

# SAMBa Newsletter

Issue 6, September 2016

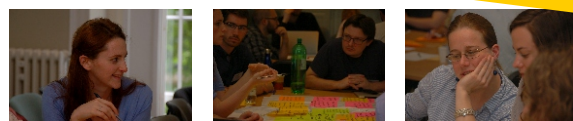


Find out more about what we have been up to from our blog

## Health of ITT model maintained with successful 4<sup>th</sup> event



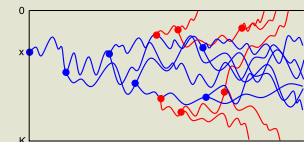
Our 4th Integrative Think Tank took place in June with partners from the NHS (through the Royal National Hospital of Rheumatic Diseases) and Astra Zeneca. The departments of Pharmacy and Pharmacology, Health, Computer Science and Mechanical Engineering and the Bath Institute of Mathematical Innovation, were amongst over 90 participants during the week. The ITT has already generated outputs, with two of our SAMBa students taking up PhD projects formulated during the ITT, and two short-term projects in collaboration with the department of Pharmacy and Pharmacology being picked up by students alongside their main PhD studies. We have high hopes that there are many more activities that will result from the ITT, which has cemented the success of the model even further.



## Building a nuclear partnership with Amec Foster Wheeler



Following their attendance at ITT2, Amec Foster Wheeler has invested in SAMBa for the long term with funding being provided through a fixed sum awarded annually over 7 years. This has enabled us to support two PhD projects investigating Monte Carlo methods for the neutron transport equation. One will focus on the use of branching processes and the other uncertainty quantification. As a direct result of ITT2 work, a joint proposal between Amec Foster Wheeler and Prob-L@B on stochastic analysis of the neutron transport equation has been supported by EPSRC. Congratulations to the investigators on the proposal - Andreas Kyprianou, Simon Harris and Alex Cox from Bath, and Paul Smith and Max Shepherd from Amec Foster Wheeler!



Coming up...	
20 <sup>th</sup> -23 <sup>rd</sup> Sep	BUC5: Uncertainty Quantification
27 <sup>th</sup> Sep	Cohort 3 arrives
Sep 2016 – Jan 2017	MCMC themed semester
5 <sup>th</sup> and 12 <sup>th</sup> Oct	MRes transfer days
11 <sup>th</sup> Nov	Matlab training day
21 <sup>st</sup> -28 <sup>th</sup> Nov	Research scoping week, National University of Mongolia
16 <sup>th</sup> -20 <sup>th</sup> Jan 2017	Research scoping workshop, IMPA Brazil
30 <sup>th</sup> Jan – 3 <sup>rd</sup> Feb 2017	ITT5



Website: [www.bath.ac.uk/samba](http://www.bath.ac.uk/samba)  
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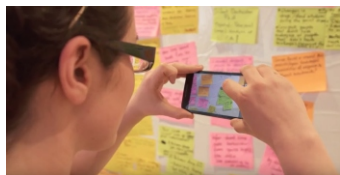




## The BUCs keep rolling in

The BUC series brings together mathematics researchers from the University of Bath and the Mexican Institutions of CIMAT and UNAM. BUC3 and BUC4 took place in quick succession in May and June. BUC3 brought probability researchers together at CIMAT. It developed the mechanism of problem formulation pioneered through the SAMBa ITTs and is already leading to publications from the research ideas that were discussed. BUC4, held in Bath, finished off a series of three environmental statistics workshops, supported by computational short courses delivered by students. BUC5 takes place in Bath from 20th – 23rd September and has the theme of Uncertainty Quantification. The success of the series has led to further investment from the University of Bath with £15,000 awarded to support 3 more BUC events.

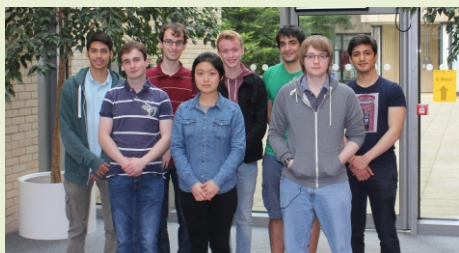
Co-Directors Andreas Kyprianou and Gavin Shaddick were part of the organising committee for the Pre-Congress meeting of New Researchers in Statistics and Probability held at the Fields Institute in Toronto in July. One of the highlights was a presentation about the Mongolian mathematics research environment from Tsoogii Saaizmaa, who is joining us as a SAMBa student this year, having been awarded a prestigious Schlumberger Faculty for the Future fellowship.



We've got a brilliant new SAMBa video recorded during ITT4 and starring our wonderful students. [Find it on YouTube.](#)

## Summer internships scheme delivers research experience for undergraduates

We supported three interns in the department of mathematical sciences this summer. SAMBa funds internships for those who are not yet certain whether they want to pursue a career in academia. This is beginning to deliver success as previous SAMBa interns have taken up PhDs at CDTs in Oxford, and Reading and Imperial, and as a SAMBa aligned student. The department's internships scheme continues to grow with funding for students also coming from Bath IMI, the LMS and BBSRC.



## The expansion of the SAMBa cohort

We enjoyed welcoming a number of our new cohort of students to Bath in June. We have 13 students joining the SAMBa programme this year, along with four aligned students, who are doing PhD projects thanks to ideas and funding generated by SAMBa. This brings the size of the total cohort to 40. We are particularly proud of the diversity of our cohort which is 40% female and consists of 15 different nationalities.

Congratulations to our co-Director Gavin Shaddick and Executive Committee member Chris Budd who have been appointed Deputy Directors of the Bath Institute for Mathematical Innovation.

Welcome to our new administrator, Jess Ohren. Jess's role is shared between SAMBa and the Condensed Matter Physics CDT.



Our second cohort have chosen their research projects. There are 14 new projects across a broad range of mathematical sciences research, including supervisors from Mechanical Engineering, Computer Science, the NHS and Astra Zeneca. [Find the summaries here.](#)

Paul Milewski, SAMBa co-Director, co-organised a fluid dynamics conference at the ICMS in Edinburgh in July. This included a public lecture from Paul entitled *When water waves act up: hydrodynamic laser and quantum analogues*, which was well-received by attendees.

**We've been visiting:** ICMS, Edinburgh · CIMAT, Guanajuato · UNAM, Mexico City · WHO, Geneva · WHO, Bucharest · Roche, Welwyn Garden City · Syngenta, Jealott's Hill · Fields Institute, Toronto · Miami · Beijing Computational Science Research Centre · University of Lancaster · London · Bon Pasteur, Angers · Institut Henri Poincaré, Paris



For more details on all these stories and to see how you can get involved, visit the SAMBa website: [bath.ac.uk/samba](http://bath.ac.uk/samba)



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