

Australasian Region

IBS-AR

Newsletter

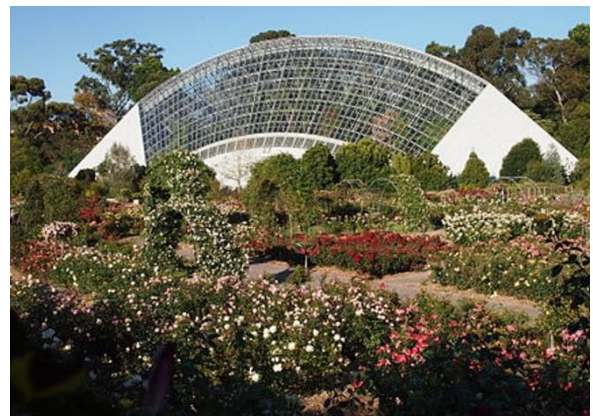


**Issue 25
August 2019**

President's Corner



Much of the recent activity in the Regional Council has been directed towards planning "Biometrics by the Botanic Gardens", the 2019 Australasian Region Conference to be held in Adelaide from Tuesday 3 – Friday 6 December with two days of pre-conference workshops on Sunday 1 – Monday 2 December. I am very excited by the venue and the scientific program. The venue is the National Wine Centre in the Botanic Gardens in Adelaide, which is a very interesting place to hold a conference. [Olena Kravchuk](#) and her team of local organisers have organised a social programme which includes a special conference dinner at the Adelaide Hills Convention Centre in Hahndorf and, as a change from the Young Statisticians Dinner, a Young Statisticians Event in an escape room. [Petra Kuhnert](#) and the members of the Scientific Committee have put together a great set of pre-conference workshops, plenary speakers and the Biometrics/JABES Showcase session covering a wide range of contemporary topics. Holding workshops on two days is a new innovation – this should make it easier for members to attend two workshops if they wish. My personal difficulty is that the workshops are so interesting that I am struggling to choose between them. Conference details as well as videos promoting the plenary speakers and workshops are available on the excellent conference website <https://ausbiometric2019.org/> where you can register for the conference. So please do register and come and join us in Adelaide in December to make the conference successful and enjoyable. I will look forward to seeing you there.



The National Wine Centre, venue for
"Biometrics by the Botanic Gardens"
ausbiometric2019.org

Now is also a good time to start thinking about taking a more active role in the Society and perhaps nominating for a position on the Regional Council. I think it is very rewarding to be on the Regional Council, see how the Australasian Region is organised and contribute directly to organising the activities of the Australasian Region. The next election of members to the Regional Council will be at the AGM at the Conference so please think about it.

Alan Welsh
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Australasian Regional Council

President	Alan Welsh (The Australian National University)
Past-President	Samuel Mueller (University of Sydney)
Secretary	David Baird (VSN NZ)
Treasurer	Warren Müller (Retired)
Membership Officer	Ian Renner (University of Newcastle)
Social Media Officer	Emi Tanaka (University of Sydney)
Newsletter Correspondent	Vanessa Cave (AgResearch Ltd)
Regional Website Manager	Hans Hockey (Biometrics Matters)
Conference Chair of the Local Organising Committee	Olena Kravchuk (University of Adelaide)
Conference Chair of the Scientific Committee	Petra Kuhnert (CSIRO)
IBS President	Louise Ryan (University of Technology Sydney)
IBS Executive Board	Brian Cullis (University of Wollongong)
IBS Representative Council	Alison Kelly (Queensland Dept of Ag & Fish) Kevin Murray (University of Western Australia) Ross Darnell (CSIRO)

The IBS-AR Member Code of Conduct can be found here:

<http://www.biometrics.org.au/docs/IBS-AR-Code-of-Conduct.pdf>

www.BiometricSociety.org.au



Facebook group: [IBS-AR](#)

IBS-AR Student Scholarship Recipients

To help attract enthusiastic and talented students to career paths in biometrics, the Australasian Region offers scholarships for suitably qualified students who intend to undertake a fourth or honours year of study, or a coursework Masters, in statistics, mathematical statistics, biostatistics, bioinformatics or biometrics. We are delighted to announce the winners of this year's highly contested award: [Anna Greenwood](#) (masters in biostatistics at the University of Melbourne) and [Harriet Plant](#) (honours student at the University of Auckland). Congratulations!

