

SSA Biostatistics & Bioinformatics Newsletter

Q4 2019



Welcome to the December edition of the Biostatistics and Bioinformatics section newsletter!

This is our last update of 2019. We aim to keep you updated about our activities of this quarter and highlight the topics that may be of interest to you.

In this newsletter, we are excited to introduce you to our new bioinformatics committee member Gavriel Olshansky and update you about the biostatistics and bioinformatics section mentoring program pilot. In addition, our newsletter contains upcoming events, meeting one of the members in our mailing list, and much more...

Thanks to everyone who has supported our Section in 2019. We wish you happy holidays and look forward to hearing from you 2020!

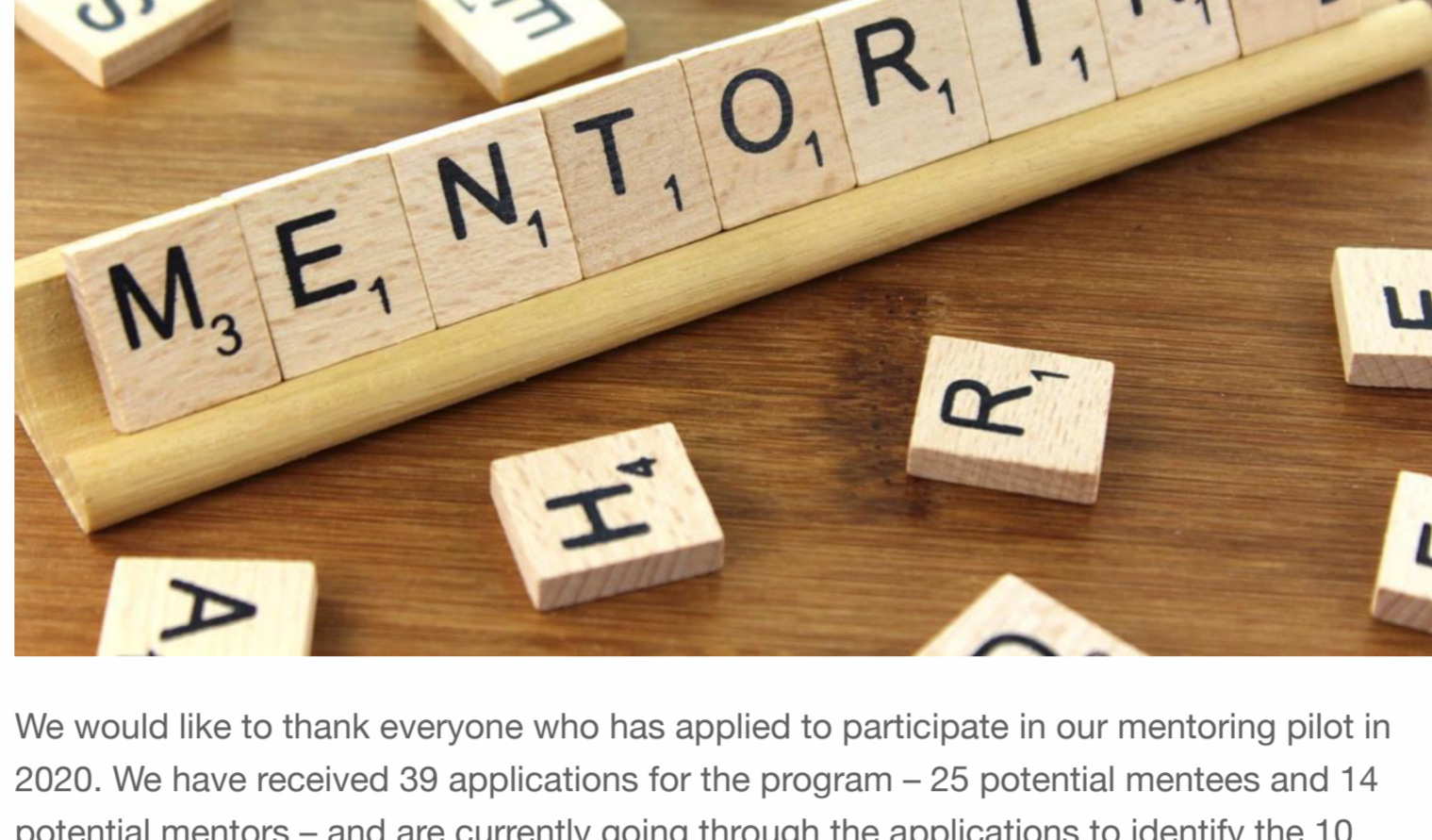
The SSA Biostatistics and Bioinformatics section committee

