From: Statistical Society of Australia
To: Contact us
Subject: Stats Matters & Events
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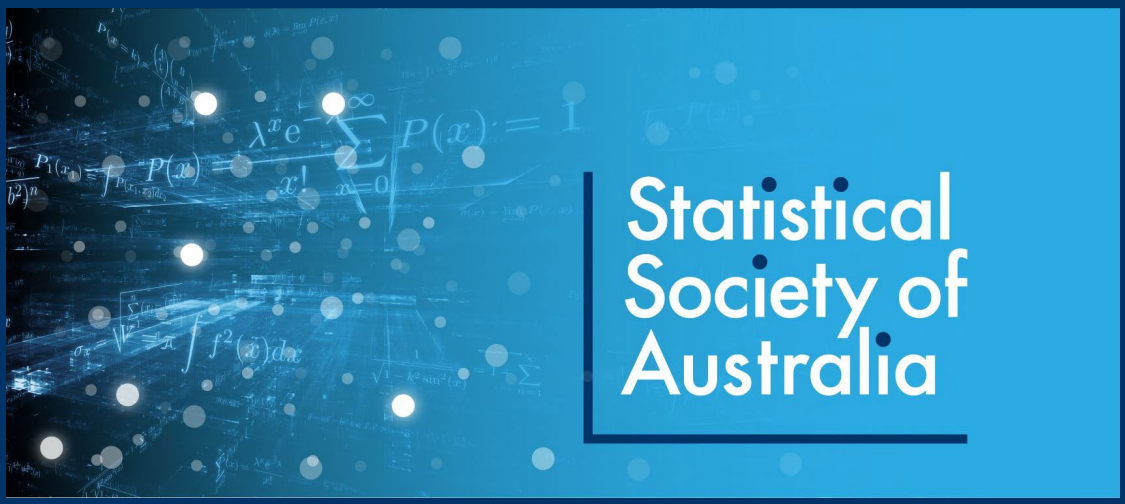

STATS MATTERS & EVENTS

17 August 2023

There may be some sad faces today, as fans come to grips over the Matilda's loss against England last night. You can look at it differently though. To use the words of my 92-year mother in Germany, who watched the game over lunch and texted me afterwards: "The Matildas had a world ranking of ten at the start of the tournament. Look how far they have come. You must feel so proud."

I have not done any extensive research on this, but surely the FIFA Women's World Cup 2023™ and more importantly the Matilda's stellar performance, have had an incredible impact on the recognition of not only women's soccer, but soccer in general in Australia. Perhaps you'll recall how in another newsletter I mentioned attending a monthly dinner with a group of female friends and being disappointed that none of them showed any interest in the World Cup at all. I can assure you that last night's dinner with the same group had to be wrapped up by 7:30pm so that everyone had sufficient time to get home and get settled in front of their TV. If this is not proof enough, just check out these FIFA Women's World Cup statistics I found on the *Glam Adelaide* website:

Largest turnout in women's sporting history

The FIFA Women's World Cup 2023™ is on the brink of achieving the milestone as one of the most widely attended women's sporting events ever. By 4 August 2023, a staggering 1.7 million tickets had been purchased, surpassing the previous attendance record for a Women's World Cup, set at 1.35 million during the 2015 tournament hosted by Canada.

Record-breaking attendance in New Zealand's soccer history

New Zealand's opening match drew an impressive crowd of 42,137 spectators, marking a historic moment as the largest assembly ever witnessed in the nation's soccer history, encompassing both men's and women's events.

Unprecedented TV viewership, surpassing AFL grand final and Origin

The Matildas have achieved a groundbreaking feat by shattering television ratings records, outpacing both the AFL grand final and the Origin series. The Australian women's team's match against Denmark established a fresh milestone for Channel Seven, attracting an average viewership of 3.56 million individuals. Notably, that match's average audience exceeded that of every National Rugby League grand final and every Origin game since 2016. Remarkably, this audience size also surpassed all but two of the AFL grand finals within the same timeframe. This analysis comes from sports industry blogger Jason Lassey.