Anna Greenwood



I was born in Poland and from a young age I have always had a passion for problem solving and mathematics. When choosing my university degree, I was torn between studying medicine or mathematics and mathematics won. I completed my undergraduate degree with honours in mathematics at the University of Melbourne focusing on statistics and stochastic processes. Since graduating I have worked for the last 10 years in the finance industry applying problem solving, statistical and

computing skills to manage risks and produce analyses to improve the way the business operates and build my management and business skills. Whilst the finance industry offers challenging problems in itself, going forward I would like to use my skills in the field of medical research where I see many opportunities to be able to enhance people's quality of life, if only even in a small way, through the use of the enormous amounts of health data we are accumulating. I feel particularly passionate about researching food related intolerance and links between gut health and overall health and well-being, having been exposed to some of these impacts with my children. This year I have embarked on the start of my masters in biostatistics at the University of Melbourne, which I hope will be just the beginning of my future in this field. I also look forward to meeting many of the wonderful people making a difference in this field already.

Harriet Plant



Harriet is currently working towards a BSc(Hons) in statistics at the University of Auckland. She completed her BSc in statistics at Victoria University of Wellington in 2018 and decided to pursue a specialisation in her main interest: medical statistics. After her studies, she hopes to work either in clinical trial analysis or in public health.

Over the past summer, she completed a summer research internship with the New Zealand Police, reviewing a programme to prevent drunk-driving recidivism. On this project she learned a lot about working in a multidisciplinary team and communicating statistical ideas to non-statisticians. Through several years of tutoring both high school and university students in statistics, she has also grown passionate about the importance of statistical literacy.

Harriet's current research project is based around the secondary analysis of the results of an SMS-based system for self-management of diabetes, working under the primary supervision of Dr Yinnan Jiang. The aim of the project is to determine which characteristics of the programme contributed to its success, and which participants it was most effective for.

You can learn more about the prizes and awards the Australasian Region offers on our website: <http://www.biometricsociety.org.au/prizes.html>

Recent Papers

The International Biometrics Society publishes two journals, *Biometrics* and, jointly with the American Statistical Association, the *Journal of Agricultural, Biological, and Environmental Statistics*. Papers recently published by our members* in these journals include:



Journal of Agricultural, Biological, and Environmental Statistics

March 2019, Volume 24, Issue 1

Daniel W. Gladish, *Ross Darnell*, Peter J. Thorburn and Bhakti Haldankar. *Emulated Multivariate Global Sensitivity Analysis for Complex Computer Models Applied to Agricultural Simulators.*

To submit a manuscript visit: <http://www.editorialmanager.com/jabe/>

Biometrics

March 2019, Volume 75, Issue 1

Ben C. Stevenson, David L. Borchers and *Rachel M. Fewster*. *Cluster capture-recapture to account for identification uncertainty on aerial surveys of animal populations.*

To submit a manuscript visit: <http://www.biometrics.tibs.org/>

*IBS-AR members are in blue italics

If your paper has been inadvertently omitted from this list, please email the editor (Vanessa.Cave@agresearch.co.nz) so that it can be included in the next edition.

Membership News

Remembering Ken Russell

It is with immense sadness that we report our colleague and friend Ken Russell passed away peacefully in Wollongong on 16 July, after suffering from cancer, in his 69th year. After 40 years with a (New Zealand) kidney transplant and attendant immune-suppressant drugs, his body finally gave up the fight. Ken is survived by his wife Janet, and brothers Colin and Ian.

Ken joined the Australasian branch of the International Biometric Society in 1978 and served as our president from 1999-2000 and as our representative on the IBS Council (now the Representative Council) from 2002-2005. Ken was a great supporter of IBS-AR, and we will remember him most fondly.



