



The New Zealand Statistical Association Newsletter

Number 90

March 2024

Welcomes

- Welcome from the President
- Editorial

Upcoming Conferences

- Australasian Applied Statistics Conference 2024
- MIGARS 2024
- International Workshop on Statistical Modelling

Obituaries

- Murray Jorgensen (1944–2024)

Conference Reports

- Biometrics in the Bay of Islands 2023
- NZSA Conference 2023
- NZMASP Conference 2023

Stories of Interest

- NZSA Awards 2023
- NZSA Conference Student Prizes
- Meet the NZSA Executive
- ECR Travel Fund

Updates

- NZSA Mentoring Program
- SECS Network
- R Users' Groups

Statistics Education Teams

- Statistics Education

Local News

Statistics at:

- Fonterra
 - Foodstuffs
 - AgResearch
 - Luma Analytics
 - Te Papa Atawhai, Department of Conservation
 - Statistics Research Associates Ltd
 - Department of Mathematical Sciences, AUT
 - School of Mathematics and Statistics, Victoria University of Wellington
 - Biostatistics Centre on Dunedin Campus, University of Otago
 - Department of Mathematics and Statistics, University of Otago
 - Department of Statistics, University of Auckland
-

President's Welcome

by BEATRIX JONES



Kia ora koutou,

Welcome to the latest edition of the Newsletter! It was great to see so many members in person at the December meeting in Christchurch. Thanks to

the hosts at University of Canterbury, especially the conference chairs Daniel Gerhard and Elena Moltchanova. This year is seeing the retirement of some of the longest serving members of the exec committee: Ian Westbrooke, Harold Henderson, and Richard Penny. These exec retirements more-or-less coincide with retirement from their work roles, so we wish these long-time members all the best for an enjoyable retirement, and thank them for all the service roles they've taken on over the years. Jennifer Brown is not retiring, but will set aside the exec to focus on the awards committee. The work of the awards committee continues to expand: one of the motions approved by members at the AGM was a fund for travel awards for early career researchers, who might not otherwise be able to attend our conferences.

As you can imagine, these changes mean we will have some new faces in various roles. Harold is passing the membership secretary role to John Haywood, and Jie Kang from NZ Beef and Lamb has been elected to the corporate rep role that Richard held. Priya Parmar from the University of Auckland, Tilman Davies from Otago, and Roy

Costilla from AgResearch have volunteered to fill the vacancies on the exec. You will also be having a new newsletter editor—but I will let Ben tell you about that.

One of the tasks for the exec this year will be to revise our constitution, which members will then vote on at the next AGM. There are some small changes that are required to be compliant with the current charities legislation, however it also seems a good time to examine our organizational structures and see if any changes are needed. I will be asking a team led by Jie Kang to look at our corporate membership and get feedback from both current and potential corporate members. We will also consider if there should be an explicit role for the past-president or president-elect, as many societies have. If there is another part of the constitution you feel needs an overhaul, feel free to get in touch.

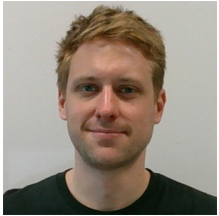
I will close on a bittersweet note—like many members I was sad to learn of Murray Jorgensen's recent passing. He held many formal roles with the NZSA over the years—this newsletter contains an obituary with all the details—but most memorable was his impish presence at conferences and seminars.

With best wishes,

Beatrix

Editorial

by BEN STEVENSON



Kia ora koutou,

I hope the new year has treated everyone well. I write this piece during the first week of classes at the University of Auckland, and the corridors are abuzz with

the energy of a new academic year. I am sure your own workplaces and projects are getting into gear for 2024.

My first piece of news is that this will be my final issue at the helm of the NZSA Newsletter. I've been editor of this newsletter for two years now, and it's been a wonderful experience. I didn't have much involvement in the New Zealand statistics community prior to taking on this role, and I've had the pleasure of getting to know so many different statisticians across the country. Let me extend my thanks one final time to all of you who have contributed to the newsletter over the last couple of years.

I am very pleased to announce that your incoming editor is Dr David Huijser, a lecturer at Victoria University of Wellington. We've acted as co-editors for this issue to ensure a smooth transition. If you'd like to get to know David a little better, he has had the honour of interviewing himself for this issue's Meet the Executive column. I was fortunate that David agreed to take on the role when I invited him to do so, because I misspelt his surname a grand total of three times in our previous issue. Luckily for me, instead of being offended, David is thankful that I am setting the bar quite low for what is expected of him in his new role!

Sadly, we recently lost an important member of our NZSA community. Murray Jorgensen passed away peacefully on 7 February. An obituary for Murray, written by James Curran, appears in this

issue. I was not fortunate enough to know Murray particularly well, but he did have an early impact on my career trajectory.

My first ever conference was the 2011 NZSA Conference. Murray chatted to me after my presentation and invited to me to give a seminar on the same topic at the University of Waikato, where he was Head of Department at the time. I had been nervous about attending the conference and about giving my presentation. I was a Masters student—yet to pursue a PhD—and I didn't think I could possibly say anything that would interest the country's greatest statisticians. Murray's gesture, and his warm welcome after I took the 90-minute drive down State Highway 1 to give the seminar a few weeks later, made me feel as though I *did* belong—not just at the conference, but within New Zealand's statistics research community. I got such a kick out of someone so highly-regarded being interested in what I had to say, and this experience played a small part in my eventual decision to pursue a research career.

At the time, I assumed Murray's invitation must have been because I had dazzled him with the brilliance of my presentation. In retrospect, both the research and the quality of my talk were completely bog-standard, but Murray must have spotted an opportunity to provide some encouragement to a young and enthusiastic statistician taking their first steps in research. I am sure many of you have your own stories of Murray, and about how he has shaped your lives.

That's all from me. Over to David now, and I look forward to reading future issues of the newsletter!

Haere rā,

Ben

Upcoming Conferences

Australasian Applied Statistics Conference 2024

by VANESSA CAVE



We invite you to Western Australia for the Australasian Applied Statistics Conference 2024 (AASC2024) to be held on Rottnest Island at the Samphire Resort on 3-5 September 2024, with pre-conference workshops being held on 2 September in Fremantle. For more information, please visit website: <https://aasc2024conf.netlify.app/>.

Imagine immersing yourself in the fascinating world of statistics and data science while surrounded by azure blue waters, unspoiled sandy beaches, and a vibrant array of local wildlife. Rottnest Island, fondly known as 'Rotto' by locals, provides the perfect serene backdrop for deep intellectual engagement and promises an unforgettable experience filled with exploration,

adventure, and relaxation

We are very pleased to advise the following plenary speakers have been confirmed:

- Prof Hans-Peter Piepho, University of Hohenheim
- Prof Kerrie Mengersen, Queensland University of Technology
- Prof Lucy Marshall, Macquarie University
- Dr Roger Payna, VSNi International
- Prof Adrian Baddeley, Curtin University
- Anna Hayes, Data Analysis Australia

Key dates

- 5 February 2024: Registration and abstract submission opens
- 31 May 2024: Abstract submission closes
- 1 July 2024: Early-bird registration closes

MIGARS 2024

by ALEJANDRO C. FRERY



MIGARS 2024 International Conference on Machine Intelligence for GeoAnalytics and Remote Sensing

MIGARS aims to explore the interface of machine intelligence approaches with geosciences, spatial analytics, and remote sensing. With the tremendous developments in remote sensing technology, data acquisitions and sensing platforms, digital data have grown leaps and bounds to stream. They are too big by volume,

variety, and veracity. The challenge is handling, processing, and automating geo-data from various sources, such as multi-platform remote sensors and Internet-of-Things devices, informing decision-making and monitoring our planet.

The conference focuses on connecting researchers from various disciplines, including computation/artificial intelligence, engineering, remote sensing, hydrology, agriculture and geosciences, and looking for the potential use of intelligent computational approaches for geo-data-based applications and serving society.

Our conference will be held in the beautiful city of Wellington, buzzing with cultural activities, restaurants, and nightlife, all within the heart of Aotearoa New Zealand.

The Local Organising Committee, on behalf of the IEEE-Geoscience and Remote Sensing Society (GRSS) and IEEE-Computational Intelligence Society (CIS), warmly invite you to join the

second edition of the Machine Intelligence for GeoAnalytics and Remote Sensing (MIGARS) conference at Shed 6, Queens Wharf, Wellington, New Zealand, from 8 to 10 April 2024.

For more information, please visit website: <https://conferences.co.nz/migars2024/welcome-letter/>.

We are looking forward to greeting you in Wellington.



International Workshop on Statistical Modelling

by KENAN MATAWIE

The 38th International Workshop on Statistical Modelling (IWSM38), will take place in Durham (England, UK), from 15th to 19th July 2024: <https://maths.dur.ac.uk/iwsm2024/>.

We are seeking novel and original contributions to the wider field of Statistical Modelling. Papers that provide advances in the development of statistical models which are well motivated by

a contemporary data scenario or application problem are particularly welcome.