Matildas' jersey sales surpass men's world cup figures

Nike, the apparel sponsor for Football Australia, has unveiled an impressive statistic: even before the commencement of the Women's World Cup, the Matildas had managed to outsell the Socceroos' jerseys during and following the men's World Cup in Qatar. Remarkably, the Matildas' jerseys for this FIFA Women's World Cup are experiencing a two-to-one sales ratio compared to the Socceroos' jerseys from the FIFA Men's World Cup. Retailer and Football Australia partner, Rebel Sport, has reported that the FIFA Women's World Cup™ stands out as one of the most fervently supported major sporting events they have ever witnessed.

Like so many others I have been swept up and carried away by all this excitement. And while I'm disappointed with the outcome of last night's game, this is a good moment to quote another family member of mine. My sister texted: "Don't forget – **after** the World Cup is also **before** the World Cup!"

Only four years to go!

Marie-Louise Rankin
Executive Officer

Read newsletter in your browser

In this newsletter:

Chilling Forecast: Scientists Warn of Potential Atlantic Ocean System Collapse and Its Impact on Europe's Climate

News from the Statistical Education Section

Report on practice models for the use of digital technologies in mathematics teaching and learning - AMSI News

SSA events

Other events

Current Job Vacancies

Chilling Forecast: Scientists Warn of Potential Atlantic Ocean System Collapse and Its Impact on Europe's Climate

An article published in “The Conversation” on 10 August 2023 discusses a controversial study published in Nature Communications that warns of the potential collapse of the Atlantic Meridional Overturning Circulation (AMOC), a critical ocean system that brings warm water up the North Atlantic. The collapse of AMOC, which is essential for regulating Europe's climate, could lead to a colder Europe and have devastating consequences. In a Q&A conducted by “The Conversation”, the study's authors, physicist Peter Ditlevsen and his sister, statistician Susanne Ditlevsen, address various aspects of their research.

They clarify that some media coverage has conflated the collapse of the Gulf Stream with the collapse of AMOC, which are related but distinct phenomena. The potential collapse of AMOC poses serious risks, including the possibility of temperatures dropping by 5 to 10 degrees in Europe during our lifetime.

The researchers emphasise that their study's central estimate places the collapse around 2057, but they also highlight the difficulty of predicting extreme events accurately. If the collapse were to happen, Europe would experience rapid cooling, impacting agriculture and human habitation. They note that societies historically struggle to adapt to such rapid changes.

The Ditlevsens stress the importance of better understanding AMOC through more measurements, particularly historical data. They discuss the challenges of studying past sediments due to the long timescales involved and call for

innovative approaches and new types of paleo data to improve the accuracy of predictions related to AMOC and its potential collapse.

News from the Statistical Education section

Statistics Education – 2023 and 2024 initiatives & opportunities to help develop the next generation of statisticians

What would you like to see happening in the Statistical Education Section?

Are there Statistical Education activities you've conducted in recent times that you'd like to share with the Statistical Education community?

Would you perhaps like to participate in the delivery of current and upcoming Statistical Education activities?

Please feel free to share your thoughts and interest with me!

Some highlights of what's happening or upcoming in the Statistical Education Section:

2024:

15th International Congress on Mathematical Education (ICME), Sydney, Australia (7 – 14 July)

The SSA, via the Statistical Education section, was part of the consortium which won the right for Australia to host ICME2024. This quadrennial event was last held in Australia in 1984!

ICME-15 is for everyone involved in mathematics/statistics education – mathematicians/statisticians, researchers, teachers at all levels, teacher educators, administrators, curriculum developers, and resource producers.

Topic Study Group Paper and Poster submissions close 15 September, 2023 – details follow.

2023:

Topic Study Group Paper and Poster submissions – close 15 September, 2023 for ICME2024 (Sydney, Australia)

"*Topic Study Groups (TSGs) are a unique opportunity to collaboratively explore classic and contemporary topics relevant to mathematics education through the submission of papers, session-based discussions, and report synthesis.*"

A list of the 54 TSGs is available.

