



The New Zealand Statistical Association Newsletter

Number 92

March 2025

Welcomes

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

Upcoming Conferences and Events

- [Ihaka Lectures 2025](#)
- [NZSA Conference 2025](#)
- [MaxEnt 2025](#)

Obituaries

- [Bryan Manly](#)
- [David Vere-Jones](#)

Conference Report

- [NZSA Conference 2024](#)
- [Migars 2024](#)

Stories of Interest

- [NZSA Awards](#)
- [Back In The Day](#)

Updates

- [NZSA Mentoring Program](#)
- [SECS Network](#)

Statistics Education Teams

- [Statistics Education Research](#)

Local News

Statistics at:

- [AgResearch](#)
 - [Biostatistics Centre on Dunedin Campus, University of Otago](#)
 - [Department of Mathematical Sciences, AUT](#)
 - [Department of Statistics, University of Auckland](#)
 - [Fonterra](#)
 - [Foodstuffs](#)
 - [Luma Analytics](#)
 - [Oritain](#)
-

President's Welcome

by JOHN HAYWOOD



Kia ora koutou,

Welcome to this bumper issue of the Newsletter, and to my first column as the NZSA President. It is a great honour to be President for so many amazing

members – 555 at the last head count during March, and we're continuing to grow. How wonderful to be involved in so many of the NZSA's activities – and there is a great deal going on!

I'd like to thank Beatrix Jones for her two years of hard work as outgoing President, with much of that work done quietly, behind the scenes. I congratulate Beatrix too, on her transition to be the inaugural Past President, a new 2-year role on the NZSA Executive Committee. There have been several other, minor changes in our organisational structure recently, implemented in our new Constitution that was approved by members at the 2024 AGM – after sustained work by Beatrix that was started by Matt Parry, as part of his role as President from 2021-2022. The 2024 AGM was held during our Conference in Wellington in early December; you can read a separate report (from me) on the 2024 Conference elsewhere in the Newsletter, including a poem from two young conference prize winners and a guest appearance from a New Zealand taonga called Spike.

Thanks are due to all the NZSA Executive Committee members, whether ongoing, or new to a role, or moving positions, or stepping down. In particular, special thanks to outgoing NZSA Treasurer Daniel Gerhard – 8 years of excellent service from 2017-2024, and to Nokuthaba Sibanda, NZSA Secretary from 2021-2024. Thanks also to Matt Parry, who has taken on the role of Membership Secretary from me after my move to President, and welcome to new

Exec members Ivy Liu as Secretary and Ciprian Giurcăneanu as Treasurer. Lots of changes, for sure! As always, thanks to Harold Henderson – who, despite attempting to hand over the membership duties a year ago and leave the Exec, still helps several of us regularly with his wise counsel. Many people work hard to keep the NZSA and its various committees doing important mahi, which I know is appreciated by our members.

As the new President I had the great pleasure to present several awards at the 2024 Conference Dinner, following a lot of hard work behind the scenes by our Awards Committee and their convenor, Vanessa Cave; you can read Vanessa's full report elsewhere in the Newsletter. Briefly though, in addition to the five deserving student prize winners, we also featured our major award recipients: Tilman Davies (Littlejohn Award), David Baird (Jean Thompson Award) and Lisa Thomasen – by far the youngest winner (so far) of the NZSA Campbell Award! Lisa continues to demonstrate why she deserves our highest accolade – check out her ongoing development of our Mentoring programme presented later in the Newsletter, including the expansion to a Mentoring team (thanks, Manori Wickramasinghe!) that Lisa reported to our March 2025 NZSA Exec meeting. Coffee roulette, anyone?

Two other celebrations of note at the 2024 Conference Dinner were for impressive and sustained contributions to the NZSA by Martin Hazelton and Mike Camden. At the end of 2024 Mike stepped back from his role as Secretary of the Education Committee after many years, passing that baton on to Pip Arnold. The Education Committee do amazing mahi in so many projects, which continue to influence the

Statistics curriculum within New Zealand. Mike has been a stalwart of the Committee for 37 years and was awarded life membership of the NZSA in 2010. You can read Mike's full tribute, as read out by Anna Fergusson at the Conference Dinner, in Maxine Pfannkuch's Ed Comm report, which – as always – is full of updates on many projects.

Martin Hazelton was elected as an honorary life member of the NZSA at the 2024 AGM, in recognition of his distinguished contributions to the association over many years. One of those contributions was as Editor-in-Chief of the Australian & New Zealand Journal of Statistics (ANZJS) between 2019 and 2024, during which time the journal extended its high academic standards and saw significant growth in both the quality and impact of the research it published. During March 2025, Lynne Giles, President of the Statistical Society of Australia (SSA), and I prepared a letter to jointly thank Martin, on behalf of the statistical communities in New Zealand and Australia, for his long and dedicated service as ANZJS Editor-in-Chief. Martin's leadership, expertise, and ability to guide the team of editors, reviewers and authors has left a lasting legacy, which is deeply appreciated by both professional societies.

Moving forwards, the March 2025 Executive Committee meeting heard updates from many of our association's leaders. Our new Treasurer, Ciprian Giurcăneanu, has been involved (along with Ivy Liu and me) in email discussions with the SSA Treasurer, Damjan Vukcevic, to work towards a new financial arrangement to support ongoing management and editorial activities for the ANZJS. The new plan has now been approved by the Executive Committees of both the NZSA and the SSA, and this is a testament to Ciprian's and Damjan's hard work. The new approach should save both organisations money in the longer term, which is great. Another 'changing of the guard' this year involves Roy Costilla taking over the coordination of our support for Science Fair prizes throughout the country – a role that Alasdair Noble has coordinated for many years.

Thanks to Alasdair, and also to Roy for stepping up.

The Student and Early Career Statisticians Network had a very good 2024, as explained in Muskaan's report later in the Newsletter. The Exec approved the SECS team's plans to restructure the organisation of the network around the country, with more representation from all the regional representatives. The SECS team will also implement the process they have designed to allow young statisticians to apply for our first Tidy International Travel Award, a wonderful new initiative enabled by our External Engagement (a new role!) representative, Jie Kang, from generous funding volunteered by Hadley Wickham. Thanks to everyone involved.

James Curran contacted me early in the year with another great idea (following our series of UnConferences that James put on during the Covid years): perhaps the NZSA might like to regularly support the R Foundation, of which NZSA member Simon Urbanek is currently President. The Foundation relies heavily on donations for income, with funds of the R Foundation used exclusively for supporting the R Project. I consequently proposed that the NZSA becomes an annual Benefactor of the R Foundation, and the Exec committee approved that proposal at our March meeting. No uncertainty associated with that decision across the Exec, BTW – a nice example of a degenerate distribution!

Finally, although next summer is still some time away, it's never too early to start thinking about a visit to somewhere nice – so how about Dunedin, for the next NZSA Conference? The 2025 edition will be hosted by the University of Otago, in the second week of December. I'm looking forward to catching up with many of you in person at the conference, as well as once more in print, at the start of our next Newsletter (thanks, David!) in a few months' time.

Best wishes,

John

Editorial

by DAVID HUIJSER



Kia ora koutou,

It's been a while since our last newsletter, and so much has happened that this might just be the longest NZSA newsletter ever—a testament to our thriving and growing NZ Stats community.

But before we dive into all the exciting updates, I must pause to share some sad news. We recently lost two esteemed members of our NZSA community, and their contributions will not be forgotten. Bryan Manly passed away on February 11, 2025, and David Vere-Jones on October 31, 2024. Both Bryan and David made outstanding contributions to the field of statistics—not just here in New Zealand, but globally. Their work has had a lasting impact, and I believe I speak for all of us when I say we are proud to have called them colleagues and friends. Later in this newsletter, you'll find an obituary for Bryan Manly written by David Fletcher and an obituary for David Vere-Jones based on the tribute presented by David Harte at the last 2024 NZSA Conference with an addendum written by Mike Camden. A formal obituary by Robert Davies & Peter Thomson has been published by the Royal Statistical Society, <https://doi.org/10.1093/jrsssa/qnae149>.

I'm pleased to welcome a new contributor, Oritain! Founded in 2008 at the University of Otago by Dr. Helen Darling and Professor Russell Frew, Oritain specializes in analytical chemistry. Thanks to Anjali Gupta for representing them—you'll learn more about their link to statistics later in the newsletter.

In the last newsletter, I introduced Back-in-the-Day, a new feature celebrating our veteran colleagues with their amusing stories.

The first piece by Shirley Pledger received great feedback! A big thank you to John Maindonald for contributing this edition's story.

And finally, a truly special piece of news — perhaps even a first in NZSA history! Two former NZSA Presidents, Vanessa Cave and James Curran, have tied the knot. On behalf of the entire NZSA community: Congratulations!



Vanessa and James

I would like to express my personal thanks to all contributors and proofreaders: Thank you. As always, please send any items for our next issue, planned for August 2025 to newsletter@stats.org.nz.

Hei konā mai,

David

Upcoming Conferences and Lecture Series

Ihaka Lecture Series 2025

by PAUL MURRELL



The Ihaka Lecture Series was established in March 2017 by the Department of Statistics at the University of Auckland to honor Associate Professor Ross Ihaka for his pioneering

contributions to statistical computing and data science. Since its inception, this annual lecture series has served as a platform for thought leaders to share insights into the evolving landscape of data analysis, computation, and statistical methodology. In the past, the Ihaka Lecture Series explored the evolving intersection of statistics and data science, encompassing themes like data visualization, software development, machine learning, and the application of data analysis to public policy and societal challenges, with a growing emphasis on effective communication

and responsible use of data.

