

From: [Statistical Society of Australia](#)
To: [Contact us](#)
Subject: Stats Matters & Events
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STATS MATTERS & EVENTS

21 December 2023

As the year ends, I want to take a moment to extend the warmest season's greetings to our wonderful members. Whether you will be celebrating Christmas, or just be putting up your feet to relax a bit, I hope your next week will be filled with joy and happiness.

As many of us enjoy some holiday cheer, it's also a time to reflect on the year gone by. It has been a year of challenges, growth and remarkable achievements, many of which would not have been possible without the invaluable contributions of our many volunteers. Each one of you plays a vital role in the success of our society, and for that, we are truly grateful.

Looking ahead, the new year presents fresh opportunities to learn, grow and connect. I know that our branches and sections are already working hard, planning a fantastic line-up of events in 2024 that you won't want to miss. As always, our events are going to be insightful and engaging and I look forward to meeting you at some of them. The Canberra Branch will host the workshop "An Introduction to Bayesian Modelling Using greta" in early February, and the Early Career and Student Statistician Network is planning their conference for November, with many other events to be announced over the following months.

Your commitment to the statistical profession and to our society has been inspiring. Your contributions, whether through active participation in events, insightful discussions or the sharing of knowledge, have been invaluable in fostering a vibrant and dynamic community of statisticians. As we step into 2024, let's continue this journey of exploration and excellence.

Thank you for being an integral part of the Statistical Society of Australia.

Here's to a joyous holiday season and an even more prosperous and fulfilling new year!

[Marie-Louise Rankin](#)

Executive Officer

Read newsletter in your [browser](#)

The SSA office will be closed until Monday, 8 January 2024.

The first newsletter of 2024 will be sent out in mid- February 2024.

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Congratulations to our latest four Service Award recipients!

A Society Service Award is awarded to a member in recognition of sustained and significant service to the Statistical Society of Australia (SSA).

Four members of the Society were awarded this prestigious award in 2023:

- Brenton Clarke
- Stephen Horn
- Karen Lamb and
- Daniel Vukcevic.

These members have worked tirelessly - some over decades - for the benefit of the SSA. Read about their amazing achievements [here](#).

NSW Branch Wrap-Up of 2023

The NSW branch experienced a transformative year marked by innovative initiatives. Introducing a new event format, the branch organised two-hour sessions with junior and senior speakers. In a bid for inclusivity, our events were held at various Sydney universities, offering flexibility with both lunchtime and pre-dinner sessions. This strategy significantly boosted participation, fostering a healthier community. We even provided lively support for Australia during the Women's World Football Cup in the semifinal against England after our August event.

The Australian Statistical Conference, featuring active involvement from me, the Vice-President Gordana Popovic and past president Thomas Fung, served as a key highlight. Collaborating with colleagues in Wollongong added richness to the experience, showcasing the branch's commitment to knowledge exchange. Dedicated to supporting early career researchers, the branch provided eight scholarships for early career researchers to cover the conference registration fees, affirming its commitment to nurturing talent. I cannot say enough how grateful I am to have had Gordana and Thomas in this adventure: our final hug at the end of the conference was the best way to celebrate.

The traditional early career event and JB Douglas award ceremony celebrated the active engagement of students and postdocs. Looking forward, the NSW SSA branch plans to expand activities to include Wollongong and Newcastle, building on the momentum of a successful year and maintaining a focus on growth, inclusivity, and excellence in statistical advancements.