Changes in the SSA Biostatistics and Bioinformatics section

Introducing our newest member of our committee, Gavriel Olshansky. Gavriel is a Bioinformatician at the Metabolomics laboratory, Baker heart and Diabetes institute (Melbourne). His work involves analysis of large scale lipidomic studies, with interests in normalisation and visualisation of high dimensional data. He will be working closely with Alysha and the rest of the committee to increase engagement with bioinformaticians within the field.



SSA Biostatistics & Bioinformatics section mentoring update



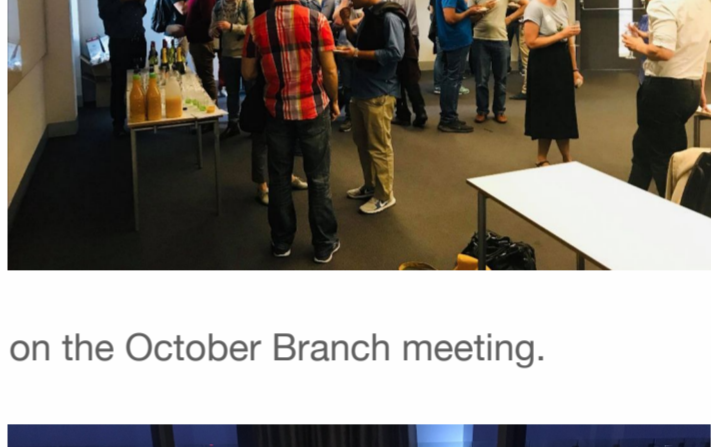
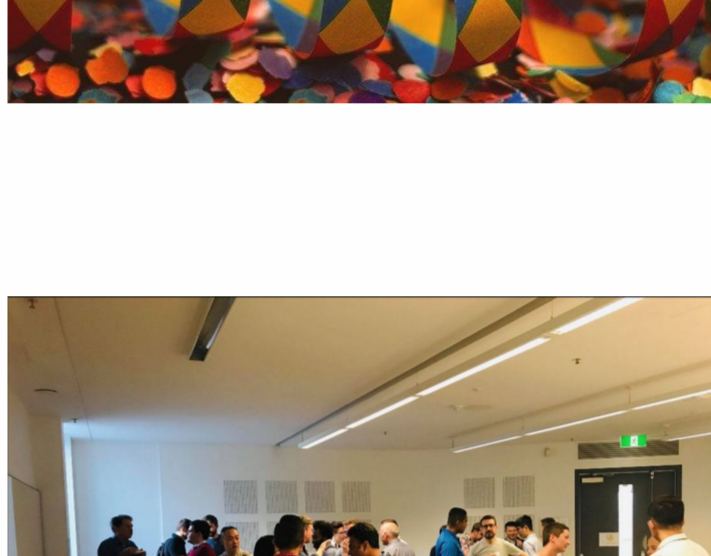
We would like to thank everyone who has applied to participate in our mentoring pilot in 2020. We have received 39 applications for the program – 25 potential mentees and 14 potential mentors – and are currently going through the applications to identify the 10 mentor-mentee pairs for this pilot. There were applicants from almost every State and Territory in Australia. With such a breadth of locations, it could be a little tricky accommodating those who wish to meet a mentor or mentee in person, but we will do our best to accommodate in the matching!

