



The New Zealand Statistical Association Newsletter

Number 76

January 2016

Welcomes

- [Welcome from the President](#)
- [Editorial](#)

NZSA Conferences

- a report on the 2015 NZSA conference in Christchurch will appear in the next newsletter mid 2016.

Stories of Interest

- [NZSA 2014 Awards](#)
- [Nihal de Silva Obituary](#)
- [Christine Franklin's Reflections](#)

Stats Education News

- [Statistics Education Group](#)
- [NZSA Education Committee](#)

Local News

- [Statistics at the Department of Conservation](#)
- [Mathematics and Statistics at the University of Otago](#)
- [Division of Health Sciences at the University of Otago](#)
- [Mathematics and Statistics at the University of Canterbury](#)
- [Statistics at AUT](#)
- [Statistics at the University of Auckland](#)

Welcome

by MARTIN HAZELTON
NZSA President

In the superb 1980s television series "Yes Minister", the egregious politician Jim Hacker seeks the advice of suave civil service mandarin Sir Humphrey Appleby as to how to run his new ministry. The latter recommends "masterly inactivity". Such advice would also be a recipe for a quiet life as NZSA president. However, I suspect that the Association has reached a juncture where action and change are essential if NZSA is to properly serve all of its members, and also address its mission of leading New Zealand to value and make intelligent use of statistical thinking and good statistical practice. The process of change began with some informal discussions amongst members of the Executive Committee. An immediate result was the establishment of a small working party to examine possible mentoring schemes for early career statisticians with NZSA, with recommendations due in the next few months.

We started to survey the views of the general membership through a discussion forum, entitled "What's Next for NZSA?", at November's NZSA conference. One general theme that arose was the question of how to recognize excellence in applied statistics, particularly from those working outside the university sector. Should a prize be established to reward exemplars? Other talking points concerned professional development (for instance, should NZSA organize workshops on a more frequent basis?) and enhancement of the Association's website. I would welcome any feedback on these ideas, or any other proposed initiatives.

Of course, any steps to improve NZSA will require work. We will prosper only to the extent to which NZSA members volunteer their time and energy. With those remarks in mind, I will take this opportunity to thank Kylie Maxwell for her excellent work as NZSA Young Statisticians representative over several years, and to welcome Courtney Jones into this critical role. If you are a young statistician (in years, or career, or simply at heart) then make sure you keep up to date with the NZSA Young Statisticians activities via the NZSA website, or by joining the NZSA Young Statisticians group on Facebook. I also extend my thanks to outgoing newsletter editor Steffen Klaere for his contributions, and welcome incoming editor Marie Fitch.

I'll finish by wishing all NZSA members a happy and successful 2016.



Editorial

by STEFFEN KLAERE AND MARIE FITCH

I (Steffen) started collecting stories for this edition back in April while still on parental leave, and I received many excited and positive contributions from the local groups. Then life got in the way; two small boys, loads of teaching, and a big grant can take away a lot of time. I am thus very thankful to the NZSA for making the decision of handing over the newsletter for me. So welcome to Marie Fitch who assembled the contributions within a few days of receiving them and will do a great and way more organised job in this than I did.

It hence remains for me to thank the local editors for their help and support over my two-issue stay as editor, and hope you appreciate the following newsletter with interesting stories from departments across the country and a few joyful and some mournful messages.



Steffen and family celebrate Christmas

I (Marie) was very thankful that Steffen had already collected a newsletter's worth of contributions. Our focus for this newsletter has been to collate and publish all those wonderful contributions ... so our apologies if some of it seems a bit out of date. At the moment my main goal for the newsletter is to re-establish regular publication, with a second newsletter for 2016 planned for mid-year. Contributions and suggestions are very welcome.



Stories of interest

NZSA Awards 2014

Worsley Early Career Award

This award recognizes outstanding recent published research from a New Zealand statistician in the early stages of their career.

Dr Tilman Davies

Otago University

Dr Davies has an impressive range of abilities. He can carry out important methods research on a practical problem, connect with other statistical researchers, and take the primary role in producing an important statistical paper from collaboration with other scientists.

Littlejohn Research Award

This award recognizes excellence in research, based on publications during the five calendar years preceding the date of the award.

Professor Martin Hazelton

Massey University

Professor Hazelton is recognized internationally for important theoretical contributions to density estimation, nonparametric regression and traffic modelling. His wide range of collaborations with other scientists in fields such as ophthalmology and epidemiology demonstrate his commitment to real-world applications of statistics.

NZSA Campbell Award

The purpose of the award is to promote statistics within NZ and to recognise an individual's sustained contribution to the promotion and development of statistics.

Professor Shirley Pledger

Victoria University

Professor Pledger's research has had considerable influence on the modelling of heterogeneity in both closed and open populations, and on modelling the age structure within open populations, including application to migratory bird movements.