Clara Grazian
NSW Branch President



Annual dinner



NSW Branch President with ASC23 Volunteers





Early Career Event

JB Douglas Awards

SA Branch Wrap-Up of 2023

Let me sum up our exciting year at the SA Branch of the SSA in 2023:

- **AGM and presentation on “New pharmacotherapy for sleep apnoea”** delivered by Dr Amal Osman. Dr Osman is a post-doctoral research fellow at the Adelaide Institute for Sleep Health, Flinders University and receiver of Women In Innovation, Innovation Category, 2021 and InDaily's 40Under40, 2022 awards. Dr Amal shared her research and her interest in development of simple clinical tools to measure how collapsible the upper airway is during wakefulness and sleep in people with obstructive sleep apnoea.
- **Broadcasting event** via Zoom of a presentation held at the South Australian Health and Medical Research Institute (SAHMRI) by Dr Dylan Harries entitled: CGR-CUSUM: a continuous time generalized rapid response cumulative sum chart. The broadcasting was accompanied by a powerpoint presentation in a journal club style and sparked a very delightful conversation.
- **Networking Event:** We had a fantastic in-person networking event on June 15th at the University of Adelaide. We welcomed 25 attendees from various universities, including the Australian Institute for Machine Learning. Our keynote speaker Dr Dale Godfrey, the Director of Research Branch (Development Grants) at the University of Adelaide, shared insights on "Navigating the Australian Funding Landscape." It was

tailored to researchers at different career stages, promoting active participation.

- **The Role of Statisticians in Addressing the Poor Quality of Clinical Research:** We held an enlightening session on Wednesday, August 16th, Dr. Jennie Louise shed light on the persisting issues surrounding bad clinical research, attributing much of it to inadequate statistical practices and misunderstandings about the role of statistics in research. This session provided an overview of the problems, reasons for their complexity, and insights into how statisticians can improve statistical understanding and practice in clinical research.
- **Young Statisticians Event:** On October 18th, we hosted a vibrant in-person event at Adelaide University. This gathering attracted 45 attendees, many of whom were Master's students of the BCA. We had six speakers representing different affiliations from universities such as Adelaide, Flinders, SAHMRI, and ABS. The presentations were a mix of in-person and online sessions, keeping the event engaging for everyone. Plus, we all enjoyed pizza and refreshments!
- **EA Cornish Lecture:** The highly anticipated Cornish Lecture by Prof Julie Simpson took place on November 16th. (For more details, check out the separate newsletter article.)
- **Christmas Dinner:** We wrapped up the year with a cheerful Christmas dinner on December 13th at the Griffin Head's Hotel. Around 20 colleagues and family members joined in the festivities.
- **Supporting Statistical Events:** We proudly provided funding support for two statisticians to attend ASC-OZCOTS 2023, boosting opportunities for career development.
- **Membership Offer:** We're extending the offer of 20 free memberships into 2023! Full-time students attending at least one SA Branch meeting in person are eligible.

Wishing everyone a heartfelt thank you for your contributions and best wishes for an amazing 2024 ahead! Cheers!

Barbara Toson
SA Branch President

WA Branch Wrap-Up of 2023

Scholarships, Scholars, and Socialising

For the WA Branch, our highlights of 2023 include financially supporting our early career and student statisticians, the visit of Professor Guy Nason (2023 Frank Hansford-Miller Fellow), and our End of Year Function.

A total of \$2,600 was awarded to student members across one Honours scholarship and four ASC2023 registration scholarships. In April, Professor Guy Nason (Imperial College London) delivered his Fellowship Lecture on network time series as well as hosting a workshop on non-stationary time series. Prof. Nason also engaged with early career statisticians over a pint and visited various universities in Perth. Our End of Year social was a relaxed evening of drinks and canapes attended by more than twenty members and guests.

During 2023 the WA Branch continued to experiment with ways to grow our monthly meetings. This included hosting joint meetings with the International Biometrics Society Australasian Region (IBS-AR), Clinical Trials Enablement Platform WA (CTEP-WA), and Perth Epidemiology Group (PEG). We also looked for guest speakers to speak on topics of broad appeal such as large language models, maintenance scheduling, and adaptive clinical trials.

In the new year, the Branch will officially start preparations for hosting the 2025 Australian Statistical Conference in Perth. Venues and dates are still being confirmed but likely a Perth university campus during early December 2025. A call to join the Local Organising Committee will be announced soon.