Registration for the conference will open in early 2024 via the conference webpage (<https://maths.dur.ac.uk/iwsm2024/>), with an early bird deadline of April 22, 2024.

Please visit the above website for more details.

Obituaries

Murray Jorgensen (1944–2024)

by JAMES CURRAN



Murray Allen Jorgensen, BSc, MSc Hons, PhD

Editor, *New Zealand Statistician* (1996–1998)

Applications Editor, *Australian and New Zealand Journal of Statistics* (1998–2001)

NZSA President (2004–2005)

Honorary Life Member NZSA

It is with a heavy heart that we bid farewell to our friend and colleague Murray Jorgensen who passed away peacefully Wednesday, 7 February 2024, after a short battle with pancreatic cancer.

Those who knew Murray will miss his quirks, his geniality, and his “left-field” way of thinking about things. It was this way of thinking that, at least for me, led to some novel insights. I can link about twenty of my published articles to a set of short conversations Murray and I had dealing with robust approaches to outliers in statistical models.

Murray was one of three children and grew up in West Auckland. He attended Kelston Boys’ High School, coincidentally overlapping

with my mother in-law who described him as “one of those weird boys that listened to the Goon show”. Murray went on from Kelston to study Mathematics at Canterbury, followed by a Masters degree at Auckland and then a PhD in Pure Mathematics from the University of British Columbia (1971). Never the one for a traditional route through life, Murray lectured briefly in Canada and then in Botswana (1977-1979). Murray returned to New Zealand to where he worked as a Statistical Consultant for the Ministry of Agriculture and Fisheries. I am not sure when the transformation from pure mathematician to statistician happened, but I presume it had something to do with the demand for expertise in ultrapowers not being high. Murray joined the Department of Mathematics and Statistics at the University of Waikato in 1986, where he was the section leader for Statistics until 1994 when Statistics became a separate department. Murray continued to work at Waikato (including a period as Department Chair) for a further 19 years until his first retirement. This didn’t last long, and Murray soon found himself working at an academic institution again—this time as a Senior Lecturer at AUT. Murray taught at AUT for

a further five years until his second retirement where this time it seemed to stick apart from a brief reappearance during a period of parental leave for former colleague. This, of course, did not mean the end to Murray's interests in Mathematics and Statistics where he continued to dabble right up to the end. Those of you who follow Murray on Facebook may have noted a post on influence functions on January 11, less than four weeks before he died.

Murray made many contributions to the New Zealand Statistics Community, the most prominent of which was his work as Editor of

the New Zealand Statistician (1996-1998) where he was involved with the journal's merger with the Australian Journal of Statistics to form our beloved Australian and New Zealand Journal of Statistics. Murray became the first Applications Editor of the ANZJS, and he was recognised by the NZSA as the second recipient of the Campbell Award in 2001. Murray served a term as President of the NZSA (2004-2005), and in 2013 was made an Honorary Fellow at the University of Waikato.

Murray is survived by his wife Jene, and sons Mat and Andrew, and four grandchildren. He will be missed.

Conference Reports

Biometrics in the Bay of Islands 2023

by VANESSA CAVE AND JAMES CURRAN



After a four year Covid-induced hiatus, November 2023 finally saw a resumption of the Australasian Region of the International Biometric Society's biennial conference, which was held jointly with the Statistical Ecology and Environmental Monitoring conference. It was very good to see old friends and reunite with colleagues, especially our Australian colleagues.

The conference was held in the Copthorne Hotel and Resort Bay of Islands, Waitangi, NZ—a venue which turned out to be very pleasant indeed. And, unusually for New Zealand, the weather cooperated all week!

Keynote speakers were (in order of appearance) Hans-Pieter Piepho (University of Hohenheim, Germany), Lisa Warbrick (Indigenous Genomics Institute, NZ), Adrian Baddeley (Curtin University, Australia), David Warton (University of NSW, Australia), and Joanne Potts (The Analytical Edge, Australia).

We are grateful to the NZSA for its support, in particular with processing credit card payments and promoting the conference. In addition, the two organisations collaborated to bring Hans-Pieter to New Zealand as an invited speaker at both our conferences. We are also grateful to the Statistics Department at the University of Auckland who sponsored David Warton as an invited speaker, and also provided supplemental sponsorship.



Chris Triggs receiving his E. A. Cornish Award from IBS-AR President, James Curran. Both James and Chris are long-standing members of the NZSA.

The next IBS-AR conference will be held in 2025 somewhere in the Australian Capital Territory.

The conference also allowed the resumption of the E. A. (Alf) Cornish Awards. This award recognises 'longtime' service to the Biometric Society and to the advancement of biometry. In 2023, two awards were presented. The worthy recipients were Past President, Mario D'Antuono (Perth, Australia), and IBS Council Representative Chris Triggs (Auckland, NZ). Chris, of course, is a

well-known face of the NZSA.

Finally, congratulations to the winner of

the student presentation prize, Sam Mason (University of NSW), and to runner-up Min Zhang (University of Queensland).



Conference attendees at Te Whare Runanga on the Waitangi Treaty Grounds.

NZSA Conference 2023

by DANIEL GERHARD AND ELENA MOLTCHANOVA



The 2023 NZSA Conference took place at the University of Canterbury from 4–6 December, 2023. Over 100 delegates participated, engaging in a diverse program that featured more than 50

contributed talks across three parallel streams. Noteworthy were the 17 exceptional student presentations.

The keynote speakers included Nokuthaba Sibanda, presenting her work on healthcare monitoring and fisheries modelling; Matt Edwards, introducing Bayesian free-knot splines; and Hans-Peter Piepho, who gave an overview of variance estimation for network meta-analysis.

Many thanks to everyone who turned the event into a smoothly running meeting and a great success! We wish to especially thank Simon Urbanek for his work with the website and registration, Harold Henderson for handling credit card payments, Johana Montes Sanchez for

venue management, OnCampus for catering and providing an amazing ice cream sundae station, and of course all the student helpers. Many thanks to our sponsors, Harmonic Analytics and the NZSA for their generous financial support.

NZMASP Conference 2023

by SAMUEL BASTIDA, SAPIR BEN-SHAHAR, MARK BISHOP, LAIA EGEA CORTES, ELLEN HAMMATT, MALCOLM JONES, DIAMANT PIREVA, SHONAUGH WRIGHT, AND RUOFEI XIE

The 18th annual New Zealand Mathematics and Statistics Postgraduate Conference (NZMASP) was held at the Royal Society Te Apārangi in Wellington from 29 November to 1 December 2023. This year NZMASP was organised by a committee of postgraduate students from Te Herenga Waka, Victoria University of Wellington. After a record attendance last year of 46, this year's conference was record-breaking again with 58 postgrads in pure and applied mathematics and statistics, data science, maths history, and maths education. This trend signals a thriving community of postgrads served by the NZMASP Conference, supported once again by the New Zealand Statistical Association together with:

- Reserve Bank of New Zealand Te Pūtea Matua
- New Zealand Mathematical Society
- New Zealand Institute of Physics
- Wolfram
- Dragonfly Data Science
- Australia and New Zealand Industrial and Applied Mathematics
- Te Pūnaha Matatini
- Harmonic Analytics
- Te Herenga Waka, Victoria University of Wellington School of Mathematics and Statistics
- Royal Society Te Apārangi

The Conference featured plenary talks by Geertrui van der Voorde (Te Whare Wānanga o Waitaha, University of Canterbury), Lauren Smith (Waipapa Taumata Rau, University of Auckland), and Charlotte Jones-Todd (Waipapa

Taumata Rau, University of Auckland) who were asked to present both on their research area and their personal journeys through academia. They offered invaluable insights into how diverse and complex these journeys can be.



NZMASP conference attendees outside the Royal Society Te Apārangi venue.

We were also privileged to have Sinapi Taeao (Sacred Heart College) and Robin Averill (Te Herenga Waka, Victoria University of Wellington)

lead a special session on education through traditional Samoan dance. This gave us much to think about as current and future educators of an increasingly diverse student community.

A handful of representatives of the Reserve Bank of New Zealand Te Pūtea Matua attended the conference and gave a presentation about Information, Data, and Analytics at the Bank. There was significant interest from attendees in the goings on at the Bank. The attendees had the opportunity to talk with the representatives during breaks throughout the conference.

Many attendees gave what may be their first conference talk in a friendly environment among fellow students. Indeed many postgraduate students do not intend to stay in academia after their studies, so it may have also been their only opportunity to speak at an academic conference. The community can be proud to have this unique platform.