We are delighted to announce that the 2025 Ihaka Lecture Series will take place on the 4th and the 11th of September 2025. The first of the Ihaka Lectures will be given by Dan Exeter, a professor in Epidemiology and Biostatistics at the University of Auckland. The second of the Ihaka Lectures will be given by Adrian Baddeley, a professor in Statistics at Curtin University in Perth.

While details regarding this year's theme are still forthcoming, we encourage you to stay tuned for updates. This promises to be an engaging and intellectually stimulating event, continuing the tradition of excellence that defines the series.

Mark your calendars and keep an eye out for further announcements!

2025 NZSA Conference

by JOHN HAYWOOD



Planning for the NZSA 2025 Conference is still at an early stage, but the meeting will be held in Dunedin from Monday 8 to Wednesday 10 December 2025, hosted by the University

of Otago, with the conference sessions located in the St David Complex. For further enquiries

about the conference please contact the Chair of the Organising Committee, Conor Kresin: conor.kresin@otago.ac.nz.

Note that the International Biometric Society (Australasian Region) 2025 conference will be in Canberra from 24-28 November 2025, while the Statistical Society of Australia will have their 2025 conference in Perth, from 1-5 December 2025.

MaxEnt 2025 Conference

by BRENDON BREWER



We are pleased to announce MaxEnt 2025, the 44th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering. The conference will take place at the University of Auckland, from December 14 to 19, 2025. This will be only the second time the MaxEnt conference has been held in Australasia, after being held in Canberra in 2013. As the long name suggests, the MaxEnt conference series focuses on the foundations and applications of Bayesian inference, along with the maximum entropy principle. Traditionally, a large emphasis of the conference has been inverse problems in

the physical sciences. However, you can expect a variety of scientific fields to be represented at the conference. Statisticians with an interest in these topics are, of course, welcome!

The website is at <https://maxent2025.co.nz> and is open for registration and submissions.

The keynote speakers are:

- Richard Arnold
- Ali Mohammad-Djafari
- Alexei Drummond
- Renate Meyer
- Geoff Nicholls

We are grateful to Dr John Skilling for his generous support of this conference.



Obituaries

Bryan Manly

by DAVID FLETCHER



Bryan Manly, Professor of Statistics at the University of Otago from 1973 until 2000, passed away in Dunedin in February of this year. Bryan was born in London on 27th May 1944. After secondary school, Bryan studied at what later became City University in London. In his third year he decided to specialise in Statistics. His final-year project was on sequential analysis, which he wrote up and later published in the *Journal of the Royal Statistical Society*. After completing his degree in 1966, Bryan started working for a large pharmaceutical and chemical company on estimation of variance components, analysis of surveys, and a host of other projects. He eventually decided he wanted

to go into academia, and soon started work in the Department of Mathematics at Salford University. During his time there, he discovered his life-long joy of consulting. One day the biologist Mike Parr came into the department tearoom wanting help with a t-test, and Bryan offered to help. He was shown Mike's mark-recapture data, from which he wanted to estimate survival rates of different colour-classes of dragonfly. Bryan suggested that he could also estimate of abundance using the ratio of the number of individuals captured to the estimated probability of an individual being captured. What is now known as the Manly-Parr method was published in 1968 in the *Transactions of the Society for British Entomology*.

Thereafter, Bryan decided to focus on the life sciences. Although the mathematics might be easier than in sequential analysis, and hence less respected by his colleagues, he felt that it would be more useful and read by many more people. In a profile of Bryan by John Rayner in 1992, Bryan says that “there are people with real problems where the solutions aren’t in text books. That is the sort of consulting which is of great value to statisticians, because it gives them some real point for doing their statistics... I just enjoy solving problems and find a great deal of satisfaction working with someone who has unusual data, and then developing new methods of analysis.” His appreciation of the benefits of consulting later led him to ensure that workloads in the Statistics Group at the University of Otago could allow for time spent by staff in giving consulting advice to staff and postgraduate students in other departments.

After three years at Salford, Bryan became keen on gaining an academic post in a developing country. This led to him taking up a Lectureship in Statistics at the University of Papua New Guinea. Bryan, his first wife Lorna, and their three children, left by ship from Southampton in 1970. Once there, Bryan continued his research on mark-recapture and began to write his book on the “The Statistics of Natural Selection on Animal Populations”. They stayed in Papua New Guinea for three years before deciding to move on, and Bryan was appointed Senior Lecturer in the Department of Mathematics and Statistics at the University of Otago in 1973.

Early on in Dunedin, a meeting with one of his consulting clients motivated Bryan to write a book on multivariate analysis: the client had obtained a copy of Bryan’s cluster analysis course notes from a friend, and told Bryan that “this is the only literature on this topic that I can understand”. The book was first published in 1986, and has proved to be very popular, with the 5th edition (co-authored with Jorge Navarro Alberto) appearing in 2024. In 1981 at a conference in the US, Bryan met, and formed a long and fruitful friendship, with Lyman McDonald, who was at the University of Wyoming in Laramie. In 1985, Lyman visited Bryan at the University of

Otago, and during this visit they developed the idea of resource selection functions for the study of habitat and food selection by animals.

In 1994 Bryan received three major awards: he was made a Fellow of the Royal Society of New Zealand, a Doctor of Science by City University in London, and was presented with a “Distinguished Statistical Ecologist” medal at the International Ecology Congress in Manchester. After he left the University of Otago in 2000, Bryan worked as Senior Statistical Consultant for Western Ecosystems in Wyoming, a company started by Lyman McDonald. Lyman told me that “scientists at WEST greatly benefited from interactions with Bryan: his breadth of knowledge was immense. He could talk to a scientist and see how to make sense of a fledgling hypothesis and a jumble of data”.

Bryan published over 200 scientific papers, wrote seven books and was the editor of several others. Each of his books is a model of clarity, explaining the theory and methods succinctly, in a very down-to-earth manner. In John Rayner’s 1992 profile of Bryan, he says that “I enjoy writing, that’s one of my pleasures in life. There is nothing more pleasant to me than to have something to write up. I think it’s really nice to sit down in the morning and know that I have the day in front of me and I am just going to write something up.”

Bryan loved tramping, and was world-famous, amongst family and friends, for his home brewing of beer and various types of wine (elderberry, parsnip, carrot, etc.). He was the cherished husband of Celine, and was much loved and respected by the rest of his family. Bryan was a giant in the field of statistical ecology and made major contributions in many fields. His books and papers will be read and used for many years by students in all disciplines. I and many others are very grateful for all Bryan did for us and for the scientific community. I leave the last words to Professor Emerita Marti Anderson:

“Bryan was an incredible inspiration in the areas of multivariate analysis and also randomization, bootstrap, and resampling methods. His books on these topics are not just cornerstones in the field of statistics, due to their novel content, clarity

and statistical rigour, but also have proven over and over again to be a guiding light to practicing researchers everywhere, particularly in the fields of biology, ecology and environmental science. In his descriptions of methods and algorithms, he had a unique directness and succinctness in his writing style, and was truly gifted at making probabilistic and mathematical concepts not just approachable, but intuitive. He also maintained an incredible duty of care in ensuring later editions of his books kept pace with ongoing developments, which was so impressive. I am indebted to him (as are we all) for his many academic contributions, particularly in the form of these core books that will always remain

essential reading. In addition, I am indebted to him, personally, for his critical research on permutation methods, in particular, which formed not just an important impetus and guide for my own work in that field, but remained a touchstone for ongoing conversations between us over many years, albeit at a distance, which were always fruitful. How right and fitting it is to celebrate the life of this very special person of incredible intellect who was always so generous with his knowledge!”

A recording of Bryan’s funeral service (at Hope and Sons in Dunedin) is available for viewing until 21st May at the [webpage](#).

David Vere-Jones (17 Apr 1936 - 31 Oct 2024)

by DAVID HARTE AND MIKE CAMDEN



This is a condensed version of the personal tribute given by David Harte at the NZ Statistical Association Conference in Wellington on 4 Dec 2024; Full version with all photos [here](#)

David was born in London in 1936, and went to school in Manchester until the family came to NZ in 1948.

He attended Hutt Valley High School and then completed an MSc at Victoria University. He worked in the DSIR Applied Mathematics Laboratory in Wellington as a vacation student under Peter Whittle. He won a Rhodes Scholarship to study for a DPhil with David Kendall at Oxford University. After a one year postdoc in Moscow, working with Boris Gnedenko, he returned to the DSIR Applied Mathematics Laboratory in 1962. Here, he was involved in a descriptive study of NZ earthquakes, beginning a life-long interest in earthquake occurrence.

In 1964, he married Mary Chung, who he knew from student days at VUW. Soon after, he took up a position at the ANU in Canberra, then following a sabbatical year in Manchester in 1969, he returned to NZ to take up a chair in mathematics at VUW.

David was a lecturer in MATH 102 during my first year at VUW in 1976 To illustrate probability's

historical use, particularly in gambling, he read a five-minute passage from Shakespeare, using varied tones for different characters. I was struck by his distinctive approach.



David Vere-Jones and Mary Chung

Later in 1980, after an overseas break, I inquired about a Master's at VUW. Approval required David's consent, but he was on sabbatical at UCLA. I wrote to him and received a very encouraging but challenging-to-read reply, saying he would be "delighted" to be my supervisor. He recommended Mandelbrot's book "Fractals", believing it had relevance to earthquakes and point processes. Thus began my lifelong connection with David, as a postgraduate student,

colleague, and friend.