On behalf of the WA Branch Council, thank you to everyone for your support and we look forward to another milestone-filled year in 2024.

Shih Ching Fu
WA Branch Secretary



Guy Nason and Brenton Clarke



SA Branch November Meeting 2023 - E. A. Cornish Memorial Lecture

Professor Julie Simpson: Integration of statistical modelling and mathematical biology to improve the treatment of malaria

The E.A. Cornish Memorial lecture is held every two years and is the highlight of the SA Branch's speaker program. Edmund Alfred Cornish, born in 1909,

was a pioneering statistician renowned for his groundbreaking research linking meteorological variables to agricultural yields. He established a CSIRO division, pioneering computing's use in statistics, leaving an enduring legacy upon his sudden passing in 1973.

The 2023 lecture was given by Professor Julie Simpson, the Head of Biostatistics at the Melbourne School of Population and Global Health and Director of the Methods and Implementation Support for Clinical and Health research (MISCH) Hub at the University of Melbourne. She has 30 years' experience collaborating on multidisciplinary research projects with clinicians, laboratory scientists, epidemiologists and health policy-makers at universities and hospitals (and even refugee camps) worldwide. She has been an advisor to World Health Organisation (WHO), Medicines for Malaria Venture and the World Wide Antimalarial Resistance Network regarding dosing regimens for current and new antimalarial drugs.

Professor Simpson gave a talk on her main area of research, the integration of biostatistics and mathematical modelling to improve the treatment of malaria. There is an urgent need for this type of research, because first-line treatments of malaria are threatened by the widespread emergence of drug-resistant parasites. She described a computational process which can assess the efficacy of treatment regimens which is more flexible and faster than clinical trials. The models can be used to predict patient outcomes under different mechanisms of drug resistance or explore alternative dosing schemes. First, the life cycle of the malaria parasite within the red blood cell is modelled mathematically. Next, pharmacokinetics, pharmacodynamics and Bayesian hierarchical models are used to incorporate the effect of different treatment regimens, patient immunity and drug resistance into the models.

There are some challenges in using this approach, such as finding sufficient real-world data to validate the models. Professor Simpson also described professional challenges, such as simulating a paediatric population which informed WHO treatment guidelines for childhood malaria, that was later contradicted by the US Food and Drug Administration, which recommended a lower dose. Despite this, her team showed their dosing regimen was safe and well-tolerated and there was more potential for harm from underdosing in childhood malaria. The talk was well attended by approximately 35 people and a dinner followed afterwards.

Lan Kelly
Vice President, SA Branch



SSA Canberra “rego grant” prize winners Santiago Marin, Xian Li, and Zhi Yang Tho discuss their experiences attending and presenting at ASC & OZCOTS 2023

SSA Canberra congratulates three winners of its 2023 “rego grant” prize, Santiago Marin, Xian Li, and Zhi Yang Tho, all of whom share their recent experiences of attending the 2023 ASC & OZCOTS conference at Wollongong.

Read about their experiences [here](#).

SA Branch Meeting - October 2023

Young Statistician Career Event 2023

To provide an environment for our early career statisticians, the SA Branch held an event to meet potential employers and other statisticians in SA. Nearly 40 people attended this year’s event and were able to consume refreshments, including pizza from the Uni Bar!

The format provided a welcome and refreshments, with employers making

presentations followed by Q&A.

This event is an opportunity for young statisticians to learn about which organisations employ statisticians in South Australia. Presenters focused on what type of technical skills employers look for in a statistician and provided key points to consider to get job-ready, as well as some pearls of wisdom from seasoned professionals!

