners
- *Problem formulation* is a key part of the SAMBa training programme
- *Integrative Think Tanks* (ITTs) are a flagship activity of SAMBa

Current situation

- £4M from EPSRC, £2M from University of Bath to run for 8 years
 - 5 intakes of (10-12) students on full SAMBa programme
 - Funds staff time (managerial, administration, academic)
- Also recruit “aligned” students to industry-generated research projects
- Total of 55 students
 - 38% female
 - 38% non UK (15 different nationalities)
- Recruiting for 5th (and final for this incarnation of SAMBa) cohort

Diversity strategy

- What is the point of a non-diverse cohort?
- There should be no barriers to doing mathematical sciences research except academic ability

Diversity strategy

- Aim for diversity at all levels in SAMBa (Immediate focus on gender as it is the easiest to measure and promote)
 - Advisory and Monitoring Board is 50% female with female chair (easy to achieve)
 - Departmental executive committee is 43% female with female chair
 - SAMBa Academic Management team is 20% female
 - SAMBa Directorial team is wholly male (driven by academic profile)
 - All SAMBa sponsored events aim for 50/50 speakers in terms of gender
- Promotion of our (genuinely) diverse SAMBa cohort
 - All publicity, social media, culture, and discussion internally and externally
- Encourage inclusive, supportive atmosphere across student, supervisor, management cohorts (we have positive feedback on this from existing students and external visitors)

Diversity strategy



Diversity strategy

- Other protected characteristics are harder to promote, identify, and quantify (e.g. race, sexuality, social background, disability, age)
 - Hoping to do more study on this (psychology expertise at UoB)
 - For now, aiming to apply lessons learnt from gender diversity AND
 - Create the most inclusive possible atmosphere
 - The data we have shows we are above the HESA average for diversity in all groups

SAMBa initiatives

- Recruitment and retention
- Integrative Think Tanks

Discussion and analysis is gender focused but expectation is that the cultural ethos will be of benefit to all

Recruitment process

- Interview students in batches of 4-6
 - Aim that there will never be 5 male and 1 female
 - But there may be one of 6 men, and a separate one of 3 men and women
- Meet existing students for lunch and campus tour
 - Mix of male and female
- Interview panel of three
 - Never exclusively one gender
- Balance offers/holds to maintain diversity
 - But quality is explicitly the primary criterion
- All those with offers are put in touch with existing student whilst they decide

Support within the cohort

- Every incoming SAMBa student is assigned:
 - Cofactor (student)
 - 1st year supervisor (academic)
 - These are not matched with gender – more background and research interest
 - Important that men see women as mentors and senior figures from the outset
- Initially there was some manipulation of working groups, activities etc. to ensure gender balance
- Management team are close to students – regular meetings, office close to 1st year
- Department itself already had very supportive and inclusive staff and PGR culture