From left: Daryl Daley, Rick Schoenberg, David Vere-Jones

The **first edition** of his book with Daryl Daley was published in 1988, followed by an expanded two-volume second edition (**Vol. 1 in 2003, Vol. 2 in 2008**). These works are regarded as authoritative texts on point process theory.

In January 1994 an IASPEI conference (Seismology & Physics) was held at VUW. A person at the conference called Ma Li appeared in David's office one day, asking if she could stay as a visitor. David was very generous with such requests and she stayed at VUW for about 6 months. It turned out that Ma Li was a professor in the State Seismological Bureau (SSB) in Beijing, and her father was a famous geologist. Given the major loss of life that China had suffered in recent earthquakes, e.g. Tangshan 1976, their government had tasked the SSB to come up with risk mitigation strategies. The Californians had attempted to do some earthquake predictions a few years earlier, but the event never occurred within the specified fixed space-time boundaries; ending with much embarrassment. Hence the western seismologists were then very reticent about such activities.

But in 1995, David published an award winning paper titled **Forecasting Earthquakes and Earthquake Risk**. Further, Ma Li realised that the risk mitigation strategies of the SSB required the use of statistics and probability, aspects missing in the earlier Californian predictions. This

was a major coming together of a number of David's projects and activities, in particular point processes and earthquake modelling. Like David, Ma Li was also an extraordinary person, with the drive and ability to push for the use of statistics and probability within the Chinese earth science bureaucracy.

Ma Li then organised a Workshop on Statistical Seismology in Hangzhou in June 1998.



1998 Workshop in Statistical Seismology in China.

The participants were mostly students from the SSB with visitors including David and Mary, Yosi Ogata (ISM Tokyo), Lowell Whiteside (USA), Ray Brownrigg and me (VUW). A number of the students in the photo visited VUW for a month or more around this time. This included ZHUANG Jiancang who stayed for 1 year.

The 2nd Workshop in Statistical Seismology occurred at VUW in 2001 in conjunction with David's 65th Birthday Festschrift. These workshops were then embraced by the international statistical seismology community, and a workshop has been held approximately every 2 years since then.

David enjoyed walking in the back country and forest parks; and taking colleagues and visitors on walks. Yehuda Ben-Zion, a professor in geophysics at USC in Los Angeles, gave a tongue-in-cheek warning to others on one occasion that if David invited them for a walk on Sunday, it will not be a walk in the park but a serious tramp, go well prepared!

David often had gatherings at Otaki. The photo below is about 2004/05, possibly when David's friend Phil, from Manakau, made a hangi.

David was a great person with whom to discuss my work. He often dropped his current

tasks almost immediately. He was always understanding and encouraging. I very much admired David's modesty, well thought out opinions and a keen sense of social justice. Contrary to one's initial impression, I found him a very warm and engaging person. I will miss him immensely.



Gathering at Otaki: Front Row left to right: Cheryl Brownrigg, Ray Brownrigg, David Crossan, Megan Clark, Ivy Liu, Richard Arnold, Nuovella Williams, David Vere-Jones. Middle row left to right: David Harte, Stefanka Chukova, Yu Hayakawa, John Haywood, Shirley Pledger, Steven Johnston (in front of Shirley). Back row left to right: David Funnell, Erris Thomson, Peter Thomson, Estate Khmaladze, Leigh Roberts, Mzia Khmaladze.

This additional tribute was written by Mike Camden for David's contributions to statistical education.

Alongside his other contributions and achievements, David found time and energy for a very active interest in statistical education. He made a huge contribution to world-wide statistical education with the arrival of the International Association for Statistical Education (IASE), and he contributed to statistics in schools and to the NZSA's efforts here.

David chaired the International Statistical Institute Education Committee 1987-1991, co-founded the IASE in 1991, and was its interim president (1991-92) as it took over the role.

David's well-known paper, **The Coming of Age of Statistical Education** (International Statistical Review 1995), records the history of

the International Statistical Institute Education Committee from its start in 1948, details the founding of the IASE, and explores what the IASE's challenges would be. His ideas are still very relevant.

We'll let David speak for himself from this paper. In the section *The Democratisation of Mathematics* he writes:

One of the notable achievements of Western societies in the last few decades has been the extension of modern education, including mathematics, to a very substantial proportion of the population. It is no longer a relatively small, "academically" selected minority that proceed with their studies until age 18, or even to age 21, but a substantial majority. Moreover, in most Western countries, girls participate equally or to an even greater extent than boys in this process. It is within this context that the movement for statistical education has taken root. Its motivations are quite different from those of classical mathematical education. It has never been considered as part of a process of selecting the elite. It is as easily available to girls as it is to boys. It does not fit well into a competitive examination framework. On the contrary, a commonly expressed aim is to assist all students into the 21st century, by giving them a basic quantitative literacy in an age dominated by quantitative material. It is in this sense that I see statistics as a key part of the more general process of the "democratisation of mathematics".

Back at home, David made time to visit schools and address teacher groups. He was asked to speak at the 2001 conference of the NZ Association of Mathematics teachers. Instead of showing applications of statistics, he applied his thinking as above to the evolution of school mathematics here in New Zealand, from the 1870's. He noted that the target audience had expanded from the sons of the middle class to everyone, that audience needs for mathematics and statistics had changed massively by then, and that the needs were changing rapidly.

Back in 1986, David was a founding member of the NZSA's Education Committee. His work here and abroad continues to have positive effects.

Conference Reports

MIGARS 2024

by ALEJANDRO FRERY



MIGARS 2024, the International Conference on Machine Intelligence for GeoAnalytics and Remote Sensing, was hosted in Wellington between 8 and 10 April 2024.

The conference was technically sponsored by the IEEE Geoscience and Remote Sensing Society, and received support from MBIE, Lynker Analytics, Eagle Tech, Planet, Massey University, University of Canterbury, and Victoria University of Wellington.

We had over 170 delegates from 22 countries and had 108 peer-reviewed articles presentations. Of these, 56 articles were published in IEEEExplore.

The conference covered topics related to Earth Observation with a strong statistical component. See details here <https://conferences.co.nz/migars2024/>

The upcoming MIGARS will be hosted by University POLITEHNICA of Bucharest in September 2025.

New Zealand Statistical Association 2024 Conference

by JOHN HAYWOOD



The 2024 NZSA Conference was held at Victoria University of Wellington from 2–4 December 2024. For full details, including published abstracts of all the Plenary talks, the ANZJS Read Paper, and the Contributed Talks plus Posters, see the conference [website](#).

The program was exceptionally diverse, featuring 80 presentations that covered a wide range of topics, including physical sciences, finance, statistical education, mental health, and data visualization. Presentations were delivered by speakers at all career stages, from students to senior professors.

The seven excellent keynote speakers covered a smorgasbord of topics. Alan Welsh (ANU)

spoke on "Double descent and noise in fitting linear regression models". In the Premium Sponsor's Presentation from SAS New Zealand, Joe Robins addressed the thought-provoking topic, "The best minds of my generation are teaching machines to be convincingly wrong – how do we make this right?". Kate Kolich from RBNZ explored "Data leadership within and beyond your organisation," while Marti Anderson delivered the inaugural live-streamed ANZJS Read Paper, "The incremental progression from fixed to random factors in the analysis of variance: a new synthesis (with discussion)". Ruth Shinoda (ERO) presented "Insights, killer stats, and impact", followed back-to-back by Kylie Reiri's talk, "Payment for Success: An introduction to how paying for social outcomes works, and the critical role of statisticians". That double-header

session highlighted how the work of statisticians is essential to shape and guide improvements in the development and delivery of good public policy. Finally, David Harte closed the conference with “A brief personal tribute to David Vere-Jones”. DVJ sadly passed away on 31 October 2024, and there is an obituary for David elsewhere in this newsletter.

A special acknowledgment goes to the 29 students who bravely presented at the conference. Stepping up to speak in front of peers and experts can be intimidating, but you all demonstrated confidence and capability—proving that the future of our field is in very good hands!

As Conference Chair I would like to extend my gratitude to everyone who contributed to making the event a great success. In particular, special thanks to the other members of the Organising Committee, Ivy Liu and Nokuthaba Sibanda. For our welcome Karakia thanks to our Mata Awhinuke, Tu Temara, and for her Welcome Speech thanks to Professor Margaret Hyland, the University’s Deputy Vice-Chancellor (Research). Thanks also to Christo Muller, Caroline Nebel, Teresa Schischka and Ginny Whatarau for logistical support, and our many student helpers who were wonderfully organised by Ivy Liu. Daniel Gerhard (NZSA Treasurer at the time) set me up to create invoices for all those people who needed special, last minute financial arrangements – thanks, Daniel! We are deeply grateful to our sponsors, SAS New Zealand, Harmonic Analytics (many student prizes!) and the NZSA, for their generous

financial contributions.

Finally, I want to thank two student presenters, who both also won Highly Commended Student Prizes: Angeline Xiao and Tarin Eccleston. After the conference, Angeline and Tarin reached out to share that they had greatly enjoyed the conference and they were inspired to write a short poem—marking, as far as we know, the first poem of that type in NZSA history. Angeline and Tarin get the last word:

*Once two students visited Vic
They talked about statistic(s)
They were as keen as a bean
And not very mean
But left the city very quick
For their nerves they ate a banana
Before they presented on their data
They asked a local called Spike
For help with the mic
But he couldn’t, ‘cause he’s a tuatara
In their talks they showed a plot
But what it’s about, they forgot
To know the trend
They called a friend
But the graph had just one big dot*



Spike

Stories of Interest

NZSA Awards

by VANESSA CAVE, CONVENOR OF THE AWARDS COMMITTEE



Honours and Awards

Three New Zealand statisticians were recognised with **NZSA awards** at the conference dinner in Wellington. Thanks to everyone who submitted a

nomination for the 2024 awards. Competition was exceptionally tight, with several nominations received for each of the Littlejohn, Jean Thompson and Campbell Awards.