We had a wide range of engaging statistics topics ranging from the development of linked datasets by combining various NZ administrative health collections, to improvements to the estimation of principal components in high dimensional settings, to astrophysical applications such as machine learning techniques applied to gravitational wave detection. Supported by our sponsors, we could award prizes to the best statistics talks, chosen by popular vote. Congratulations to the statistics prize winners:

- Angeline Xiao won the New Zealand Statistical Association Prize for the best student presentation in statistics for the presentation *Parallel Queues with Time Delay*

- Reza Siar won the Dragonfly Data Science Prize for the best student presentation in data science for the presentation *LDA Topic Modelling: Uncovering Coherent Topics of Hazara Genocide Campaign on Twitter*

The organising committee for 2023 has been grateful for the opportunity to host this event and looks forward to seeing it continue to blossom in the future. We look forward to the 2024 conference, which will be hosted by Te Whare Wānanga o Waitaha, University of Canterbury. Although there was record attendance this year, we find there is underrepresentation of statistics students, making up a quarter of the total student attendees. This is something we hope to fix, so please keep an eye out for future notifications and forward the message onto your students.



Angeline (left) and Reza (right) receiving their prizes from Kate Kolich and Kiran Malik from the Reserve Bank of New Zealand.

More information and photos from the event can be found on the conference website [here](#).

Stories of Interest

NZSA Awards 2023

by VANESSA CAVE



Three New Zealand statisticians were recognised with NZSA awards at the conference dinner in Christchurch. Thanks to everyone who submitted a nomination for the 2023 awards. Competition was exceptionally tight, with several nominations received for each of the Littlejohn, Worsley and Jean Thompson Awards.

Worsley Early Career Research Award

The Worsley award recognises outstanding recent published research from a New Zealand statistician in the early stages of their career.

2023 Recipient: Xun Xiao (University of Otago)



Worsley Early Career Research Award recipient, Xun Xiao

Xun is developing a significant research profile, with contributions in applied statistical modelling and statistical reliability. His research utilizes sophisticated statistical models and computational tools to examine the properties

of complex physical and biological processes, and to analyse systems that are subject to degradation and failure.

In the nomination for the Worsley award, we ask for the candidate's best three papers to be highlighted. The first of Xun's nominated papers, published in *Journal of Quality Technology*, considers the detection of change points for the parameters of a gamma distribution. This has a nice connection with the namesake of the award, Keith Worsley, who worked on change points of exponential family distribution.

The second article, published in *Computers and Electronics in Agriculture*, is concerned with the difficult problem of modelling kiwifruit firmness based on storage times and spectral measurements.

The third article, published in *Technometrics*, arguably the flagship journal for applications of statistics in industry and engineering, examines the problem of failure monitoring for items with long lifetimes, such as computer hard disks.

Congratulations Xun!

Littlejohn Research Award

The Littlejohn award recognises excellence in research, based on publications during the five calendar years preceding the date of the award.

2023 Recipient: Alain Vandal (University of Auckland)

Alain is a collaborative, applied biostatistician working in the broad field of human health. His collaborations in recent years have focused on neuro-rehabilitation, rheumatology

and respiratory medicine, with important contributions to public health research such as the Pacific Islands Families Respiratory Study and the Harmonised healthy relationships project.

Alain is committed to ensuring the internal validity of the projects in which he is involved. He is engaged in translating state-of-the-art statistical methods to human health research, whether experimental or observational, and whether focused on explanation or prediction.



Littlejohn Research Award recipient Alain Vandal with Beatrix Jones, NZSA President.

A highlight of Alain's approach as a biostatistician, and a hallmark of excellent statistical practice, is his engagement with the clinical aspects of the research. Those that have heard Alain speak know that he knows almost as much as the clinicians about the clinical side of the research. Alain has many intellectual interests and this curiosity carries over into his professional work and research.

He is a valued member of any clinical trial or biomedical research project. Congratulations Alain!

Jean Thompson Award

The Jean Thompson award celebrates statistical excellence by practitioners in New Zealand industry. It recognises outstanding levels of impact in the application of existing or new statistical methods to New Zealand industry, and the exemplification of good statistical practice.

2023 Recipient: Neil Cox (NeilStat, AgResearch retiree)



Jean Thompson Award recipient Neil Cox with Vanessa Cave, convenor of the Awards committee, and Beatrix Jones, NZSA President.

Neil has made a tremendous contribution to the application of statistical methods in New Zealand industries. Neil has been a statistician with the Ministry of Agriculture and Fisheries and continuing with the formation of AgResearch. He has collaborated in a wide range of projects including meat quality, deer production, field greenhouse gas emissions, animal behaviour and welfare, pasture management, plant production, animal reproduction, wool production, pest management, water quality, traceability, and defect testing. Since his "retirement", in addition to his continued collaborations with AgResearch scientists, he has also been collaborating with the likes of Zespri and the Waikato Regional Council.

One of Neil's strengths has been the way he can precisely and coherently describe the methods used and the meaning of those analyses. Neil's influence in good research has also been mediated

through other statisticians due to his leadership and mentorship within and beyond AgResearch. Something which I have personally benefitted from tremendously.

I would like to sum up with a quote from one

of the testimonials supporting Neil's nomination: "Through working with Neil, I have learnt so much; his encouragement of statistical thinking and practice has shaped me as a researcher". Congratulations Neil!

NZSA Conference Student Prizes

by VANESSA CAVE



Congratulations to this year's winners of the Harmonic Analytics Student Presentation Awards. Best presentation was awarded to Bethany Macdonald from the University of Otago.

Bethany presented *A Test of Clustering for Neyman-Scott Processes*. Highly commended awards were given to Jessica Allen (University of Otago) for *Revealing and Characterising Anomalous Spatio-Temporal Patterns in Hikurangi Subduction Zone Seismicity*, and to Amin Boumerdassi (University of Auckland) for *Using Convolutional Autoencoders for Signal Detection of Extreme Mass Ratio Inspirals Detected by the LISA Mission*.



The winners of the Harmonic Analytics student presentation awards at the 2023 NZSA conference. From left to right: Bethany Macdonald, Mia Biggs (Data Science Team Manager at Harmonic Analytics), Amin Boumerdassi and Jessica Allen.

Harmonic Analytics, a generous supporter of the NZSA and our association's early career researchers, has been sponsoring the best student presentation awards since 2013. Many thanks!

A couple of our prizewinners provided their reflections on the conference.

Student reflection: Jessica Allen

I'm currently in the second year of my PhD at the University of Otago, applying statistical methods to seismological contexts with a particular focus on problems regarding event detection and unobservable processes.

At the 2023 NZSA conference I presented research using multidimensional hidden Markov models to extract seismic swarms from the earthquake record in the Hikurangi Subduction Zone of New Zealand. This work is supervised by Ting Wang (Otago), Mark Bebbington (Massey) and Calum Chamberlain (Victoria), and is part of a larger MBIE funded project. Classifying events recorded in the Hikurangi region and understanding their recurrence is a crucial step in highlighting the interactions between different forms of seismic activity and the underlying fault processes, and a step towards developing an improved forecast of the next megathrust earthquake.

I enjoyed the opportunity to present my findings in a knowledgeable and supportive environment. The conference also provided a great chance to hear about the wide range of novel problems and applications that statisticians are working on, and to connect with researchers from around New Zealand.

Student reflection: Amin Boumerdassi

What I remember most from the conference was seeing first-hand the accessible, broad, and interdisciplinary nature of statistics. For someone like me with a physics background, I felt welcomed and included. The conference

itself was a great opportunity to network with fellow statisticians from other institutions. And of course, it was an honour to have my work commended by Harmonic Analytics and NZSA. I hope to see many familiar faces at the next NZSA conference!

Meet the NZSA Executive

by DAVID HUIJSER

Usually for each newsletter issue, the editor interviews a member of the current NZSA executive committee, giving them an opportunity to introduce themselves, tell us their about their role on the committee, what they do for work, and perhaps what they do in their own time.

For this issue, this column is a little different to usual. Because I am the new editor, I have the awkward once-in-a-life-time opportunity to interview myself.

David Huijser



How long have you served on the NZSA Executive Committee, and which roles have you held?

I am currently a newsletter contributor for Victoria University of Wellington, I have been undertaking this role since last year. This edition of the NZSA is the first time I am editing together with Ben Stevenson who will soon pass the torch to me.

What have you enjoyed most?

I only started my roles at NZSA about a year ago, so I think it is a bit too early for that question.

However, in general I do enjoy interacting with interesting people.

What does your research involve?

I started my studies at the University of Leiden in the Netherlands where I obtained Bachelors and Masters degrees in Astronomy. Since I loved science and research I decided to pursue an academic career. I was very fortunate to be offered a PhD position in statistics at the University of Auckland. My research was focused on the application of Trans-Dimensional MCMC to find Dark Matter satellite galaxies using Gravitational Lensing.

I completed my PhD in 2020. I worked for a couple of years as a freelance statistician and a few temporary teaching jobs until I was offered a lecturer position at Victoria University in Wellington in 2022. I still love astronomy, however, in the last few years I have broadened my horizon. I now have projects in astronomy, geochemistry, health, and psychology.

What do you enjoy doing outside your work?

Outside of work I enjoy the usual things. I spend time with friends and family and enjoy good food. I also enjoy going to the gym or playing videos games or board games. Every Sunday I go for a walk in Zealandia here in Wellington with my partner.