Outcome

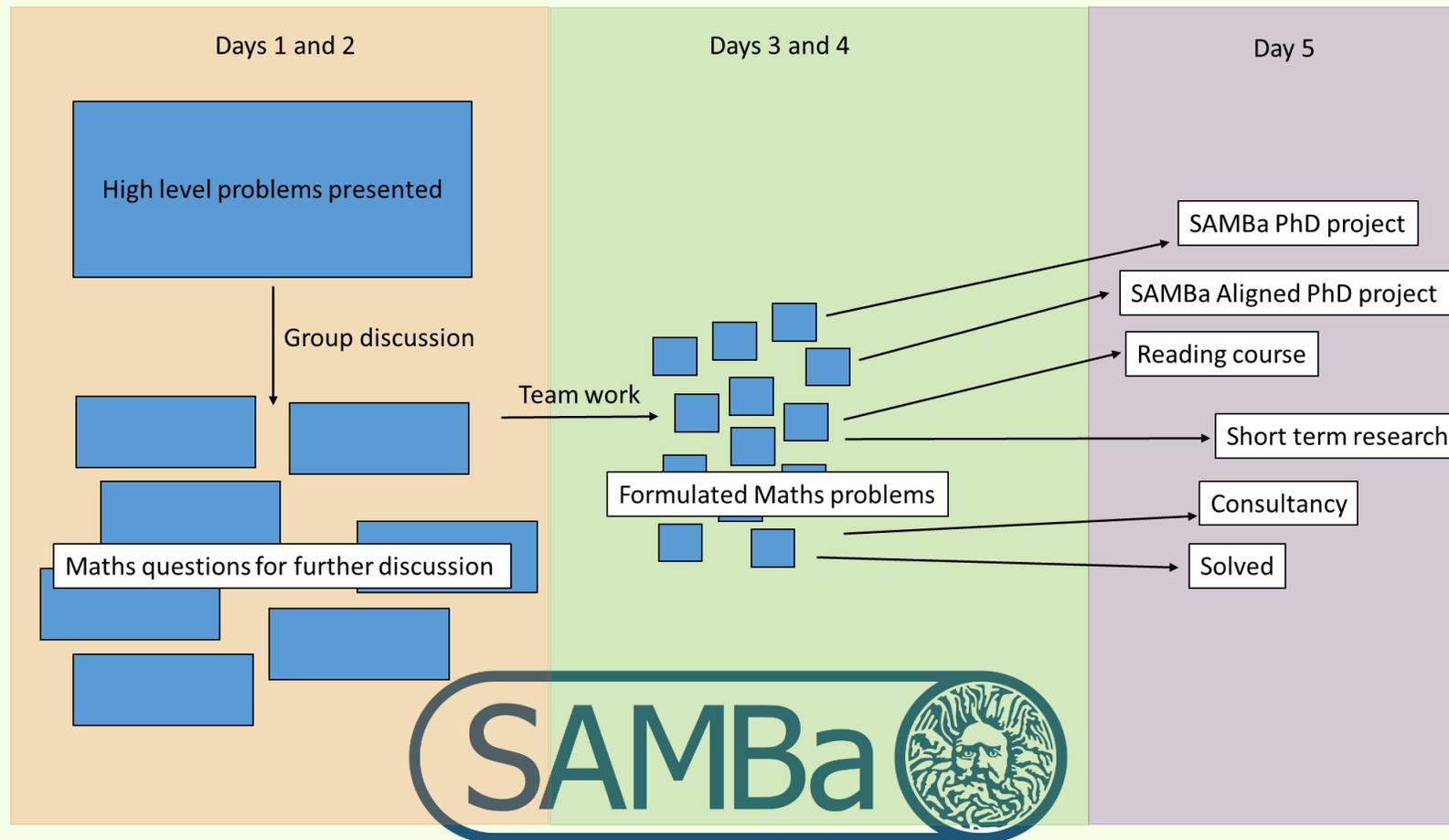
- 38% of entire cohort are female
 - 34% of full SAMBa students, 50% of aligned (60% of those aligned in Maths)
 - In 2016, 46% female recruited into SAMBa
- Manipulation of groupings to balance gender no longer necessary
- Very close cohort – built up from well before incoming students arrive
 - Students report feeling supported and more likely to remain
- Downsides:
 - When a student does not fit so well can exacerbate feeling of isolation
 - Competitive environment can put more pressure on anxious/low confidence students
 - Staff/departmental support is very important to mitigate these problems

Recruitment and retention

- Does this approach also have an effect on departmental diversity?
 - Since 2014 (start of SAMBa), Bath Maths has recruited 11 men, 8 women
 - Including first female professor
 - Pre-SAMBa there were 6 female members of academic staff
 - Postdocs: 42% female

ITT model

- 5 day workshops focusing on problem formulation
- 60 participants: students, academics, external partners, collaborators



ITT outcomes so far

- 20+ PhD projects – some within SAMBa, many externally funded
- Reading courses
- Grant proposals
- Collaborative research
- Spin off workshops
- Internships/mini projects
- Confidence of academic staff and students
- Better relationships with external partners

My observations

- Everyone contributes
 - Upfront principle: “all questions are valid and should be treated with respect”
- Confidence grows throughout the week and from ITT to ITT
- Students are the best prepared and can contribute to and lead discussion
- Partners are amazed by capabilities of students and impressed by range of possible approaches
- There is plenty of time for discussion between different participants
- Managerial oversight to identify and sort out problems keeps people involved (or at least understanding what the difficulties are)

Positive action

- Group chairs (usually approx. 16) are chosen to be balance of male and female
- External partners encouraged to bring female participants
- Using more experienced SAMBa students as chairs and group leads drives confidence through the cohort

What do participants think?

A quick and dirty survey of Bath Maths ITT participants

- How inclusive do you find the University environment?
- How inclusive do you find the departmental environment?
- How inclusive do you find the ITT environment?
- Have ITTs improved how included you feel within the department?
(Please answer yes/no and expand your answer a little)

What do participants think?

- How inclusive do you find the University environment?

Students/postdocs: 81%

Staff: 74%

- How inclusive do you find the departmental environment?