Once we have created our pairs, we will be in touch with applicants to let them know who their mentor or mentee is. Please keep an eye on your emails as we will be in contact within the next couple of weeks. Apologies to anyone who will miss out on the opportunity to take part this year but please be assured that we will keep your details on hand should the program run in 2021.

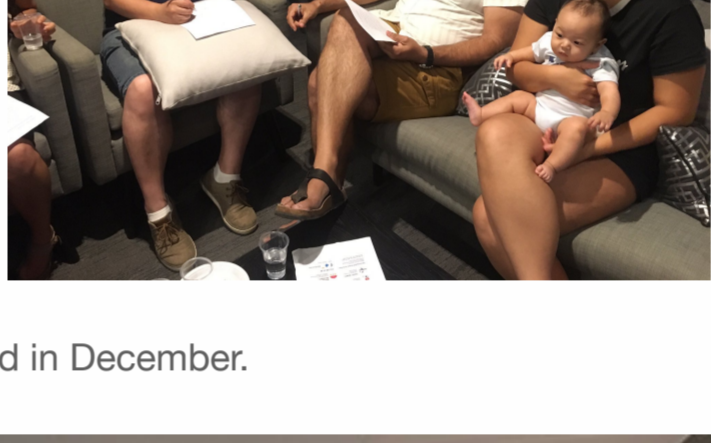
Thanks again to all interested parties. If anyone has any questions about the program, please do not hesitate to contact our coordinator [Karen Lamb](mailto:k.lamb@unimelb.edu.au) (k.lamb@unimelb.edu.au).

B&B End of Year Networking events

Our Biostatistics and Bioinformatics section have teamed up with SSA state branches to hold end of year networking events in New South Wales, Queensland and South Australia. We hoped you all enjoyed the night and were able to meet old colleagues as well as make new friends. Here are a few pictures from the night. We hope to bring you more successful events (and in more states) in 2020.



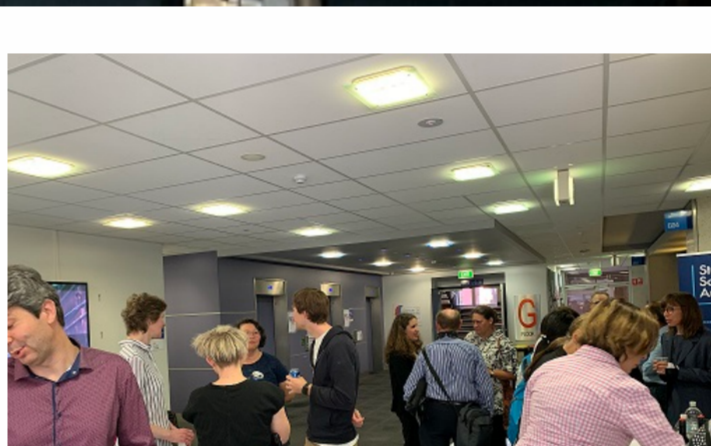
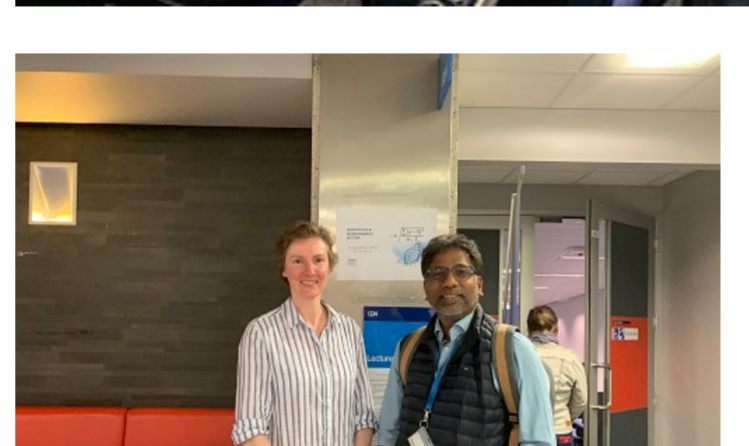
New South Wales: B&B Networking event held on the October Branch meeting.