Her leading role in many Department of Conservation research projects has resulted in significant advances in New Zealand conservation efforts and her work with the top overseas practitioners in her area.

Shirley's referees make significant note of her leadership in scholarship, particularly in mentoring and encouraging young researchers to both publish and to further their academic careers.

As perhaps a side note, Professor Pledger's life and career have both been heavily influenced by Professor Campbell. It was because of him that Shirley chose to major in Mathematics, since he was far more encouraging towards women than the senior academics in other areas of science. It was also because of Professor Campbell that Shirley's husband-to-be, Ken Pledger, chose to return as a mathematics lecturer to Victoria University, where Shirley and Ken met.

Nihal de Silva

by MARK WOHLERS

On the evening of Saturday 27th of June, 2015, Nihal de Silva passed away after a battle with acute myeloid leukaemia.

Nihal joined what was then MAF Technology as a biometrician on 4 July 1988, and was initially based at Palmerston North before relocating to the Levin Horticultural Research Centre and commuting daily from Palmerston North.

He had migrated to New Zealand from Sri Lanka where he had completed his BSc at the University of Ceylon in 1975 and Doctor of Philosophy in Quantitative Genetics at the University of Peradeniya in 1984. He had previously studied at Massey University where he completed his Masters in Agronomy in 1981, to be followed by a Diploma in Social Sciences in Statistics in 1992.

His early work involved kiwifruit on-orchard crop estimation, where his past research

experience in plant sciences and expertise in statistical software were to prove invaluable.

Nihal subsequently transferred to HortResearch, Palmerston North, at the time the Crown Research Institutes were established in 1992. He later relocated to the Auckland site and became the Biometrics team leader. In this role he mentored a number of young statisticians which continued when HortResearch merged with Crop and Food forming Plant and Food Research. He was always more than happy to help and was very approachable. One common theme amongst the scientists he interacted with was that he made the effort to understand the science behind the data.

In addition to the high regard in which he has been held for his professional abilities, Nihal will be greatly missed for his many fine personal qualities. These very qualities were very much to the fore in recent months as he struggled to continue to give his very best in the job that meant so much to him.

The large number of tributes on the PFR internal site is a testament to how valued Nihal was as both a colleague and friend within the institute.



My reflections on the NZSA Education Committee

by PROFESSOR CHRISTINE FRANKLIN,
UNIVERSITY OF GEORGIA, USA
US FULBRIGHT SCHOLAR 2015

It has been an honour and a pleasure to participate in the NZSA Education Committee during my time in New Zealand. I have the highest admiration for the active role the Education Committee played in revising the Maths and Stats NZ Achievement Standards, which was critical to the excellent Stats standards currently in place. I respect the openness of the committee, diversity of the committee, and its current involvement with clarifying standards and assessment concerns. This committee's work is critical for the credibility of school level statistics.

The American Statistical Association Joint ASA-NCTM committee for K-12 statistics would be the parallel committee in the US (NCTM is the USA's National Council of Teachers of Mathematics.) It is structured differently in that three members are appointed from ASA and three members are appointed from NCTM. This committee has a more formalized process of support both financially and with marketing from each organization. This support has allowed the committee to develop and write resources that are peer reviewed for school level teachers, write policy documents, and to develop a structured professional development (PD) model. It is the desire of ASA that these resources and policy documents be shared and utilized internationally.

How do NZ and the US compare with respect to statistics at the school level?

- NZ has well written standards in statistics that progress nicely from one grade level to the next - I believe this is due in large part to the active involvement of this Education Committee in the writing of the standards. The statistics standards in US are similar in spirit and content but not as well articulated with respect to progression and clarity. Although the policy document was

there on the table for this to happen, statisticians were not invited as primary writers for the Common Core national standards.

- The NZ external and internal assessments focus on students having foundational skills of a practicing statistician. This type of ideal assessment will be a dream for the States - our assessments will be primarily multiple choice and some constructed response.
- Dedicated statisticians and educators in both NZ and US are working to develop and maintain the desired goal of statistical literacy.
- NZ is ahead of us in implementing the desired statistics standards and in implementing assessment - US has much to learn from NZ.
- Similar challenges: teacher PD; teaching to the assessment instead of teaching the curriculum; training teachers to use technology effectively; the many who question whether Stats should be part of the Maths curriculum; helping teachers develop the belief that Stats is an important part of the school level curriculum; clearly articulating the learning outcomes of the standards; aligning assessment with the standards.

What are my recommendations for future work of the Education Committee?

- Focus on helping teacher preparation programs in NZ - guide these programs in implementing the recommendations of the Statistical Education of Teachers (SET) Report.
- Focus on PD for current teachers and developing resources that are peer reviewed and easily accessible - make the navigation easy on websites.
- Consider utilizing and encouraging more formative assessment items - model items are available from the National Science Foundation funded LOCUS project.