Littlejohn Research Award

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

Recipient: Tilman Davies (The University of Otago)

Citation from Martin Hazelton

Dr Davies receives the Littlejohn Award in recognition of his excellent corpus of research published over the period 2020-2024. This work is primarily on spatial statistics, and is exemplified by five nominated articles.

The first, published in the Annals of Applied Statistics, employs thresholded hidden Gaussian conditional autoregressions to model a binary response that distinguishes slow from fast twitch fibres in a muscle cross-section, potentially leading to new insight into muscle aging and disease.

The second article, from the Journal of the Royal Statistical Society Series C, uses a sophisticated and computationally demanding

nearest-neighbour Gaussian process spatial factor model to relate levels of trace elements to environmental variables obtained at sampling sites in the South Island of New Zealand, while respecting likely spatial dependencies.

The next article, appearing in the journal Spatial Statistics, looks at point patterns on networks. Critically, many of the fundamental ideas and tools underpinning spatial processes in Euclidean space require adaptation, or simply fail, when applied to processes on networks. This highly cited paper provides a beautifully clear and wide-ranging review of the area.



Tilman Davies

The fourth article, from Statistical Science, is concerned with diffusion estimation of spatial intensity functions. The paper reviews existing diffusion smoothers, and then synthesizes and extends previous work to develop a highly

practical methodology.

The final article, published in *Spatial Statistics*, addresses major theoretical and practical issues in fitting cluster process models to spatial point patterns. This work overturns the accepted wisdom that the problems were with the fitting methods, showing instead that the classical model parameterization was largely to blame.

Dr Davies' methodological work is typically implemented in publicly available R packages. Through this software, his methods are being adopted across the world by researchers in numerous different disciplines.

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.

Recipient: David Baird (VSN NZ Ltd)

Citation from Vanessa Cave



Vanessa Cave and David Baird

David Baird exemplifies the spirit of the Jean Thompson Award through his remarkable contributions to applied statistics and his role as a mentor, leader and innovator within the statistical community. For over 4 decades, David has applied his statistical and computing expertise to address critical challenges in agriculture, horticulture, biosecurity, entomology, ecology, plant breeding,

and finance. David's work has been instrumental in solving real-world problems faced by New Zealand industry, government agencies, and Crown Research Institutes. For example, one of David's many important contributions was his work with the New Zealand Earthquake Commission (EQC) following the Christchurch Earthquakes to estimate property damage and address insurance-related issues. In addition to his consultancy, David has made significant contributions to the statistical software Genstat. As a principal developer, he created the first Windows version of Genstat, introducing a user-friendly interface that made statistical analysis accessible to both statisticians and non-experts. David is also an exceptional mentor and coach. He has supported the careers of many statisticians, including myself, and many non-statisticians, offering guidance, advice, and sharing his vast knowledge. Additionally, David has demonstrated a strong commitment to the statistical community, both in Australasia and internationally. He actively contributes to the New Zealand Statistical Association and the International Biometric Society, organizing conferences, conducting workshops and serving on committees. David's effectiveness, leadership and commitment to advancing statistical thinking and good statistical practice in New Zealand make him a highly deserving recipient of the Jean Thompson Award.

Campbell Award

The **Campbell Award** celebrates a sustained contribution to the promotion and development of statistics within New Zealand.

Recipient: Lisa Thomasen (Fonterra)

Citation from Jie Kang and Matt Parry

Lisa has been, and continues to be, a powerful advocate for students, early-career, and professional statisticians, ensuring their voices are heard, that they are supported, and that their contributions are recognized both within our Association and beyond.

From 2016 to 2021, Lisa served as the student and early-career representative on the NZSA

Committee, demonstrating remarkable dedication and engagement to this role. Among her many contributions, Lisa organized highly successful networking events, founded a network of regional representatives, and built stronger connections with early-career statisticians in Australia. Lisa's good works and exemplary service have provided the next generation of statisticians with opportunities for professional development, engagement, and leadership.



Lisa Thomassen

Over recent years, recognising the need for structured support and guidance for student and early-career statisticians, Lisa developed, and continues to lead, the NZSA's highly successful mentoring programme. This programme has become the cornerstone of the NZSA's efforts to support the professional development of early-career statisticians, with participants consistently praising its effectiveness and value. Additionally, Lisa pioneered the "Lean In Circles" initiative, another innovative programme designed to support and foster peer-to-peer mentorship within the NZSA community. These circles provide a platform for members to exchange experiences, offer peer support, and expand both personal and professional networks. Like the previous programme, it has been incredibly successful, receiving high praise from participants for its practical benefits and impact. The success of the Mentoring programme and the Lean In Circles underscores Lisa's remarkable ability to cultivate environments that promote collaboration, community building, and the overall well-being of statisticians at all stages of their careers. Lisa's unwavering advocacy

for early-career statisticians, along with the mentoring and community-building initiatives she has developed and led, make her a truly deserving recipient of the Campbell Award.

New Life Membership

Congratulations to Martin Hazelton from The University of Otago on being elected an **honorary life member** at the 2024 AGM. This prestigious title celebrates NZSA members with a long and distinguished record of service to the Association. Martin is an active and dedicated member of the NZSA community, and a long-standing member of the NZSA executive. He has served in a variety of key roles, including as President (2015-2016), Editor-in-Chief of ANZJS (2019-2024), and Convenor of the Awards Committee (2010-2013, 2016-2018).



Martin Hazelton and John Haywood

Harmonic Analytics Student Presentation Prize

Congratulations to all 29 students who presented at our 2024 conference in Wellington. The prizes for the top student presentations were generously sponsored by Harmonic Analytics, a long-time supporter of students and early-career statisticians. The 2024 conference winners are:

Best Student Presentation

Tori Diamond (University of Auckland) Novel applications of linked administrative data – adding longitudinal capability to the Te Kupenga survey

Highly Commended Student Presentations (in alphabetical order)

Adam Glucksman (Victoria University of Wellington). The subjective wellbeing of first-in-family university students: A multivariate re-evaluation of common narratives

Angeline Xiao (University of Auckland). Evaluating the impact of timely access to concussion services on patient outcomes in Aotearoa

Bradley Drayton (University of Auckland). Variance estimators for mixed-effects proportional hazards models fitted to complex samples

Tarin Eccleston (University of Auckland). Variational autoencoders for stellar core-collapse gravitational waves



From left to right: Bradley Drayton, Angeline Xiao, Matthew Stansfield (Harmonic Analytics CEO), John Haywood (NZSA President), Tori Diamond, Tarin Eccleston and Adam Glucksman.

Travel Awards

Student Travel Awards

Travel grants were awarded to 20 students to support their attendance at the 2024 NZSA conference. The recipients included 12 students from Auckland, 5 from Otago, and 1 each from AUT, Canterbury, and Massey.

Early Career Discretionary Travel Fund

This year, for the first time, funding was made available to support early-career researchers attending NZSA-affiliated events. Congratulations to Anjali Gupta and Yongshi Deng, who were awarded travel grants to assist with their attendance at our 2024 conference. While we've had the pleasure of highlighting the achievements of some incredible individuals,

there's nothing quite like hearing directly from the award winners themselves. In the spirit of celebration and connection, we're giving them the spotlight to introduce themselves to a wider audience.



Anjali Gupta

I am Dr. Anjali Gupta, currently working as a Senior Statistician at Oritain Global Limited. My academic background is in Statistics, with a PhD in the field from the University of Auckland. Prior to that, I completed an MSc in Applied Statistics at the University of Oxford and earned a BSc (Hons) in Statistics from the University of Delhi. I have been an active member of the statistics community in New Zealand, engaging with the NZSA, the country's only professional society for statisticians. I look forward to attending the 2025 conference.



Yongshi Deng

I am Yongshi (Agnes) Deng, and I recently completed my PhD in Statistics at the University of Auckland. My doctoral research focused on investigating the use of statistical learning methods to solve missing data problems for large datasets. I am currently working as a data scientist at the Institute of Environmental Science and Research (ESR), where I apply statistical methods with near-infrared (NIR) spectroscopy to analyse illicit

drug samples. I was so grateful to receive the early-career travel grant to attend the NZSA 2024 conference. This grant enabled me to travel to Wellington to present a talk on part of my PhD research and a poster to showcase my current work at ESR. More importantly, I had the opportunity to meet people who love statistics and learn about how they apply statistics to solve a wide range of real-world problems. I am so inspired!

Tidy International Travel Award

I am pleased to announce the establishment of the NZSA Tidy International Travel Scholarship, generously sponsored by Hadley Wickham for an initial period of five years. This scholarship, valued at \$2,500 p.a., aims to support students and early-career statisticians (SECSs) in attending international conferences that are relevant to their research and professional development. The first round of applications is provisionally scheduled for April 2025. At present, Student and Early Career representative, **Muskaan**, is working with SECS members Jinxian Hu, Jyotsna Garg and Andre Macleod Hungar to design the application and assessment processes. I would also like to acknowledge Jie Kang for conceptualising this initiative and for liaising with Hadley.