Queensland: End-of-year social trivia event held in December.



South Australia: Cornish Memorial Lecture & Biostats Networking event held in December.



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SSA events



The Australian and New Zealand Statistical Conference will be held from the 6-10th July 2020 on the beautiful Gold Coast in Queensland. This conference is being put together by the Statistical Society of Australia, the New Zealand Statistical Association, the International Institute of Business Analysis (Special Interest Group for Business Analytics), and the Australian Conference on Teaching Statistics.

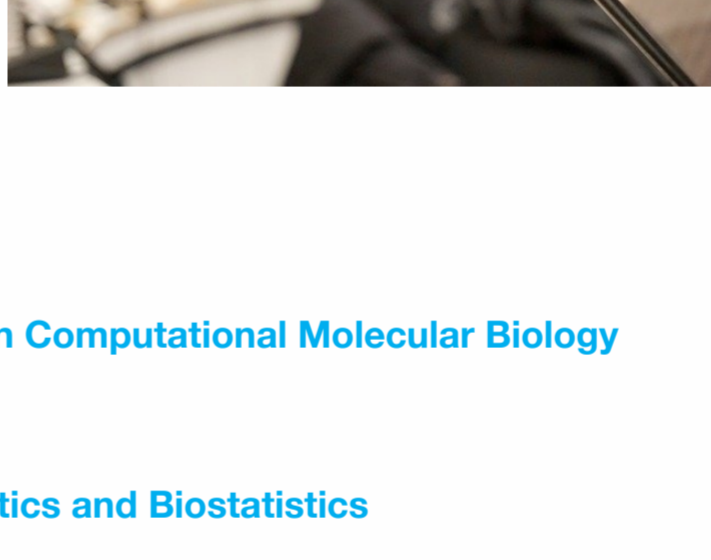
The conference aims to bring together a broad range of researchers and practitioners across a variety of statistical disciplines to facilitate the exchange of theory, methods and application. There will be an exciting range of workshops, presentations and social events. Over the coming newsletters, we will keep you up-to-date with announcements about this conference.

If you are keen to be involved in the conference, abstract submissions are now open. Early bird registration is also available until 27th March 2020. We look forward to meeting you at the conference.

Other upcoming events

There are a range of events of interest for biostatisticians and bioinformaticians taking place in 2020. These include:

Dynamic Treatment Regimens and SMART Design
Melbourne, Australia, 10th February 2020



VCBioStat Summer School
Melbourne, Australia, February 2020
(to be announced)

Pacific Symposium on Biocomputing, 2020
The Big Island of Hawaii, 3rd-7th January 2020

24th International Conference on Research in Computational Molecular Biology
Padova, Italy, 10th-13th May 2020

International Conference on Statistical Genetics and Biostatistics
Vienna, Austria, 18th-19th June 2020

7th International Statistical Ecology Conference
Sydney, Australia, 22th-26th June 2020

30th International Biometric Conference
Seoul, Korea, 5th-10th July 2020

Intelligent Systems for Molecular Biology (ISMB)
Montreal, Canada, 12th-16th July 2020

Australian and New Zealand Statistical Conference
Gold Coast, Australia, 6th-10th July 2020

41st Annual Conference of International Society for Clinical Biostatistics
Krakow, Poland 23th-27th Aug 2020

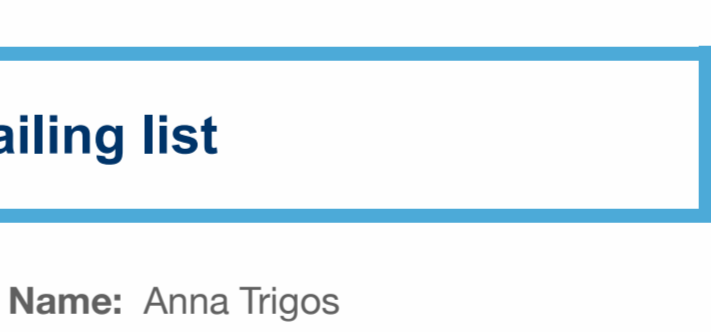
Women in Australian Mathematical and Statistical Sciences (WIMSIG)
Melbourne, Australia, 1st-2nd October 2020

