



The Statistical Society of Australia NEWS



YOUNG STATISTICIANS CONFERENCE 2015

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The Young Statisticians Conference for 2015 was held on the 5th – 6th February 2015 at the University of Adelaide. The conference featured 4 keynote speakers, 2 careers sessions, 46 delegate oral presentations, 5 delegate poster presentations, a panel session, 2 workshops, a user group, a public lecture and 3 social events.

Delegates were enthusiastic and the high quality of the contributed sessions was noted by the prize judging panel.

Events kicked off on Wednesday with **Dr Murthy Miffinty**, a Biostatistician from the Better Start Group in the School of Population Health at the University of Adelaide, presenting a "Multi-level Modelling" workshop to 13 participants. A few YSC attendees took up the option to gain some free training provided by SAS on "SAS Enterprise Guide: Querying and Reporting", a course for users who do not have SAS programming experience but need to access, manage, and summarize data from different sources, and present results in reports and graphs.

On Wednesday afternoon, 51 people were registered for the SAS Users South Australia (SUSA) meetings launch. Three talks were given at this event: "Data Science in action: Helping a major National Charity to increase revenue" presented by **Dr Marcus Brownlow** and **Dr Inna Kolyshkina**; "Consulting, Discover why your statistical intellect is in even more demand now, than ever before" presented by SAS Australia and New Zealand, Product Marketing Manager **Natalie Mendes**; and "SAS Analytics, Extracting YouTube videos using SAS" presented by **Craig Hansen**, South Australian Health and Medical Research Institute.

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March 2015
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SSAI

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DEADLINE FOR NEXT NEWSLETTER
10 May 2015

EDITORIAL



Hi. My name is Sonia Langford and I am the new SSAI voluntary editor. In brief my "back story" includes being a chemical engineer in the minerals processing industry, an at-home mum, an administrator and bookkeeper for a small engineering firm, and a student of applied statistics.

Why specifically am I getting involved with SSAI's newsletter? I believe there is opportunity over the next couple of years to continue to make the newsletter more engaging and ensure ongoing relevance whilst working within resource constraints. Initially, I will be coming to grips with the editing duties, plus gaining an understanding of what members want from the newsletter and what is possible with it. Our executive officer Marie-Louise and I will be taking a paced approach to this work, juggling it around our other commitments. We look forward to your constructive feedback and hopefully anticipate your co-operation with any changes. **Feel free to contact us on eo@statsoc.org.au.**

With warm regards from,

Sonia Langford

The March 2015 SSAI newsletter is a leaner beast than the mammoth December 2014 edition, but still packs a punch with quality articles from our committed members and other sources. There are press releases celebrating significant international recognition of some of our members, plus reports on the Victorian branch's Christmas gala and the 2014 Knibbs Lecture in Canberra. Other articles explore our members' interactions with statistics in our international neighbourhood, and there are also a number of different perspectives given on the Young Statisticians Conference (YSC) 2015. So dig in and enjoy this healthy fare after the indulgences of the festive season.

EVENTS

2015 EDITION OF THE SUMMER SCHOOL ON MODERN METHODS IN BIOSTATISTICS AND EPIDEMIOLOGY

7-20 June 2015, Treviso, Italy

SPATIAL STATISTICS CONFERENCE (THEME: EMERGING PATTERNS)

9-12 June 2015, Avignon, France

INTERNATIONAL MEETING OF THE PSYCHOMETRIC SOCIETY

12-16 July 2015, Beijing, China

60TH ISI WORLD STATISTICAL CONGRESS

26-31 July 2015, Rio de Janeiro Brazil

JOINT STATISTICAL MEETINGS 2015

8-13 August 2015, Seattle Washington USA

THE 36TH ANNUAL CONFERENCE OF THE INTERNATIONAL SOCIETY FOR CLINICAL BIOSTATISTICS (ISCB 2015)

23-27 August 2015, Utrecht, The Netherlands

2015 RSS CONFERENCE

4-10 September 2015, Exeter UK

XXVIIITH INTERNATIONAL BIOMETRIC CONFERENCE (IBC 2016)

10-15 July 2016, Victoria, BC Canada

AUSTRALIAN STATISTICAL CONFERENCE 2016

(WEBSITE NOT YET AVAILABLE)

5-9 December 2016, Canberra

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Best of luck finding top talent...or that dream job!

http://careers.statsoc.org.au/home/index.cfm?site_id=18859 (Job Board)

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Young Statisticians' Network

(Vacant)
<http://www.statsoc.org.au/about-young-stats.htm>

Further contact details for Society Secretaries and Section Chairs can be obtained by contacting the Society on (02) 6251 3647

SSAI CENTRAL COUNCIL

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PRESIDENT'S COLUMN



The Future of Our Society

The Statistical Society of Australia has a history to be proud of. It was founded in 1962 as a federation of state bodies, and these state bodies went back to 1947 in the case of New South Wales. The federal structure created a national body able to organise the Journal and events such as the biennial Australian Statistical Conference, while at the same time maintaining the sense of community and friendships of local bodies, the Branches of today. To me, the local structure gives the Society great strength rarely found in other societies.

