Welcome to the second issue of "Statistically Speaking..." – a termly publication designed for all current and past staff members, as well as current and past students of the Statistics Department in Warwick University.

This December issue includes information on recent news and events from the Department, upcoming seminars, and a few words from departing and new members of staff.

Contributions are most welcome and should be sent to statspeak@warwick.ac.uk.

A big thank you to all who contributed to this issue or participated in its production in any way.

Larbi Alli, Antoniya Petkova
Managing Editors

The Department of Statistics has been awarded the Athena Swan Bronze Award in a ceremony which took place on 7 November 2013.

The Charter allows higher education institutions committed to the advancement and promotion of the careers of women to apply for membership. In Warwick Statistics, these efforts are overseen by our Welfare and Communications Committee, chaired by our Head of Department.

The Departments of Mathematics and Psychology, and the Schools of Engineering and Life Sciences are holders of the Athena Swan Bronze Award, while Chemistry and Psychics, the WMG and the University of Warwick have been awarded Silver status.

Congratulations to:

Paul Jenkins and wife Sarah for the safe arrival of their daughter Claudia Constance Jenkins on 29 October 2013

Kirsty Hey for Best Oral Paper at the International Biometric Society Channel Network Conference

Alexandre Thiery for the 2013 John Copas Prize in Statistics for the most outstanding thesis

Mark Girolami for a three-year EPSRC network grant as the principal investigator in the Network on Computational Statistics and Machine Learning

Chenyi Zou for outstanding overall performance in Mathematics and Statistics

Shaun Killingbeck for outstanding performance in a Masters dissertation

Christopher Nam, Francisco Rubio, Alex Thiery, and Emmanuel Ogundimu for timely completion of a successful PhD

Lucas Craciun, Francesca Pickford, Mardin Mider, Isabella Yuen, Bethan Copsey, and Edmund Wall for outstanding performance in first, second or third year examinations

James Turner for best performance in a third year Actuarial Sciences module

Adam Bowditch and Jingwen Zhong for outstanding overall performance in MORSE

Daniel Brunt, Jack Carter, Zhang Min Chow, Rashmi Divakaran, Louie Hawkey, Sajjaad Jeeawody, Hassan Khan, James Thornton, Badar Ali, Daryl Chia, Yuchen Gao, Adlul Hajee Abdoula, Desislava Ivanova, Mikolaj Kasprzak, I-wen Liu, Adwaye Rambojun, Ken Wei Tan, Jason Yueng Yuk Wing, Pit Bryer, Ju Ng, Dilan Rajaram, David Whitcombe for academic excellence in an intermediate year

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Bienvenue dans le deuxième numéro de “Statistically Speaking...” - une publication mensuelle conçue pour tous les membres actuels et anciens de l'Université Warwick, ainsi que pour tous les anciens et les étudiants de la statistique du département.

Ce numéro de décembre inclut des informations sur les derniers événements de la Department, des séminaires à venir, et quelques mots de remerciements de départ et d'arrivée des membres du personnel.

Les contributions sont bienvenues et devraient être envoyées à statspeak@warwick.ac.uk.

Un grand merci à tous ceux qui ont contribué à cet numéro ou participé à sa production de quelque manière que ce soit.

Larbi Alli, Antoniya Petkova
Directeurs de la Publication

Le département de statistiques a été récompensé du prix Athena Swan Bronze Award lors d’une cérémonie qui a eu lieu le 7 novembre 2013.

Le Prix Athena Swan est dédié à l’avancement et à la promotion des carrières des femmes dans le domaine de la science, de l’ingénierie, des mathématiques et de la médecine (STEMM) ainsi que pour l’adresses des inégalités de genre dans l’académie.