Ken Russell (seated second from the right) pictured with 9 other former IBS-AR presidents at the 2015 regional conference in Hobart. From lower left: Jeff Wood (1982- 1983), Peter Johnstone (2001-02), Kaye Basford (1997-98), Ken Russell (1999-00), Ann Cowling (2005-06), Melissa Dobbie (2007-08), Graham Hepworth (2009-10), Mario D'Antuono (2011-12), David Baird (2013-14), Ross Darnell (2015-16).

Remembering Jeff Wood

It is with sadness we report Jeff Wood passed away on 22 April 2019. Jeff was our longest standing member, having joined in 1968. An obituary for Jeff follows:

Jeffrey Thomas Wood 1942 – 2019

Jeff Wood lived and worked in England until, at the age of 31, he migrated to Australia where he remained for the rest of his life. His statistical expertise contributed significantly to the biological and ecological research at major Australian scientific institutions, and to a prolific publication record with many collaborators.



Jeff was born on 17 July 1942 to parents Thomas and Coral Wood. Thomas was employed as a draughtsman in The Admiralty. Jeff grew up in Bath in the West Country of England, where he was educated at King Edward's School, Bath. From school he entered St. John's College, Cambridge graduating with a BA (Hons) in Mathematics in 1963. He went on to the University College of Wales, Aberystwyth and obtained an MSc in Statistics under David Bartholomew and Ann Mitchell.

His first position was at the National Vegetable Research Station, Wellesbourne (later incorporated into the University of Warwick) under John Nelder and Geoff Freeman from 1966-1973, during which period he received an MA from Cambridge and a PhD from University of Birmingham under Henry Daniels. The title of his Thesis was *The problem of m rankings*. He felt that Nelder and Daniels had the most influence on his career, providing him with a broad outlook and a natural intuition for the theory and application of statistics to scientific projects. Jeff considered that they were influential as 'problem solvers' (i.e. working towards specific objectives) who forged broad links across disciplines within their institutions. He was a 'sounding board' for Nelder when he was developing GenStat and maintained contact with him until Nelder died in 2010.

It was in Birmingham that he met Jenny (née Wake) whom he married in 1968.

Jeff and his family moved to Canberra, Australia in 1973. He originally worked as an applied statistician with CSIRO (the major Australian government research agency), firstly in the Division of Mathematics and Statistics, then in a Biometrics Unit, and finally in the Division of Mathematical and Information Sciences. The major part of his work was collaboration with research scientists from other CSIRO Divisions, principally Plant Industry, Soils, and Wildlife Research.

Around 2000 the applied statisticians in CSIRO were redirected into a single or a few major projects, instead of the previous wide-ranging collaboration and consulting model. This did not suit Jeff so in 2001 he left to join the Statistical Consulting Unit in the Australian National University (ANU) in Canberra, which

advises and instructs graduate students and staff from diverse disciplines. During this time he also did consulting for students in Charles Sturt University at its Wagga Wagga, Bathurst and Albury campuses. He retired from this role in 2011. In 2006 he had diversified his work at ANU to collaborate part-time with David Lindenmayer and others in the Conservation and Landscape Ecology program at the Centre for Resource and Environmental Studies (now the Fenner School of Environment and Society). This was an extremely productive part of his career, with most of his later papers being with people in this group. He continued there until early 2017 when he retired and became a Visiting Fellow, continuing in that role until his death on 22 April 2019.

During his career, Jeff published over 150 papers, mostly collaborative. His publications included theoretical papers on experimental design and an interesting one on branching splines (Silverman & Wood, 1987, J. Amer. Statist. Assoc.). He was involved in a number of large-scale projects, but the one which gave him most satisfaction was the Mulligans Flat - Goorooyarroo experimental restoration project in the north of the Australian Capital Territory, a long-term ecological experiment commenced in 2004 in which statistical principles were applied to the planning and design from the start.

