

SSA Biostatistics & Bioinformatics Newsletter

Q1 2019

Welcome to the first Biostatistics and Bioinformatics section newsletter in 2019!

We are planning to provide you with quarterly updates on our activities to keep you informed about what we have happening throughout the year and other topics that may be of interest to our members. Our mailing list consists of 240 people from every state and territory across Australia of whom 90% have an interest in biostatistics and 37% in bioinformatics. In this newsletter we are looking forward to our upcoming workshop on gaining skills in biostatistical consultancy in Melbourne in July, meeting one of our members, and lots more.

Enjoy reading!

The SSA Biostatistics and Bioinformatics section committee

Upcoming SSA Biostatistics & Bioinformatics events

Our section has been planning our 2019 events or supporting other events. Please spread the word to colleagues who may be interested in attending. We hope to see many of you and your colleagues at these events!

- **AusHSI Research Quality Meeting (April 8, Brisbane)**

This event, organised by the Australian Centre for Health Services Innovation, features presentations from researchers working on issues relating to research waste and a discussion of potential policies to reduce waste. This event will include a presentation from Professor Brian Nosek, Co-founder and Director of the [Center for Open Science](#) in Virginia, as well as our very own section co-Chair, Sabine Braat.

- **Gaining skills in biostatistical consultancy (July 4, Melbourne)**

Our section is co-hosting a workshop in conjunction with the Clinical Epidemiology and Biostatistics Unit from the Murdoch Children's Research Institute on consultancy skills for biostatisticians. We have four fantastic speakers: Dr Emily Karahlios and Professor Julie Simpson from Melbourne University, Associate Professor Susan Donath from the Murdoch Children's Research Institute and Dr Emi Tanaka from Sydney University. The workshop will cover a range of subjects including communication skills, how to reach and interact with different clients, how to manage consultancy projects from start to end and how to secure funding as a consultant. Further details and registration are available [here](#).



Presenters for the biostatistical consultancy workshop: Dr Emily Karahlios (top left), Professor Julie Simpson (top right), Associate Professor Susan Donath (bottom left) and Dr Emi Tanaka (bottom right).

- **Young Statisticians Conference (October 1-2, Canberra)**

The [Young Statisticians Conference](#) is a fantastic conference for early career statisticians across all sectors in the country to present their work and network with their peers. Our section is delighted to have nominated the fantastic biostatistician [Dr Teresa Neeman](#) from the Australian National University to participate in the careers panel at this conference.



- **Webinars (October & November)**

The SSA is in the process of reviving their webinar series to ensure we reach our members across the country. Our section has nominated to deliver both a biostatistics and a bioinformatics webinar later this year and are currently on the lookout for speakers. If you would be interested in delivering one of our webinars please contact our co-Chairs, [Sabine Braat](#) or [Karen Lamb](#).

If you have any suggestions of biostatistics or bioinformatics topics you would like to see our section cover in a seminar or workshop, please do not hesitate to contact us. Additionally, do let us know if you are aware of any visiting international biostatisticians or bioinformaticians who are coming to Australia who may be interested in presenting on their research at an SSA event. All events organised by the SSA can be found on the [SSA events calendar](#).

Other Biostatistics & Bioinformatics events

Some other biostatistics and bioinformatics events taking place this year that you may be interested in include:

- **Workshop on Biostatistics & Bioinformatics**

Atlanta, Georgia 10th-12th May 2019

- **International Conference on Computational Science and its Applications**

Saint Petersburg, Russia 1st-4th July 2019

- **IWSM 2019**

Guimarães, Portugal 7th-12th July 2019

- **ISCB 2019**

Leuven, Belgium 14th-18th July 2019

- **GeoMed 2019**

Glasgow, Scotland 27th-29th August 2019

- **ACTA International Clinical Trials Conference**

Sydney, Australia 2nd-5th October 2019

- **AEA 2019**

Brisbane, Australia 23rd-25th October 2019

If you would like to advertise any of our co-Chairs, [Sabine Braat](#) or [Karen Lamb](#).

Featured articles

Beyond "p-value"

There has been a lot of discussion on the use and abuse of p-value on numerous occasions, however, there never has been a call this vigorous to look beyond statistical significance. In 2016, the American Statistical Society released a "Statement on Statistical Significance and p-values" with six principles underlying the proper use and interpretation of the p-value. Moreover, in this March edition of the journal *Nature*, three researchers (Amrhein, Greenland and McHane) want to "Retire Statistical Significance". More than 800 researchers have added their names as signatories. The authors though are not calling to end the use of p-values, but want to end the use of them as an arbitrary threshold of significance (ie, stop using them in a way that either refutes a result or supports a scientific hypothesis).



In this March edition of the statistical journal the American Statistician, there are also numerous articles which discuss the use and misuse of p-values and life after p-values. For those interested to read them, we recommend viewing them on the [American Statistician Website](#). It is surprising that despite knowing that uncertainty is multidimensional and that one has not taken every dimension of it into account, when analyzing the data, we still want one number to reveal the truth. For more insights into looking beyond statistical significance, please read the article titled "[Scientists rise up against statistical significance](#)."