Given the talent and dedication of the committee members, the committee has the potential to make a tremendous impact beyond writing and clarifying standards. Teachers need your help with implementing the spirit of the statistics part of

the Curriculum and the standards. THANK YOU for inviting me to join. I am going to miss working

with you in NZ but please stay in close contact as we continue our work in the United States.

Note from the editors: *While here Chris took the opportunity to explore as much of NZ as she could... as reflected in the two photographs below. She will be returning to NZ for 3 weeks in March and plans to write a follow up article on how our two committees are building collaboration.*



Chris at Milford Sound



Chris and Maxine at Piha

News from the Stats Education Teams

Statistics Education News,
May 2015

by MAXINE PFANNKUCH

International News

2015 conferences

IASE Satellite Conference 2015, 24-25 July in Rio de Janeiro. The theme of the conference is *Advances in Statistics Education: Developments, experiences and assessments*. An unprecedented number of papers have been received for this conference.

(See <http://iase-web.org/Conferences.php>)

World Statistics Congress 2015, 26-31 July in Rio de Janeiro. The International Association for Statistical Education (IASE) has organized about 10 Invited Paper Sessions for this conference.

(See <http://iase-web.org/Conferences.php>)

The International Research Forum on Statistical Reasoning, Thinking and Literacy will be held on 26 July to 1 August 2015 in Paderborn, Germany. The theme of the Forum is *Reasoning about models and modelling in the context of informal statistical inference*. (See <http://srtl.info>)

Upcoming conferences

The **IASE Roundtable Conference** will be held in Berlin July 19-22, 2016 at the Max Planck Institute. The theme of the Roundtable is *Promoting the understanding of statistics about society*. (For further announcements see <http://iase-web.org/Conferences.php>)

International Congress on Mathematical Education 2016, 24-31 July in Hamburg. Topic Study Groups are being organized in statistics (http://icme13.org/files/tsg/TSG_15.pdf) and probability ([TSG_14.pdf](#)). For further details see <http://icme13.org/>.

Local News

Professor Christine Franklin, (University of Georgia, USA), a **Fulbright Scholar**, has spent the first half of this year with us at Auckland University. The aim of her visit has been to compare the development of statistics education in NZ with the USA. She is renowned for her work in statistics education and recently won the USCOTS Lifetime Achievement Award in Statistics Education and the American Statistical Association (ASA) Founder's Award. Under the auspices of the ASA she was the lead writer of the GAISE (Guidelines for Assessment and Instruction in Statistics Education) **report** and the chair of the recently published SET (Statistical Education of Teachers) **document**; a document that we believe will be the benchmark for the requirements necessary for school teachers from Years 1 to 13. By the end of her visit, Christine will have worked with teacher educators in Dunedin, Christchurch, Wellington, Hamilton and Auckland. She has also worked with the NZSA Education Committee.

CensusAtSchool Project. The 2015 CensusAtSchool 7th survey started in March. By May 374 schools had participated with 15,000 students responding to the survey. A feature of this Census was to improve the participation rate of Kura Kaupapa schools (see <http://new.censusatschool.org.nz/news/> for photos and media reports on this new initiative). There were also some new questions on bullying in schools, which provided some interesting insights (see the **June press release**). The CensusAtSchool project is sponsored by the Department of Statistics of The University of Auckland, Statistics New Zealand, and the Ministry of Education. It has become the central repository of resources for teaching the NZ school statistics curriculum. Chris Wild is the Project Director and is assisted by Rachel Cunliffe and Anne Patel in the running of the website. See:

www.censusatschool.org.nz.

FutureLearn MOOC - Data to Insight: An Introduction to Data Analysis. On 6th October 2014 this Auckland University MOOC was launched. The course ran for eight weeks with 3 hours each week. Over 20,000 students participated mainly from NZ, UK and US. Feedback from course participants was very positive. Chris Wild spent many months with Eileen Wild and Tracey Meek (Auckland) developing this exciting course. It is centred on his innovative software iNZight (see <https://www.stat.auckland.ac.nz/~wild/iNZight/>). The course ran again in October 2015. For more details see <http://tinyurl.com/4StatEducators>.

NZSA Education Committee, June 2015

by MIKE CAMDEN

A year with a series of subtle questions

The once shiny and new NCEA Achievement Standards, at NCEA levels 1, 2 and 3 are now in use for their 5th, 4th and 3rd years, respectively. As teachers and assessment experts apply them, a series of subtle questions pops out. We've been busy finding the answers. (NCEA = National Certificate of Educational Achievement.) At the end of this piece, you'll find a few of these questions. Any attempts at them will be considered as Achieved with Excellence.

By June we had met 3 times in 2015 and had 25 members on the emailing list.