Examples of those that may interest SSA members, includes:

- TSG 1.7: Teaching and learning of statistics

Co-Chairs: Peter Howley, Mauren Porciuncula

- TSG 1.6: Teaching and learning of probability

Chair: Mathieu Thibault

- Topic Study Group 3.18: Data science teaching and learning

Co-Chairs: Daniel Frischemeier, Michelle Wilkerson.

- TSG 1.3: Teaching and learning of algebra at secondary and tertiary levels

Co-Chairs: Lynda Ball, Ami Mamolo

- TSG 3.2: Mathematics education at tertiary level

Co-Chairs: Nadia Azrou, Elena Nardi

- TSG 3.8: The role and the use of technology in the teaching and learning of mathematics at upper secondary and tertiary level

Co-Chairs: Alison Clark-Wilson, Allen Leung

Additionally, "*Surveys teams are commissioned by the IPC to examine new developments and progress on specific themes and issues that have arisen in mathematics education during recent ICMEs*".

Examples of those that may interest SSA members, includes:

- Survey 2: Mathematics education and Indigenous perspectives

- Survey 3: Statistics and data science education as a vehicle for empowering citizens

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Australian Statistical Conference (ASC) and Australian Conference on Teaching Statistics (OZCOTS)

Invited Speaker Session – Statistical Education Speakers:

- **Professor Rhys Jones**, University of Surrey, UK, Associate Dean

(Education)
Royal Statistical Society Centre for Statistics and Data Science Education – the new era of the RSS Centre for Statistics Education

- **A/Professor Ayse Bilgin**, Macquarie University, Australia, President of the International Association for Statistical Education
Possibilities for your future in statistics education research
- **Professor Peter Howley**, SSA Section Chair – Statistics Education, Hunter Medical Research Institute Affiliate
Industry 5.0, future workforce needs and national initiatives to prepare the next generation

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- **Connecting teachers and students with Statistics, Systems thinking, Sustainability & STEM (SSSS) – a national initiative!**

Emeritus Professor Tim Roberts AM and I, Professor Peter Howley, are delivering a national initiative to Primary and Secondary Schools in 2023 entitled *"Preparing for Industry 5.0 and beyond in light of COVID19: facilitating the cradle-to-career life cycle"*.

The initiative aims to have significant engagement across the Australian education system with school administrators, educators, teachers and students nationally, as we conduct an integrated delivery of free online:

- teacher Professional Learning workshops
- student workshops – including practical implementation and career opportunities
- two national student competitions – an online mini-solar vehicle competition and the NSPC

which develop Statistics, Systems thinking, Sustainability and STEM (**SSSS**) and associated cross-functional skills that:

✓ *are core to emerging workforce environments and needs*

✓ *support national curriculum learning areas and outcomes*

✓ *positively impacts the attitudes, aspirations & abilities of educators & the future workforce*

We are aiming to make a step-change in attitudes, aspirations and abilities of educators and the future workforce surrounding these core **SSSS** and cross-functional skills.

Industry 5.0 places research and innovation at the service of the transition to a sustainable, human-centric and resilient industry. Research & innovation and

the associated cross-functional skills required are fundamental to, and supported by **SSSS** skills … the points of focus of this project.

Please inform your family, friends, colleagues and school contacts about this opportunity.

Australia's National Schools Poster Competition (NSPC) **is in its 10th year!**

Please contact me if you are interested in being part of the delivery of this annual initiative!

Please inform your family, friends, colleagues and school contacts about this opportunity.

In 2022, the NSPC received 4 times the number of 2021 submissions, with 20 new schools submitting!

Topics are too numerous and diverse to list them all, but examples include: nutrition, health, psychology, sustainability, space, diversity and inclusion, biology, science, finance, aspects of political and social interest, sports, physics, chemistry, product preferences, physiology and solar energy.

Please view the 2022 winners and honourable mentions**, and the feedback we now provide as part of our aim to develop students' statistical skills.

**There's even a capture-recapture based project, with lollies in the wild!

The NSPC provides an opportunity for students from Years 3 to 12 (ages 8 to 18) to work in teams of 2 to 5 and develop, implement and creatively report upon, in poster format, an investigation on any topic of interest to them.