ECR Travel Fund

by VANESSA CAVE



I'm delighted to announce the establishment of a new fund to support our early career researchers (ECRs) attending NZSA events.

Unlike the Student Travel Award, which subsidises travel costs for students, ECRs are responsible for the full cost of their attendance at NZSA events. This can be challenging for ECRs seeking employment, or those in an employment situation where the cost

of attendance is not covered by their employer. This new fund will provide needs-based financial support to ECRs to attend NZSA events, such as our annual conference.

The fund will be managed by the Awards committee and grants will be awarded at the committee's discretion. A call for applications for grants from this fund will be made prior to NZSA events.

Many thanks to Jie Kang for spearheading this new initiative!

Updates

NZSA Mentoring Program

by LISA THOMASEN



Cohort 2 of the mentoring program came to a close in October last year. Participants attended a close out session and filled out a survey to share their feedback and suggestions for future cohorts.

All bar one of the survey respondents enjoyed participating in the program and would recommend the program to others in the NZSA. The majority of participants in the program felt that the individual(s) they were grouped with were a good match and that the program met their expectations. The introduction of mentoring groups and peer mentoring this year led to a decrease in these scores compared to last year. Some mentors felt their mentee(s) were not very engaged in the program or they were unclear what their mentee(s) wanted to get out of the program. The scores for these two questions are similar to those from last year.

Cohort 2 Testimonials

From mentors:

I learned at least as much as my mentees.

[We] had some fantastic discussions and think I got as much benefit out of the sessions as my mentees. I really looked forward to catching up and sharing ideas at our mentoring catch-ups. It was nice to reflect on the challenges that we all faced and share ideas on how to tackle these.

From mentees:

My mentor was amazing at talking me through situations at work that I wasn't sure how to navigate, by sharing her experience and thinking with me about possible solutions and building my confidence.

I found it really useful and learned a lot. I enjoyed the group-style mentoring. I think it was really helpful to have more than two viewpoints on a topic.

The NZSA Mentoring Program provided opportunities to meet and network with other statisticians working in a diverse range of organisations. The program helped me to develop skills necessary for achieving work-life balance and building resilience working for a small team of statisticians in a large organisation.

Cohort 3

Cohort 3 will be offered in 2024, with a similar format to Cohorts 1 and 2.

The plan for Cohort 3 is currently as follows:

- Cohort 3 launch webinar on Friday 2nd February
- Survey for expressions of interest open for 2 weeks until mid-February
- Pairings communicated throughout March
- Program running from April–September

Lunch 'n' Learn Sessions

The first of these sessions was held online from 12–1pm on Wednesday 21 February. The second of our Lunch 'n' Learn sessions offered as part of the NZSA Mentoring Programme will be on the topic of Finding Confidence as a Statistician facilitated by Elena Moltchanova who is a Professor and Head of the Statistical Consulting Unit at the University of Canterbury. This session will be held online from 12–1pm on Friday 15 March.

Lunch 'n' Learn sessions will be offered to give NZSA members an opportunity to network and discuss relevant topics. This Lunch 'n' Learn session will be an interactive session focusing on professional development including the following discussion areas:

- Important development areas for statisticians

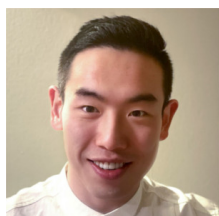
- Useful development tools and resources
- Finding time for professional development amongst competing priorities

Lean In Circles

Lean In Circles are small groups which connect regularly for peer-to-peer mentoring, networking and support. This year a Lean In Circle aimed at women in the NZSA will be offered with the purpose of expanding networks, building connections and creating future opportunities for self-selection of mentors/mentees where an initial connection has already been established. Lean In Circle members do not need to be currently involved in the mentoring program to participate. These sessions will involve a 1-hour call per month covering a variety of topics of interest to the group. If you are interested in being involved, please reach out to Lisa to find out more.

Student and Early Career Statisticians' Network

by JIE KANG



Catching Up With Jie Kang: SECS Rep Farewell Edition!

I hope this newsletter finds you all riding the stats wave like pros! Before we dive into the latest and greatest, there's a bit of news from yours truly, Jie Kang, your outgoing SECS Rep. Buckle up, it's been quite a ride!

Reflecting on two years: A big shoutout to my incredible SECS team—Rory, Anna, Tiana, Louise, Devendra, and Michael—you guys rock! Working alongside you all and the fantastic NZSA crew has been an absolute blast.

So, what have we been up to? Hold onto your data sheets because the SECS crew has been on fire.

Monthly Webinar Extravaganza: Unleashing the Stats Power!

We kicked off our monthly webinar series in style, teaming up with the Statistical Society of Australia (SSA) for an unforgettable learning experience. Each session was a gem, turning the spotlight on various facets of the statistical universe:

- *Academia vs Industry: A statistical viewpoint* by Clair Alston-Knox (Predictive Analytics Group): An eye-opening exploration into the dynamic world where academia and industry collide.
- *Getting to Know: The Australian Bureau of Statistics* by Claire Clarke and Benjamin Long: A fascinating journey unraveling

the mysteries behind the operations of the Australian Bureau of Statistics.

- *Getting to Know: Stats New Zealand* by Wendy Dobson and Tiana Whitehead: A deep dive into the heart of Stats NZ, uncovering the intricacies that make it tick ([link](#)).
- *Much more than just fitting models: Perspective from an applied statistical scientist* by Olivia Angelin-Bonnet (Plant and Food Research): A nuanced perspective shedding light on the multifaceted role of applied statistical scientists.
- *Perspectives from two Early Career Statisticians* by Melissa Middleton (Murdoch Children's Research Institute) and Shih Ching Fu (Curtin Institute of Radio Astronomy): A dynamic duo sharing insights and experiences from the trenches of early-career statistics.
- *An academic journey in pursuing the art of statistics* by Emi Tanaka (Australian National University): A captivating narrative unraveling the academic journey through the lens of statistical artistry.
- Panel discussion titled *From Student to Data Professional: Keys to Success in Australasian Data Industry* by Charmaine McGowan (Treasury AU), Jonathan Blanchard (Safe Work Australia), Oliver Stevenson (Luma Analytics), and Lillian Lu (MfE): A powerhouse panel revealing the keys to success in the Australasian Data Industry.
- *The Academia-Industry War: Surviving the conflict between two opposing ideals as a graduate student* by Timothy Bilton from AgResearch: A survival guide for graduate students navigating the intense clash between academia and industry ([link](#)).
- *From PhD to post-doc: navigating life as an early-career researcher* by Rheanna Mainzer from Murdoch Children's Research Institute: An insider's guide on navigating life's twists and turns as an early-career researcher ([link](#)).

The monthly webinar binge was nothing short of pure gold, making learning cool and infusing our statistical journey with insights, wisdom, and a touch of magic!

Branding Glow-Up

Ever noticed our sleek new look? We jazzed up the NZSA brand with a fresh design. The NZSA logo is now mingling with a Kiwi contour pattern and a snazzy barcode that takes you straight to our website (stats.org.nz). Yep, we're tech-savvy now!



Check out our QR-scannable branding!

ECSS 2024: It's Happening

We're cooking up something special for 2024 - the ECSS conference! Yours truly is part of the planning squad. Get ready for a stats fiesta like no other.

Passing the Torch

A round of applause for Michael Walker, the new Auckland SECS Rep. As for me, I strapped on my boots and moseyed off into the sunset as your SECS rep by the end of 2023. Wishing y'all nothing but the best on your statistical adventures!

Ihaka Lecture Series: A Hit!

The Ihaka Lecture Series hit four cities, bringing statisticians together for some serious brain food. Shoutout to our hosts for making it happen!



One of our regional hubs enjoying the Ihaka Lecture Series.



Mucking in with the tree planting.

Tree Planting and Otago Vibes

Our Otago crew got their hands dirty planting native trees near Orokonui Ecosanctuary. Stats and nature, a killer combo!

Social Media Shenanigans

Our Facebook group is booming with 604 cool cats, and LinkedIn is the new kid on the block with 95 members. We're breaking the internet with 85 posts on Facebook and 27 on LinkedIn. Follow us if you haven't already!

SSA Collab Magic

We teamed up with our mates from SSA for events, webinars, and the grand finale - a joint conference. Stats across the ditch and the Tasman never looked this good.

Unconference and Meetup Magic

Our NZSA unconference and in-person meetup at the University of Auckland was a blast. Matthew Parry and Gary Dunnet kicked it off. It was like a family reunion, but with more stats talk.

I can't thank you all enough for the laughs, the stats, and the memories. It's been an absolute blast! Here's to turning the page onto the next chapter and embracing more statistical adventures. Keep crunching those numbers!

R Users' Groups

by SHIRLEY WU

We've had some really interesting talks at both the Auckland and Wellington R users groups in the last six months. Ieuan Jenkins from Epi-Interactive talked to the Auckland group about applying some core principles from the practice of DevOps when working with R in the cloud, with challenges of scaling your apps, handling more frequent data updates

and reducing manual work. Dr Uli Muellner from Epi-Interactive shared with the group some updates from the recent Posit:Conf 2023 ([link](#)), which is one of the world's biggest R events.