If you would like to advertise any upcoming biostatistics or bioinformatics events to our mailing list, please contact one of our co-Chairs, [Sabine Braat](mailto:s.braat@unimelb.edu.au) or [Jaimi Greenslade](mailto:j.greenslade@unimelb.edu.au)

Featured articles

Sibling Comparison Designs: Bias From Non-Shared Confounders and Measurement Error.

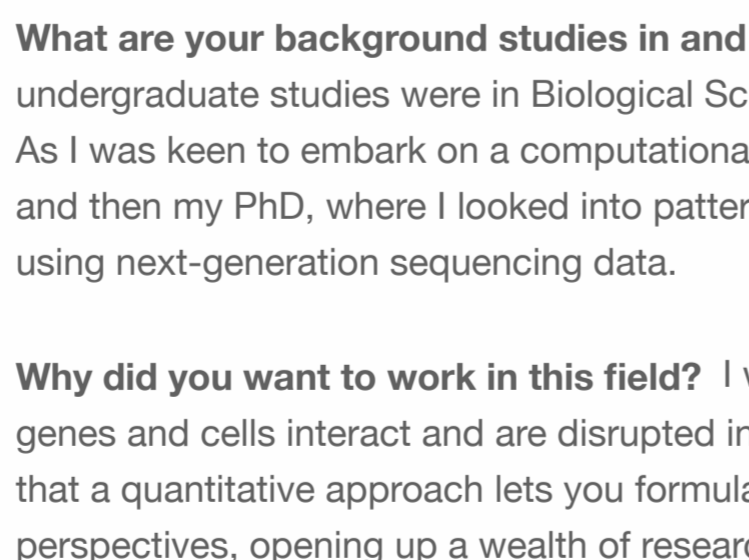
In epidemiological research, data from twins, siblings and half-siblings is used to compare groups in matched cohort and matched case-control studies. This is because, the "within-pair" estimates acquired through these comparisons are free from confounding from all factors that are shared by the siblings. However, these designs are not free from bias.



As the authors note in their paper if the time gap between siblings is longer, then they are likely to be less similar with regard to observed confounders and this leads to biased estimate of within-pair estimate than the simple unpaired estimate. Additionally, Frisell et al show that the within-pair estimate can be biased if the exposure is misclassified or has measurement error, even in the absence of confounding. This article can be accessed from the following website. It is not open access. However, this can be [accessed online](#).

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 Mittinty](mailto:murthy.mittinty@unimelb.edu.au) know.

Meet our mailing list



Name: Anna Trigos

Where do you currently work? I am a postdoctoral researcher at the Peter MacCallum Cancer Centre. I am based in the Computational Biology program, but I collaborate widely with medical oncologist and wet-lab researchers across the institute.

What field do you associate with, biostatistics or bioinformatics (or both)? Bioinformatics! Although my work includes some statistical analyses, I am definitely more a bioinformatician. However, I am always looking to expand my knowledge in biostatistics and collaborate with others in this area.