Jeff was an expert user of the Genstat statistics package. He was a frequent contributor to its email list, providing helpful, and at times challenging, advice. He also made important contributions to ensuring the quality of Genstat as an Editor of the Genstat Procedure Library from 2005 onwards, and as a beta tester. An important characteristic of Jeff's work was his enthusiasm for new methodology, for example as an early adopter of HGLMs in Genstat, using them effectively with interesting data sets.

An important part of Jeff's career was the many professional responsibilities he undertook. He was on the Committee of the Birmingham Local Group of the RSS (1969-1973). For the International Biometric Society he served on the Awards and Education Committee (1982-1984), President of the Australasian Region (1982-1983), committee of the Australasian Region (1982-1993), International Council member (1986-1993, 1999-2006), International Treasurer (1999-2006) and member of the Finance Committee (1987-1998). His contributions to the IBS were recognised by being awarded an A.E. Cornish (Alf) Award by the Society's Australasian Region in 2013. He also had several responsibilities for the Statistical Society of Australia, including national Treasurer (1989-1992), and Editor of the Applications Section, Australian and New Zealand Journal of Statistics (2006-2009). He received a Service Award from that society in recognition of his contributions.

Jeff's wide knowledge of applied statistics and his willingness to share this knowledge made him an invaluable colleague to the large number of statisticians with whom he worked over these years. His capacity to become involved in

projects from large to small, and to provide advice when requested, meant he was well-respected amongst the CSIRO and ANU scientists with whom he worked. He will be remembered for his generous help to colleagues, broad knowledge of statistics, cheerful good nature, gentle humour and the traces of his West Country accent. He is survived by his wife Jenny and children Caroline and Stephen, and two grandchildren.

Warren Müller and Mark Westcott

Congratulations to Samuel Mueller

Congratulations to IBS-AR member Samuel Mueller, whom together with John Ormerod and Jean Yang received a special commendation from the Australian Council of Graduate Research for the 2019 ACGR Award for Excellence in Graduate Research Supervision. This is national recognition for a unique supervision model that Samuel, Jean and John championed in their Sydney Precision Bioinformatics research group. This is national recognition for the excellent research supervision provided by the team.

In addition, Samuel has been selected as a Fellow of the American Statistical Association. Under ASA bylaws, the Committee on Fellows can elect up to one-third of one percent of the total association membership as fellows each year. All 59 awardees were officially recognised on Tuesday 30 July 2019 at the Joint Statistics Meeting in Denver, Colorado. The citation read *"For outstanding research in statistical model selection; for mentoring junior researchers and leadership in teaching; and for service to the profession"*.

Congratulations Samuel!



Congratulations to Bruce Weir



Congratulations to IBS-AR member Bruce Weir, the recipient of the 2019 Genetics Society of America (GSA) Elizabeth W. Jones Award for Excellence in Education, in recognition of “*his work training thousands of researchers in the rigorous use of statistical analysis methods for genetic and genomic data.*”

There is an excellent article in *Genes to Genomes* outlining Bruce’s achievements and background, that you can access here: <http://genestogenomes.org/gsa-grants-2019-elizabeth-w-jones-award-for-excellence-in-education-to-bruce-weir/>. A short extract is reproduced below:

“His contributions fall into three categories: the acclaimed Summer Institute in Statistical Genetics (SISG), which has been held continuously for 23 years and has trained more than 10,000 researchers worldwide; the popular graduate-level textbook *Genetic Data Analysis*; and the training of a growing number of forensic geneticists during the rise of DNA evidence in courts around the world.”

Were you there?

In association with the 2001 joint conference of the Australasian Region of IBS and the New Zealand Statistical Association in Christchurch, Bruce organised a Southern Summer Institute in Statistical Genetics (SSISG). The summer institute was so popular that it was extended to 6 days to enable attendees to cover two out of the four modules on offer (each module lasted three days). There were 97 participants, mostly from New Zealand and Australia.