Students/postdocs: 82%

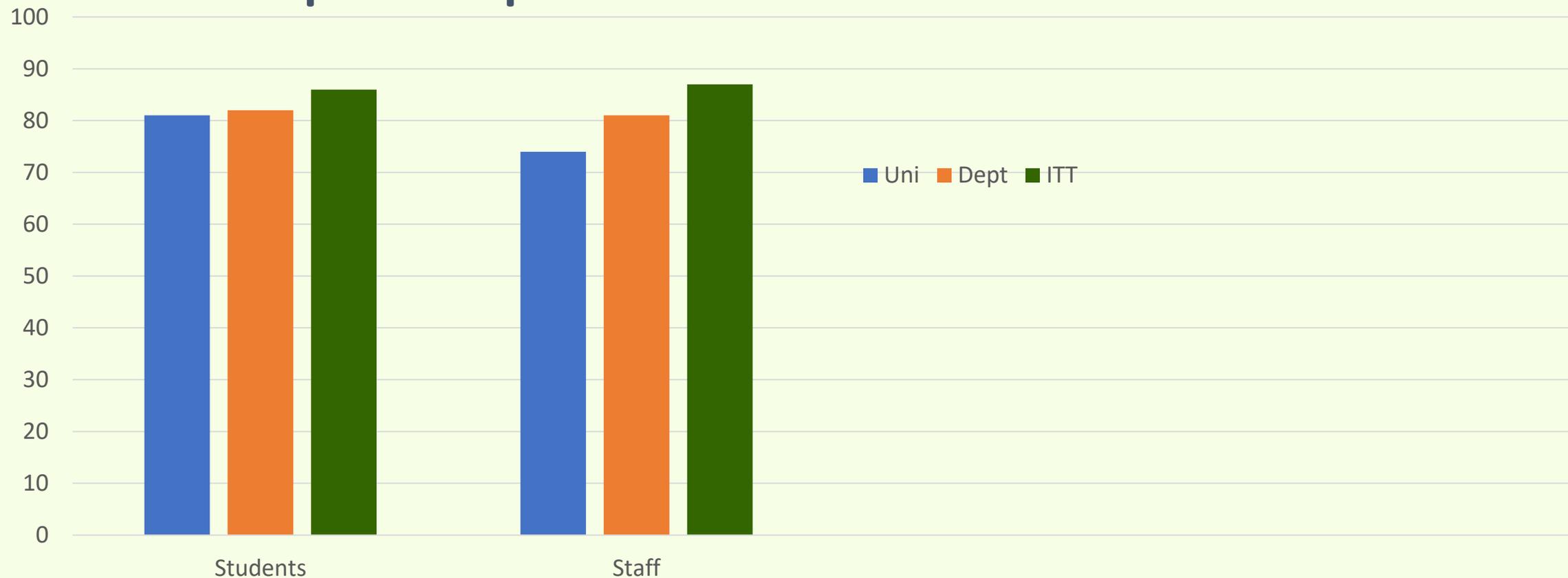
Staff: 81%

- How inclusive do you find the ITT environment?

Students/postdocs: 86%

Staff: 87%

What do participants think?



What do participants think?

- Have ITTs improved how included you feel within the department?

Students 23/25 yes, Staff 12/20 yes

Yes, I found the ITTs very helpful to combat imposter syndrome. As topics are typically new to both academics and students, we can make mistakes together.

Surely. As a new-ish member of staff I had the chance to properly meet and do some Science with my new colleagues, work closely with the students, and network with industrial partners and other academics within the University.

In comparison to the general University environment, I think the ITTs feel more inclusive. In the department, one has for example specific social group meetings (e.g. coffee meetings for Statistics or Geometry groups). In comparison, the ITTs feel more open and welcoming to people no matter their background; one can join any group.

Definitely. Its a good opportunity to work with/be seen by people who you might otherwise not get the chance to.

Yes - working in closer collaboration with academics other than my supervisors has strengthened personal relationships with these academics. This has resulted in me feeling more included in the department, as I have been more able to have causal conversations with the academics I have worked with at the ITT.

It definitely helped in getting to know more people outside of my research area group - which means staff coffees are more friendly.

Conclusions

- Strong staff/student relationship fosters inclusion and support
- This takes time, energy, someone to pull it all together and funding
 - CDTs have a good opportunity to do this
- Inclusion and diversity agendas are well driven by scientific excellence and impact
- Diversity needs to underpin all we do but quality is primary criterion
- Culture change is possible but it is not always obvious it is happening at the time!

Thanks!

SAMBa: <http://go.bath.ac.uk/samba>

ITTs: <http://www.bath.ac.uk/math-sci/postgraduate/samba/our-research/itt.html>

2018 studentships advert:

<https://www.findaphd.com/search/PhDDetails.aspx?CAID=2444&LID=280>



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