



Canterbury Branch Royal Society of New Zealand Te Apārangi February 2025 Newsletter

Dear Member

It feels like summer has arrived at last. We hope you have enjoyed the warmer weather. In this newsletter we have a travel grant report, some exciting news on ECRs, increasing our involvement with the Children's University, the postponement of proposed field trip, and a Branch Constitution update.

We are building networks and relationships that will generate an exciting future for the branch, but only if we want too. These relationships have been built by your councillors. Their hard work builds on the belief that Canterbury should have a thriving branch. Your support, encouragement and input help to do this.

Branch Constitution

As you have read in the previous newsletters, the council planned a member's night to discuss the changes needs and suggested updating of the branch constitution for re-registering as required by the Incorporated Societies Act.

After considering it again, the council thought it would be better to have a special meeting after the Annual General Meeting on the 26th of March. We would really like your feedback on the draft constitution, as it is your society and your vision for the future is important.

If you like to make to make your thoughts known, please come to the AGM or email you comments to

Next Annual General Meeting

The 2024 Annual General Meeting will be held on the Wednesday March 26th. We plan to hold it at the Upper Riccarton Library, Memorial Ave (pending confirmation of booking) Time 7.00pm-7.45pm for AGM. Then we will reconvene at 8.00pm for discussion on the draft constitution and finish at 9.00pm.

A full notice will be sent out prior to the AGM as required by the current constitution.

How about thinking about coming on to the council and join the team. Your input, help, support and ideas will be welcomed.

Students travel grants. Awarded.

Will Dixon application \$400

Reports from grant recipients.

RSNZ Canterbury Branch Travel Funding Report

Kia ora koutou,

RSNZ Canterbury Branch has afforded me the chance to share my experience at ANZIAM 2025 in Coffs Harbour (NSW) after generously contributing funding towards my travel fees.

ANZIAM (Australia and New Zealand Industrial and Applied Mathematics) held their annual conference in Coffs Harbour (NSW) during early February 2025. At the time, there were 6 months remaining on my PhD in Computational Applied Mathematics at the University of Canterbury under Professor Alex James. At ANZIAM 2025, I presented a talk on my PhD research. This research uses mathematical modelling methods from theoretical ecology and epidemiology to study human populations, specifically universities and colleges in the US.

Since the 1970s, the number of contingent (full-time non-tenure-track and part-time adjunct) faculty has been steadily rising in American colleges and universities. The American Association of University Professors estimates that since 2022, less than one-third of faculty are on tenure lines, with over two-thirds classified as contingent.

Sociological research on this phenomena focuses on the experiences of individual faculty members, rather than the dynamics of tenured/tenure-track, contingent staff, and graduate student populations. We mathematically show that there exists a tipping point, where a rational HoD would abandon hiring tenured staff and solely recruit contingent faculty.

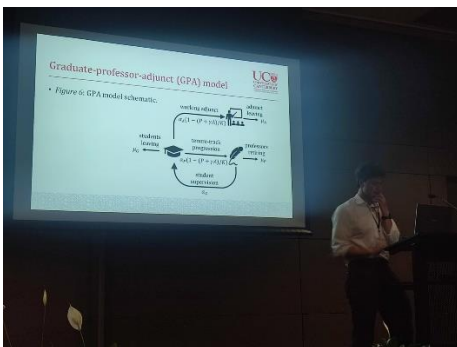
Highlights of the conference included a plenary talk by Professor Hinke Osinga (2024 recipient of the ANZIAM medal) about wild chaos in dynamical systems, a special session including Professor Osinga's PhD students Sam Doak and Juan Patiño-Echeverría, and an especially impressive talk by PhD student Sarah Vollert on calibrating mathematical models when data is limited. Amongst several award winners, Professor Jennifer Flegg stood out to me, as many of the best student and contributed talks featured Professor Flegg as a supervisor or collaborator.

The peer-review I received was invaluable. Several talk attendees offered model extensions and suggestions. This collaboration helped grow my early-career research network. Moreover, hearing experienced researchers talk about mathematics, different mathematical ideas, and tools has had an immediate, noticeable, and positive effect on my own research.