What do we think? Check us on the CensusAtSchool website

We'd like NZSA members to know what we're thinking and doing. You now have a new way of checking us out. We aim to make our main statements available to teachers and members, and we're doing this by getting them put up on the CensusAtSchool website: <http://new.censusatschool.org.nz>.

Here's the 2015 crop so far:

- The Ministry of Education's RAMP: Review And Maintenance Programme for curriculum-based resources: <http://tinyurl.com/h7cxfwz>
We said this (and plenty more):
The school view into statistics is a view into a very dynamic world: the world of data deluge, with new tools and skills for dealing with it. The public hears plenty about topics like big data, data analytics, etc. The skills that the RAMP materials support are core necessities for these topics. We need to ensure that they stay core, and that we stay ahead.
- NZQA's six external assessments (exams) of November 2014:
<http://tinyurl.com/2014externals>
We commented in detail on each exam, and also said this and more:
We congratulate the authors on continuing the movement of the assessments towards the spirit of The NZ Curriculum. In most cases, the questions use contexts that require statistical thinking about all parts of the statistical enquiry cycle. We're very well aware of how hard it is to write statistical assessments.
- Sampling at NCEA level 2:
<http://tinyurl.com/zdvs97r>
We said that sampling is an essential concept, and that we'd like to see resources that illustrate contexts where students do not have access to the population data, and that require or show students' description of their sampling method.
- The e-asTTle assessment tool:
<http://tinyurl.com/hefb552>
We recommended that the e-asTTle statistics questions be reviewed and re-written to align more closely with the NZ Curriculum.

Here's the 2014 crop:

<http://tinyurl.com/2014L3>
<http://tinyurl.com/2014ethics>
<http://tinyurl.com/2014NZSAday>
<http://tinyurl.com/2014resources>.

A guest member of the committee:
Professor Christine Franklin

Chris has spent most of the first half of this year based in the Statistics Department at the University of Auckland, and joined the Education Committee for her stay. Chris is Professor and Undergraduate Coordinator in Statistics at the University of Georgia and a Fellow of the American Statistical Association. She was the lead writer for the American Statistical Association Pre-K-12 Guidelines for the Assessment and Instruction in Statistics Education (GAISE) Framework, and chaired the writing team of the recent ASA Statistical Education of Teachers (SET) report. (K-12 is the equivalent of our school years 1 to 13.)

Chris is in an excellent position to compare statistical education across NZ and USA school systems. She presented our June meeting with her insights and her recommendations for the committee. Please see the [separate article](#) by Chris in this issue. We're very appreciative of the time and expertise that Chris has provided to us and the rest of the NZ statistical education community, and we wish her many successes back at home.

NZAMT14: Auckland, July 7 to 10

The biennial conference, Back to Basics, of the NZ Association of Mathematics Teachers was at AUT. Several members of the committee presented.

ISLP Poster competition

We have new ideas for encouraging NZ participation in the poster competition of the International Statistical Literacy Project. We plan to trial a datajam-like event at Cantamath, then go national at a later date.

Like a challenge? Here are some questions

1: We filter a time series into the three components: trend, seasonal, remainder.

1a: How much detail can we tolerate in a description of the trend?

1b: What is in the remainder? Should it be uncorrelated white noise, or can it contain some short-period bumpy bits from the smooth?

2: Probability assessment has traditionally consisted of mental and algebraic gymnastics.

2a: How can we move the learning and assessment of this vital subject towards the skills that people need to use in this complex and precarious world?

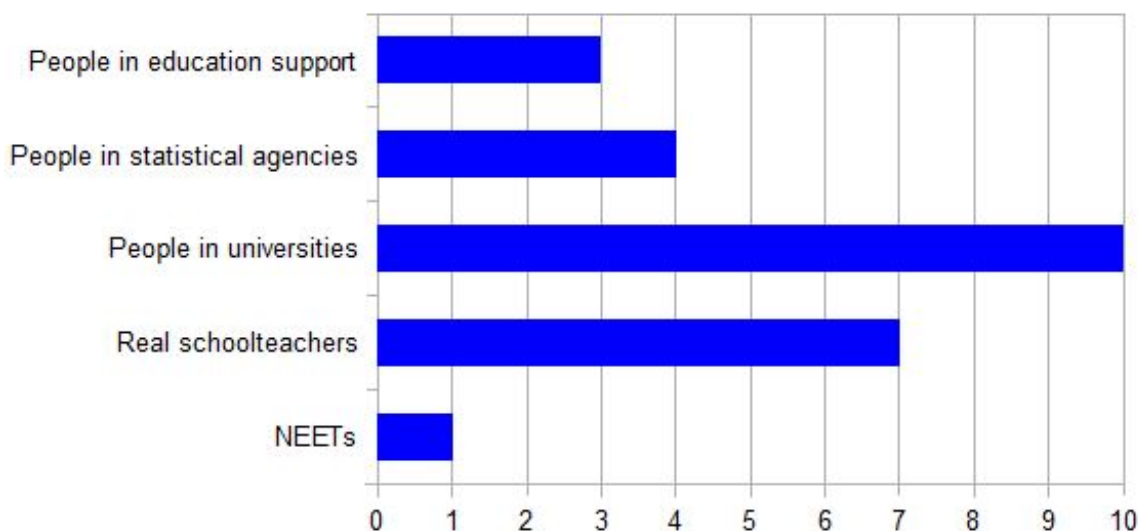
2b: How do we include the strong mathematical concepts that underlie probability?