2025 Visiting Lecturer

I'm delighted to share that we have a visiting lecturer this year - Dr. Matthew Beckman from Penn State University.



Matthew Beckman

His visit is being organized by Anna Fergusson from the University of Auckland. More information about his visit can be found here: <https://www.stats.org.nz/nzsa-visiting-lecturers/>.

Call for Applications – Campbell Bequest Fund Funding Details:

- Amount Available Annually: Approximately \$1,500
- Application Deadlines: Applications are received twice a year, in April and October.
- Application Submission: Applications should be emailed to the Convenor of the Awards Committee:
vanessa.cave@auckland.ac.nz

About the Fund:

The **Campbell Bequest Fund** supports initiatives that reflect the interests of Professor Campbell. These include:

- the importance of a good mathematical foundation for any teaching of statistics;
- the likelihood of developments in mathematics being stimulated by the needs of the social sciences, and the role that women, in particular, will play in this;
- more generally the need to help women mathematicians;
- the responsibility he felt towards 'second-tier' students – the 'elite' ones were seen as 'self-propelling';
- effective connections between schools and universities;
- the importance of instilling intellectual honesty – much wider than just mathematics.

For more information, visit:

<https://www.stats.org.nz/campbell-bequest-fund/>

Back-In-The-Day

by JOHN MAINDONALD, CONTRACT ASSOCIATE AT STATISTICS RESEARCH ASSOCIATES



In 1986, while working at DSIR Applied Mathematics Division, I collaborated with DSIR Auckland Industrial Development Division on an experiment to determine

whether trucks with airbag suspension provided gentler treatment to apples compared to those with mechanical suspension. The study involved transporting apples in wooden bins on each of four trips—two outbound and two return—between Henderson and Hastings. Each trip had one truck of each type traveling together, providing four sets of paired data.

Granny Smith apples were selected for the experiment due to their ability to visibly reveal bruising. Upon arrival, bins were left to stand for at least 18 hours to allow bruises to develop. Every effort was made to ensure consistency across trips, including equal cooling periods and uniform grading standards.

Unexpected Findings

Initial results were highly variable. The most noticeable difference was that apples in bins placed directly on the truck tray suffered more damage than those stacked on top. To address this, we mixed and matched apples across bins for the second set of trips to Hastings.

It was during this second outbound trip that a startling discovery was made. One bin, located in the back right position of the mechanically suspended truck, exhibited damage levels twice as high as any other bin. Some apples displayed rings of heavy bruises and indentations, indicating they had been forcibly pressed against each other or the wooden boards of the bin. Upon closer inspection, we identified the bin as an older, pre-1980 model with noticeable instability—it could be deflected nearly 20mm by pushing at the top.

By the time we recognized this issue, the trucks had already been loaded for the return trip to Henderson. After unloading, we found that the two rear bins on the lower level of the air suspension truck also showed significant damage—more than double that of the other bins. Interestingly, only the right-side bin exhibited clear instability. This suggested that left-right rocking of the unstable bin had transferred movement to its neighboring bin, exacerbating apple damage.

A Shift in Focus

What began as a study comparing truck suspensions turned into an investigation of bin stability. The experiment inadvertently revealed that bin design and stability were critical factors in apple damage, overshadowing any differences caused by suspension type. While our study design had accounted for many variables, this unforeseen issue underscored the importance of meticulous experimental planning. These findings raised new questions: How could bin instability be measured to predict potential apple damage? What bracing techniques could minimize rocking and its detrimental effects? These areas warranted further investigation.

Additional Comparisons

For reference, we also transported a small number of bins by rail during both return trips. The resulting damage levels were comparable to, or slightly lower than, those observed in the least-damaged truck bins, reinforcing the idea that bin stability, rather than the mode of transport, was a key factor in apple preservation. This experience highlighted an important lesson: in experimental research, unexpected discoveries often provide the most valuable insights.

Updates

NZSA Mentoring Program

by LISA THOMASEN



Mentoring Program

The NZSA Mentoring Program launched for 2025 on Friday the 21st of February with a panel discussion attended by 37 members. Some of the key

takeaways from the discussion included:

- Morning and afternoon tea breaks are valuable – take them
- Get comfortable asking for help from others – this can benefit you and the person you ask
- Connection and networking are important – there are so many benefits to this, including not feeling alone in the challenges you face
- There is a lot to learn from statisticians who've joined the workforce in different decades. You can add value to others and learn lots regardless of your career stage and experience.
- Mentoring relationships are helpful for professional development
- Honesty helps to build trust and connection

There are lots of exciting things happening for the mentoring program this year. By the time you're reading this, the 2025 pairs will be matched and about to start on their mentoring journeys. Pairs will meet up between April and September and will also have the opportunity to network with fellow participants.

Lean in circles

A successful Lean in circle was offered last year. Many of last year's participants are keen to continue meeting and there has been enough interest to offer a second circle this year. I'm excited to facilitate these peer mentoring sessions and provide an opportunity for members to

connect and learn from each other.

Coffee Roulette

This year a new initiative is being offered. The purpose of coffee roulette is to provide networking opportunities for members. After being randomly matched, participants will arrange a time to connect with their match for a virtual coffee and chat. Where location allows, individuals may also opt for an in-person coffee! This option is ideal for individuals who don't want the formality or time commitment of a mentoring relationship, but is also open to current mentors and mentees. Members can join coffee roulette at any time throughout the year.

Lunch 'n' Learns

Lunch 'n' learns are online sessions which are scheduled for the lunch hour. These may include discussion topics and presentations covering a variety of topics. There are some exciting topics pencilled in for this year. These will be promoted via the NZSA mailing list, so keep an eye out for these. Get in touch if you'd like to share an idea for a future topic or volunteer to facilitate a future lunch 'n' learn session.

To emphasise the impact of initiatives we present, here are some of the comments and feedback we received from participants.

A 2024 Lean in circle participant said: *"This is a fantastic initiative. As someone without a team around me, the opportunity to connect with others, share ideas, and learn from my peers was invaluable. Really enjoyable and a very safe environment."*

A 2024 Lean in circle participant said: *"The content and questions . . . always helped to generate useful discussions. I felt supported by hearing others*

experiencing similar things and found it valuable to hear different perspectives and ways of approaching challenges."

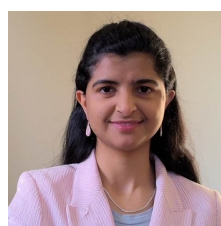
A Mentee in the Mentoring Program said: "*Many difficult challenges become a lot easier when you have a mentor telling you how they've been in the situation and what to do and what not to do.*

Hence, I would argue that mentorship is a shortcut to success."

If you would like more information about the mentoring program, please check out the [NZSA website](#) or our FAQs document or send me an email: mentoring@stats.org.nz

Student and Early Career Statisticians' Network

by MUSKAAN



SECS Network: A Year in Review

As we reflect on 2024, it's clear that our SECS network had an exceptional year of growth, collaboration, and learning.

With a series of successful monthly webinars and the ECSS conference marking the highlight of our events, we've continued to nurture and strengthen the statistical community, while also embracing new opportunities for networking and professional development.

Monthly Webinars

The monthly webinars in 2024 were a true highlight, covering a wide range of topics and delivering valuable insights to statisticians at all stages of their careers. Here's a quick recap of some memorable sessions:

1. **Adventures in Statistics and Genetics: A Brief History of the Methods in Animal Breeding** – Roy Costilla gave an inspiring talk on the intersection of Statistics and Genetics, tracing the historical development of these fields from Galton and Fisher to Henderson and Stranden. He also shared his own journey in Animal Breeding and his vision for the future of these intertwined disciplines.

2. **Are Statisticians Sufficiently Engaged with Public Policy?** – Dennis Trewin AO FASSA shed light on several examples of poor statistical practice in public policy, from

COVID-19 responses to flawed machine learning algorithms in the Robodebt scandal. His suggestions for improving the role of statisticians in policy-making were both practical and eye-opening.

3. **Setting Up a Reproducible Data Analysis Project in R** – Olivia Angelin-Bonnet introduced best practices for ensuring reproducibility in data analysis, focusing on tools like GitHub, renv, and targets. This session was particularly valuable for those looking to ensure the longevity and reusability of their analysis.

4. **Analysing Haphazard Surveys with Mild-ish Assumptions** – Gordana Popovic presented an insightful discussion on how to handle non-probability samples, using assumptions to estimate odds ratios in the absence of auxiliary data. Her work on racial bias in police searches from a haphazard Facebook survey was a fascinating case study.

5. **Presenting Effectively at Mixed-Mode Events** – Karen Lamb offered tips for delivering impactful presentations in hybrid settings, a must-have for anyone facing both in-person and virtual audiences.

These webinars brought statistics to life, offering both technical insights and a broader view of the impact of statistical thinking on society.

A huge thank you to all our speakers for their contributions – these sessions were truly exceptional!

The ECSS Conference: A Major Milestone

The ECSS Conference in November, hosted by the ECSS Network of SSA and SECS Network of NZSA, was a standout event of the year. The conference spanned three local hubs in Perth, Hobart, and Christchurch, with a livestream option bringing statisticians together from all over. The focus of the conference was on early career and student statisticians, offering numerous opportunities for networking and professional development. The conference featured an outstanding lineup of keynote speakers:

Vince Galvin (Chief Methodologist, Stats NZ)

Vince's keynote, "A Peek Around the Corner: Some Thoughts About the Next Five Years", offered thought-provoking insights on the future of official statistics and the challenges of delivering accurate public measures. He discussed emerging trends and shared his predictions on how the profession would evolve in the next five years, including the growing importance of data ethics and automation in statistical practice.