Les départements de mathématiques et de psychologie, ainsi que les écoles d’ingénierie et de sciences de la vie sont titulaires du prix Athena Swan Bronze Award, tandis que la chimie et la psychologie, ainsi qu’il WMG et l’Université de Warwick ont été attribués des statuts d’argent

Les félicitations pour:

Paul Jenkins et épouse Sarah pour l’arrivée en toute sécurité de leur fille Claudia Constance Jenkins le 29 octobre 2013

Kirsty Hey pour la meilleure communication orale à la conférence internationale de la société biométrique, chaîne, réseau conférence

Alexandre Thiery pour le prix 2013 John Copas en statistique pour le travail le plus remarquable

Mark Girolami pour un contrat EPSRC de trois ans en tant que principal investigator dans le réseau de statistique et de sciences de l’informatique

Chenyi Zou pour excellent rendement général en mathématiques et en psychologie

Shaun Killingbeck pour excellent rendement dans une thèse de maîtrise

Christopher Nam, Francisco Rubio, Alex Thiery, et Emmanuel Ogundimu pour la récente remise de leur thèse.

Lucas Craciun, Francesca Pickford, Mardin Mider, Isabella Yuen, Bethan Copsey, et Edmund Wall pour leur excellente performance dans les premières, deuxième ou troisième années d'examen

James Turner pour la meilleure performance dans une deuxième année d'actuariat

Adam Bowditch et Jingwen Zhong pour leur exceptionnelle performance globale en MORSE

Daniel Brunt, Jack Carter, Zhang Min Chow, Rashmi Divakaran, Louie Hawkey, Sajjaad Jeeawody, Hassan Khan, James Thornton, Badar Ali, Daryl Chia, Yuchen Gao, Adlul Hajee Abdoula, Desislava Ivanova, Mikolaj Kasprzak, I-wen Liu, Adwaye Rambojun, Ken Wei Tan, Jason Yueng Yuk Wing, Pit Bryer, Ju Ng, Dilan Rajaram, David Whitcombe pour leur excellence académique au cours d’une deuxième année d’études

The Department of Statistics will award substantial scholarships to qualifying students on the MMathStat or MMORSE courses who began their degree in 2012 or later. Students can receive up to £4000 if they demonstrate academic excellence considered to be of a First Class Honours standard during their third year and who continue onto the 4th year. For more information, visit http://www2.warwick.ac.uk/fac/sci/statistics/courses/senior-scholarships

BSc Data Science Course Announced

We are proud to announce the new three-year Data Science degree. This unique course aims to meet the rapidly growing demand for a systematic flexible combination of high-level learning and experience in both Statistics and Computer Science. The course structure includes the option of an intercalated year, a year spent away from Warwick to gain valuable experience before the final year of the degree. Details at: www2.warwick.ac.uk/fac/sci/statistics/courses/datasci
Reading Between the Lines

By Ben Graham

The Chinese Handwriting Recognition Competition 2013 was held as part of the 12th International Conference on Document Analysis and Recognition. Researchers were invited to submit a computer program that would have to read 225,000 handwritten Chinese characters from a secret database.

To measure the difficulty of the task, the competition organisers also measured human performance on the dataset. The top human accuracy was 95.19%, and the humans had an easier task—they were shown 10 possibilities and asked to pick one, whereas computers had to identify the character from the full range of 3755 GBK characters.

Ten different systems were entered into the competition, with accuracies ranging from 92.97% up to a superhuman 97.39%. In the battle between man and machine, this represents yet another indignity for humans, although perhaps not as bad as when a mobile phone reached the level of chess grandmaster in 2009.

My program distinguished itself in a number of ways, not least by being 23 times slower than the next slowest program, and requiring the highest number of resubmissions before it would actually run on the test computer.

As the focus of the Statistics department shift towards Big Data, it is my ambition to extend my program from reading individual characters to whole words, and who knows, possibly even entire sentences.

Big Data in the Mathematical Sciences

By David Rossell

November 13 saw an exciting workshop on big data and mathematical sciences, organised by Graham Cormode. It was a joint initiative between the Computer Science, Statistics and Mathematics departments, funded by the EPSRC WAMP grant. In Graham’s words, “Our goal was to show that Big Data is more than just how much computation power you have, but relies fundamentally on mathematical insight. We were lucky to bring a great set of speakers who emphasized ideas from across Statistics, Computer Science and Mathematics”.