The Society's structure has not remained static, with its largest change being to become incorporated in the 1990s, a change that made all branch members also members of the Society. While in a technical sense that was a major legal change, in a practical sense it was minor. And to the credit of the members who drafted the changes, it has worked. The way that the Society faced the financial challenges of several years ago demonstrated this.

However, I believe it is time to rethink some aspects of our structure. In my role as President it has become clearer to me that a large part of the national work of the Society falls upon the shoulders of surprisingly few people. This was sensible in a time when we had no formal office, no accreditation system and a much smaller professional development role. I believe that today we also have a discipline that is more important to Australian society than ever before, but is finding it more difficult for that role to be recognised.

The Society needs to think about how these issues might be faced. In my mind, we must ensure that we keep the strength of what we have in the Branches, but that changes are likely that will result in some increase in representation at the national level. For example, the Executive currently consists of the five office bearers of the Society – the President, Vice President, Secretary, Treasurer and Editor – but usually functions with additional co-opted members. Perhaps the Executive needs to be enlarged to have additional members with specific national roles. If so, will that lead to changes in our Council that brings together Branch representatives? If we expand the Executive, do we need to have a greater number of defined national roles so that members know what they are nominating for?

In raising these issues I am not being critical of what we are currently achieving, but searching for ways of doing it better. We need a discussion on possible changes as they will need to be carefully considered. **I welcome any thoughts, ideas, suggestions – please contact me (john@daa.com.au) and I will respond.**

And finally on a different and, I hope, a brighter side, several members of the Society have been appointed by the Hon Bob Baldwin, Parliamentary Secretary to the Minister for the Environment, to a Technical Advisory Forum on climate change data.

John Henstridge

President
Statistical Society of Australia



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As the appointed Insurance Brokers to the SSAI we are proud to offer their members a truly unique Professional Indemnity Insurance Policy: one that will cover your particular requirements perfectly and save you money.

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The first social event took place after the SAS Users Group meeting where drinks and nibbles were provided in the atrium at the University of Adelaide. Networking was enhanced because the event doubled up as the pre-talk refreshments for the Public Lecture given by YSC keynote **Professor Sheila Bird** (MRC Biostatistics Unit, Cambridge). Sheila gave an entertaining and educational talk on “Biostatistician behind bars” in which she described how a quarter century of surveillance designs (with associated biological sample), record-linkage studies, and bespoke “questionnaires” - a phrase coined from Hill and Doll - have improved prisoners' access to harm reduction (e.g. Hepatitis B immunization), contributed to changed policy in prisons (e.g. put an end to random mandatory drugs testing), got them barred from doing studies in prisons, but led them to quantify a 7 times higher risk of overdose death soon after prison-release. This work eventually enabled three musketeers to mount the pilot N-ALIVE Trial in England, which tests whether those randomized to receive naloxone-on-release have 30% fewer opioid-related deaths in the 4 weeks post-release than controls (prior estimate: 1 in 200).

Adelaide put on some lovely weather for the official start of the Young Statisticians Conference 2015. **Lynne Giles**, president of the SA Branch of the Statistical Society opened the conference, highlighting that without sponsorship from the **University of Adelaide, Monash University, SAS, Minitab, University of Queensland** and **Swinburne University of Technology, Data Analysis Australia** and support from the **Statistical Society of Australia** this important event would not be possible. It was a delight to have **Professor Terry Speed** (The Walter and Eliza Hall Institute of Medical Research) at the conference. He kicked off proceedings with a talk on “Instrumental variables and negative controls”, in which Terry's main message was the dual nature of the concepts of instrumental variables from econometrics and negative controls developed for bioinformatics.

Having two parallel sessions for the contributed talks meant attendees had to make choices as to the sessions they attended. Chairs kept the talks generally to time, so delegates were able to move between the different sessions. It was possible to mingle with noted speakers and catch up with friends during session breaks in the Ingkarni Wardli Building atrium, which provided shade from the sun, but was open and airy. Post lunch the focus of talks changed in line with the objectives of the conference, with our second keynote speaker **Geoff Lee**, former Head of Methodology at the Australian Bureau of Statistics and former president of the Statistical Society of Australia, providing delegates with some words of wisdom during his talk “Solving problems with statistics”. He showed just how the real world relies on statisticians, and no matter what job you may have there are always surprises around the corner.