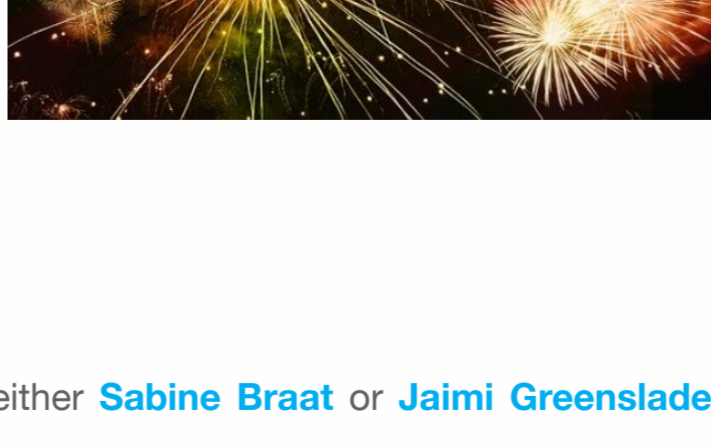
What are your background studies in and how did you join this field? My undergraduate studies were in Biological Sciences, and I did my honours in Neuroscience. As I was keen to embark on a computational research field, I did a MSc in Bioinformatics and then my PhD, where I looked into patterns of genetic changes in cancer patients using next-generation sequencing data.

Why did you want to work in this field? I wanted to understand how networks of genes and cells interact and are disrupted in disease. Once I began in this field, I realised that a quantitative approach lets you formulate biological questions through novel perspectives, opening up a wealth of research opportunities. On a day to day basis, I enjoy finding trends in data, visualising big data and working in multidisciplinary teams.

What is the most exciting concept/idea upcoming in your work or field? Right now there is a big hype around single-cell data, where you can measure the activity of all ~20,000 genes in single cells, and you have the ability to measure millions of cells in one experiment. Another upcoming field is spatial single-cell data, where you get detailed information about the X.Y location of cells in tissues, and where we try to identify patterns that link back to the biology of the tissue or disease.

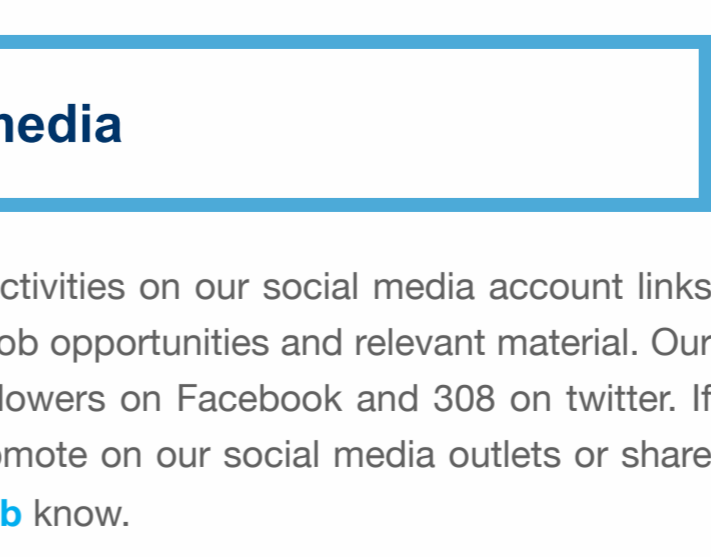
If you didn't pursue biostatistics and/or bioinformatics, what would have been your alternate career? Since I was initially trained to be a wet-lab scientist in biology, I probably would have gone down that route.

Want to be featured in the next member profile?
Please let [Nicole De La Mata](mailto:nicole.de.la.mata@unimelb.edu.au) know.



Closing comments

Our Section Committee is interested in biostatistics and bioinformatics and we are committed to assisting you with your career in biostatistics or/and bioinformatics. We are interested in hearing from our members, especially regarding ideas for future events, presentations, webinars or workshops held by the SSA Biostatistics & Bioinformatics section. We are interested in hearing about our members and how they became involved in biostatistics or bioinformatics.



Please contact us via our section co-Chairs, either [Sabine Braat](mailto:s.braat@unimelb.edu.au) or [Jaimi Greenslade](mailto:j.greenslade@unimelb.edu.au) regarding these or any other related queries.

If your colleagues would like to receive this newsletter, they can sign up via mailchimp

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 account links below. We actively promote upcoming events, job opportunities and relevant material. Our online community is growing with over 578 followers on Facebook and 308 on twitter. If you have any material you would like us to promote on our social media outlets or share with the fellow members, please let [Karen Lamb](mailto:k.lamb@unimelb.edu.au) know.

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