Nine members of the SSISG team:

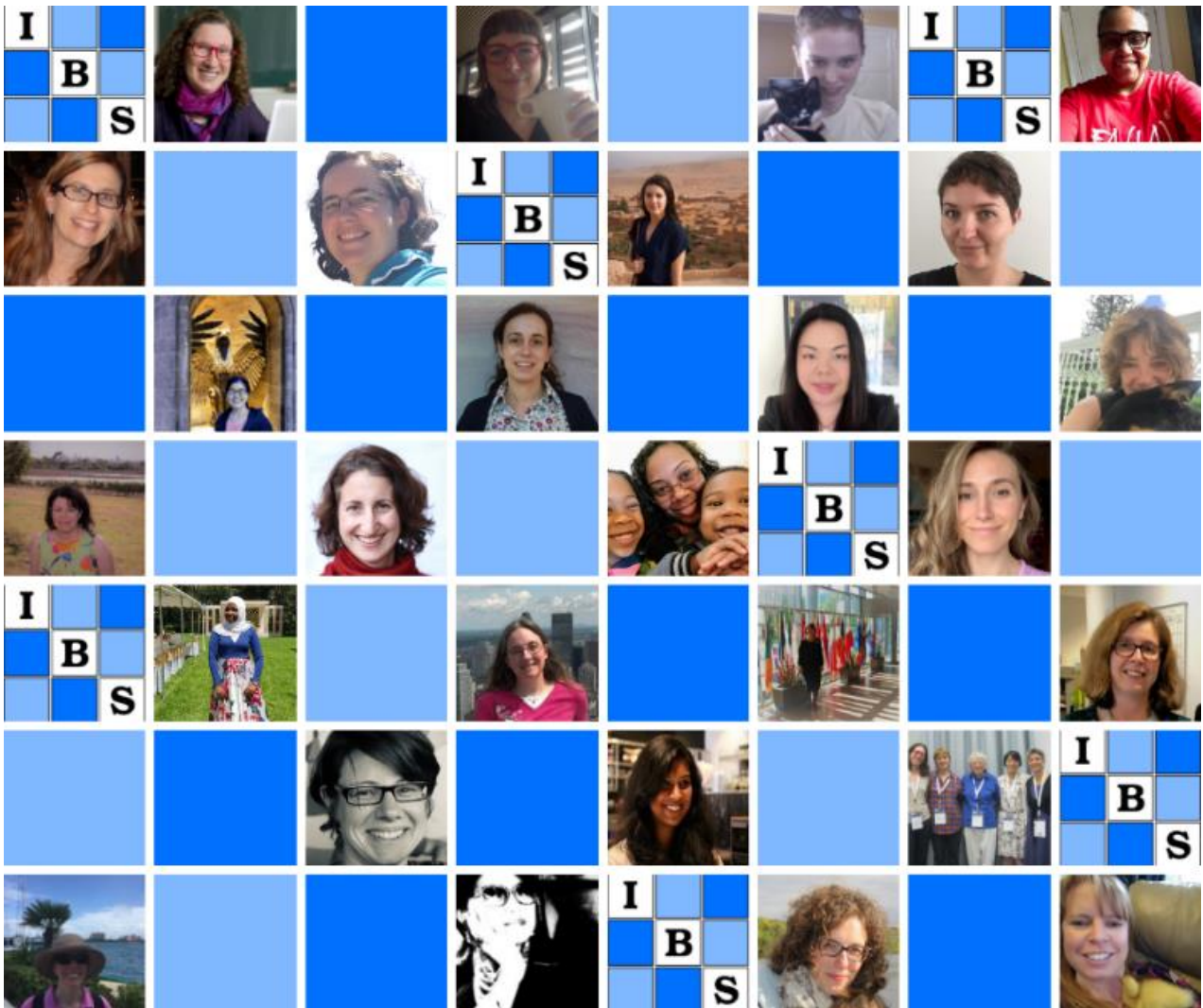
(Front L to R) Chris Basten, [Bruce Weir](#), Sharon Browning, [Ken Dodds](#) and Zhao-Bang Zeng
(Back) Greg Gibson, Rebecca Doerge, Spencer Muse and [James Curran](#)

Emi Tanaka, Social Media Coordinator



Emi Tanaka ([@statsgen](https://twitter.com/statsgen)) has taken up the role of Social Media Coordinator for the Communications Committee of the International Biometric Society. She will be, with the help of regional social media liaisons, better connecting members and increasing the visibility of the society to the general public. A recent activity, during the lead up to International Women's Day on May 12th, saw IBS female members featured on Twitter and Facebook. Find these and more by searching for hashtag #IBSWomen on [twitter](https://twitter.com) or [facebook](https://facebook.com)!