> Continued on page 8



Delegates enjoying a break in the atrium



Dinner at Lincoln College

At afternoon tea delegates had the opportunity to view the poster presentations. Despite the small number, the quality of posters was high, and delegates were able to discuss issues with the authors. The last contributed sessions were the Big Data/Data Mining and Biostatistics/Time Series. The first day finished with a session designed to provide delegates with an understanding of an academic career. The first speaker **Dr Jonathan Tuke** (University of Adelaide) entertained the audience with a combination of theatrics and forthright advice, and was a hard act to follow. **Professor Richard Woodman** (Flinders University) provided a different slant on the role of researcher academic as he explained his path to becoming a statistician. **Professor John Lynch** (University of Adelaide) rounded off the session with advice on how to build a professional reputation. All presenters responded to questions.

The conference dinner was held at Lincoln College, a one and a half kilometre walk from the conference venue. Just about all of the delegates attended and were able to enjoy a three course meal. Prizes for some games were provided by SAS. It was interesting to find out who sings in the shower, had eaten snails, got a ticket in the past week or used a new tooth brush that morning. It was a good night out, and for the more adventurous delegates there was a chance to see some of the Adelaide night life afterwards.

Professor Sheila Bird was first up on the second day with her talk on the "Changing face of statistics" involving a lexicon of concepts in statistics from Assumptions to Bayes, all the way to Zygotosity. After lunch our final keynote speaker **Anna Munday** (Data Analysis Australia) gave a talk "Consulting: The random and variable life of a Consulting Statistician", where she highlighted the variety of work one might expect as a consultant. The Industry Career Session had two guest speakers. **Sandra Pattison** from the National Centre for Vocational Education Research gave some advice on the sorts of skills her organization looks for when recruiting statisticians. Anna Munday provided some further insights into the world of statistical consultancy. All four keynote speakers finished the conference in a panel session entitled: "Data Science and Statistics". Sheila Bird noted the difficulties and consequences of big data sets in the medical field. Terry Speed gave some great anecdotes about the proliferation of formal Data Science schools in universities, but had come to the conclusion that Data Science is Statistics, and that we (statisticians) need to do more to engage the analytical community. Questions followed.

With the formal proceedings completed, delegates were able to wind down with some drinks and nibbles. In closing the conference the best talks were announced. First prize went to **Rory Tarnow-Mordi** (ABS) who gave a talk on "Investigations into the FEWS Index for producing a CPI incorporating Transactions Data". Second prize went to **Brock Hermans** (University of Adelaide), "Inference for epidemics on networks" and third prize was awarded to **Yuen Yi (Cathy) Lee** (University of Technology, Sydney), "Fast approximate inference for Bayesian longitudinal and multilevel models". The best poster went to **Michelle Trevenen** (University of Western Australia), "Triaxial Acceleration Algorithm Development for Sleep/Wake Identification Using Hip and Wrist Actigraphy".

So another conference came to an end. Delegates increased their networks and friendships and are eagerly anticipating the next conference in 2017.

Chris Davies and **Paul Sutcliffe**
YSC2015

Conference program:
<https://ysc2015.files.wordpress.com/2014/07/ysc-2015-short-program2.pdf>



(From left to right)
Michelle Trevenen,
Cathy Lee and
Rory Tarnow-Mordi

Read more about
YSC2015 on pages
25-27, 30, 32

SSAI SUPPORTS VISITING PHD STUDENT FROM VIETNAM

The SSAI is committed to promoting statistical excellence within Australia and beyond. The SSAI Section for International Engagement is particularly interested in our international links, particularly those with developing nations. As such the SSAI offers an International Travel Grant for statisticians from developing nations to attend our conferences and visit Australian statistical groups.

The SSAI International Travel Grant for 2015 was awarded to Anh Nguyen Duc, a PhD student from the Oxford University Clinical Research Unit in Ho Chi Minh City in Vietnam. This Grant allowed Anh to attend the SSAI Young Statisticians conference in Adelaide, the Multi-Level Modelling satellite workshop in Adelaide, and to visit the University of Queensland in Brisbane. At the Young Statisticians Conference and at the University of Queensland Anh presented a seminar entitled "Smooth Non-parametric Estimation of the Cumulative Incidence Functions under Arbitrary Censoring". This visit came at a critical time in Anh's career i.e. when he is at the final stages of his PhD and wants advice from expert statisticians about his future career direction.

Mark formally thanks the members of the International Travel Grant Committee for their time and advice in reviewing grant applications.

Dr Mark Griffin

Chair of the SSAI Section for International Engagement



Anh Duc Nguyen
with Mark Griffin

If you would like to travel as well, please apply for the

SSAI GOLDEN JUBILEE TRAVEL GRANT

It provides overseas travel funds to SSAI student members, who can prove consecutive SSAI membership for a minimum of two years and who wish to attend overseas conferences at which they present a paper or poster.