This year we had six presenters: Andrea Peng, Statistician, from Avance Clinical CRO; Patrick Lim, Director of Data Services (JAPAC), IQVIA; Dr Elina Hypponen, Director, Australian Centre for Precision Medicine, SAHMRI/University of South Australia; Dr Aline Kunnel, Statistician, SAHMRI Women's and Kids / Women's and Children's Health Network; Michelle Hedger, Business Survey Methodology, Australian Bureau of Statistics; Aarti Gulyani, Senior Biostatistician, Caring Future Institute (College of Nursing and Health Sciences), Flinders University.

All the guests gave engaging presentations. Some key points that were highlighted were:

Good communication and writing skills are valued by all employers.

In consultancy, the key is to understanding the question being asked.

Networking is important early in your career and the best way to get a job is through connections.

Be competent in computer languages, and be willing to learn new languages as employers use a variety of software.

Always be willing to sharpen statistical knowledge.

Participants then took the opportunity to discuss one-to-one with the employers that they might be interested in. Overall, a really good night which provided valuable insights.

By Paul Sutcliffe
SA Branch Treasurer and Membership Officer

News from the Statistical Consulting Network

ASC2023 provided a great opportunity for members of the [Statistical Consulting Network](#) to meet in person for the first time, in some cases, and for the first time in many years, for others. There were interesting contributions in

a session on *Lessons learned in statistical consulting*, and experienced statisticians shared their views in a lively panel discussion *That wasn't in the textbook!*

Monthly online meet-ups continued throughout 2023 with discussions including statistical dilemmas, challenges in the human side of consulting and in teaching statistical consulting. Monthly meet-ups will start again in February 2024.

In 2024, Statistical Consulting Network members will participate in the SSA Mentoring Program to support early career consultants, and work to strengthen links between the SSA's networks.

Sue Finch and David Warton

Section Co-Chairs

News from the Biostatistics & Bioinformatics Section

The [Biostatistics & Bioinformatics section](#) were proud to host a session at ASC2023, featuring three wonderful EMCRs - Vicki Jackson (WEHI), Margarita Moreno Betancur (MCRI/University of Melbourne) and Andrew Grant (USyd). We also held a series of webinars throughout the year, and are aiming to host these more regularly in 2024.

If you are interested in joining the section committee, or have some ideas about events you would like to see organised, please let us know!

It was wonderful to meet so many of you (including fellow committee members!) in person at the recent conference, and we look forward to working with you next year.

Nicola Armstrong and Alberto Nettel-Aguirre
Section Co-Chairs

ASC2023 Wrap Up - from the SSA Vice President (Communications)

It was an absolute pleasure meeting incredible minds at the ASC2023 conference. Engaging with passionate professionals and learning from their valuable experiences in the world of statistics has been truly enriching. A big thank you to the organisers for orchestrating an event that seamlessly blended knowledge-sharing, networking, and celebration.

Over the five days of the conference, we witnessed a convergence of brilliant minds, insightful discussions and groundbreaking ideas in the fields of Statistics and Data Science. A heartfelt thank you to all our speakers, sponsors and attendees for making ASC2023 an unforgettable experience. Your passion and commitment to advancing the fields of Statistics and Data Science inspires us all.

Each day offered not only enlightening presentations but also valuable networking opportunities. Connecting with Horizontal and Keynote speakers and hearing their life and academic experiences was truly inspiring. A huge thanks for your adorable contributions when sharing your messages, opinions and moments on SSA social media. The ASC2023 closing ceremony was a moment of celebration, honouring outstanding contributions and expressing appreciation for the dedication that made this conference a success.

We're thrilled to share the highlights from the incredible ASC2023 conference on SSA's social media channels ([Twitter](#) and [LinkedIn](#)). Check out the conference hashtag (#ASC2023) on social media to relive the memorable moments. Please feel free to share your experiences and connect with fellow attendees! We can't wait to build on the success of ASC2023 and create more opportunities for learning, collaboration and connection. Don't let the conversation end! Stay connected with us on social media, join our online community and continue the dialogue. We look forward to seeing you at future events and collaborations. Mark your calendars for the next conference in 2025 in Perth!