Arlene Mavratsou (Assistant Commissioner, WA Police Force)

Arlene's talk, "Solving Crime Faster with Data and Technology", highlighted how data analytics and technology are transforming crime-solving. She explored innovative uses of data to identify and track persons of interest, as well as strategies to enhance community safety through collaboration between frontline officers, analysts, and data scientists. The role of predictive modeling in law enforcement was a key focus.

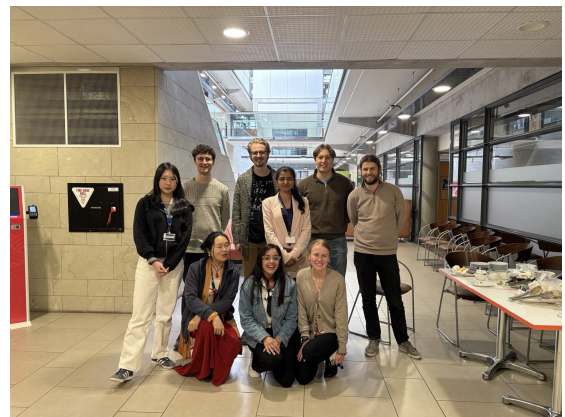
Russell Thomson

Russell, a seasoned applied statistician, shared highlights from his 25-year career, including fascinating projects that combined techniques like random forests, structural equation modeling, and multivariate methods. He also touched on the intersections between statistics and music, revealing how statistical methods are applied in unique fields like marine conservation and

healthcare prediction.



Conference attendees and hosts gathering at the reception for the Stats NZ tour.



Attendees at the Christchurch hub (University of Canterbury), engaging with presenters.



Attendees gathered for a group photo after lunch.

The conference also featured a hands-on Quarto workshop on the final day, allowing attendees to sharpen their technical skills.

The event was also marked by a fantastic social program, including an exclusive tour at Stats NZ where the attendees had the chance to connect with statisticians in a relaxed setting, gaining insights into both the work culture and the daily challenges faced by professionals in the field.

The conference was a resounding success, with seamless connection across hubs and a livestream audience. We look forward to more such collaborations in the future. A special thank you goes to Jinxian Hu and Jyotsna Garg for their exceptional support during the event, and to Richard Penny, whose invaluable guidance behind the scenes was instrumental in the conference's success. Richard provided crucial background support, offering advice on how to manage and organize the event efficiently and ensuring every detail was in place. His strategic input helped streamline the process, making the event run smoothly and successfully.

Changes in Canterbury

Farewell to Tiana Whitehead

We say goodbye to Tiana Whitehead, who stepped down as the Canterbury representative after an outstanding tenure. During her time as the Canterbury representative for Early Career Statisticians, she undertook several initiatives to foster collaboration and engagement among students and early-career professionals: Organized webinar viewing events at the University of Canterbury, including Perspectives from Two Early Career Statisticians and Ihaka Lectures, providing students with an opportunity to engage with the content and participate in a post-event networking session. These sessions allowed students to connect with each other and ask questions directly to Richard Penny and her. Presented at a joint webinar hosted by the New Zealand Statistical Association (NZSA) and the Statistical Society of Australia (SSA) on the experiences of an early-career statistician at Stats NZ, focusing on the transition from university to full-time employment. Worked closely with other regional and national reps

to exchange ideas, coordinate initiatives, and strengthen engagement across the Early Career Statisticians network. Participated in the association's mentoring program and provided guidance and support to a fellow mentee who was still studying, offering advice on transitioning into the workforce and navigating career opportunities in statistics. A round of applause for Tiana, for her amazing contribution.

Warm Welcome to Jinxian Hu

We are excited to welcome Jinxian Hu as the new Canterbury representative. Let's take a moment to read their brief introduction below and join us in extending a friendly hello!

My name is Jinxian Hu, and I am the Christchurch Early Career Statisticians Representative. I am currently completing a Bachelor of Science in Statistics and Finance at the University of Canterbury. My experience includes statistical analysis and financial modeling, with research focusing on renewable energy adoption patterns in New Zealand. I have a deep appreciation for interdisciplinary data analysis—just as antiques hold traces of the past waiting to be interpreted, data tells stories that help us navigate the present and future. I am excited to connect with fellow early career statisticians, fostering collaboration and sharing insights across diverse fields.



Jinxian Hu

The Tidy International Travel Award: A New Opportunity

We are also excited to announce the establishment of the NZSA Tidy International Travel Scholarship, generously sponsored by Hadley Wickham. This scholarship, valued at \$2,500 per year, will support students and early-career statisticians in attending international conferences. The award's first round is tentatively scheduled for April 2025. A huge thank you to Jie Kang for his work on bringing this initiative to life. I am collaborating with SECS members Jinxian Hu, Jyotsna Garg, and Andre Macleod Hungar to design the application and assessment processes.

Looking Ahead

As we look ahead to the coming months, we are gearing up with ECSSN of SSA for the Personal Journey Webinar Series, where seasoned statisticians will share their experiences and lessons learned throughout their careers. Additionally, our Professional Development Webinar Series will kick off in April (jointly with ECSSN of SSA), focusing on widely used R and Python packages and prominent methodologies in industry. If you are interested in presenting something for our Professional Development Webinar Series, please contact me at muskaan@stats.govt.nz.

We encourage you to stay connected and follow us on [Facebook](#) for the latest updates and announcements.

Statistics Education

Statistics Education Research

by MAXINE PFANNKUCH



Mike Camden retires after 37 years of service to NZSA Education Committee.

At the NZSA Annual General Meeting in December 2024, Mike Camden was thanked

for his prodigious service to the Education Committee. Below is the tribute to him from the current committee.

The NZSA education committee was formed in 1987, and Mike Camden, retiring secretary, has been a member ever since. In fact, he has probably been the secretary most of that time too. This dedication by Mike, and others, has meant that we have been active in the updates to the New Zealand mathematics and statistics curriculum in 1992, 2007 and the recent developments. Mike also has led many education committee statements, getting the initial ideas started, and then encouraging the rest of us to contribute. He has deep knowledge of statistics and of education which is truly valuable for us as a group. If it wasn't for Mike, the committee would not have had regular meetings and the requirement to be accountable for work promised, resulting in the continuous contribution of the committee to the improvement of statistics education in NZ.

Mike has been the ears on Wellington ground to find out about curriculum developments. If it wasn't for Mike, time series would not have been introduced into the 1992 Year 13 curriculum, a world first and which very few countries have adopted. If it wasn't for Mike, there would not have been a statistics education representative on the 2005 curriculum reference group and consequently

NZSA education committee involvement in the development of the 2007 curriculum. If it wasn't for Mike, the maths curriculum name would not have changed to the maths and stats curriculum - an important step change for statistics education in NZ. If it wasn't for Mike, the continuous feedback to NZQA on their external exams would not have occurred.

The kindness, embrace and expertise you have shown and shared in your management of the education committee meetings has been a class act. You have genuinely exhibited that rarest of skills, reaching out to others and encouraging them to share what they know for the benefit of all. You've shown equal respect to primary, secondary and tertiary educators and we all appreciate this balance the mix brings to the committee and its wider influence on statistics education in New Zealand.

While the education committee will continue and Mike will still pop in from time to time, the unique set of skills Mike brings to our group will be difficult to replace, and definitely not with one person. Thank you, Mike, for all that you have done for statistics education, but most importantly for making statistics in schools interesting and purposeful for students to engage with.

The School Curriculum

The NZC - Mathematics and statistics (Years 0-8) is now in operation in primary and intermediate schools. Our feedback for the draft Years 0-8 statistics curriculum was recognised in several places in the Ministry of Education summary of the review. The refreshed curriculum for Years 9-10 has been released for consultation from 27

January to 28 April 2025: **NZC – Mathematics and Statistics (Years 9-13)**. We will be giving detailed feedback to the Ministry.

Probability | Tūponotanga - A Guide for Teaching Probability

The NZSA education committee's digital book as a guide for teachers to support the teaching and learning of tūponotanga | probability in Aotearoa New Zealand schools is now underway with the first chapter out for review. Pip Arnold is leading the project. The book will have 15 chapters authored by members of the NZSA education committee, other NZ educators, and international experts. The book will align with the new refreshed mathematics and statistics curriculum. The aim is to have two chapters of the guide available by June 2025, a further seven chapters by December 2025 and the rest available by June 2026.

People in Statistics Education

Congratulations to Rachel Passmore for the successful completion of her PhD thesis, Assessment of graduate profile attributes in a statistics capstone course: Supporting journeys from students of statistics to professional statisticians [website](#)).

Anna Fergusson is forging ahead this year leading three exciting new projects in the field of statistics and data science education. The first is a two-year collaborative high school data science project with the University of Paderborn, Germany, the second, a joint project with Matt Beckman, Penn State University, related to large-scale teaching/assessment practices for intro-level stats/data science, and the third is a year-long project with New Zealand high school teachers. Matt Beckman is currently at the University of Auckland on sabbatical and the German project team will be visiting New Zealand at the end of October this year. Anna will also be a keynote speaker at the CAUSE Research Satellite Conference at USCOTS 2025. Her computer technical expertise is in demand internationally with IASE's flagship journal **SERJ** appointing her as Assistant Editor–Technology and IASE have used her skills to publish their **Roundtable Conference proceedings** in February 2025.