A complete application will consist of

- Information on the conference and its importance to student's work (2-3 lines)
- Details of the paper/s/poster student wants to present at the conference
- A list of other funds sought or promised, including student's home institution
- Student's out of pocket expenses expected
- Any other supporting material student feels is necessary
- A letter of support SIGNED by one of student's supervisors AND student's Departmental Head
- Student's CV

The application deadline is **31 March 2015**.

A maximum of \$1000 is available per application, limited to a single trip during the course of the student's studies. Students will not be supported in their first year of study and will have had to be members of the Society for at least 2 years prior to the application deadline. Applications are required to be lodged in advance of travelling. In exceptional circumstances an application can be for post-conference support, but the application will then have to be made within 1 month of returning and the 2 year mandatory membership period prior to departure must still be met. Exceptional circumstances are limited to unforeseeable student out of pocket expenses arising from other funding sources not fulfilling their obligation or changes to the trip that could not have been avoided.

If successful the student member is required to produce original receipts for amounts of equal or greater value than the grant. These receipts will be returned to the student marked with how much has been reimbursed. The student will therefore still be able to use the receipts for proof of attendance or to claim any funding shortfall from other organisations. The student member will also need to supply a report of his or her involvement in the conference to be published in the SSAI newsletter. This report should confirm the actual travel details and papers presented.

Recipients of the grant are asked to acknowledge the SSAI's support in the presentations and in any published version of the paper.

One travel grant is available per year. Assuming that more than one application will be received per year, either the Executive Committee or a special committee would help with the selection process.

For more information or to apply, contact the SSAI Office (eo@statsoc.org).

With this travel grant program the SSAI seeks to underline its objective to further the study, application and good practice of statistical theory and methods in all branches of learning and enterprise. It has been implemented to confirm to members that the SSAI is willing to support student statisticians and their budding careers.



Post Graduate Internships

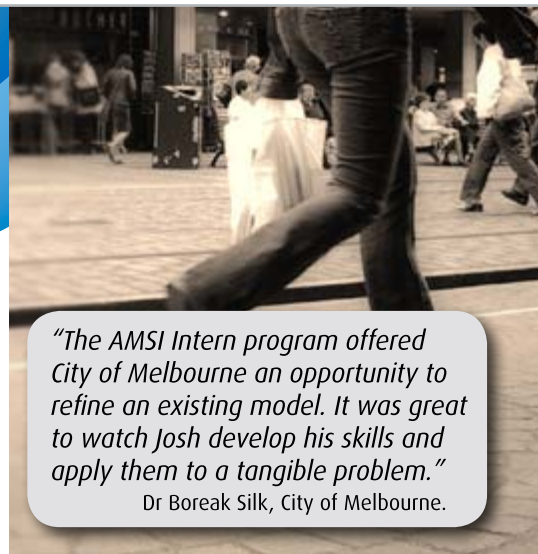
Ready... Stats... Go...

At 18 different locations around Melbourne's CBD the city council monitors pedestrian traffic to determine the impact of events—from a tram running late, tourism trends around specific events, to changes in foot traffic after major social and economic changes such as the stimulus package.

To analyse and translate the foot traffic data, the City of Melbourne enlisted the skills of AMSI Intern Josh Browning from the School of Mathematical Sciences at Monash University.

The AMSI Intern program connects businesses and academics with specialist knowledge. All intellectual property remains with the business, creating a secure environment to grow innovation and productivity through R&D projects.

Find out more at www.amsiintern.org.au



"The AMSI Intern program offered City of Melbourne an opportunity to refine an existing model. It was great to watch Josh develop his skills and apply them to a tangible problem."

Dr Boreak Silk, City of Melbourne.



MONASH
University



AMSIIntern

2015 BioInfoSummer

University of Sydney
7 – 11 December 2015

Research 
Australian Mathematical Sciences Institute

Bioinformatics, is an exciting, fast-moving area analysing and simulating the structures and processes of biological systems. BioInfoSummer provides bioinformatics training to students, researchers and others working in related areas.

The event includes both specialist lectures and hands on introductory and advanced computer workshops.

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- Proteomics and Metabolomics
- Systems Biology, Networks and Data Integration



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MEMBER NEWS

SSAI Honorary Member elected to lead International Statistical Institute

The election results for 2015-2019 for the leadership team of the [International Statistical Institute \(ISI\)](#) include the announcement of [Helen MacGillivray](#) as the President-elect for 2015-2017, and President for 2017-2019.