In Wellington, Louise McMillan from Victoria University presented two R packages for model-based clustering with covariates. Both packages use likelihood-based methods and

can perform clustering and biclustering. The `clustglm` package implements techniques from Pledger and Arnold (2014) for handling binary and count data, or data from other single-parameter exponential family distributions, such as normal distributions with constant variance. It leverages `glm()` and can fit pattern detection models that include individual-level effects alongside cluster effects. The `clustord` package handles ordinal categorical data, using techniques outlined in Fernández et al. (2016). It builds on the ordered stereotype model, which accommodates flexibility in the ordinal scale used. The clustering results can reveal when two ordinal categories are effectively equivalent and can be combined to simplify the model. It can also handle similar models to `clustglm`.

Joann Zhang from Epi-Interactive shared with the group her personal experiences, learnings, and

pitfalls transitioning from university to industry. She talked about the challenges encountered while learning R Shiny and the role R Shiny plays in bridging data analysis and software development. Joann also shared with the group her experiences working within the collaborative Epi-Interactive team.

Looking for Presenters!

We are constantly looking for presenters for talks and interesting R or statistics related topics to share with the R community. Please contact your local R user group organisers if you are keen to present!

- Auckland R Users' Group meetup page is [here](#).
- Wellington R Users' Group meetup page is [here](#).

Statistics Education Teams

Statistics Education Research

by MAXINE PFANNKUCH AND MIKE CAMDEN



The Ministry's Review Projects

Our inputs into these were mostly earlier, so we've had a quieter last six months in terms of supplying comment.

The Curriculum Refresh

The latest update of the Curriculum came out at the start of November 2023 ([link](#)). The What's Changing section ([link](#)) notes that the full curriculum will be used from the start of 2027.

Schools and kura, however, "must use the refreshed mathematics and statistics and English learning areas from the start of 2025". The 31-page Maths and Stats part merits a good read and is [here](#).

Inputs into Strategy

The Ministry's Literacy & Communication and Maths Strategy "aims to lift educational outcomes for all ākonga in Aotearoa New Zealand". Within this, the Common Practice Model (CPM) includes a plan for the pedagogy for Maths and Stats. The Phase 1 release is [here](#) and the Phase 2 details, with core teaching requirements, are due later. We've made extensive inputs into both phases, with the intention of having the key features of statistical pedagogy built in.

Inputs into Assessment

The assessment area has been quiet this year,

with the new NCEA Level 1 achievement standards (four of them) written and being piloted, and the new NCEA Level 2 achievement standards awaiting further development. At Level 1 we'll have one subject, assessed through four standards. At Level 2 there will be two subjects, Mathematics, and Statistics, each assessed through four standards. This gives New Zealand an opportunity to be world leaders at this level. The Review is [here](#).

Probability

In the assessment of probability, we see the arrival of the new Achievement Standards as an opportunity to shift the classroom focus from mental puzzles to skills for managing uncertainty and risk.

New Ministerial Advisory Committee

The new Minister has set up an advisory group for English and Mathematics and Statistics for primary and intermediate. Biographies of group members, and a download of the terms of reference, are [here](#). As usual, we are interested in whether group members have expertise in statistics.

Proposal for Probability | Tūponotanga - A Guide for Teaching Probability

The proposal is to produce a digital book that supports the teaching and learning of tūponotanga | probability in Aotearoa New Zealand schools. The project would develop a digital teacher's guide, similar in purpose and structure to the Statistical Investigations | Te Tūhuratanga Tauanga book. The guide will align with the refreshed mathematics and statistics

curriculum. The aim is to have some chapters of the guide available by the end of 2024, for use in 2025 on the new curriculum.

We are expanding the business case for our proposal to the NZSA Executive, by adding details of the programme of work. We gather that NZAMT sees the need for the book and is very interested in supporting it.

The Statistics Teaching Journal Statistics and Data Science Educator

SDSE ([link](#)), continues to provide ideas for teachers. Project leader Maxine Pfannkuch is passing her role on to Anna Fergusson. The plan was to support teachers to write and review the lesson plans, but this has proved difficult as teachers are so busy.

People in Statistics Education

Rachel Passmore, University of Auckland, submitted her PhD thesis at the end of January, entitled *Assessment of graduate profile attributes in a statistics capstone course: Supporting journeys from students of statistics to professional statisticians*. Emma Lehrke, University of Auckland, submitted her dissertation, *Implementing open-response assessment within a large introductory-level statistics course*, in January for her MProfStuds (Mathematics Education).

At each biennial NZAMT teachers' conference, the organisers announce the winner of NZAMT's Bevan Werry Award. At the NZAMT conference in Whangarei this year, the award recipient was Anna Fergusson, Auckland University. This made her a plenary speaker at the conference, and it funds her to travel within New Zealand to provide professional development around the country. Anna's plenary was well received. Congratulations, Anna! See [this link](#).

Maxine Pfannkuch, Auckland University, and Gail Burrill, Michigan State University, USA, presented an International Association for Statistical Education (IASE) *Webinar on Emerging trends in statistics education from 2017 to 2022 – What next?* in September 2023, a webinar that was based on their *ZDM-Mathematics*

Education journal article. The monthly webinars are organised by Pip Arnold, Karekare Education/University of Auckland, Vice President of IASE, and Gail Burrill and are attended by statistics educators across the world. For access to past webinars and to register for upcoming webinars see: [this link](#).

Rhys Jones's book, *Statistical Literacy: A beginners guide*, breaks statistical terms and concepts down in a clear, straightforward way. From understanding what data are telling you to exploring the value of good storytelling with numbers, it equips the reader with the information and skills needed to become statistically literate. The book is due to be released in February 2024. See [this link](#).

CensusAtSchool Project

The CensusAtSchool project, under the co-direction of Rachel Cunliffe and Anne Patel, launched its eleventh biennial online census for Years 3-13 students on February 13 2023. Over 38,500 students from 698 schools across the nation took part in the online survey in 2023, the largest uptake since the project began in 2003. Pip Arnold is the resource developer. See [this link](#).

In CensusAtSchool, you'll find the NZSA education committee's introduction to the refreshed resources from the University of Otago. The twenty resources all involve NZ contexts, videos, datasets, and use of R: Find them [here](#). Also, you'll find our Data Gems document [here](#), which leads kaiako and ākonga to datasets and data graphics. We'd like to add more New Zealand data, and make it easier to use in software such as INZight and CODAP.

To find our inputs, follow [this link](#), touch Resources, and scroll to find us at the bottom left.

Teacher Professional Development

Statistics Teachers Day

The Department of Statistics, University of Auckland, and the Auckland Mathematics Association (AMA) organised and ran a successful in-person Statistics Teachers Day in December

2023 under the direction of Anne Patel alongside Anna Fergusson, Robyn Headifen, Emma Lehrke, Stephanie Budgett, and Pip Arnold. Anna Fergusson, University of Auckland, gave the first keynote talk, *Fake it til you make it!*, about how to use model-generated data to create animated monsters that can fake it as humans in at least one aspect of human behaviour. Malia Puloka, University of Auckland, gave the second keynote talk, *What's in a Pasifika name?*, about developing Year 9 students' abilities to construct datasets and interpret them, which was drawn from her current PhD research ([link](#)). Anne Patel, Stephanie Budgett, Rachel Passmore, Anna Fergusson, and Pip Arnold, University of Auckland, presented workshops. NZSA education committee members Michelle Dalrymple, Marina McFarland, Dave Phillips, and Mark Hooper also presented workshops. Teachers from across NZ attended the day. See [this link](#).

AMA Saturday Morning Workshops

The AMA has continued with its online Saturday Morning workshops, resulting in teachers from across New Zealand registering. In August, Mauren Porciúncula, Federal University of Rio Grande, Brazil, presented her research work on developing statistical literacy and Pip Arnold presented her thoughts on data-ing, a concept discussed at the June SRTL conference. Tim Erickson, USA, a regular AMA presenter, continued to introduce teachers to more features of CODAP, software for data analysis, probability simulations, and data visualisation for school students. In November, Fiona Ell, University of Auckland, and Pania Te Maro, Massey University, gave a well-attended presentation on the refreshed mathematics and statistics curriculum, which they had led. Matt Johnson, Te Atatu Intermediate School, Auckland, gave a workshop on Weetbix cards that he had used as a statistical activity with his class, a session inspired by an AMA presentation by Pip Arnold. To access past AMA sessions, see [this link](#).

Statistics Education Conference Involvement

OZCOTS was held in Wollongong, Australia in December 2023. Stephanie Budgett, Anna Fergusson, Emma Lehrke, Rachel Passmore and

Malia Puloka from the University of Auckland gave presentations. Many people submitted papers to **ICME-15** in Sydney in July 2024 as well as proposals to the **IASE Roundtable** conference, which will be held in Auckland at the beginning of July 2024. Anna Fergusson is leading the local organising team, along with Pip Arnold, Stephanie Budgett, Anne Patel and Matt Parry. See [this link](#).