Dave Phillips, Lincoln High School, joined the **NZAMT** Executive in 2024 to strengthen his understanding of teacher concerns and new curricula and assessment developments. Michelle Dalrymple, Cashmere High School, is staying at the forefront in data science education by undertaking a Master of Professional Studies at the University of Auckland, which includes being a teacher-researcher on Anna Fergusson's German and NZ projects. Mark Hooper relinquished his position in the Ministry of Education at the end of 2024 and is now Head of Mathematics and Statistics at Christ's College.

Statistics and Data Science Education Conferences and International Involvement

Upcoming statistics and data science education conferences are: SRTL-14 at Penn State University, USA, in June 2025, which Anna Fergusson is attending; and the **IASE Satellite Conference** in Münster, Germany in October 2025, which Anna Fergusson, Stephanie Budgett and Malia Puloka are attending as part of the Paderborn University collaborative research project with the University of Auckland. The ICOTS-12 conference is in Brisbane in July 2026, for which Stephanie Budgett is the IPC Chair. Abstract submissions for **ICOTS-12** are due on 31st May 2025. Stephanie gave information about the conference in an **IASE webinar**. At the NZSA conference in December 2024 a whole session was devoted to statistics education with talks by Anna Fergusson, Andrew Balemi and Lisa Bolton, University of Auckland, and John Harraway, Otago University. The Inaugural **Data Science Education K-12** conference was held in San Antonio, Texas, in February 2025, at which Anna Fergusson and Pip Arnold presented. Pip Arnold also recently presented to a group of mathematics and statistics education students at the University of Georgia.

In January 2025 Stephanie Budgett was appointed as the **SERJ** Assistant Editor Manuscripts. Pip Arnold is continuing to organise the monthly IASE webinars.

The biennial **NZAMT19** conference will be held in Dunedin in the first week of July. The NZSA is sponsoring Leticia Perez, WestEd, USA as the statistics keynote speaker. Members of

the NZSA education committee will be presenting workshops at this conference.

CensusAtSchool Project

The **CensusAtSchool** project, under the co-direction of Rachel Cunliffe and Anne Patel, launched its twelfth biennial online census for Years 3-13 students on February 25, 2025. Pip Arnold is the resource developer.

Teacher Professional Development

Statistics Teachers Day The Department of Statistics, the University of Auckland, and the Auckland Mathematics Association organised and ran a successful in-person **Statistics Teachers Day** in November 2024 under the direction of Anne Patel alongside Anna Fergusson. Matt Parry, Otago University, gave the keynote talk, *How I learned to stop worrying and love uncertainty* about how the heart of statistics is learning from data and quantifying uncertainty is its guts. Anne Patel, Anna Fergusson, Pip Arnold, Charlotte Todd-Jones, Jessica McLay, and Daniel Walsh, the University of Auckland, presented workshops. NZSA education committee members Michelle Dalrymple and Marina McFarland also presented workshops. Over 200 teachers from across NZ attended the day.

Committee Members Active in Sharing their Understandings

Committee members are 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, Mike Camden, Neil Marshall, Rhys Jones (UK), Robyn Headifen, Alasdair Noble, and Stephanie Budgett. Fun fact about the members of the committee: in 2024 milestone birthdays of 50, 60, 70, and 80 were celebrated – guess who! We see the committee as a good source for sharing information and expertise.

Participation in our four main two-hour meetings in 2024 had a median attendance of 10.5 people with a median of 5.5 apologies. Numerous other meetings in 2024 were held by subsets of members who spent an inordinate number of hours giving detailed feedback on the refreshed school statistics curriculum. With Mike Camden's retirement from the committee, Pip Arnold will be the education committee's secretary.

Our priorities for 2025 are: (1) having input into the school curriculum and related resources; (2) having input into NCEA and related resources; and (3) production of Probability | Tūponotanga - A Guide for Teaching Probability.

Local News

AgResearch

by MARYANN STAINCLIFFE



Here at AgResearch as we welcome in the New Year we also begin a transition to the new PRO. We currently have 12 statisticians on our team. The team is led by Sarah Rosanowski who stepped up to the team leader role in August 2024. She is based at Grasslands (Palmerston North) alongside Paul, Peter and Rina. There is Dongwen and Chanutda based at Ruakura,

Alasdair, Esther and Dimetre at Lincoln and Ken, Timothy and Maryann at Invermay. As a team we enjoy the privilege of Harold, Neil, Martin, Catherine and Chikako still offering insights and mentorship as they enjoy their retirements. We are looking forward to opportunities to reconnect with some of our fellow statisticians who sit within the other CRI's that we will be merging with.

Biostatistics Centre on Dunedin Campus, University of Otago

by ANDREW GRAY



We were all incredibly sad to hear that Professor Bryan Manly had passed away. Some of us were lucky enough to have been taught by Bryan. Others were privileged to have been his colleagues in the Department of Mathematics and Statistics, where he had a well-deserved reputation as the go-to problem solver when no one else could crack a statistical challenge. We have all been influenced by his many, many contributions to statistics. For me, the second edition of his *Multivariate Statistical Methods: A Primer* (the one with the blue cover, which I bought as a second-year Statistics student) has been one of my most often recommended statistics books, packing an enormous amount into only slightly more than 200 pages. Associate Professor Claire Cameron arranged for Bryan to join the biostatistics group in early 2016 (this was before we became a Centre, which

happened at the same time Professor Robin Turner arrived in November 2017). Those were challenging times, especially with Associate Professor Sheila Williams retiring, and we all appreciated and benefited from Bryan's experience and wisdom. This included running some biostatistics workshops with Associate Professor Ari Samaranayaka.

Robin, with help from Ari, delivered her always extremely popular two-day Introductory Biostatistics for Health Researchers course at the Public Health Summer School in Wellington during February. Soon Robin will be teaching first-year health science students about biostatistics, with some fun activities involving inflated globes and chocolate. The latter should ensure that there's no shortage of volunteers to help her with these lectures!

As Director of the Biostatistics Centre, Claire has kept us moving forward as a collegial and

productive group. This has included recent promotions for Dr. Ella Iosua, Dr. Nisa Widyastuti, and me. Thank you, as always, Claire for keeping people at the centre of the Centre! We missed you when you were away for a few weeks of much-deserved leave and we will similarly miss Nisa when she spends some time in Indonesia

building up connections there.

Ella and our amazing administrator, Janet Kim, have both completed training in the webpage management system. By the time the next newsletter comes out, I'm hoping to be able to point you to an up-to-date news and events section on our webpage!

Department of Mathematical Sciences, Auckland University of Technology

by PATRICIO MATURANA-RUSSEL



In September 2024, Mat Pawley was appointed as Associate Professor in the Department of Mathematical Sciences at AUT. Mat completed his PhD in Ecology and Statistics at the University of Auckland in 2007, work supervised by Dr Brian McArdle. After graduating, Mat accepted a post-doctoral fellowship at the Leigh Marine Laboratory, monitoring sediment effects on marine communities. He continued to work with Prof Marti Anderson as a post-doc at Massey University, before eventually accepting an academic position there. Mat's theoretical research has focused on multivariate control charts, with a more general aim of developing methods to regularize distance-based methods that analyse ecological abundance data. His applied research is varied—he has ongoing collaborations with the Anaesthesiology Department at the University of Auckland (UoA) and Plant and Food Research using statistics and machine learning tools to assess honeybee behaviour.

Nate spent the second half of 2024 having his first research and study leave. He visited the Thailand Development Research Institute in Bangkok, the Ohio Education Research Center at Ohio State University, Lincoln University in Christchurch, and the University of Sydney. Nate gave several presentations and workshops. In July 2024, he attended and gave a talk at the 7th International Conference on Econometrics and Statistics, Beijing Normal

University in China where he met Professor Tommaso Proietti, an internationally-known time series econometrician. Nate also helped organize the University of Sydney Time Series and Forecasting Symposium in November 2024.



Tommaso Proietti (left) and Nuttanan Wichitaksorn (right) at EcoSta 2024.

Thanks to the Collaborative International Interuniversity Research, Innovation, and Development program between Pontificia Universidad Católica de Valparaíso (PUCV), Chile, and AUT, Patricio Maturana-Russel visited the School of Computer Engineering at PUCV in November 2024 for a research visit. He also visited the Department of Statistics at PUCV to discuss potential collaboration between the departments.

On November 7th, we held the AUT Master of Analytics Mix & Mingle. Our panellists included Joseph Thornley from Datacom, Andrew Cathie from Harmony, and Jason Sharpe from Teradata. Representing our alumni, we had Surbhi Gupta from Mott MacDonald and Hai Ha (Hannah) Ta from OCS Ltd. The discussion topic was:

"Analytics in the World of AI: How Has NZ Adapted?" Joseph and Andrew led the event with two insightful keynotes on the topic. The event was attended by current Master of Analytics students, alumni, and industry professionals and it provided a valuable opportunity for networking, knowledge sharing, and insights into the role of analytics in the evolving AI landscape.

We held the 9th AUT Mathematical Modelling and Analytics Symposium on December 3–4, 2024. It had enthusiastic participation from academics, students, and industry professionals. Among the invited speakers, we had Roslyn Hickson, from James Cook University, Rodelyn Jaksons from Whānau Āwhina Plunket, Wai Keung Li from The Education University of Hong Kong, and Eric Ulm from Victoria University of Wellington.