The great turnout reflects a growing interest. Over 200 attendants, roughly 50% from outside Warwick, gathered in front of a stellar line-up. The contributions blurred the frontiers between disciplines, ranging from computational and sampling methods for networks, summarizing big data to obtain faster queries or extract features for classification, or learning from complex time ordered data.

A personal favourite is Michael Jordan’s view that in a world where computation time is finite statisticians should pay more attention to algorithm time cost. The sacred principle that more data is always better fails when algorithms do not scale up! In these situations, bound to become more frequent with big data, it may pay off to visit our neighbours in maths and computer science for coffee and a crash-conquer strategies.

As food for thought, what is “big data”? It seems to mean different things to different people and fields. Regardless of its definition, two points seem clear. First, that anything with “data” in its name calls for statisticians. And second, that “big data” requires multiple disciplines, something that again is ingrained in the very DNA of statistics. We really should have something to contribute to this debate.

Keep your eyes open for upcoming big data events, regularly updated at:  
http://www2.warwick.ac.uk/fac/cross_fac/dimap/events/bigdataevents

Knowledge and Systems Sciences, Beijing 2013

By Simon French

At the end of October 2013, I visited China to lecture at the Chinese Academy of Sciences in Beijing and then to attend the KSS 2013 conference in Ningbo. In Beijing I gave three talks ranging from Expert Judgement to Decision Support for Emergency Management. Aside from the lectures, I also discussed a range of potential research topics with my host Prof Xijin Tang. Additionally, I was the plenary speaker at KSS2013 where I spoke on Cynefin, Decision Analysis and Emergency Management.

A social highlight was a trip to the Summer Palace in Beijing, a delightful park full of history, lakes, palaces and – honest! – a rather large yellow rubber duck!!! Performance art is a strong China in as in Europe and America.

New Starters

A warm welcome to the Department’s most recent starters!

Ms Audrey Kueh  
Research Assistant from 1 October

and

Dr Sayan Banerjee  
Research Assistant from 18 November

Dr Elisabetta Candeliero  
Statistics Research Fellow

“I have joined the University of Warwick only a few months ago, and since the very first day I have been feeling warmly welcomed. The reason for this being that everybody (members of staff as well as students) contributes to the creation of a very friendly environment.

My experience so far has been great: besides interacting with people in the department, there have been multiple occasions in which I had the opportunity to discuss with national and international visitors. Such environment completely matches my enthusiasm, motivates the investigation of new topics and stimulates the birth of new collaborations.

My current aims are to actively contribute in maintaining the high research standards of the department, as well as to develop my personal knowledge and strengthen my skills.”
Professor Tony Lawrance will be retiring at the end of December after a career in statistics of nearly fifty years. He reflected on this time by answering a few questions for ‘Statistically Speaking’.

Where did your interest in statistics begin? I did a Maths degree at Leicester which brought me in touch with statistics in my third year, that was in 1963. I was then advised to take the MSc in Statistics in Aberystwyth where there was a newly formed department of really good people, like Dennis Lindley, David Bartholomew, Mervyn Stone and Ann Mitchell. Some may be surprised that Dennis Lindley taught me the Neyman-Pearson Lemma among other non-Bayesian stats... This one-year course got me into the subject, particular its applicable theory. I was then about to head off to the US for a PhD but the offer of a teaching/PhD position back in Leicester kept me in the UK – this was a time when you could get a UK university job if you promised to do a PhD. I did this in the modelling and statistical analysis of point processes ‘on the line’, with external guidance from Frank Downton in Birmingham.

What was your next move? One of the topics I worked on for my PhD was the modelling and analysis of computer failure data using the newly developed branching Poisson process. That got me in touch with Peter Lewis and research that was going on at the IBM Thomas J Watson Research Centre. So in spite of having just got married and bought a house, we decided I would accept a one-year visiting research staff position with IBM in New York. This was a rather novel and exciting thing to do at that time and the experience really kick off my research career and we had a great time, with my wife working at the British Consulate.