Thank you once again for being part of the ASC2023 journey!

With best regards,

Atousa Ghahramani
SSA VP Media and Communication

Congratulations to Ian Gordon and Sue Finch on taking out the “Best paper in Teaching Statistics 2023” award.

Their article entitled “Bare bones, or a rich feast? Taking care with context in a data rich world” has been awarded the C. Oswald George prize for 2023 for best article in Teaching Statistics.

Read more about the paper and the award [here](#).

Election of Executive Members

Members are advised that the Executive positions of Secretary and Treasurer will become vacant at the Society's Central Council Annual General Meeting in 2024.

Members of SSA are invited to submit nominations for the two positions to be vacated. Nominations must be in writing and signed by the nominator(s), and must be accompanied by a written and signed statement from the nominee accepting the nomination. Nominations should be submitted to the SSA President (president@statsoc.org.au) or to a Branch President before 1 May 2024.

Doug Shaw, Secretary

The Tjanpi Award for best Student paper in Environmental Statistics

Nominations are now being accepted for the 2023 Tjanpi Award, the annual student prize for best student paper in environmental statistics, sponsored by the SSA Environmental Statistics Section. To be eligible a student must be:

- An author of a paper that has been accepted during 2023, having made a substantial contribution to the work
- A student as of 30 June 2023
- A current member of the SSA and the Environmental Statistics Section

The winner will receive \$500 and will be asked to present in an invited session on environmental statistics at the next annual stats conference.

Please submit your nominations to eo@statsoc.org.au (self-nominations welcome), with Tjanpi Award submission in the header, by 5 PM AEDT Friday 1st March 2024, including:

- Full name, institution
- Paper, as one pdf file.
- Letter of support from supervisor or other academic at the institution, confirming student status of applicant and describing the student's role in the paper.

David Warton
Chair, Environmental Statistics Section



Central Australian landscape dominated by Tjanpi, photo by Sara Winter

Tjanpi is the Pitjantjatjara word for Triodia, a spiny tussock-forming grass that dominates the vegetation across more than 20% of Australia's land mass. It is a long-lived plant that makes deep roots and can withstand the harshest of conditions. It can grow over decades into characteristic ring formations three metres in diameter. As a source of food and shelter, Tjanpi is fundamental to life in some of Australia's most extreme conditions, being central to highly diverse ecosystems dominated by termites and ants, as well as reptiles, birds and small mammals. It has also been traditionally used by Indigenous people for a range of purposes, including building shelters, making an adhesive resin, basket weaving, fishing and using its seeds as a food source.

Tjanpi is an analogy for the Environmental Statistics student award – because the development and application of appropriate statistical techniques is fundamental to good environmental research, and our hope is that the recipient of this award will grow over the coming decades to become central to a diverse range of interesting research endeavours!

SMRI International Visitor Program - February 2024 Round - Applications now open

Sydney Mathematical Research Institute (SMRI) International Visitor Program (IVP): applications closing 20 February 2024.

The SMRI IVP2024 February Round applications are now open. Researchers in the mathematical sciences from international universities who wish to do research at SMRI (and Australian universities) either individually or as part of a group of collaborators are warmly invited to apply.

This round is for visits taking place between January–December 2025 for general applicants; and September 2024–December 2025 for Australian & New Zealand citizens.

Applications will close on Tuesday 20 February 2024 (23:59 AEDT).

Applications with the information requested in the terms and conditions can be made through the webform found on the [IVP webpage](#).

If you have existing or potential research collaborators who may want to spend some time working at SMRI, please direct them to the website and encourage them to apply.

NB: The next application deadline is expected to open between June–August 2024.

The Assistant Managing Editors of **Statistics, Politics and Policy**, a double-blind peer-reviewed academic journal published by De Gruyter, Germany, contacted SSA recently will a call for submissions.

You can access their website [here](#).