Students conduct small-scale versions of real-world investigations in teams, developing core statistical, STEM and cross-functional skills.

They create an informative e-poster presentation communicating their investigation clearly, concisely and creatively…much like a conference poster.

The competition is judged in five divisions: one for each of the Year 3-4, 5-6, 7-8, 9-10, 11-12 School Grades. **Entries close 10 November.**

Information and many additional resources are provided at the www.ssapostercomp.info website.

NSW Bushfire STEM Poster Competition!

Please contact me if you are interested in being part of the delivery of this initiative!

Please inform your family, friends, colleagues and school contacts about this opportunity.

Part of the NSW Schools Bushfire STEM project supported by the NSW Office of Chief Scientist and Engineer, this initiative aligns with the NSPC with a focus on bushfire-related investigations.

Peter Howley

Professor, Chair of Statistical Education Section, Statistical Society of Australia
Career Profile
Hunter Surgical Clinical Research Unit - Statistical Research Lead
Program Director – StepChange, MCB Business Partners
Hunter Medical Research Institute Affiliate
International Statistical Institute – Elected Member
Vice President – Hunter Innovation and Science HUB
Advisory Board – International Statistical Literacy Project

News from the Australian Mathematical Sciences Institute (AMSI)

AMSI is pleased to advise that the Department of Education has recently published a report focusing on the best practice models for the use of digital technologies in mathematics teaching and learning.

Please find the final report here for your reference. For a concise overview and the key findings of the research, you can access them here.

Mentioned in previous newsletters:

SSA Branches are offering funding to attend ASC/OZCOTS 2023

Branches of the Statistical Society are offering funding for student and early career members of the society to attend the Australian Statistical Conference (ASC) and Australian Conference on Teaching Statistics (OZCOTS) in Wollongong, 10th - 15th December 2023. All branch funding will cover registration to the conference, with some branches covering additional travel if funds allow. For full details see each branches' announcement.

For most branches the application deadline has passed, so at this stage there are only two left:

- Canberra (check your email for 'Canberra branch ASC & OZCOTS 2023 rego grant')

- NSW (application form)

With best wishes,

ASC & OZCOTS 2023 Programming Committee

SSA Events

SSA and ASPAI AGMs and Q & A for the Strategic Plan

24 Aug 2023, 5:30 PM – 7:30 PM (AEST), online

You are invited: SSA and ASPAI AGMs - 24 August 2023- SSA Members only

The 2023 Annual General Meetings of the Statistical Society of Australia, Inc and the Australian Statistical Publishing Association Inc will be held on Tuesday, 24 August 2023 from 5:30 pm to 7:00 pm AEST via Zoom.

The meeting documents, including the agenda, can be found here.

The AGMs will be followed by a presentation commencing at 6:15 pm AEST. SSA President, Professor Ian Gordon will be discussing the recently announced strategic plan, followed by a Q&A session and also give a brief talk on the estimation of total amounts of loss in class actions.

Register here.

Statistical Consulting Network July Meet-Up

25 August 2023, 12:30 PM – 1:30 PM AEST, held online

Come along with your thinking cap, maybe a problem, and some lunch!

The Statistical Consulting Network invites you to their monthly meet-up, a virtual lunchtime meeting where statisticians help each other out with problems that they aren't sure how to deal with. This virtual meeting is held on Zoom at lunchtime on the last Friday of each month, 12:30-1:30 PM (AEDT). We start each meet-up with announcements, or occasionally a special topic discussion, then discuss problems that attendees have brought along with them.

We also have a Slack workspace where members of the consulting network can communicate between meetings, or post problems or relevant materials

they would like to discuss during a meeting.