Want to quit a bad habit? Here's one way to compare treatments

Whether it's quitting smoking, reducing alcohol intake or making healthier dietary choices, many of us have habits we'd like to change. But it's really hard to know which treatment path to take. To advise their patients on the best course of action, doctors sometimes compare treatments using something called the "number needed to treat" (NNT). But the term is easily misunderstood by patients, and doctors as well. In [this article](#) in "The Conversation" our section co-Chairs Sabine Braat and Karen Lamb break down what NNT means.

Are you aware of a recently published article that may be of interest to our biostatistics and bioinformatics members? Please do not hesitate to let [Murthy](#) know.

Meet our mailing list



Name: **Dr Stephen T. Wright**

Where do you currently work?
Australian Red Cross Blood Service (Sydney)

What field do you associate with, biostatistics or bioinformatics (or both)? Biostatistics

What are your background studies in and how did you join this field?

I completed a Bachelor of Mathematics at QUT with a focus on data visualisation and computational mathematics. After graduation I started working as an insurance pricing analyst, and worked in a corporate environment for the next few years. During this time I completed a Masters of Applied Statistics (Macquarie Uni). Following the experience of a fifth corporate re-structure, I threw in the towel and had a gap year. I spent a wonderful year volunteer teaching high-school mathematics to Samoan kids. Upon returning to Australia, I took up a Research Assistant position at UNSW with David Warton, and this is where I decided I wanted to pursue a PhD and work in academia.

I somehow managed to wrangle a position at the Kirby Institute (UNSW) where my journey as Biostatistician began. I completed my PhD under the supervision of Kathy Petoumenos and Matthew Law, and importantly I learnt how to work in a diverse team. The variety of my work allowed me to visit hospitals and remote clinics, collect data, visit many different countries, and even came on TV a few times. After my PhD studies, I accepted a post-doc position working with Louise Ryan at UTS. My new position was rather unique as my role saw me embedded in the Blood Service working on challenging "real-world" problems as well as conducting methodological research to help solve these problems. Importantly, I was able to cement the value a Biostatistician and secured a permanent position at the Blood Service.

Why did you want to work in this field?

If I am honest, I didn't. To quote Professor Ian Turner: *just follow your nose*, and here I am. The pertinent question I find is "Why do I work in this field?" and the answer is simple. The people. I have found that working within a diverse team is just fun. I have been awed by the intuition of non-stats folk when it comes to presenting your results or methodology contributions. People respect you, and you are always learning to respect other peoples expertise and contributions. The variety of work is amazing and there is never a dull day especially if you are approachable and keen to help others out. There are so many quirks to data these days, and just trying to work out what to do is a fun challenge. I love it!

What is the most exciting concept/idea upcoming in your work or field?

The uptake of Causal Inference for observational data. More non-stats professionals are starting to take analysis design more seriously and are seeking our help. The rise of secondary use data for primary analysis is pushing our understanding of how to best answer causal-relationship type questions with these messy datasets. The pitfalls of the big administrative datasets are vast, but developing new, but mostly discovering old techniques to tackle them is exciting.

If you didn't pursue biostatistics and/or bioinformatics, what would have been your alternate career?

Barista, hands down.

Want to be featured in the next member profile?

Please let [Nicole](#) know.



Biostatistics & Bioinformatics blogs

Interested in a good statistics blog? We've started a list of some interesting and entertaining statistics blogs.



Flowing data
This great site looks at how data is used to understand society. The majority of posts are on data visualization with some amazing use of R.

Dataists
This blog has links to interesting stories on a wide range of topics including data analysis, data visualisation, machine learning and R.

Lies & Stats
Lies and Stats is a tongue-in-cheek reference to the quote "lies, damned lies, and statistics". This blog covers interesting facts about statistics, but also focuses on the bad and dishonest use of statistics.

Realizations in Biostatistics
This is a blog on biostatistics, the clinical trial design, critical thinking about drugs and healthcare, scepticism, and the scientific process.

Stats with Cats
A stats blog with pictures of cats thrown in for good measure.

Statistical Thinking
This blog is for the Bayesian's among us. It focuses on describing problems caused by the frequentist approach and describing advantages of Bayesian methods.

Biostatistics blog
Run by seven biostatisticians at the University of Tasmania. This blog provides a beginners guide to statistics and research.

It's a Stat Life
Another blog on the uses and abuses of statistics, with a few educational pieces thrown in.

We'd love to have your input to grow this list. Do you have a blog that you love to read? Do you have a blog of your own that you want to promote? Please let [Jaimi](#) and we'll add it to the list.

Closing comments

We are always interested to hear from our members, especially regarding ideas for future event or presentations held by the SSA Biostatistics & Bioinformatics section, featuring member profiles or papers, or promoting materials on the mailing list. Please contact us via our section co-Chairs, either [Karen](#) or [Sabine](#) regarding these or any other related queries.

If your colleagues would like to receive this newsletter, they can sign up via [Google form](#).

To view previous newsletters please see our [section's webpage](#).

Social media

We encourage all our members to follow our activities on our social media accounts below where we promote upcoming events, job opportunities and relevant material. If you have any material you would like us to promote on our social media outlets or share with the fellow members, please let [Alysha](#) know.