Statistics, Politics, and Policy studies the way statistical analysis drives public policy decisions and economic policies. The journal publishes significant research on the application of statistical ideas to problems that relate to society, economy, politics, and policy implementation.

The publishers would like to announce SPP's upcoming call to our members as an opportunity for the publication of suitable manuscripts in 2024.

New Call: **Climate Change and Sustainability**

The call is ending on 30.05.2024. Details are included in the attached pdf file.

SPP exclusively publishes in English and features a high-profile board of editors with diverse international backgrounds and longstanding expertise. SPP is currently indexed and has received a SCOPUS impact factor in 2023.

All submissions are double-blind peer-reviewed by experts of the related fields and disciplines and only selected for print if they are found to be suitable in quality.

Find out [more](#).

SSA Events

Canberra Branch Workshop on Bayesian Modelling using greta

presented by **Professor Nick Golding** (Telethon Kids Institute/Curtin University) and **Dr Nick Tierney** (Telethon Kids Institute).

7 February 2024, 9:00 AM – 4:30 PM (AEDT), CSIRO Waterhouse Theatre, Building 101, Clunies Ross St, Black Mountain ACT 2601

Often, statistical analyses require custom models that cannot be fitted using off-the-shelf statistical software, but can be estimated by MCMC by specifying the model in specialised software, the most popular of which are BUGS, JAGS and Stan. Greta is a package for statistical modelling in R that has three core differences to these available alternatives:

1. simple: greta models are written right in R, so there's no need to learn another language like BUGS or Stan
2. scalable: greta uses [Google TensorFlow](#) so it's fast even on massive datasets, and runs on CPU clusters and GPUs
3. extensible: it's easy to write your own R functions and packages using greta

Find out [more](#).

Step by Step in Survey Weighting

15 Feb 2024 (AEDT) – 7 Mar 2024 (AEDT), held online- live 1 hour sessions on Thursdays at 6pm AEDT

The Social Research Centre and the Statistical Society of Australia (SSA) are very proud to offer statistical training from the International Program in Survey and Data Science (IPSDS), a joint program of the University of Mannheim and the Joint Program in Survey Methodology at the University of Maryland. Places are limited, please register early to take advantage of early bird discounts and secure a place.

About the course:

Step by Step in Survey Weighting is a statistical methods class that combines hands-on applications and general review of the theory for survey weighting giving participants the necessary tools to calculate analysis weights for various survey designs in a real-world setting. The course will focus on methods to solve practical problems while providing overview of the theory for the underlying assumptions. Weekly homework problems are included to reinforce learning and provide opportunity to apply methods in practice. Participants are encouraged to discuss their own weighting challenges and solutions during