If you have any comments or suggestions regarding IBS and social media, please send them to Emi at dr.emi.tanaka@gmail.com.



Peter Johnstone Retires



Long-time IBS-AR member Peter Johnstone “re-retired” from AgResearch (New Zealand) at the end of June 2019. Peter joined the Ministry of Agriculture and Fisheries (later becoming AgResearch) in January 1973 and was its national statistics leader from 1999 until his official retirement in June 2007. After a three-month hiatus, Peter re-joined the team on a part-time basis in October 2007. His most recent attempt to retire was interrupted when he was asked to cover team movements and maternity leave. Peter was an IBS council member from 1996-99, president of the Australasian region in 2001-2 and was expedition leader for the Tongariro crossing activity at the 1992 IBC. Peter was also awarded Honorary Life Membership of the NZ Statistical Association in 2013. We wish Peter well in his retirement!



Peter Johnstone making arrangements at IBC 1992

New Members

Welcome to our new members:

Melanie Greenland (University of Western Australia),
Rebecca Harding (University of Melbourne),
Nidhi Menon (Australian National University),
Suman Rakshit (Curtin University)

Membership as of 22 August:

Life Member	3	Australia	161
Regular Member	168	New Zealand	46
Senior Retiree	18	Vietnam	6
Student Member	24	USA	4
Supporting Member	9	Europe	3
	222	Malaysia	2

Biometrics by the Botanic Gardens

Save the date: 1-6 December, 2019

Make a note in your diary and book the first week in December for coming to Adelaide, South Australia. [Short courses and workshops](#) on a range of topics will be given on Sunday 1 Dec and Monday 2 Dec, with the main conference running from Tuesday 3 - Friday 6 Dec. Attuned to the interests of the regional membership, the conference will look at statistics research and applications in medicine and public health, agriculture and environment, genetics, natural sciences and education. Invited [speakers](#) include international and Australasian statisticians at various stages of their careers: Marti Anderson, Daniela Bustos-Korts, James Carpenter, Claudia Czado, Joanne De Faveri, Max Moldovan, Blair Robertson and Christopher Wikle.

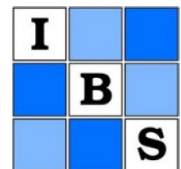
Early bird registration closes: 19 September 2019.

More information is available on the conference website, www.ausbiometric2019.org.

The Australasian Region of the International Biometric Society is running a School Poster Competition in 2019

(Joint with the SSA National Schools Poster Competition)

Open to Year 9 & 10 Australian and New Zealand School Students



Entries Close 10 November 2019

Prizes will be awarded to the top 3 entries that can demonstrate a clear statistical inquiry to a Biometrics problem.

1st Prize \$300 2nd Prize \$200 3rd Prize \$100.



Agriculture



The Environment



Medical

Details about the submission: <https://www.ssaipostercomp.info/schools/>

Details about the Biometrics Poster Competition: <https://ausbiometric2019.org/school-posters/>

Key Contacts: Petra Kuhnert (Petra.Kuhnert@data61.csiro.au) or Vanessa Cave (Vanessa.Cave@agresearch.co.nz)

Special Features

Joint Western Australia SSAI and IBS-AR Meeting

The joint Western Australia branch meeting is an initiative of Mario D'Antuono's that began in 2013. It involves having a biometrician or biostatistician present at the joint meeting, and then – as the event always coincides with the week of Mario's birthday - it is followed by dinner, coffee and cake at a local restaurant. A report from this year's event follows:

Statistical inference for on-farm experiments with a focus on large strip trials

The August meeting of the WA Branch has been held as a joint meeting of the Statistical Society of Australia, WA Branch and the International Biometric Society, Australasian Region since 2013. The occasion is used to invite a statistician whose work focuses on biometrics to deliver a presentation. The speaker this year was Dr [Suman Rakshit](#) from Statistics for the Australian Grains Industry (SAGI) West who works as a biometrician at Curtin University. Dr Rakshit has a background in research in spatial statistics and the analysis of point patterns. His current research primarily focuses on developing methods for the design and analysis of large-scale agricultural field trials.

