Successful ITTs explore variety of Statistical Applied Mathematical challenges in UK and Mexico

We've hosted two Integrative Think Tanks prior to June. The first was ITT13 in January, with partners Roche Pharmaceuticals and Spectra Analytics, where participants explored challenges including improving therapies for people with multiple sclerosis and adaptive clinical trial design. In May, we partnered with Bath's ART-AI CDT and the Department of Social and Policy Sciences, and joined up with UNAM and CIMAT from Mexico to deliver our second UK-Mexico ITT with the theme of environmental resilience. Partners at this ITT were CENAPRED, SACMEX and the Jalisco Government who brought challenges including classifying volcanic seismic signals, optimising water distribution, and mapping forest fires.

Both events delivered lots of ideas and potential for

future collaboration and it's really exciting to see the impact take shape. Matt Nunes, from our SAMBa Executive, who participated in both ITTs said: "The ITT model is incredibly valuable for generating new research directions and collaborations both nationally and internationally. I really enjoy working in diverse groups with complementary expertise – even online – to develop ideas which will have real industrial and societal impact in so many global challenges." ITT14 has just taken place and you can read all about it in the next newsletter.

Check out an interview by SAMBa student Kevin Olding with our Co-Director, Andreas Kyprianou published in The Actuary.

We've recruited our 8th cohort and are welcoming a wonderfully international bunch from the UK, Spain, Brazil, Mexico, Chile, South Korea, China, Nigeria and Italy. As well as Statistical Applied Mathematics expertise, they bring skills in table tennis, playing tuba and piano, acting, powerlifting, volleyball, and origami. We are excited to meet them in person soon!

Coming up ...

5th - 7th Jul	SAMBa conference
26th - 30th Jul	ICMS workshop on Machine Learning
1st - 10th Sep	Symposium on PDE and Randomness
September	Interdisciplinary Workshop on Evolution and Ecology

SAMBa

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EPSRC
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Where are they now?

Adwaye Rambojun, cohort 2, finished SAMBa March 2020

What are you doing now?

I work at the Bath Institute of Mathematical Innovation as a Mathematical Innovation Research Associate. I investigate potential interdisciplinary research projects involving maths while applying machine learning techniques to medical imaging problems.

What are you enjoying the most about it?

I work on a diverse portfolio of projects, which means that I never get bored. I also get to talk to researchers outside of maths, which gives me a refreshing outlook on the direction of research.

What are you planning to do next?

I would like to lead my own team of researchers looking at various medical and health related problems that would benefit from machine learning and data science.

What do you miss most about SAMBa?

I miss the social gatherings and my friends who moved away.

What was the most fun thing you did whilst in SAMBa?

I cannot think of a global maximum for the most fun thing, but I had a lot of fun doing my PhD in Bath. Memorable things: organising the 2017 SAMBa Summer Conference, ITTs, going to the weir during the summer, meeting up for coffee on Fridays, going to the many pubs in town and randomly going to the SAMBa office for a chat.

Santander Universities

In collaboration with two other CDTs at Bath (ART-AI and AAPS), and with financial support from Santander UK, we awarded research experience projects to 6 Bath undergraduates of female and under-represented gender identities. Students will carry out research within the remits of Statistical Applied Mathematics, Automotive Propulsion, and Accountable, Responsible and Transparent Artificial Intelligence over this summer, guided by current CDT students. We are looking forward to seeing the results and to running this scheme again in 2022.

Delivering collaborative workshops successfully

Despite the challenges of the pandemic, our spin off Reimagining Recruitment project has supported a number of collaborative incubators exploring mental health (hosted by Ulster University), automata in the wild (University of Warwick), future transport (Oxford Brookes University), and microalgae and microtechnologies (Heriot-Watt University). The team recently published an article based on their experience in Times Higher Education. Read it here.

Congratulations to...

Emiko Dupont, **Elizabeth Gray**, **Malena Sabate Landman**, **Cameron Smith**, **Hayley Wragg** who passed PhD vivas

Piotr Morawiecki who won a BAMC poster prize

Tosin Babasola who was part of the winning team at the ICMS/MAC-MIGS Modelling Camp

Katie Phillips who won a Doctoral Recognition Award from the University of Bath

Tim Rogers and **Sam Moore** who won the Lloyd's Science of Risk (pandemics category) prize for their paper on predicting epidemics in networks

Bas Lodewijks who won the Godfrey and Sue Hall Postgraduate Research Student prize and came second in the University's 3 Minute Thesis competition

Chris Budd and **Matthias Ehrhardt** who, in collaboration with Cambridge and UCL, have been awarded an EPSRC Programme Grant to explore the Mathematics of Deep Learning

Kirill Cherednichenko, funded by EPSRC to investigate quantitative tools for upscaling the micro-geometry of resonant media

Sarah Penington for being awarded a Royal Society URF on branching systems with spatial interactions, and **Matt Roberts** for a successful continuation of his Royal Society URF

Chris Budd who won the Leadership category in the Vice-Chancellor's Engage Awards

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