I would like to kindly thank RSNZ Canterbury Branch for giving me this opportunity. Ngā mihi nui.

Liam Gibson, Te Whare Wānanga o Waitaha

12/2/2025



Children's University

As you will know, last year we supported a programme by the Children's University. At this month's branch council meeting, we agreed to fund a programme for 2025. It could be similar to last year that involved microscopes and forest litter, or a new programme.

We also agreed to sign the Learning Destination Agreement with Children's University which means that identify activities that are suitable, will be loaded onto the Children's University. online portal that tamariki have access to.

When children attend a learning destination with their caregivers and complete the activities, they will approach a staff member for a stamp in their passport.

If you want to know more about the Children's University, use this link to their website <https://www.canterbury.ac.nz/study/outreach-for-schools-and-the-community/outreach-for-schools/childrens-university>

Early Careers Researchers

Tony and I met with Joya Kemper, a committee member of the Royal Society of New Zealand Te Apārangi Early Career Researchers Forum, to explore opportunities to coordinate events, seminars etc which connect ECRs to established members.

The discussion was positive, and Joya has already suggested two events, that the council will consider at the next meeting.

Also, I have met with Gabrielia Bantas, who is a ECR at Ara and wishes to help the branch build a STEM/ women/girls section for the branch.

Both Joya and Gabrielia will help in a area that the branch has struggled with, but with their enthusiasm, help and ideas, we should be able to build a powerful ECR component within the branch.

Branch Podcast

At the last council meeting, the council decided to fund the first batch of podcasts, pending on finding an interviewer/s.

We do have a number of topics planned, from AI, ECRs, to travel grant recipients.

It is also the intention that the podcasts will be self-funding.

We have had great support and advice from Plains FM, who will broadcast them, and other platforms as well. Also, we have had continuing help form Paul and Tom, who are expert in these fields and like the council are committed to make these successful.

This is major step for the branch to increase its profile to the public and thus helping to build membership and support for what the branch does.

Branch members field trip

We were planning at field trip, to the Tawhaki National Aerospace Centre here in Christchurch, but after discussions with them, we decided to place this on hold, and to work on it as it involves more than just the site at Kaitorete.

Those who showed their interested will be kept on the list and informed when we have further information.

Cause of this, we will begin planning another trip somewhere else. Details will be in the next newsletter.

Link and Alert newsletters

<https://www.royalsociety.org.nz/fellows-and-members/link-news/2024/july/>

Don't forget you can subscribe to the RSNZ Te Apārangi weekly Alert newsletter shares events, news, and opportunities for those interested in exploring and discovering knowledge or reading past issues at

<https://www.royalsociety.org.nz/whats-happening/alert-newsletter/>.

Upcoming Branch talks, field trips, and related activities

Christchurch talks



Saturday, March 8th, at ARA for the Global AI Bootcamp—a worldwide event bringing AI enthusiasts together! 🌍

💡 Don't miss this chance to level up your AI skills—for free!

📅 When? Saturday, March 8th

📍 Where? ARA Institute of Canterbury K Block

🔗 Register now: <https://lnkd.in/gExxdQw7>

Prof Ann Brower- Changing the world one data point at a time.

Date: Mid/late April

Venue: TBD

Rutherford Medal winner- Professor Richard Beasley, the 2024 Rutherford Medal Winner

Wednesday 27th August

Venue TBD

Time TBD

Timaru talks

No events planned

Upcoming field trips

Christchurch

Proposed trip to Tawhaki National Aerospace Centre (postponed to a later date)

And don't forget our CO2 monitor you can borrow. Contact us and we'll arrange for you to pick it up. A guide to recommended CO2 measurements can be found at <https://www.rnz.co.nz/news/in-depth/470690/whose-breath-are-you-breathing>.

All we ask in return is that you post your findings on either the branch's Facebook page or Twitter.

From other branches and RSNZ Te Apārangi

From Royal Society Te Apārangi



Will upzoning deliver housing affordability for everyone? Evidence from Auckland

By Associate Professor Ryan Greenaway-McGrevy

Like much of Aotearoa New Zealand, Auckland has experienced rapid population growth over the past few decades. But housing supply has not kept up with demand.