Suman's talk was titled "Statistical Inference for on-farm experiments with a focus on large strip trials". He began by explaining the historical context of field trials in agricultural research, where the questions of interest traditionally involved testing differences in mean yields from applying qualitative or quantitative treatments, such as different cultivars or differing levels or timing of nitrogen application. Field trials of this kind were implemented on small plots on relatively uniform land, and the designs incorporated randomisation, replication and blocking. Much of the early theory of trial design and analysis was developed for this type of application.

New technology has brought new opportunities for agricultural research. In particular, motivated growers can now conduct experiments cost-effectively in their own paddocks by utilising variable rate application technology to vary inputs, and real-time sensors fitted to harvesters to collect vast amounts of data. In these situations, the question of interest changes from a comparison of treatments to working out how to best manage inputs to maximise profit. Rather than trying to answer a question that can be extrapolated to other growers and other farms, inference is local: the questions being answered relate only to the actual paddock on which the trial is implemented. With no knowledge of trial design theory, trials are often implemented systematically and in ways that make life easier, such as in long-strip plots with lengths greater than 200 metres.

Statistical methods developed for small plot trials are not appropriate in this context.

Suman discussed an adaptation of geographically weighted regression for use in grower-initiated on-farm experimentation in order to analyse geo-referenced yield monitor data to obtain spatially-varying estimates of treatment effects, and demonstrated his proposed approach on a publicly available dataset of a corn field fertilizer trial from Argentina. He concluded his talk by presenting derived maps of spatially varying relationships which could be used to guide grower decisions in paddock management.

Following the talk, further discussions were held at a nearby restaurant. Special thanks to SSAI WA Branch and IBS-AR for the pre-dinner drinks and post-dinner dessert/coffee, respectively.



P.S.... the former President of the IBS-AR [Mario D'Antuono](#) is shown photographed (courtesy of [Berwin Turlach](#)) with the 'Birthday Cake' that IBS-AR sponsored for the evening. Mario has decided to step down after 7 years of promoting this event as his 'birthday' seminar series which began on his actual birthday and concluded on his actual birthday. He is hopeful that other IBS members in Western Australia can continue the tradition of friendship and fellowship between the two societies and have the August meeting continue as a joint meeting. Mario expresses his sincere thanks to the IBS-AR committee for their continued support of this event. He is now in semi-retirement mode and wants to do many other things in his life ... like staying forever young!

[Karyn Reeves](#)

IBC 2020

The 30th International Biometric Conference will be held at the Seoul Convention and Exhibition Centre from **5-10 July 2020**. The themes of the conference are:

- Digital technologies and biometry
- Challenges in genomics
- Statistical modelling in ecology
- Adaptive designs
- Predictive modelling
- New techniques in agricultural research
- Modelling grouped environmental data
- Spatial and spatio-temporal data analysis
- Clinical trials
- Analysis of observational cohort data
- Inference in natural resource surveys
- Advancements in survival analysis
- Bioinformatics
- Epidemiology
- Big data methodologies



For more information, visit:

<https://www.biometricsociety.org/2018/07/ibc-2020-seoul-preview/>



Upcoming Conferences



Young Statisticians Conference
1-2 October, Canberra
<https://ysc2019.netlify.com>



New Zealand Statistical Association
Conference
26-28 November, Dunedin
<https://www.otago.ac.nz/nzsa/>

rOpenSci OzUnconf

December 11 - 13 2019 - Sydney - Australia



rOpenSci OzUnconference
11-13 December, Sydney
<https://ozunconf19.ropensci.org/>