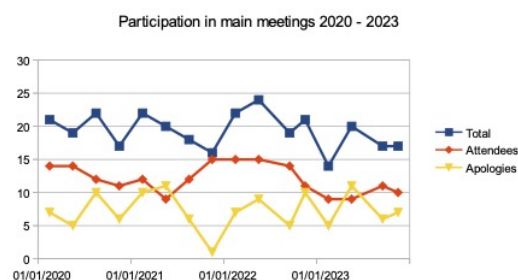
Other upcoming conferences with IASE involvement are **SRTL-14** at Penn State, USA in June 2025; the **World Statistics Congress** in The Hague, Netherlands in October 2025; the **IASE Satellite Conference** in Muenster, Germany in July 2025; and the **ICOTS-12** conference in Brisbane in July 2026, for which Stephanie Budgett is the IPC Chair. ICOTS, which spawned USCOTS and OZCOTS, has a new addition, **UKCOTS**, initiated by the RSS. See [this link](#).

Committee Members Active in Sharing their Understandings

Committee members have been and plan to be active in events here and internationally, as detailed elsewhere in this column. The members include Anna Fergusson, Chris Franklin (USA), Chris Wild, Dave Phillips, Marina McFarland, Mark Hooper, Matt Parry, Maxine Pfannkuch, Michelle Dalrymple, Pip Arnold, Rachel Passmore, Rhys Jones (UK), Robyn Headifen, and Stephanie Budgett. We see the Committee as a good source of solidarity.

Participation in Main Meetings

We had our usual four full committee meetings in 2023, plus numerous other meetings for subsets of members. The participation over the last four years looks like this.



Local News

Fonterra

by LISA THOMASEN



The Fonterra stats team has been working on bite sized video modules that cover basic stats techniques and data management tips that our colleagues can refer to when our workload is too full to deal with all the requests we get.

Lisa Thomassen had the opportunity to attend the IBS conference in the Bay of Islands in November. She gave a presentation on the statistical considerations for dealing with

non-perceiver data for sensory attributes such as bitterness or off-flavours. It was a wonderful location for a conference, especially with the breakfast view below!



Foodstuffs

by MAZEN KASSIS



It's not every day that we data people get to say we're working on truly pioneering stuff, but that's exactly what I'm a part of at Foodstuffs North Island, with respect to our Facial Recognition work.

For those who may not have been keeping tabs on the local mass media of late (who could blame you?), we're currently undertaking a trial of Facial Recognition Technology (FRT) in a subset of our stores. The aim of the use of this technology is to enhance in-store safety for our customers and fellow Foodies. You see, our data suggest that 'harmful behaviour' (e.g., verbal physical assault, theft, etc.) has risen and that a substantial portion of the rise stems from 'repeat offenders' (e.g., those that have been trespassed from a store

unlawfully returning). Our hypothesis is that the use of FRT presents a unique opportunity for us to detect such individuals and take early actions to minimise associated risks.

The use of this technology is a first-of-a-kind for Aotearoa. In fact, we haven't found evidence of its use in this way anywhere else in the world! So, as part of our social license with the people of this country, we bear the burden of undertaking it in a way that engenders trust and is geared towards gathering the objective evidence required to determine its appropriateness for the task.

The journey to get to this trial has taken over two years and involved liaisons with the Office of the Privacy Commissioner, providers of FRT technologies, store owners and staff, IT architects, IT security, loss prevention professionals,

customers, and my personal favourite—program evaluation professionals. As someone with a background in statistics and evaluation, it's the first time I've used both in this way in a private-sector environment!

As part of the trial, which is a case-control design, we'll be gathering evidence to enable us

to determine the fitness of purpose of the FRT, including considerations of important factors such as ethical use and privacy.

We've got a number of months to go, and I hope to be able to share with you the findings, in due course.

AgResearch

by MARYANN STAINCLIFFE



Over the past year we have welcomed Alba Chaolumen and Dimetre Triadis to our team.

Dimetre joined the AgResearch statistics team in August 2023. Born and raised in

New Plymouth, he has a broad background in mathematical and statistical modelling of real-world systems. After a Bachelors and Masters degrees in applied mathematics at the University of Waikato, he completed a PhD in applied mathematics at the University of Melbourne. Subsequent academic postdoctoral positions in Melbourne and Japan involved various consulting and industrial modelling projects. He has coordinated La Trobe University's data science industry projects over several semesters, along with contributions to various 'Mathematics in Industry Study Group' conferences. Dimetre is very much enjoying exploring and contributing to AgResearch's diverse scientific activities.

Alba is an emerging professional in the field of data science, who joined the AgResearch statistics team in May 2023. She is currently finalising her Masters degree in Artificial Intelligence at Victoria University of Wellington. With a solid foundation in Environmental Science and Ecology, Alba has successfully bridged her passion for the natural world with the cutting-edge realm of AI. Her career has spanned roles as a business analyst and data analyst for a renowned listed Fintech company, where she developed a keen acumen for analytics and data-driven decision-making. Alba's

unique blend of expertise in both environmental sciences and artificial intelligence positions her at the forefront of developing sustainable, technologically advanced solutions. In her free time, Alba is an ardent admirer of New Zealand's diverse ecosystems, drawing inspiration from nature for her professional pursuits.

Alasdair Noble and Chikako van Koten have decided that the time has come to alter their walk through statistics. Chikako is planning to retire at the end of 2024. This is to allow her to spend more time engaging in her hobbies and travelling. Over her 16 years at AgResearch she has collaborated with many scientists and been a valuable member of our team. She is looking forward to having more "me time". Alasdair will remain at AgResearch for a bit longer but is reducing his hours down to three days a week. This is so that he can invest more time into the newest member of his family, Zoey, a rescue dog who enjoys many walks. He is also looking forward to having more time to spend skiing and tramping.

On another farewell, Jay Patrick is leaving AgResearch to return to the UK. It's been a short tenure in the New Zealand statistics community, but a thoroughly enjoyable one. In his three years in Aotearoa New Zealand, Jay has been at StatsNZ and AgResearch, working with a large number of talented and dedicated statisticians. Jay has had an incredible experience, and feels fortunate to have been part of this wonderful community!

Luma Analytics

by OLIVER STEVENSON



Luma Analytics has been a hive of activity since our last update in August. The team has settled into our new waterfront office above Britomart and between attending conferences, Christmas functions, and the summer break, we're prepared for what looks to be a busy 2024 ahead.

Reflecting on the last quarter of 2023, Luma were thrilled to place 30th in the 2023 Deloitte Fast 50 list, marking us as one of the fastest-growing companies in New Zealand! This recognition has been a real testament to the exceptional dedication of our team, showcasing their hard work, passion, and unwavering commitment to delivering exceptional data-driven outcomes for our clients. A huge thanks goes out to our valued clients, partners, and all those who have supported us on this incredible journey.

Looking ahead to the first half of 2024, we've both welcomed and will be welcoming a number of new faces to the team. Jack Perkins joined us in January, strengthening our growing Business Intelligence consulting team, while Sophie Merksich, Grace Cleland-Pottie, Daria Kabriova, and Pranav Rao will all be joining us on our growing graduate and internship programmes.



Three members of the Luma Leadership Team accepting the Fast 50 Award.

As our team continues to grow, so does the variety of work we are undertaking with our clients. With data maturity in New Zealand improving year by year, more opportunities to apply cutting-edge machine learning techniques to answer complex business problems are presenting themselves, as well as companies across Australasia looking to capitalise on the Generative AI wave. Amidst all the hype, it is important to remind ourselves that statistics is one of the key drivers under the hood of these advances in technology!

Te Papa Atawhai, Department of Conservation

by ELLEN CIERAAD



It has been another busy six months or so since the last newsletter as we continue to build our community of practice within Te Papa Atawhai. As we are updating IT and data management systems, we keep staff informed

on relevant initiatives, including DOCs modern data platform, snowflake, and others. With the multitude of tools available to support data-driven decision making in conservation, we are keen to help support people to make choices among these tools, depending on their needs. Late last year, we hosted a Microsoft team who taught

a three-day PowerBI workshop, and are looking to work with other parts of the organisation to roll out increased support for this tool, which is being used more and more for visualisation of data. Examples include visualising data from almost seven million records of predator trapping captured by DOC projects in the TrapNZ application (Jamie McAuley provided details on his dashboard), and the cross-agency (seven ministers!) reporting of Jobs for Nature work (Gerome ten Velde). We will shortly run another iteration of the data science courses, which involve DOC wrap-around support for EdX MOOCs (massive open online course; R basics and Visualisation in R using `ggplot2`).