Between 2001 and 2018, the population of adults in Auckland grew by 42 percent, yet the number of dwellings increased only by 29 percent over the same period – leaving a substantial shortfall. The latest 2023 census shows that this trend has now been reversed, and for the first time in a generation, housing supply outstripped demand. What happened?

[Read more.](#)

This research is funded by a [Marsden Fund Standard](#) grant.

First-of-its-kind study: How Antarctica's melting ice sheet could change NZ's climate patterns

A first-of-its-kind study suggests the worsening melting of Antarctica's vast ice sheet could directly drive shifts in New Zealand's local climate patterns.

Jamie Morton @NZ Herald



[Pesticides worsen the biodiversity crisis – Expert Reaction](#)

A major study concludes that pesticides are overwhelmingly harming hundreds of species they aren't meant to affect.

The systematic review analysed over 1700 experimental studies (including a handful from NZ). It found pesticides can reduce plant and animal growth, and affect animals' ability to find a mate or catch prey. However, the researchers note that cutting pesticide use could affect global food supply and farmer livelihoods.

The SMC asked experts to comment.

@SMC



["Hawke's Bay Scientists on Air" radio broadcasts](#), which we support, now go to air each second Monday after the 10:00 am news.

“Talking About” is the Otago Institute’s podcast series. It features topical conversations about anything and everything from the worlds of Arts, Sciences, and Mātauranga Māori.

<https://oar.org.nz/oi-podcast/>

Other items of interest

From Nature Briefing

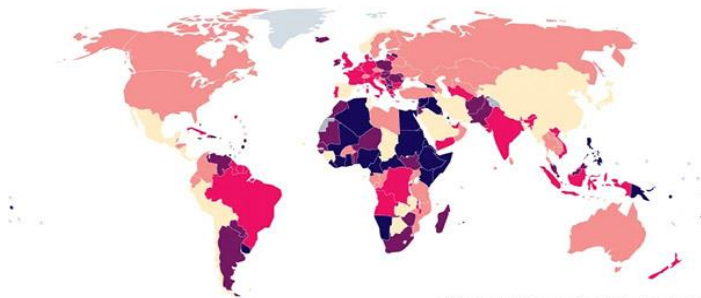
Breast cancer is on the rise

GLOBAL BURDEN

In 2022, there were an estimated 670,000 deaths from breast cancer worldwide. Death rates were highest in low-income countries owing to later diagnoses and a lack of access to treatment.

Age-standardized mortality (per 100,000 people)

2.3–11.1 11.1–13.7 13.7–16.1 16.1–19.3 19.3–38.9 Not applicable No data



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(Source: Ref.1)

[Breast cancer is on the rise](#)

People in low- and middle-income countries (LMICs) face higher death rates from breast cancer than those in wealthier nations, because of a lack of screening and treatment options. For example, [people aged under 50 in low-income countries are four times more likely to die](#) from breast cancer than those in high-income countries, on the basis of the most-recent available data, from 2022. Because of increasing life expectancy and changing prevalence of

risk factors — such as obesity, drinking alcohol, and less breastfeeding — breast cancer cases and deaths are predicted to rise over the next 25 years, with the greatest increase in LMICs.

[Nature | 5 min read](#)

Reference: [Nature Medicine paper](#)

[Ancient walkers might have pulled carts](#)

Gently curving tracks preserved in New Mexico could be [evidence of one of the earliest-known uses of transport technology](#): handcarts without wheels, called travois. The tracks were found alongside footprints that the same team earlier revealed could be around 22,000 years old — if so, they are the oldest evidence of human settlement in the Americas, setting the date thousands of years earlier than other timelines. Researchers [built their own travois](#) and dragged them through sand to reproduce a pattern that they say might indicate “adults pulled the simple, probably improvised travois, while a group of children tagged along to the side and behind”.

[New Scientist | 3 min read](#)

Read the researchers’ own view of their finding in [The Conversation \(5 min read\)](#)

Reference: [Quaternary Science Advances paper](#)

If have any suggestions for speakers, field trip ideas, or even contribute something to the newsletter please contact us and if you want to help us, please contact us, your input is valued. and we are always willing to discuss anything regarding the branch with you.

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