weekly online meetings. Click [here](#) for more details

Introduction to Big Data & Machine Learning

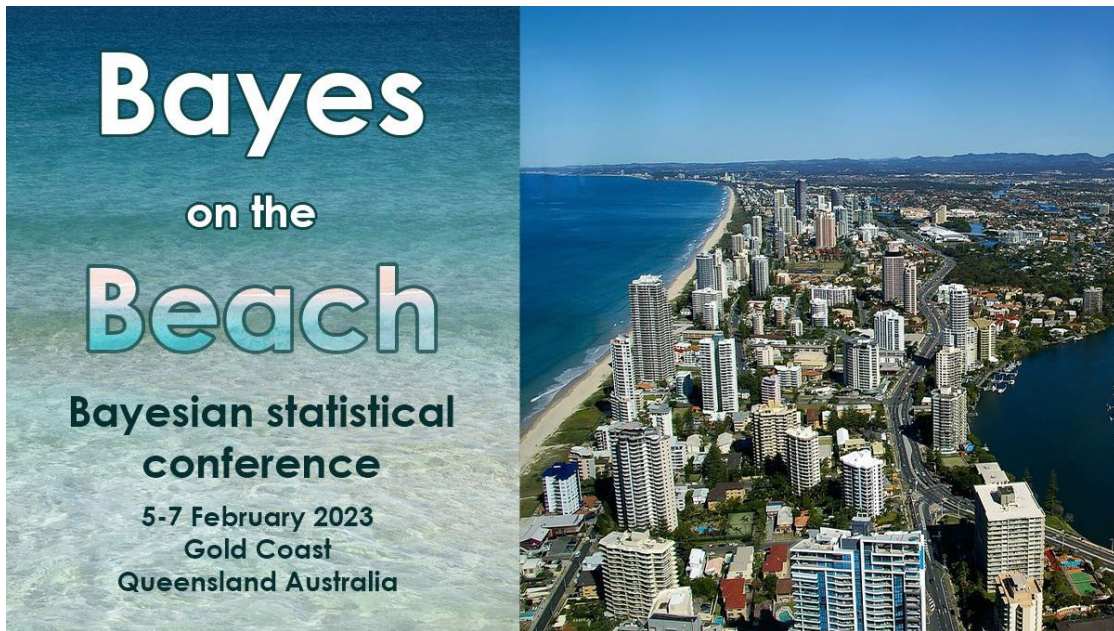
6 Feb 2024 (AEDT) – 27 Feb 2024 (AEDT), held online

The Social Research Centre and the Statistical Society of Australia (SSA) are very proud to offer statistical training from the International Program in Survey and Data Science (IPSDS), a joint program of the University of Mannheim and the Joint Program in Survey Methodology at the University of Maryland. Places are limited, please register early to take advantage of early bird discounts and secure a place.

About the course:

The amount of data generated as a by-product in society is growing fast including data from satellites, sensors, transactions, social media and smartphones, just to name a few. Such data are often referred to as "big data" and can be used to create value in different areas such as health and crime prevention, commerce and fraud detection. Big Data are often used for prediction and classification tasks. Both of which can be tackled with machine learning techniques. In this course, we explore how Big Data concepts, processes and methods can be used within the context of Survey Research. Throughout this course we will illustrate key concepts using specific survey research examples including tailored survey designs and nonresponse adjustments and evaluation. For details click [here](#).

Other events



[Registrations now open!](#)

This is an invitation to submit a contribution for the:

[Computational and Applied Statistics](#)

Workshop of the 24th International Conference on Computational Science and Applications ([ICCSA 2024](#)) will be held on July 1-4, 2024 at Hanoi, Vietnam.

Like last year, ICCSA 2024 offers the possibility of Virtual participation (with reduces registration fees – see more [here](#)).

Topics:

The aim of CAS workshop is to bring together scientists working in computational statistics, scientific computation and applications in all areas of sciences, engineering, industry, economics, life sciences and social sciences.

Topics of interest include (but are not limited to):

* Computational Statistics: new issues in the design of computational algorithms for implementing statistical methods, machine learning, development in R, Python, etc

* Applications: statistical case study in all areas of sciences, engineering and industry, including economics, medicine, biology, earth sciences and social sciences.

IMPORTANT DATES

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February 7, 2024: Deadline for abstract and paper submission

April 29, 2024: Notification of Acceptance

May 14, 2024: Submission deadline for the final version of the Proceeding Paper (hard deadline)

May 14, 2024: Registration and payment ends (hard deadline)

July 1-4, 2024: ICCSA 2024 Conference

ViCBiostat Summer School 2024

Get your tickets now for the 2024 ViCBiostat Summer School!

We are pleased to be delivering three courses led by local members Thao Le, Julie Simpson, Rory Wolfe, Margarita Moreno-Betancur and Ghazaleh Dashti; as well as special guest [Ronald Geskus](#) (OUCRU, Vietnam).

All courses will be available in-person and online via Zoom.