3: Our data has got outliers in it.

3a: Can we just toss them out?

3b: What do we do about them?

Distribution of roles in NZSA Education Committee



Local News

as at June 2015

Statistics at the Department of Conservation

by IAN WESTBROOKE

Rohan has moved from DOC after 7 years to work as a research fellow in Biostatistics at the Auckland University of Technology. We wish him well with this new opportunity.

In his place I have been joined by *Paul van Dam-Bates* who recently arrived from Victoria BC, Canada. Paul gained his Masters in Statistics with Dr Laura Cowen at the University of Victoria with research focused on the foraging strategy of the California sea cucumber in response to nutrient levels in sediment. He has also worked as a statistical consultant, including estimating injection drug user populations in Victoria BC using capture-recapture methods.

Paul and I attended the Statistics in Ecology and Environmental Monitoring conference in Queenstown in late June, where I organised and presented in an afternoon focussed on developments in environmental reporting in NZ. Also presenting were *Warren Gray* from Ministry for the Environment on the new Environmental Reporting Act (ERA), *Andrew Gormley* (Landcare Research) and *Ollie Gansell* (DOC). A similar session is scheduled for the NZ Ecological Society conference which precedes the NZSA conference in Christchurch this November. Keynote speaker will be the Government Statistician, *Liz MacPherson*. The ERA places responsibility jointly on the Secretary for the Environment and the Government Statistician to report on the state of NZ's environment.

We are heading into a busy period of training at DOC, with 2 three-day modules on statistical modelling; another on designing observational

studies; and a one day session on matrix population modelling. Along with this, our focus is on conservation monitoring, including biodiversity measures such as bird and pest counts, vegetation surveys, and visitor monitoring.

Department of Mathematics and Statistics, University of Otago

by JÖRG HENNIG

Known for his markedly friendly and warm-hearted attitude towards his colleagues and students, we bid a sad farewell to *Peter Fenton*. After 39 years of service at the Department, Peter is now entering his well-deserved retirement. Peter was awarded a BSc (First Class Honours) and MSc from the University of Melbourne, then did a PhD at the Imperial College, London. Afterwards, Peter spent two years at the University of Maryland, before he finally joined the Department in 1976. Well-known for his research in pure mathematics in particular, complex analysis, Peter was at the same time very interested in the history of mathematics, and he was an outstanding teacher. In the words of a student, "Peter Fenton's calculus lectures are the best show in town". Best wishes for a happy retirement, Peter. We hope that you will occasionally pay a visit to the Department and your old colleagues and friends.

This year's NZMS Forder Lecturer *Endre Süli* (University of Oxford) visited the Department in April. Endre gave a very interesting public lecture about "Finite difference methods in the 21st century", and a seminar on "Mathematical

challenges in kinetic models of dilute polymers”.

This newsletter’s Otago correspondent is among the five University of Otago academics whose research contributions have been recognised through “University of Otago Early Career Awards for Distinction in Research”.

David Bryant, who has recently been promoted to full professor, gave his inaugural professorial lecture. David works on mathematical, statistical and computational aspects of evolutionary biology. In his very well attended lecture, he told the audience about “Proofs and evolution”.

Members of the Department have organised the conference Statistics in Ecology and Environmental Monitoring (SEEM 2015) in Queenstown. There were about 50 participants, mainly from New Zealand, but also from Australia and the USA. Besides an interesting conference, they could enjoy the beautiful scenery with a little bit of snow and plenty of sun.

In July, *Astrid an Huef* and *Iain Raeburn* gave lecture courses at a research school on “Leavitt path algebras and graph C^* -algebras” at the Nesin Mathematics Village in Sirince, Turkey. The school was sponsored by the European agency CIMPA, whose aims include the promotion of international cooperation in mathematical research in developing countries.

Visitors

The Department had several short term visitors in the past couple of months, who were hosted by *Astrid an Huef*, *Iain Raeburn* and *Lisa Clark*. *Marcelo Laca* (University of Victoria, Canada) and *Aidan Sims* (University of Wollongong, Australia) visited in May. Marcelo was working with Iain on dynamical systems associated to self-similar group actions, and Aidan was working with Lisa and Astrid on the quasidiagonality of higher-rank graph algebras. *Jon Brown* (University of Dayton, USA), who visited us in June, was working with Lisa and Astrid on the Steinberg algebras of graph groupoids.