Department of Statistics, University of Auckland

by PRIYA PARMAR



Mānawa Mai Open Day (held Saturday August 24th) was well represented by the Department with Stephanie Budgett and David Smith leading and organising the team of Azam

Asanjarani, Heti Afimeimounga, Brendon Brewer, Lisa Chen, David Smith, Nazeela Aimen, Hannah Chun, Tim Cross, Cher Li, Yvonne Li, Felicity Xue to inform incoming statisticians and data scientists.

Last September's graduation featured 117 statistics graduates; congratulations to our four PhD grads; Luke Boyle, Yang Hai, Innocenter Amima and Zhijian Wen.

We look forward to seeing Eileen Li and Zehua Zang in the graduation ceremony this May having successfully defended their PhDs in January. Eileen's thesis "Assessing the Impact of Linkage Bias in the Integrated Data Infrastructure" was supervised by Yong Wang, Thomas Lumley, and Barry Milne. Zehua was supervised by Simon Harris and Jesse Goodman assessing "Branching Processes with Detection: Probabilistic Analysis".

We are happy to have Godrick Oketch with the Department before he begins his postdoc at UC Berkeley later this year. Godrick's thesis supervised by Rachel Fewster and Jeese Goodman, titled "Saddlepoint Techniques in Statistics: Theory, Tools, and Applications," features work of an impressive diversity, spanning theoretical results, applications in ecology, a structured and extensible R/C++ code base, and model-facing tools for interpretation, made it onto the Dean's List. Fantastic achievement Godrick! Rachel Passmore supervised by Maxine Pfannkuch and Stephanie Budgett also successfully defended her PhD last year.

The number of Master of Data Science students graduating continues to grow, with 25 in the last graduation, the largest postgraduate qualification closely followed by 16 Master of Professional Studies, 4 MSc, 3 PGDip, 1 GDip, 4 BSc(Hons). A large cohort graduated with a BSc (45) or BSc conjoint (10) and 4 further with a BA(Stats).

The Department has been fortunate to host the following excellent speakers: Brandon Whitcher from the University of London presenting

“Image-Derived Phenotypes in Whole Body MRI scans”; Xiaoyan Sun from University of California Irvine speaking about “Exploring Deep Learning Techniques for Subtype Classification Modeling in Alzheimer’s Disease”; Mine Dogucu also from University of California Irvine discussing “Teaching and Learning Bayesian Statistics”; Takafumi Kubota from Japan’s Tama University presenting “Visualization and Analysis of Suicide Methods in Tokyo Using Interactive Graphs”; and Bethany Macdonald from Otago University

discussing “Test of clustering for Neyman-Scott processes”.

December 13th (a Friday this time but still a very positive day!) saw the Department’s Christmas end of year function at the elegant Winter Pavillion at Auckland’s Museum. Another wonderful event organised by Joei Mudaliar – who also managed for us to have our own private rendition of Christmas in the Park (as they practised their routine in the grounds behind us during our traditional buffet lunch).

Fonterra

by LISA THOMASEN



During the month of January, Lisa Thomasen and Matt Schroder had an intern from Massey University shadow them for a fortnight. The data

we gave the intern to analyse required some data wrangling to get it into a useable format, which was something the student hadn’t done to date at uni. The student’s takeaway from his time with us was that critical thinking is a vital part of statistics and we couldn’t agree more! In fact, it would be nice to see more critical thinking being utilised in many areas.

Roger Kissling has been working with MPI and German statisticians to develop some Guidelines on Sampling for Codex (the subcommittee of the UN FAO and WHO organisations that makes the regulations relating to the international trade of foods) and is preparing to attend the next meeting of that committee in Budapest in May. Roger has also started working with Ha Truong of AUT as industry supervisor for Ha’s Master of Analytics project that will investigate measurement error adjustment in acceptance sampling plans.

Foodstuffs

by MAZEN KASSIS



Transforming Analytics at Scale: Foodstuffs’ Enterprise Data Evolution

The role of data and analytics in large organisations seems to be shifting rapidly. Where once centralised teams acted as gatekeepers of insight, modern businesses increasingly require embedded, real-time analytics to respond to an increasingly complex and fast-moving

environment. This is particularly true in grocery retail, where data influences everything from inventory levels to customer experience, supply chain resilience, and financial performance.

At Foodstuffs, this shift has driven a major transformation in how we manage and leverage data. We are moving from a patchwork of legacy systems to a modern enterprise data platform (EDP) built in the cloud. This transition is more than just an infrastructure upgrade—it

fundamentally changes how data flows across the organisation, making it easier to integrate, govern, and use at scale.

Automation: Reducing the Overhead of Data Work

A key enabler of this transformation is automation. Historically, analysts spent a disproportionate amount of time wrangling data—sourcing, cleaning, and preparing it before analysis could even begin. Our modern data platform is streamlining these processes, automating routine work, and allowing teams to shift their focus towards more advanced analytics, forecasting, and experimentation.

For example, machine learning models to help predict things like demand fluctuations, allowing for smarter inventory decisions and reducing food waste, become easier to develop and put into production. Automated data pipelines ensure that reporting dashboards and operational analytics reflect the most up-to-date data, reducing the manual effort required to refresh and validate insights.

Governance and Access: Making Data Usable, Not Just Secure

With great data accessibility comes great responsibility. A common challenge in large organisations is balancing security and governance with usability—ensuring that the right people have access to the right data without unnecessary bottlenecks.

We are implementing a governance framework that doesn't just restrict access but actively enables responsible data use. This means:

- Clear data classification and handling policies to ensure privacy and compliance.
- Self-service analytics tools that provide curated, high-quality datasets for analysts.
- Auditability and transparency to maintain trust

in insights generated from shared data sources.

AI-Powered Insights: Changing How People Interact with Data

Perhaps the most exciting development is the shift in how people interact with data. Instead of only relying on dashboards or structured queries, we are introducing AI-powered interfaces that allow users to ask questions and receive insights in natural language.

This removes barriers to data-driven decision-making. A category manager can ask, “Which stores are underperforming in coffee sales this week, and why?” and get a meaningful response without needing SQL skills. For statisticians, this means more time spent on exploratory analysis, model development, and experimentation rather than just generating reports.

Takeaways: The Future of Analytics in Enterprise

This transformation is far from complete, but key lessons are already emerging:

- The shift from manual data wrangling to automated pipelines is a game-changer. More time is being spent on advanced analytics rather than routine data prep.
- Governance should enable, not restrict. Making data secure is critical but making it usable is what drives real impact.
- AI-powered interfaces are making analytics accessible beyond the traditional data teams. This is redefining how insights are generated and used across the business.

For statisticians and analytics professionals, the landscape is changing. The challenge ahead is not just about finding insights—it's about making analytics frictionless, scalable, and truly embedded in decision-making.

Luma Analytics

by OLIVER STEVENSON



As 2024 rapidly becomes a distant memory, an exciting 2025 beckons for Luma Analytics, with the year kicking off with another round of recruiting to grow our Insight

Analysis and Data Engineering teams to support our growing client base.

In the continuously evolving AI space, we've recently wrapped up a cutting-edge project for an Australian client in the healthcare industry. Our team successfully deployed a generative AI solution designed to streamline data and information collected during routine medical check-ups. The application assists with automated note taking, processing post-consult survey results, and performs data quality checks on healthcare notes, ensuring that doctors and medical professionals can spend less time on data entry and more time on delivering quality patient care.

Meanwhile, back on home soil the hot topic of New Zealand's not-so-hot economy has been keeping our data scientists busy while they develop econometric models to help forecast New Zealand's economic future. By blending statistical techniques with real-world economic indicators, we're helping provide our clients with a clearer picture of how evolving economic conditions may influence decision-making within financial institutions across the country.



Ray in the Swiss Alps

Finally, we are pleased to welcome back Ray, one of our talented Senior Data Scientists, who returned from an incredible 4-month European adventure late last year. Ray's journey took him from the peaks of the Alps to the streets of Spain, France, and Germany. Whether it's supporting personal goals, embracing remote flexibility, pursuing education, or taking on new challenges outside of work — we believe these things bring fresh energy and insight to everything we do and it's exciting to have Ray back on deck for 2025.

Oritain

by ANJALI GUPTA



Statistics in Action: Oritain's Data-Driven Approach to Product Origin Verification.

In an era of increasing regulatory scrutiny and demand for transparency in global supply chains, Oritain has pioneered an innovative approach to verifying the origin of products using forensic and data science. Oritain's methodology serves two critical purposes: regulatory compliance, which ensures adherence to government regulations and international trade standards, and supply chain transparency, which enhances traceability and authenticity in complex supply networks.

At the core of Oritain's solution is the concept of a product's chemical fingerprint—a profile determined by the chemical elements and isotopes present in a sample. By analyzing these signatures, Oritain can identify the origin of a product with a high degree of certainty and, over the years, Oritain has developed a robust database of chemical fingerprints from authentic product samples. When a new sample is collected, whether from the market or a client,

it is compared against this database to determine its provenance.

From a statistical perspective, the challenge can be framed as a classification problem: comparing an unknown sample to a reference dataset and assigning it to a known origin. While this may seem straightforward, several complexities arise, including the potential impact of classification errors on stakeholders, the need for precise and reliable statistical models to ensure defensibility in regulatory and legal contexts, and the evolving nature of chemical compositions due to environmental and production variations.

To address these challenges, Oritain has developed a proprietary, customized solution that significantly outperforms conventional machine learning approaches. This tailored solution ensures both accuracy and robustness in real-world applications, reinforcing the reliability of origin verification.

With its advanced statistical methodologies and cutting-edge technology, Oritain continues to set new standards in supply chain integrity and regulatory compliance, solidifying its position as a leader in product origin verification.