Zoom link

Password: 660145

Slack Workspace link

SSA Vic & Tas Branch August meeting: Applications in long-term forecasting, derivatives' valuation, anomaly detection, and machine learning presnted by Dr Zili Zhu is the Director of RiskLab at CSIRO

15 Aug 2023, 6:00 PM – 7:00 PM (AEST), RMIT Building 15, Level 3, Room 10, 124 La Trobe Street Melbourne OR online via Teams

At RiskLab, our objective is to develop and implement innovative quantitative solutions and/or products for the industry. The methodologies that we rely on are in the domains of applied math, statistics and software engineering. In this talk, we will present some examples derived from our direct engagement with industrial clients to illustrate some typical techniques and methods that we have implemented for applications in long-term forecasting (actuary), derivatives valuations (finance and agriculture), anomaly detection (fraud risk) and machine-learning (high-frequency algorithmic trading).

To register click here.

SSA NSW August event: A/Prof Anastasios Pangiotelis - Forecast Reconciliation: A Review by A/Prof Anastasios Pangiotelis and Paco Tseng.

16 Aug 2023, 5:30 PM – 7:30 PM (AEST), Seminar Room 020, Law Building Annex, The University of Sydney or online.

Collections of time series that are formed via aggregation are prevalent in many fields. These are commonly referred to as hierarchical time series and may be constructed cross-sectionally across different variables, temporally by aggregating a single series at different frequencies, or may even be generalised beyond aggregation as time series that respect linear constraints. When forecasting such time series, a desirable condition is for forecasts to be coherent, that is to respect the constraints. The past decades have seen substantial growth in this field with the development of reconciliation methods that not only ensure coherent forecasts but can also improve forecast accuracy. This talk will serve as a review of forecast reconciliation and an entry point for researchers and practitioners dealing with hierarchical time series.

The talk will include perspectives on forecast reconciliation from machine learning, Bayesian statistics and probabilistic forecasting as well as applications in economics, energy, tourism, retail demand and demography.

For more details and to register click here.

Trivia with SSA Vic & Tas

22 Aug 2023, 6:00 PM – 9:00 PM (AEST), Prince Alfred Rooftop and Bar, 191 Grattan St, Carlton VIC 3053

Join us for dinner and trivia at the Prince Alfred in Carlton! Trivia starts at 7pm but we will be arriving at 6pm to allow time for us to order food and have a chat before trivia starts.

If you're a member of the Vic & Tas branch you'll get a free drink. Food and subsequent drinks will be at your own expense, but the fun will be free!

To sign up click here

SSA QLD Branch Meeting: Collecting and Analysing Data through the Lens of a Behavioural Economist Presented by Professor Benno Torgler

23 Aug 2023, 5:00 PM – 6:30 PM, 0500D-0M14 - UQ Brisbane City, 88 Creek Street, Brisbane/Online

Like a breath of fresh air, the expansion of economics and behavioural economics has moved into all kind of spheres of life, including sports, the science of science, warfare, crime and more. This presentation will provide insights on how we have tackled some of those areas (exploring data on sports athletes, scientists, soldiers, or citizens) while discussing both advantages and shortcomings. Moreover, It will explore future avenues for potential progress in terms of data and tools of thought and exploration.

To register click here.

Bill Venables Award seminar

24 Aug 2023, 12:00 PM – 1:00 PM (AEST), online

SSA's Statistical Computing and Visualisation section proudly presents the Venables Award seminar.

This award is to encourage new open source software development from the Australian community with a view to support efforts to develop and share data science and statistics methodology This year's winners are Matthew Sainsbury-Dale, Andrew Zammit-Mangion,with FRK: Fixed Rank Kriging. Runners-up are Rex Parsons, Robin Blythe, Adrian Barnett, Susannna Cramb and Steven McPhail, with predictNMB.

To register and see more information click here.

Canberra Branch Meeting -- The practitioner's guide to machine learning quality in the ABS presented by Edwin Lu and Nelson Chua

29 Aug 2023, 5:30 PM – 6:45 PM (AEST), in person and online via Zoom

In recent years, the ABS has increased its use of machine learning to assist with the production of official statistics. To support this increased uptake, we have devised practical recommendations to ensure the quality of machine learning outputs, promote consistency in the use of machine learning, and help build machine learning capability in the ABS. In our presentation, we will outline some aspects of machine learning quality that are of general interest. We will also highlight some technical insights drawn from recent research findings in the literature, covering topics such as distribution-free prediction intervals, how to select performance metrics for classifiers, and some model-agnostic interpretability methods. Feedback on our findings and recommendations is very welcome.