What made you change the course of your career upon your return from the US? I had pretty much decided that I would like to get into a proper Statistics Department and had offers from Imperial, Birmingham and Sheffield – times were different! The Stats Department in Birmingham was very good, and convenient for me – it had Henry Daniels, Frank Downton, Vic Barnett and David Wishart, and I actually replaced Vic Barnett. I stayed there for a while, rising through the ranks, and as they said at my farewell, for 2 years minus 20 summers – the latter due to enjoyable overseas collaborations, mainly in the US, Australia, Japan and India. My research topics varied somewhat unpredictably but a strong covariate was current teaching, beginning with stochastic hydrology from a course I developed for an engineering masters course. There then came along regression and transformation diagnostics from teaching inference, financial statistics from devising a third year course, and latterly financial time series from teaching here on the Financial Mathematics MSc. A theme from continued collaboration with Peter Lewis was Non-Gaussian time series, and work on tyre failures and electronic engine management stemmed from PhD supervision and then collaboration with Tim Davis.

After leaving Birmingham, at a time when I could have actually retired, I was fortunate enough to come here in 2004. I thought I would stay for 2-3 years, and it’s now 2014, so I’ve stayed for nearly 10 years, and greatly enjoyed the time. However, after nearly 50 years of salaried duties, perhaps I should not push my luck too far. I am already at a rather high percentile of the male life length distribution.

What is the biggest advancement or change that in your opinion the Department of Statistics has gone through in 10 years? This department has grown tremendously. It has always been good, ever since it was established by Jeff Harrison in 1972. He initially appointed quality people and this continued under subsequent heads. Over much of the time, the economic situation was such that making lots of appointments wasn’t possible, so the department grew slowly. But it was always very solid and has expanded explosively in these last 10 years and is now a major international department with an international staff and students, and that makes it a really satisfying place to work.

What is your plan after retirement? We have two sons who now have families of their own and we want to be more involved with them. At the same time, I probably won’t retire from my research; as the MP Tony Benn said when he retired from the House of Commons – now I’ll have more time for politics. I will also have more time for day-light tennis with my retired friends who are always wondering why I am still not retired. Weekday lunches and winter holidays in warm places are also on the retirement agenda.

Would you like to leave a few words to the department, perhaps? Well, no. I will feel associated with the department for quite a few years to come I hope, so I don’t want to even consider the fact that I’m officially retired! Then what about a prediction on how Warwick Stats will fare in the future? I think right now the department is very strong. The only word of caution I would give is that strong departments can weaken very quickly without wise leadership, together with highly motivated and appropriately rewarded academic staff. Individually, excellence in both teaching and research is important. Fortunately, this department does not appear in any danger on these points. I wish it well in facing the inevitable challenges to come.

Professor John Aston is relocating to Cambridge University at the end of this year. He shared his thoughts on leaving...

For the last nearly six years, I have been very happily working at Warwick Stats. If I had to come up with a word to summarise my time here, it would have to be “growth”. The most obvious expression of this is the physical numbers of people - the number of staff has doubled in size and the number of PhD students has grown even more dramatically. This has given the department a real buzz, making it a very exciting place to work. While the department has grown in size, its reputation and reach have grown significantly as well. Warwick Stats is now well known internationally, probably on a scale that it hasn't ever been before, and this has manifested itself in the dynamic staff that we have recently recruited from around the world, the strength and depth of the visitors who routinely come to the department, and the representation and the impact that the department has on statistical organisations and societal issues as a whole. Warwick Stats is most certainly one of the most eminent Statistics departments not only in Europe but worldwide. On a personal note, I have also grown as a statistician during the last six years. This is in a large part due to the interactions with my colleagues at Warwick, both Statisticians and Probabilists alike. Your support, encouragement, example and advice have been invaluable to me during my time here, and I am grateful for all you’ve shared. I will take away a lot of fond memories of my time in the department.