Established in 1885, ISI is a large international professional organisation, of high standing across the world and with significant influence with governments, business, academia and other professional organisations. Its mission is to promote the understanding, development and good practice of statistics worldwide. ISI has observer status with the UN, successfully applies for grants for capacity building from the World Bank and other organisations such as the African Development Bank, and has many organisational members including national statistical offices and central banks. ISI is a flexible organisation including seven semi-autonomous Associations covering a wide spectrum of statistical sciences and applications, special interest groups, as well as outreach committees to grow Statistics across various regions of the world. It has national statistical societies as affiliates, and collaborates with large organisations such as the Royal Statistical Society and the American Statistical Association.

Helen will be only the second Australian and the second woman to lead ISI in its 128 years of history. The previous president from Australia was Dennis Trewin (Australian statistician 2000-2006) in 2003-2005. Helen will lead an Executive of president-elect and four vice-presidents, oversee the ISI Permanent Office in The Hague, and head the ISI Council of the Executive plus 23 members, including the 7 Association Presidents. Also of note is that Australian Professor Bronwyn Harch is currently one of the Association presidents.

Helen was the first female President and the first female Honorary Life Member of the Statistical Society of Australia and was one of the first Australian Senior Learning and Teaching Fellows. She is currently an ISI Vice-President, and a past president of the International Association for Statistical Education. She is co-editor of the journal *Teaching Statistics* and of the Australian Conferences on Teaching Statistics, and a member of the International Programme Executives for both the 8th and 9th International Conferences on Teaching Statistics. She has been a member of the organising or editorial committees for many conferences, including World Statistics Conferences, Australian Statistics Conferences, Southern Hemisphere Conferences on Undergraduate Mathematics and Statistics, and Australasian Engineering Education Conferences.

Helen's university teaching and curriculum design experience of 40 years extends across many areas of statistical sciences and their applications, across all levels of subjects, all class sizes up to 600 and most disciplines. Her work has received many national and university grants and awards, including a national leadership grant and a national award for outstanding contributions to student learning. She has published widely, including textbooks, book chapters and almost 100 refereed, keynote or invited papers, and delivered approximately 100 local, national or international presentations and workshops. She has led significant developments in learning support in mathematics and statistics, and was a Visiting Fellow for the UK's Centre of Excellence in Loughborough. Helen has played key roles in mathematics and statistics school education via curriculum committees, assessment, as a statistical advisor in research and moderation, in professional development of teachers and in developing and delivering a variety of successful extension and enrichment programs in mathematics and statistics for high school students.

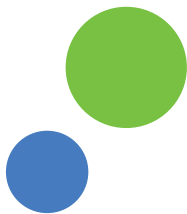
AMSI Media Release, 5 December 2014

Reprinted with the kind permission of AMSI, Bronwyn Harch and Helen MacGillivray

BOOK: TOPICS FROM AUSTRALIAN CONFERENCES ON TEACHING STATISTICS; OZCOTS 2008-2012

The success of OZCOTS, the Australian Conferences on Teaching Statistics, in providing forums and bringing together statisticians and statistics educators is now further celebrated with the release of the Springer volume *Topics from Australian Conferences on Teaching Statistics; OZCOTS 2008-2012*, edited by Helen MacGillivray, Michael Martin and Brian Phillips. Available as Hardcover or eBook (<http://www.springer.com/statistics/book/978-1-4939-0602-4>), the volume includes chapters on OZCOTS keynote topics, undergraduate curriculum and learning, professional development, and postgraduate learning.

The first OZCOTS conference in 1998 was inspired by papers contributed by Australians to the 5th International Conference on Teaching Statistics. In 2008, as part of the program of one of the first Australian Senior Teaching Fellowships, the 6th OZCOTS was held in conjunction with the Australian Statistical Conference, with Fellowship keynotes and contributed papers, optional refereeing and proceedings. This venture was so successful that the 7th and 8th OZCOTS were also conjoined with Australian Statistical Conferences in 2010 and 2012. Authors of papers from these OZCOTS conferences were invited to develop chapters for refereeing and inclusion in this volume. The approaches in this volume are immediately relevant to all who have a vested interest in good teaching practices. Globally, statistics as a discipline, statistical pedagogy and statistics in academia and industry are all critically important to the modern information society. This volume addresses these roles within wider society, as well as questions that are specific to the discipline itself. Other chapters share research on learning and teaching statistics in interdisciplinary work, plus student preparation for futures in academia, government and industry.



MEMBER NEWS

Harold Malcolm Hudson, Brian F. Hutton and Lawrence A. Shepp, Image reconstruction specialists, to receive 2014 IEEE Marie Sklodowska-Curie Award

Breakthroughs Enabled Dramatic Growth of Emission Tomography for Medical Imaging

H. Malcolm Hudson, Brian F. Hutton and Lawrence A. Shepp were honored by IEEE (Institute of Electrical and Electronics Engineers) with the 2014 IEEE Marie Sklodowska-Curie Award. The award, sponsored by the IEEE Nuclear and Plasma Sciences Society, recognized Hudson, Hutton and Shepp for developing maximum-likelihood image reconstruction in emission tomography leading to its widespread and effective use in healthcare. The award was presented on 12 November 2014 at the IEEE Nuclear Science and Medical Imaging Conference in Seattle, Washington.