After years of online courses, in September, Ian Westbrooke, Ollie Gansell, and I enjoyed teaching the Designing Studies course to real-life, three-dimensional people in Hamilton! This course aims to upskill science and technical

staff in practical statistical sample design issues for observational studies, including monitoring—where controls and randomisation are often not as straight-forward as they are taught in university degrees that tend to focus on experimental studies.

Our monthly Stats Cafés continue to be popular and are attended by a varied audience of 30–40 staff from around the organisation. In one of these meetings late last year James Griffith presented on his work analysing drivers of mast seeding of different beech species, with the aim to further improve the prediction of mast events to help plan conservation management actions. Another featured a lively discussion around a recent paper that was featured in Nature ([link](#)), in which 246 biologists obtained different results from the same data sets, and the implications for data-driven conservation.

Statistics Research Associates Ltd

by ROBERT DAVIES



Alistair Gray is still involved in consulting work. Recently he has been working with NRB on the third National Panel of Marine Recreational Fishers Survey for Fisheries NZ. The data collection phase finished at the end of September. Preliminary results were presented at a Fisheries NZ Working Group in December. Work on the final report is ongoing. He has also been assisting Solasta (<https://www.solasta.co.nz>) in a Review of the New Zealand Crime and Victims Survey run for the Ministry of Justice by Reach Aotearoa.

John Maindonald's Cambridge University Press text "A Practical Guide to Data Analysis Using R", with John Braun and Jeffrey Andrews from the University of British Columbia as coauthors, is finally hitting the press and should be out in the second quarter of this year. It is already listed on the Barnes & Noble and Amazon websites.

Code and limited other supplementary material are available from <https://jhmaindonald.github.io/PGRcode>.



A Wednesday lunchtime SRA meeting.

David Harte continues with the subcontract with Massey University on the MBIE funded Resilience to Nature's Challenges (RNC) project. He also carries out earthquake forecasts every 2nd week for NZ. These are now showing a systematic bias, most likely caused by missing events after large earthquakes. The effect is an over-forecast during times of benign seismicity and under-forecast during highly active periods (immediately after a large event).

Peter Thomson has mostly retired from commercial work but continues his involvement with the VUW School of Economics and Finance as adjunct professor. He and Viv Hall published

an article entitled "A boosted HP filter for business cycle analysis: evidence from New Zealand's small open economy" which has appeared as a CAMA (Centre for Applied Macroeconomic Analysis, ANU) working paper. They also completed another paper entitled "Selecting a boosted HP filter for growth cycle analysis based on maximising sharpness" which has been submitted for publication.

Robert Davies is pretty much retired except for organising the Wednesday lunchtime meetings where we are sometimes joined by former colleagues including Shirley Pledger. See photo.

Department of Mathematical Sciences, Auckland University of Technology

by PATRICIO MATURANA-RUSSEL



We held our 8th AUT Mathematical Modelling and Analytics Symposium on 29–30 November 2023. The symposium aimed to promote the research being undertaken

within the Department of Mathematical Sciences and the Mathematical Modelling and Analytics Research Centre and explore collaborative opportunities and potential new research areas that can be established with our research active staff. On this opportunity, we had 4 plenary sessions, led by Associate Professor Boris Choy from University of Sydney, Dr Melanie Roberts from Griffith University, Professor Zhuo Jin from Macquarie University, and Dr Azam Asanjarani from University of Auckland. For the first time, the symposium featured an industry session, where academics, alumni, stakeholders, and industry experts discussed challenges that different industry partners are currently facing on their fields. Our invitees were Graeme Wake (Massey University) and Raunaq Kamra (Suez Smart Solutions NZ), and Row Robinson (Former Chair of Engineering, Computer and Mathematical Sciences Industry Advisory Board). Their insights added significant value to our symposium, providing a unique blend of academic

and industry perspectives.

The symposium was followed by our AUT Master of Analytics Mix and Mingle, held on 30th November 2023. The event commenced with a keynote by Priya Mathur from Woolworths NZ, titled "Chapter Lead Data Excellence." Following that, Priya, along with Roger Kissling from Fonterra, Anirudh Ayyagari from Air New Zealand, and Lillian Lu from Ministry for the Environment, participated in a panel discussion. The focal point of this discussion was Analytics and Business Continuity through Resilience Strategies. The insightful conversations and diverse perspectives shared during the discussion enriched our understanding of how analytics can play a pivotal role in fortifying businesses against challenges and uncertainties.

Nuttanan (Nate) Wichitaksorn was an organizing committee member for the 2023 Sydney Time Series and Forecasting Symposium (TSF2023). This is the fifth annual event held by the University of Sydney Business School. The TSF2023 featuring world-renowned econometricians, statisticians, and forecasters, was well attended with more than 80 participants from a close-knit discipline.

School of Mathematics and Statistics, Victoria University of Wellington

by DAVID HUIJSER



The last six months have been a ‘linear combination’ of good news and sad news. We had a few changes in roles and personnel.

After living in New Zealand for over 15 years, our well respected colleague and friend Yuichi Hirose decided to depart from Victoria University of Wellington. Yuichi graduated with a PhD from the University of Auckland after working with Alan Lee, Chris Wild and Alastair Scott, then worked here at VUW for over 15 years. He has decided to pursue a business career in Artificial Intelligence in Japan, partly to be closer to some of his family there. On behalf of everyone here at VUW, we wish you the best in Japan, Yuichi: you will surely be missed!

On the other hand, we are pleased to announce that a few months ago Nokuthaba Sibanda was promoted to Associate Professor, with effect from January 2024. Congratulations! Nokuthaba was also invited as a keynote speaker at the NZSA 2023 Conference. There she talked about “Navigating two worlds: Innovations in healthcare monitoring and fisheries modelling”.

We are grateful that John Haywood has taken on the responsibility of NZSA Membership Secretary, with Harold Henderson finally stepping down after fulfilling this role for many, many years. We would like to thank Harold for his dedication and wonderful contributions to NZSA over the years.

We are proud to share the news regarding successful grant applications by two of our academic staff. Congratulations to Binh Nguyen for his successful MBIE Endeavour Fund (Smart Ideas) 2023 proposal worth \$999 999 over the next 3 years for his research on an artificial intelligence framework for the development of novel selective kinase inhibitors. Binh shares his grant with Joanne Harvey and Paul Teesdale-Spittle (both also at VUW).

Congratulations as well to Louise McMillan for her successful Fast-Start Marsden proposal on mixed-type clustering methodology using population genetic case studies. Louise shares this grant with collaborator Emma Carroll (UoA, NZ).



At the ICSDS conference dinner. From left to right: Louise McMillan, Ivy Liu (both VUW), Daniel Fernandez, and Klaus Langohr (both University of Catalonia).

The Institute of Mathematical Statistics (IMS) launched the annual IMS International Conference on Statistics and Data Science (ICSDS) in 2022. Louise McMillan and Ivy Liu attended the 2023 ICSDS, which was held 18–21 December in Lisbon, Portugal. Ivy and Louise both gave a talk in an invited session entitled “Recent advances in model-based clustering”, which was organised by Ivy.

Biostatistics Centre on Dunedin Campus, University of Otago

by ANDREW GRAY



A big highlight for the Centre over the past six months had to be the inaugural New Zealand Biostatistics Conference that took place on November 21 and 22 in Dunedin. The conference was well supported by everyone in the Biostatistics Centre (with a particular thank you to our administrator at the time, Rashmi Kumar, who did amazing things to keep us all on track), the Events and AV teams at the University of Otago, the Caucus for Women in Statistics, Survey Design and Analysis Services (Australia), and many others. In between the keynotes and invited talks from Professor Michael Hudgens, Research Associate Professor Claire Cameron, Professor Robin Turner, Stata's Dr. Chuck Huber, and SDAS's David White, we had many fascinating talks. I also gave three talks and especially enjoyed Claire's keynote on "What is the collective noun for a group of biostatisticians?" I will hope that she doesn't mind me suggesting that you share your creative ideas on this the next time you see her. Following the conference, Michael Hudgens ran a two-day workshop on causal inference which left us with plenty to digest (as did the conference dinner!). As well as leading the planning for the conference, Research Associate Professor Jill Haszard may also have been among those who led the dancing at the dinner! Thank you for both, Jill.

Before the conference, Robin and I trialled a one-day workshop for those who wanted an introduction to some fundamental aspects of biostatistics. This took them through an abbreviated version of Robin's two-day Introductory Biostatistics for Health Researchers workshop before they then worked in groups to develop their own research question(s), perform data cleaning and analysis in Stata, write up their findings, and give a presentation. Not too shabby for a day's work!

We've continued our popular series of biostatistics

workshops, this time including workshops in the Kōhatu Centre for Hauora Māori at Otago and the Public Health Summer School in Wellington (where Robin presented the two-day version of her Introductory workshop and Research Associate Professor Ari Samaranayaka presented his very popular Stata workshop). By the time this column appears, I will have presented a one-day workshop on missing data. Detail-oriented readers will not have missed that Ari is now a Research Associate Professor, a fantastic and well-deserved promotion that we're all thrilled about. Well done, Ari!