Prediction modelling

12&13 February, 9am – 5pm

Presented by: Thao Le, Ronald Geskus, Julie Simpson, Megha Rajasekhar and Rory Wolfe

This course provides an introduction to prognostic modelling in the context of health care research. It covers important principles for model development, internal and external validation, and the use of machine learning methods in model building. Computer practicals will be in both R and Stata. Upon completion of the course, participants will be familiar with the main approaches to developing and validating new prediction models in health and will have an understanding of how to implement the methods in widely used statistical software. This course is suitable for participants who are already familiar with commonly-seen statistical concepts and methods including multivariable regression models such as gained from statistics units in a Masters of Public Health.

Prerequisites: Participants should be familiar with one of R or Stata, e.g. able to create new variables, run regression commands and obtain basic plots.

Advanced survival analysis

14&15 February, 9am – 5pm

Presented by: Ronald Geskus, Julie Simpson, Thao Le, Rory Wolfe, Anais Charles-Nelson and Stephane Heritier

This course provides a deeper understanding of the main concepts, quantities and models in the analysis of time-to-event data. We explain the different types of censored and truncated data and the assumptions behind the basic estimation methods. The basic Cox proportional hazards model is extended by covering nonproportional hazards, the equivalent Poisson regression approach, time-varying covariates and immortal time bias. We explain “the hazard of hazard ratios” and introduce models based on restricted mean survival time. A specific focus will be on key concepts in competing risks analysis. Computer practicals will be provided in both R and Stata. Participants should have some understanding of the basics of survival analysis (familiarity with right censored data, Kaplan-Meier and the Cox proportional hazards regression model).

Prerequisites: Participants should have basic familiarity with one of R or Stata and ability to conduct basic survival analyses in the package, e.g. obtain a Kaplan-Meier plot.

Causal mediation analysis

16 February, 9am – 5pm

Presented by: Margarita Moreno-Betancur, Ghazaleh Dashti, Marnie Downes, Rushani Wijesuriya and Tong Chen

Many health research questions concern the multiple pathways that are presumed to mediate a relationship between an exposure and an outcome. Very often, the translational intent of such research questions is to inform potential intervention targets. However, the usual causal mediation approaches do not consider this interventional intent and/or rely on assumptions that are either too stringent or not assessable in practice. Recently an alternative approach has emerged based on “interventional effects” that assess the impact of relevant interventions on one or multiple mediators and are identifiable under relaxed assumptions. This approach is gaining popularity in applications, making it timely to present this topic.

This course provides an overview of the conceptual issues surrounding causal mediation analysis. It then presents the interventional effects approach, using a recently proposed framework that defines these effects by mapping them to

a “target trial” that evaluates interventions on one or several mediators. We describe how to define and emulate a target trial for mediation analysis and introduce an extended g-computation approach for estimating these effects.

Lectures and tutorials will ground understanding of the methods, whilst a hands-on computer practical (in R and Stata) will cover their practical implementation. Illustrations from real-world epidemiological studies are included throughout.

Prerequisites: It is strongly recommended that participants have previously taken an introductory course on causal inference, such as a prior ViCBiostat causal inference workshop, and have familiarity with concepts and methods such as the target trial and g-computation. To do the computer practical, students must also have a sound working familiarity with Stata or R and have the corresponding software installed on their computer or laptop. A list of R packages required will be circulated with electronic copies of the course material beforehand.

Venue: Melbourne

and online via Zoom meeting

All course details: <https://www.vicbiostat.org.au/short-courses>

Register here now: <https://shop.monash.edu/vicbiostat-2024-summer-school.html>

Current Vacancies in SSA's Career Centre

[Biostatistician - Office of Research and Education](#)

Australian Capital Territory

Canberra Health Services

What can we offer you:City living without the ...

[Internal Revenue Agent \(Examiner\) - DIRECT HIRE \(12 MONTH REGISTER\)](#)

Multiple Locations (See Description)

Internal Revenue Service

Summary: Positions under this announcement are ...

[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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