Shepp developed the maximum-likelihood expectation-maximization (ML-EM) algorithm in 1982, which provided improved image quality compared to Fourier-based algorithms of the time. Despite its great promise for medical diagnostics, its heavy computational burden was a barrier to clinical use. Based on Shepp's work, Hudson and Hutton were motivated to overcome the computational workload with faster image reconstruction solutions. First published in 1994, their ordered-subsets expectation-maximization (OS-EM) algorithm applied the ML-EM algorithm successively to well-chosen data blocks. Their algorithm was key to bringing maximum likelihood estimation into daily practice for emission tomography. Collectively, the trio's work has paved the way for techniques that improve image accuracy and precision in emission tomography, while shortening scan duration or helping to reduce the activity of the tracer administered to the patient.

A member of the International Statistical Institute, Hudson is an Emeritus Professor with the Department of Statistics at Macquarie University, New South Wales, Australia. An IEEE Senior Member, Hutton is Professor of Medical Physics in Nuclear Medicine and Molecular Imaging Science at the Institute of Nuclear Medicine at University College London, U.K. and a Professor in the Department of Medical Radiation Physics at the University of Wollongong, N.S.W., Australia. Shepp, who passed away in April of 2013, was a member of the U.S. National Academy of Science, the Patrick T. Harker Professor of Statistics at the Wharton School of the University of Pennsylvania, Philadelphia, and a Professor with the Department of Statistics at Rutgers University, Piscataway, N.J.

About IEEE

IEEE, the world's largest technical professional association, is dedicated to advancing technology for the benefit of humanity. Through its highly cited publications, conferences, technology standards, and professional and educational activities, IEEE is the trusted voice on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics. Learn more at <http://www.ieee.org>.

Media Contact: Francine Tardo, f.tardo@ieee.org

Brian F.
Hutton



Lawrence A.
Shepp



H. Malcolm
Hudson



A REPORT ON THE 13TH BIENNIAL ISOSS CONFERENCE: “STATISTICS FOR BETTER LIFE”

The biennial 13th Islamic Countries Conference on Statistical Sciences (ICCS-13) was held at the IPB International Convention Centre in Bogor, Indonesia during 18-21 December 2014. The conference was jointly organised by Bogor Agricultural University (BAU) and Islamic Countries Society of Statistical Sciences (ISOSS). The theme of the conference was 'Statistics for Better Life'.

In the opening session of the conference the Chair of the National Organising Committee Prof. Asep Saefuddin (Vice Chancellor of Trilogi University) welcomed all the participants and thanked ISOSS and BAU for their support for holding ICCS-13. Dr Savas Alpay, the Director General of the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) i.e. the statistics organ of the Organisation of Islamic Cooperation (OIC), emphasised the importance of statistical capacity building and cooperation between the national statistics offices and professional organisations such as ISOSS. Acting President of ISOSS, Prof. Shahjahan Khan explained the role of ISOSS in bringing together practicing statisticians and researchers from diverse backgrounds on the same platform to improve the quality and development of statistics to serve humanity. Founding President of ISOSS Prof. Munir Ahmad gave a brief history of ISOSS and noted its significant impact on the international statistical community over the years.

Prof. Illah Sailah (Indonesian Director of the Ministry of Research, Technology and Higher Education) emphasised the need for timely, good quality statistics for the formulation of government policies. Dr Sailah announced that Indonesia had created a separate Statistics subject cluster under the new Research Quality Framework. Dr Adi Lumaksono (Deputy Chief Statistician for Production of Statistics in Indonesia) discussed the activities of the National Statistics Office and how they are engaging with government departments. Prof. Hermanto Siregar (Vice Rector of BAU) focussed on the significant scientific contribution of the University during the last 50 years.

Prof. Haryono Suyono, a former Indonesian Minister of Population, presented the first keynote address focussing on the history of developing an appropriate index to measure the fertility of Indonesia and how the program was successful in managing the population growth in the country. Prof. M Ashraf Memon from the University of Queensland, Australia presented a panel session on medical meta-analysis covering different issues related to the current meta-analytic methods in the context of three different meta-analyses on surgical data.

> Continued on page 17

Formal opening of ICCS-13 (from right)
Prof Asep Saefuddin, Vice Chancellor of Trilogi University; Prof Illah Sailah, (beating the bell) Director, Ministry of Research, Technology and Higher Education of Indonesia; Prof Munir Ahmed, founding President of ISOSS; Dr Adi Lumaksono, Deputy Chief of National Statistics Office, Indonesia; Prof Savas Alpay, Director General of SESRIC; Prof Shahjahan Khan, acting/former President of ISOSS; Prof Hermanto Siregar, Vice Rector of Bogor Agricultural University.