We're also very happy that Dr. Nisa Widyastuti (who graduated with her doctorate not long after the last column was written) has decided to stay in the Centre for at least a little longer. We're very glad to still have you Nisa, including you being there for the annual Biostatistics Centre Christmas party, where we were able to thank Robin in a pun-filled speech for all her amazing support for us and the Centre during what had been a challenging year. Thank you, Robin!

We enjoyed (virtually) attending the 2024 Oceania Stata Conference where I presented work on the uses and risks of large language models such as ChatGPT in statistics. As a summary, I don't think we need to worry about being replaced by generative AIs (at least not anytime soon!). David White and others did a great job at organizing this event and we look forward to attending the next one, perhaps in person next time. David has also been very helpful with our plans to start a Stata users' group at Otago, as well as being very helpful in all things Stata. Thank you, David!

As usual, there have been far too many accomplishments from our research students to list all of them. As a selection, as well as Nisa graduating, we were delighted for Lou Fangupo (supervised by Jill) who graduated after being awarded an exceptional PhD thesis (Supporting

the development of a novel, culturally relevant sleep intervention for whānau (families) with pēpi (infants) in Aotearoa New Zealand). I also need to congratulate the runner-up for best postgraduate presentation at the NZ Biostatistics Conference, Sajeeka Nanayakkara (supervised by Robin); the winner, Rosie Jackson (supervised by Jill); and all the other postgraduate presenters who made selecting these two a very difficult task.

Related to this, we were all thrilled for Jill being nominated as a finalist for OUSA Supervisor of the Year 2023. Well done, Jill!

There are many other things that could be listed here, but, as usual, I'll suggest that you look at our Twitter/X page [@biostatsotago](#) to see some of the rest (and perhaps follow us at the same time). Perhaps you could even send us your suggestions about collective nouns there!

Department of Mathematics and Statistics, University of Otago

by MATT PARRY



It is a real pleasure to introduce Conor Kresin to the NZSA community—although many may well have noticed him at the NZSA conference last December! Conor joined Otago

as a Lecturer in Statistics in July. Recently, he sat down with Matt Parry to discuss how he ended up in Dunedin and his first few months on the job.



Conor Kresin in front of the iconic University of Otago clocktower.

MP: First up, you'd better tell us where you come from!

CK: Most recently, I've been living in Los Angeles, where I completed a PhD in Statistics at UCLA. Before that I had been working in a consulting firm.

MP: So you've just swapped sides of the Pacific Ocean then?

CK: Yes! Dunedin is a little different to LA but I am loving all the things you can do here without having to do much driving! It's a great place to have a family.

MP: In addition, to bringing your family with you, I believe you also brought some other things?

CK: Ha ha! Yes—I also managed to fit two grand pianos into the shipping container. Both my wife and I play piano. In fact, that's how we met: we both majored in piano performance at undergrad. The pianos are now set up facing each other in our house.

MP: Duelling pianos then! So do you think if you weren't doing statistics, you would be a pianist?

CK: Maybe—or a carpenter. I really like going to the Dunedin Mitre 10 Mega too!

MP: Can you tell us a little about the statistics that you do?

CK: My PhD was on computationally efficient ways to estimate parameters in point process

models. But nowadays I find myself thinking a lot about causal inference for spatiotemporal data and also understanding machine learning methods, such as recurrent neural networks, for temporal data.

MP: How have you found lecturing to NZ undergrads?

CK: The students here are as definitely as good as the students I taught in the US, but perhaps the range of abilities and backgrounds here is wider. One of the things that is important to me is that everyone gets a chance to learn how to do statistics. If we don't do that, we only perpetuate inequities we see in our discipline and our society. Sometimes all it needs is a spark to get things going.

In other news:

Jie Kang graduated with his PhD from Otago in December. As many will know, Jie is now the Corporate Representative on the NZSA Executive and formerly one of the enthusiastic leaders of the

Student and Early Career Statisticians group, so it was good to celebrate this significant step on his academic and professional journey.

In other good news, Tim Jowett was promoted to Senior Research Fellow at Otago in November. This reflects Tim's outstanding contribution as a Consultant Statistician in the Sciences.

We had two successful Marsden Fund applications last year and special congratulations ought to go to Ting Wang (with Boris Baeumer) for her project "Modelling the domino effect in complex systems", and Tilman Davies (with Martin Hazelton) for "Principled inference for spatial point processes: a unified toolkit". Martin was also part of the project "Fast statistical methods for enigmatic sensor data" with Rachel Fewster and team.

Lastly, congratulations to PhD student Taylor Hamlin for a highly commended talk at IBS-AR/SEEM on "Linking foraging movements with reproductive success in Adélie penguins".

Department of Statistics, University of Auckland

by PRIYA PARMAR



The last few months have seen the culmination of many years of work come to fruition—from our recent graduates to the launch of the Discovery Centre for Fundamental Research, and achievement awards for our statisticians across education and health.

We saw pure dedication from Stephanie Budgett with Azam Asanjarani, Liza Bolton, Tim Cross, Charlotte Jones-Todd, David Smith, Lars Thomsen, Angeline Xiao, and Thomas Yee who gave up their weekend to be enthusiastic informers to incoming statisticians and data scientists and their whānau at the Mānawa Mai Open Day on August 26th.

Our September graduation featured 121 statistics graduands; congratulations to our PhD grads

(many of which were mentioned in our August 2023 newsletter) Anna Fergusson, David Chan, Natalia Boven, Ai Lau, Yu Jin Kim, Craig Marsh, Amy Renelle, and Danli Xu. With almost 40 students graduating with postgraduate qualifications: 9 MSc, 9 Master of Data Science, 10 Master of Professional Studies, 1 PGDip, 2 GDip, 7 BSc(Hons), and the remaining graduating with BSc (64) or BSc conjoint (11).

A special mention to recent graduand Anna Fergusson on becoming a Bevan Werry Speaker at the NZ Association of Mathematics Teacher Conference. Our very best wishes and congratulations on this achievement!

Yang Hai and Zoe Luo successfully defended their theses with their respective examination panels recommending they be awarded with minor corrections. We look forward to congratulating

them in the next graduation.

October 12th saw the launch of the Discovery Centre for Fundamental Research directed by Department of Statistics Simon Harris alongside Gill Dobbie (Computer Science) and Rod Gover (Mathematics) with Rachel Fewster featuring as one of the star speakers. The Discovery Centre is designed to solve societal problems by fostering and promoting fundamental research – meaning research that is curiosity driven, or that may have a long lead time to application. From a base in mathematics, computer science, and statistics, our purpose is to bring together and support diverse thinkers, advance, and apply world class research, and be a voice for public engagement. More information can be found [here](#).



Newly minted Dr Anna Fergusson with her supervisor Maxine.

Twenty-one staff and students presented at the Biometrics Conference at the Bay of Islands (chaired by James Curran) which was held during the last week of November. The following week we had 15 staff and students present at the NZSA Conference in Christchurch.

During the NZSA Conference Alain Vandal was given the Littlejohn award. Our warmest and heartiest congratulations to Alain who is the embodiment of “the hallmark of excellent statistical practice”. Alain has ensured statistical

rigour through his prolific collaborations in neurorehabilitation, rheumatology, and respiratory medicine which have led to impactful contributions in Pacific Health and the field of Randomised Clinical Trials in New Zealand.



Alain Vandal (centre) receiving the Littlejohn Award, alongside Vanessa Cave (left) and NZSA President Beatrix (right).

We bid farewell to Shanika Wickramasuriya and welcomed two staff members. Congratulations to Liza Bolton for her successful defence of her PhD in October, and formal appointment as a permanent Professional Teaching Fellow in Data Science. Lars Thomsen, an excellent part of the STATS 10X team, was also appointed as a permanent Professional Teaching Fellow.

We congratulate Rachel Fewster, Jesse Goodman, and Ben Stevenson on their successful Marsden grant, and Charlotte Jones-Todd, an AI on a successful submission from Otago.

Further congratulations to Thomas Lumley and former University of Auckland PhD student Tong Chen, who were coauthors on a manuscript that was awarded best paper published in *Biometrics* in 2023. Take a look at the paper [here](#)!

Congratulations to our big-hitting students scoring awards at recent conferences. Tori Diamond received the Australasian Epidemiological Association Student Conference Award for outstanding student achievement and exceptional abstract submission. Rishika Chopara was highly commended for her talk at the Australasian Biometrics Conference

(IBS-AR/SEEM), Amin Boumerdassi scored a highly commended talk at the NZSA Conference, and Angeline Xiao won best student prize in statistics at the NZ Maths and Statistics Postgraduate Conference. Fantastic achievements all round!

December 13th (not a Friday!) had the

Department staff enjoying the juxtaposition of sitting within Old Government House's traditional setting whilst contently stuffing our faces full of tacos and burgers from the excellent food trucks Joei Mudaliar had arranged. This was topped off by fresh churros and a highly tactical rendition of Secret Santa, which may become Statistical Santa next time... trademark pending.