Given all this, you might well ask why I am leaving. Sometimes opportunities and challenges come along that are too tempting to miss, and this is how I feel about my upcoming move. However, I will be sad to leave, and hope that I will have continued connections with the department, as it undoubtedly continues to go from strength to strength.

http://www2.warwick.ac.uk/fac/sci/statistics
The University is saddened to report the passing of Warwick’s first Chair of the Statistics Department, Professor Jeff Harrison. Jim Smith, who was once Jeff's PhD student and then his colleague, shares his memories:

“Professor Harrison was the first Chair of the Statistics Department at Warwick, which was formed in 1972. He was well ahead of his time. As well as being a remarkably imaginative researcher, he was committed to inter-disciplinary work, and continued promoting close contacts between statistics and industry throughout his career. He was one of the early UK Bayesians and led the development of Bayesian dynamic modelling methodologies - especially those relevant to industrial applications. His paper with Stevens, read to the Royal Statistical Society in the early 70’s, had a profound effect on the discipline and inspired many leading statisticians to develop work in this and related areas. It is a testament to his vision that Dynamic Bayesian models are now one of the big growth areas in statistics. Although almost 20 years old, his book with Mike West is still a remarkable achievement. He was well ahead of his time.

But most of all Jeff will be remembered for his inspirational leadership qualities, the care and space he made for his many PhD students and his ability to turn his environment into an exciting, enjoyable and productive space for the benefit of others. The selfless care he had for both his students and his colleagues will be sorely missed.”

What’s on

CRiSM Seminars
CRiSM seminars take place in room A1.01

Monday 9 December
16:00—17:00
Professor van Zanten

Thursday 16 January 2014
14:00—16:00
Chenlei Leng (Warwick), John Fox (Oxford & UCL/Royal Free Hospital)

Midlands Probability Theory Seminars
All MPTS seminars take place in room B3.02
13.30—17.00
Full list of three speakers TBA

12 February 2014
François Delarue (Nice)

12 March 2014
Leif Döring (Zürich), Lennart Bondesson (Umeå)

14 May 2014
Christina Goldschmidt (Oxford), Enrico Scalas (Sussex)

Other Statistics seminars:
Thursday 12 December
17:00 - 18:00
RSS Seminar - Paul Hewson (Plymouth) Room A1.01

Algorithms & Computationally Intensive Inference Seminars
Seminars take place every Friday
14:00—15:00 in room D1.07

SF@W Reading Group takes place every
Friday 14:00—15:00 in room C1.06

SF@W Seminars
Scheduled speakers include: Beatrice Acciaio (LSE), Harald Oberhauser (Vienna) and Yuukihiro Tsuzuki (Tokyo)

Dates and times of SF@W Seminars will be announced on http://www2.warwick.ac.uk/fac/sci/statistics/research/sfw

Public lectures

Wednesday 30 April 2014, MS.02, 6.15pm
Professor Nando de Freitas (Professor of Computer Science, University of Oxford)

Data and the Brain: The impact of big data on learning deep neural models for speech, image and language understanding

Mathematics Matters: are international comparisons useful or just interesting?

Join the British Council’s three day conference on mathematics education: Mathematics Matters: are international comparisons useful or just interesting?

Dates: 11-13 December 2013, 9am—5pm
Venue: The University of Warwick
Conference fees: £199 (accommodation packages are available).

http://schoolsonline.britishcouncil.org/sites/default/files/Programme%20Mathematics%20Matters%20Conference%202013-v2.pdf

The University’s Annual Carol Service will be held in the Chaplaincy on Monday 2 December 2013 at 5.15pm with Bishop William Kenny and the Gaudeamus Choir followed by mulled wine and mince pies. Everyone is welcome. A collection will be taken for the DEC Philippines Typhoon appeal.

http://www2.warwick.ac.uk/fac/sci/statistics