Delegates at the dinner with the Mayor of Bogor
Dr Bima Arya (sitting 3rd from left)



Receiving ISOSS Gold Medal: Prof Asep Saefuddin
(right) and Prof Mohammad Hanif Mian (third from
the left)

There were two workshops in the conference, the first on "Big Data Analysis" by Prof. S Ejaz Ahmed, Canada and the second on "Essentials of 21st Century Undergraduate Statistics Curriculum" by Prof. Shahjahan Khan, Australia. The focus of the second workshop was the use of educational technologies and the adoption of appropriate changes in teaching statistics to ensure graduates learnt statistical computing including database management, multivariable calculus and statistical methods with the ability to communicate technical knowledge in the global context.

The conference dinner was hosted by the Mayor of Bogor, Dr Bima Arya Sugiarto, a political scientist and an alumnus of the Australian National University. He welcomed the participants to the cultural evening and noted how important statistics is in planning and evaluation, confessing that he was not a very good student of statistics.

The conference tour to Taman Mini Indonesia Indah was highly enjoyed by the participants. The huge park contains a mini map of Indonesia and many museums representing different aspects of the Indonesian nation, nature and culture. It is situated on about 250 acres and was opened in 1975.

In the business session of the conference, Prof. Abdul Ghapor Hussin of the National Defence University of Malaysia was elected as the 4th President of ISOSS for the next two years. The meeting announced the next Islamic Countries Conference on Statistical Sciences (ICCS-14) to be held at the Sultan Qaboos University, Oman during 17-20 December 2016.

The proposal of Prof. Shahjahan Khan to establish a Statistics Centre of Excellence in Kuala Lumpur, Malaysia was unanimously adopted by the delegates. They agreed this centre would work together with other international statistical organisations engaging in joint activities and co-operation. Prof. Munir Ahmad's motion to launch a new journal for ISOSS was also approved.

The ISOSS Gold Medal was awarded to both Prof. Asep Saefuddin for his outstanding contribution in the development and promotion of statistics in Indonesia and beyond, and to Prof. M Hanif Mian for his contribution to the promotion of ISOSS and development of numerous sample survey techniques.

Prof. Shahjahan Khan

University of Southern Queensland, Australia
Chair, International Organising Committee, ICCS-13

SHARE YOUR LOVE OF MATHEMATICS BY VOLUNTEERING WITH MATHEMATICIANS IN SCHOOLS

Feel like making a difference? No fixed or minimum hours, the ability to contribute in a way that suits your schedule, and a way to positively affect the Australian mathematics community of the future! CSIRO Education's Mathematicians in Schools is a skilled volunteering program offering you the opportunity to make a difference to the mathematics education of primary and secondary school students.

Scientists and Mathematicians in Schools is a successful, well-established national program, over 4000 professional partnerships between scientists, mathematicians and teachers have been created since July 2007. Currently more than 1600 scientists and mathematicians across Australia are involved in partnerships.

Interested [Mathematicians can register here](#).

How it works: Individual engineers or mathematicians are partnered with individual teachers in ongoing professional partnerships. There is no cost to participate.

Activities: Each partnership is flexible, unique and voluntary - the mathematician and teacher decide how they will work together taking account of workloads, the mathematician's expertise, and the teacher and class needs. This allows partners to develop their own style and may include hands-on activities, presentations, demonstrations, mentoring, emailing and video conferencing.

Time commitment: No fixed or minimum hours – it's up to the mathematician and teacher to negotiate the frequency of interactions. Mathematicians may visit the school once or twice a year, a couple of times a term, or once a week or month. Other partnerships utilise ICT (email and video conferencing) almost exclusively and have little face to face interaction.

Skill/experience required: The definition of a mathematician for this program includes any professional who is actively engaged in the fields of mathematics and/or technology. It includes economists, accountants, research mathematicians, engineers, cryptographers, surveyors, biometricians and statisticians, amongst others. Generally a Bachelor's degree in a mathematics related field and currently working in a profession where maths is a major component of your work is required.

Available teachers: A map of teachers interested in establishing partnerships is available on our website at www.scientistsinschools.edu.au/scientists/unmatched.htm. You can nominate one of these teachers to be partnered with, but are also welcome to nominate a region/school/teacher of your choosing and we will aim to facilitate a partnership for you.

More information can be found on our website www.mathematiciansinschools.edu.au. You can also register for Mathematicians in Schools from the website under the "Get Involved" Tab. If you have any questions, contact Gill Lunniss, Scientists and Mathematicians in Schools Project Officer in Victoria, on sis.vic@csiro.au or 03 9252 6502.