Division of Health Sciences, University of Otago

by MATT FOSTER AND CLAIRE CAMERON

News of the year to-date includes the retirement of *Peter Herbison* and *Elisabeth Wells*. Peter retires at the end of July after working 40 years as a consulting biostatistician, and Elizabeth retired at the end of April after almost 35 years, also as a consulting biostatistician at the University of Otago. To both of you, it’s been a pleasure!

Since we last reported on our activities, two people have joined the Department of Preventive and Social Medicine in Dunedin. Relatively recent PhD graduates *Jimmy Zeng* and *Ella Iosua* joined the department in 2014, as a consulting biostatistician and a lecturer in biostatistics respectively. *Ari Samaranayaka* moved to a consulting biostatistician position in June 2013, after working as a biostatistician in the Injury Prevention Research Unit for several years. *Dalice Sim* has recently joined the Wellington Group as a consulting biostatistician. *Chris Frampton*, from the Christchurch group, was promoted to Professor.

Katrina Sharples left Preventive and Social Medicine to take positions in both the Department of Medicine and the Department of Mathematics and Statistics. We continue to strengthen our networks within the Division over the three campuses through monthly meetings, which have been very successful (even though the technology can be a struggle). *Carmen Lim* (Psychological Medicine) and *Jill Haszard* (Human Nutrition) have been instrumental in getting those monthly meetings to run so successfully. Ella and *Tim Jowett* (Mathematics and Statistics) are going to be organising the consulting stream (alternate months). In April we had a visit from *Yannan Jiang* who talked about how they work in the consulting group at Auckland University, and she gave a seminar in Preventive and Social Medicine. *Dan Gillen*, from the University of California Irvine, also made the trip to the deep south in March, while on sabbatical in Auckland, and kindly popped in to give a seminar.

And finally, *Claire Cameron* chaired a working group looking at the situation of consulting biostatisticians in the Health Sciences Division. This followed many years of the group being reviewed. Hopefully, this will result in some positive changes.

Mathematics and Statistics at the University of Canterbury

by PATRICK SAART

Years 2013 and 2014 were exciting times in which we saw a few important changes and other developments at the UC's Mathematics and Statistics School.

Let us begin with some departmental news in general. To reflect our central role in mathematics and statistics education across the University, since early 2014 our department has had a new designation. We are now known as “*School of Mathematics and Statistics*”. With enormous support from academic and administrative members at the School, in 2014, *Jennifer Brown* was reselected for a second term as our Head of School. Much to our delight, *Gunter Steinke* also agreed to carry on as the Deputy Head of School. A new pair of Teaching Directors were also appointed, namely *Carl Scarrott* for Statistics and *Mike Plank* for Mathematics. Our Statistics Group has successfully organized Canterbury Statistics Open Day in November each year. The event brings together up to 60 statisticians from all over the South Island. Another important event organized by the group which took place in 2015 was the NZSA conference. Our statistics consulting unit is expanding. With a substantial increase in demand, the school has recently employed a new, talented and experienced consultant to the team. (Please see details in the welcoming note below.) The appointment has strengthened the unit and should enable further growth and development in the years to come. Finally, after years of hard work, in 2014 *Carl Scarrott* successfully established at the UC a new Bachelor of Science majoring in

Financial Engineering. The program has attracted significant interest from both domestic and overseas students.

Now let's hear interesting news from some members in our groups, especially on where they have been and what they have done.

In 2014, *Raaz* visited Cornell's Departments of Mathematics and Statistical Science for his sabbatical and mostly worked on correlated site percolation (incidentally, in Harry Kesten's former office). He coordinated a PhD seminar course in high-dimensional statistics for biological networks in the fall semester of 2014 at Cornell. In 2013 he was an Erskine Fellow for Michaelmas term in the Department of Statistics, University of Oxford, Oxford, UK where he developed teaching materials for UC's Engineering Statistics curriculum while learning probabilistic programming and the latest particle filtering methods from several statisticians and computer scientists at Oxford. In 2013 he was invited as Research Chair in Mathematical Models of Biodiversity held by Veolia Environnement, French National Museum of Natural History, Paris and the Centre for Mathematics and its Applications, Ecole Polytechnique, Palaiseau, France. During this time he taught a short course on Non-parametric Density Estimation to PhD students at the Centre for Mathematics and its Applications, Ecole Polytechnique. *Raaz* was invited to present his work on tree arithmetics to a focussed workshop on 'Advances in Scalable Bayesian Computation' at The Banff International Research Station for Mathematical Innovation and Discovery (BIRS), March 3-7, 2014, Banff, Canada.