If you are interested in attending the dinner, please let me know by 5pm Monday 28 August by entering your details at SSACanberra meeting and dinner attendance sheet or contacting me (warren.muller@csiro.au; 0407 916 868).

Check out these pre-conference workshops held in Wollongong on 10 December 2023:

- Essential Skills for Statistical Communication presented by Professor Sir David Spiegelhalter, University of Cambridge and Dr Linden Ashcroft, University of Melbourne

  The workshop will include a panel discussion. Presenters Prof David Spiegelhalter and Dr Linden Ashcroft will be joined by applied mathematician and science communicator Dr Sophie Calabretto, and ABC journalist and 'lapsed mathematician', Casey Briggs, to share their experiences.

- Statistical Consultancy – The Essentials for Getting Started and Ongoing Success Presented by Professor Julie Simpson, University of Melbourne, A/Professor Emily Karahalios, University of Melbourne and A/Professor Karen Lamb, University of Melbourne, A/Prof Sue Finch from The University of Melbourne and

- Deep Statistics for More Rigorous and Efficient Data Science presented by Professor Xiao-Li Meng, Harvard University

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Australian Statistical Conference (ASC) and Australian Conference on Teaching Statistics (OZCOTS)

10th - 15th December 2023, Wollongong

ASC and OZCOTS 2023 Social Events

Early Career and Student Statisticians Network ASC Social on 12 December 2023, held at the Illawarra Brewery's outdoor terrace at WINN stadium. The ECSSN is organising a social get-together during the ASC2023! They are inviting students, early career and more senior statisticians to join them a lovely beach view and network with like-minded people you might not see very often, plus have some fun, nibbles, and drinks!

Statistical Conference Dinner on 13 Dec 2023, at the Grand Ballroom at the Sage Hotel. Just minutes from the beach, come and join us for a three-course dinner. (You register on the same page as the conference registration page)

OZCOTS 2023 Social on 14 Dec 2023, at Lucia's by the Sea, next to the Novotel Hotel. The OZCOTS committee invites you to come and join them for a lovely meal and catch-up at a beautiful beach front venue.

Other events

4 - 7 January 2024
Melbourne, Australia

IMS - Asia Pacific Rim Meeting 2024 - Melbourne, Australia

Abstract submission is now open for talks in contributed sessions.

Sessions will be organised into general themes. Each talk will be a total of 20 minutes in length (about 15-16 minutes for the talk and allow for 4-5 minutes of questions).

Early career researchers and PhD students are particularly encouraged to submit abstracts to present their work at the conference.

Once your abstract is submitted, the Committee will notify acceptances on a rolling basis. You should expect a notification with the outcome within approximately 2-3 weeks of submission. Once your abstract is accepted, you will be provided with further instructions on finalising your registration for the conference.

Please submit your abstract via Oxford Abstracts through the link at https://app.oxfordabstracts.com/stages/6093/submitter.

Details available here.

The deadline for abstract submission in order to be included in the program is 31 October.

Current Vacancies in SSA's Career Centre

Revenue Officer- DIRECT HIRE (12 Month Register)

Multiple Locations (see description)

Internal Revenue Service

Duties WHAT IS THE DIVISION? SMALL BUSINESS ...

Internal Revenue Agent (Examiner) - Direct Hire (12 Month Register)

Multiple Locations (see description)

Internal Revenue Service

Duties WHAT ARE THE APPEALS (AP), LARGE BUSINESS ...

Internal Revenue Agent (Examiner) - DIRECT HIRE (12 MONTH REGISTER)

Multiple Locations (See Description)

Internal Revenue Service

WHAT ARE THE APPEALS (AP), LARGE BUSINESS AND ...

View All Jobs

If you have news from the Australian statistical community to share in Stats Matters and Events, please get in touch with us! We love getting feedback too.

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