In 2014, *Elena Moltchanova* collaborated with the Geo-Wiki project (geo-wiki.org) which uses citizen science and state-of-the-art modelling methods to construct maps of global forest cover and land use.

Patrick Saart was an invited speaker at a workshop on “Nonparametric and Semiparametric Volatility and Correlation Model” at University of Paderborn, Germany. While visiting University of Konstanz and the National University of Singapore, Patrick gave two seminar presentations on his recent

working papers. In addition, he helped host a research visit by Professor Peter Robinson (London School of Economics). Among a few things he did during his research leave, Patrick jointly completed a research project on “Asymmetric Conditional Correlations in Stock Returns” with Professor Yingcun Xia (NUS), and has embarked on two new projects with Yingcun Xia and Peter Robinson, who are both members of the Editorial Board of the *Annals of Statistics*.

Jennifer Brown was awarded a UC Teaching Award in 2014. In May 2015 Jennifer hosted, at UC, a one day meeting of Heads of Statistics and Mathematics groups from the NZ Universities. *Marco Reale* was appointed to the Consumers Price Index (CPI) Advisory Committee to the Government Statistician.

In addition, we saw many changes to the School’s staffing.

We welcomed five new arrivals. Firstly, *Helen Rowley* who was appointed to a continuing position of School Administrator. Helen’s initial appointment was a one-year fixed term. Secondly, *Brendan Creutz* joined us on a fixed-term lecturing contract in Mathematics. Brendan’s research focuses on number theory, algebraic geometry and computer algebra. Originally from San Diego, California, he received his PhD from Jacobs University, Bremen, in 2010. He spent the balance of the past 3 years as a Postdoc at the University of Sydney. Thirdly, *Richard Vale*, who works part-time as a lecturer and part-time as a Senior Intelligence Analyst at the IRD. He has recently been doing work in mathematical ecology, copulas and data visualisation. He has a PhD from the University of Glasgow and worked as a lecturer for 4 years in the USA. Next on the list is *Daniel Gerhard*, a statistical consultant/lecturer with a focus on Applied Statistics. Previously, he was a Postdoc at the Institute of Biostatistics at Leibniz University, Hanover, Germany, where he also finished his doctorate dealing with likelihood-based inference and multiplicity adjustment of simultaneous confidence intervals.

We also bid farewell to a number of our colleagues who left for new appointments. In December 2013, we farewelled *James Degnan* who was taking his young family back to their home town of Albuquerque, New Mexico, where the

grandparents were no doubt eagerly waiting. We wish him well in his new position at the University of New Mexico in Albuquerque. In November 2014, we farewelled *Nuttanan Wichittaksorn* who had completed his two-year lecturing contract in statistics. Nuttanan is now an Economist at Thailand Development Research Institute. Finally, *Dominic Lee*, who had been working with the Wynyard Group on a one year appointment, and decided after much thought to resign from UC and stay with that company. Dominic had been with the School for over ten years and had contributed significantly to the School particularly our research profile.

A very special thanks and farewell also to two long-serving staff members who retired in 2014. Firstly, *Peter Renaud*, who started teaching in this department in September 1968. During this time he claims to have “subjected two generations of unwilling students to something like 6,000 lectures.” Peter retired at the end of semester 1 (2013). Secondly, *Qui Bui* who retired on 24 April after a 27-year career at UC.

School of Computer and Mathematical Science at AUT

by KATE LEE

A new professional qualification, the Master of Analytics, <http://tinyurl.com/MAnalytics3ys>, is introduced this year. The degree will equip students with advanced analytics and database skills needed by industries. It is a 1.5 year full program (3 years for part time).

In January, the National Science and Technology Forum was hosted by AUT for the Applied Mathematics sessions. *Murray Black* delivered applied mathematics sessions with *Jordan Alexander* and *Mahmoud Mahmoud* from the SCMS, AUT. Colleagues and students from all over NZ and Australia tasted samples of chocolate and soft drink to obtain data then the results were analysed using descriptive and inferential analyses.

Robin Hankin has continued his research in various areas of statistical computing and education. Robin presented his research at the Hamilton Symposium of Thought in June 2015 and presented at the Atlaanz symposium in 2014.

Jeffrey Hunter has kept busy continuing his research into a variety of computational techniques for computing the key properties of Markov chains, Markov renewal processes and semi-Markov processes - the stationary distributions, the mean first passage times, the group inverse, and Kemeny's constant comparing accurate and perturbation techniques. He has presented a variety of talks, at different conferences, on this research including the International Linear Algebra Society Conference, Sungkyunkwan University, Seoul, South Korea, 6-9 August 2014 (where he was Co-organiser with Minerva Catral of a contributed Mini-symposium on Generalized Matrix Inverses and Applications); the 8th Australia and New Zealand Mathematics Conference, Melbourne, Australia, 8-12 December 2014; and the ANZIAM 2015

Conference, Surfers Paradise, Australia, 1-5 February 2015. Jeff's major activity has been the organisation of the 24th International Workshop on Matrices and Statistics, at Hainan Normal University, 25-28 May 2015. He chaired the International Organising Committee and introduced a number of specialized mini-symposia on a variety of topic areas. The Workshop was an outstanding success with over 130 registrants and speakers from more than 20 countries.

Kate Lee and *Sarah Marshall* travelled to USA in April 2015 to attend two events organized by the statistical software company SAS: Data Science and Advanced Analytics Forum in Cary, North Carolina, and SAS Global Forum in Dallas, Texas. Delegates from academia, industry and government from around the world discussed the latest developments within the fields of analytics and big data. While in North Carolina, Kate and Sarah both gave a research seminar at the University of North Carolina at Chapel Hill and visited the Institute for Advanced Analytics at North Carolina State University.



Kate Lee and Sarah Marshall with Vidyadhar G. Kulkarni and Ross Leadbetter (kiwi expat) at UNC, Chapel Hill.

Statistics at University of Auckland

by STEFFEN KLAERE

Quite a few things have happened over the last year. *James Russell* received a Rutherford discovery fellowship to investigate “Conservation complexity: scaling vertebrate pest control”. Congratulations James.

Chris Triggs stepped down as HoD. We thank Chris for his six years of service to the department. *Ilze Ziedins* took over with energy and drive, and if a colleague needs energy she might just have some chocolate in her office.

Alan Lee went into partial retirement in April 2015, and is enjoying the reduced teaching load and increased time for research and family.

We welcomed three new colleagues to the department, *Dr Jesse Goodman*, *Dr Yalu Wen*, and *Anna-Marie Martin*.

Jesse joined us as a lecturer in 2014. He completed his undergraduate and PhD studies at the University of British Columbia, then held postdoctoral fellowships at Eindhoven University of Technology, Leiden University and the Technion. His current research addresses how extreme geometric behaviour in Brownian motion arises as a combination of local and global effects. His other research interests include percolation-type processes, couplings, and random networks.

Yalu joined us as a lecturer in 2014. Her research interests primarily lie in statistical genetics. Specifically, she is interested in developing and evaluating new statistical genetic risk prediction models for both population-based and family-based studies using high-dimensional sequencing data (e.g., building genetic risk prediction models within the random field framework). In parallel with this line of research, she is also interested in the development and application of new statistical methods for genome wide association analysis.

Anna joined us as a Professional Teaching Fel-

low in early 2015. She is part of the STAT10x team. Before joining the department she was the Director for Mathematics and Statistics at Avondale College, one of the largest secondary schools in New Zealand. She is interested in statistical education, in particular curriculum and assessment design, and enjoys facilitating workshops to support professional development of statistics teachers. She has worked with the New Zealand Ministry of Education and the New Zealand Qualifications Authority on the development of national assessment standards, tasks and teaching resources for statistics. She is a member of the NZSA education committee.

There were a few guests coming and going through the department:

David Balding, University of Melbourne and UCL Genetics Institute London visited for a few days in June 2015. He gave a seminar on the bones of Richard III.

Randall Pruim from Calvin College, Grand Rapids, MI visited the department for six months in 2015. Randall gave a very interesting seminar on the introduction of R to beginners.

Volkmar Liebscher from the University of Greifswald, Germany visited in January 2015. He gave a presentation on “Potts Models for the Segmentation of Time Series”.

As mentioned elsewhere in this issue *Christine Franklin* from the University of Georgia visited in the first half of the year.

Matthias Schonlau from the University of Waterloo is visiting for a year from August 2015 to July 2016. Matthias’ field of research is survey analysis, text mining, and statistical computing. If you are interested in having Matthias visit your institute feel free to contact him under his [email](#).

Finally, on the personal side, congratulations to *Thomas Yee* on the birth of his daughter Annie, and *Steffen Klaere* on the birth of his son Michael. We wish them all the sleep they can get.



The Statistical Consulting Centre, Department of Statistics,
The University of Auckland, New Zealand

Presents the following two-day course:

**Bayesian and Penalised Regression Methods
for Epidemiological Analysis
Prof Sander Greenland**

Research Professor and Emeritus Professor of Epidemiology and
Statistics, University of California, Los Angeles

**8 - 9 September 2016
The University of Auckland, Auckland City Campus**

Further information will be available and registrations will open February 2016.

Please feel free to lodge your interest in attending and to receive further information
by emailing Rosemary Barraclough rk.barraclough@auckland.ac.nz

STOP-PRESS: 2016 Joint NZSA+ORSNZ Conference 27-30 Nov

The joint conference will be held at AUT's city campus in November 2016 as follows:

Sunday 27 Nov - informal evening welcome

Monday 28 to Wednesday 30 Nov - joint conference.