Gill Lunniss

Project Officer Victoria, Scientists and Mathematicians in Schools Education
CSIRO

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STATISTICAL EDUCATION: AND THE 2014 POSTER WINNERS ARE...!!

It is with great pleasure we report on the outcomes of the 2014 Secondary Schools Statistical Literacy Poster Competition. In the previous two SSAI Newsletters we wrote about the 2014 pilot of this national competition in the Hunter Region, being supported by the SSAI and run under the auspices of the International Statistical Literacy Project (ISLP, see <http://iase-web.org/islp/>). It is also worth noting that this activity brings additional international advertising for the SSAI, now listed under http://iase-web.org/islp/People.php?p=Country_Coordinators and the ISLP's Facebook page. The national website has been developed thanks to CARMA (Computer-Assisted Research Mathematics and its Applications), in particular CARMA's scientific and technical officer Dr David Allingham.

In brief, this statistical literacy poster competition is a project-based learning activity involving teams of 2 to 5 secondary school students who collect and interpret data to create an informative poster presentation (as per a conference poster) that addresses a practical research question. Further details are available at <http://www.ssaipostercomp.info/>.

There was great interest in the 2014 competition with 85 students completing projects and 32 posters submitted. Congratulations go to the winners:

Year 9-10 Division: Lisarow High School

Title: The Deterioration of Teeth in Liquids.
Aim: To determine the effects of different liquids on teeth deterioration.
Authors: Tyler Hayter, Taylor Cheetham, Chloe Hatcher and Brooke Khoury.

Years 11-12 Division: Kotara High School

Title: What are the representations of ethnicities in prime-time TV advertisements?
Aim: To assess how well-represented various ethnicities are on TV compared with population figures.
Authors: Jacqueline Willing, Alena Payne and Ellen Frohlich.



Years 11-12
Division winners
from Kotara
High School

Honourable mentions in the Year 9-10 Division were awarded to:

SCHOOL	TITLE	AIM	AUTHORS
Maitland Grossmann High	How to make 2 minute noodles in 3 minutes	To test whether adding salt to water increases the boiling point.	Grace Forbes Kayla Crow
Maitland Grossmann High	Electric Bike Challenge	To test what position on an electric bike will create the least drag.	Max Carter Logan Dart
Maitland Grossmann High	Growth Rates of Foot Bacteria for Males and Females	To determine which gender produces the greatest amount of foot bacteria.	Jade Bassett Luke Green
Maitland Grossmann High	Does diet cola react the best with mentos	To conduct the popular Coca-Cola and Mentos geyser experiment and observe which type of Coca-Cola (diet, classic or zero) reacted most effectively.	Lara Murray Amy Williams Emma James

> Continued on page 20

An honourable mention in the Year 11-12 Division was awarded to:

SCHOOL	TITLE	AIM	AUTHORS
Hunter School for Performing Arts	What can we de-juice?	To determine the effect of glucose on test performance.	Tasman Fell Isaac Ewald Daisy Jarrett Alex Riordan Tahlia Quinn



Poster topics were wide and varied and included investigations into: body parts and bacteria, technology (electric bikes, bandwidths, engine horsepower), food, factors affecting concentration, the utilisation of school utilities, cultural studies and the social sciences, plus marine science and populations of marine animals. Posters were judged based upon the following key areas:

- Clarity of Message,
- Data Collection Methods,
- Analysis and Conclusion,
- Use of Graphs/Tables,
- Presentation,
- Creativity/Importance.

The 2014 competition culminated in a Poster Display and Awards evening on 8 December, 2014, at the University of Newcastle. All teachers and students were awarded participation certificates. Winning schools and teams (and those who received honourable mentions) also received winner/honourable mention certificates, gift cards and prizes including iPods, solar science kits and books.

A short audio-visual presentation was also provided to those in attendance describing the field and role of Statistics, as well as the types of activities statisticians are involved with every day. Videos of practitioners describing their work in the field and examples of where Statistics is used were provided. A clear connection was made between the activity of a statistician and the types of projects students undertook in this competition.

We were heartened by the response to this competition, additionally so considering the relatively short notice schools were provided. Schools were informed from early August and had to submit by late November. As with any event, there were some hurdles, with five schools having to withdraw due to circumstances that arose, and many of the participating schools unable to attend the award ceremony as they were on excursions to Wet n Wild (half their luck), Band Camp or unable to travel the distance. Nevertheless, we had over 40 people attend the Poster Display

Teachers were very supportive of the competition's method of delivery and are keen to see it continue. Teachers from schools who had to withdraw also attended the Awards night display, and they advised us that they will be involved in the 2015 competition. One teacher is aiming to embed the competition into the school curriculum.

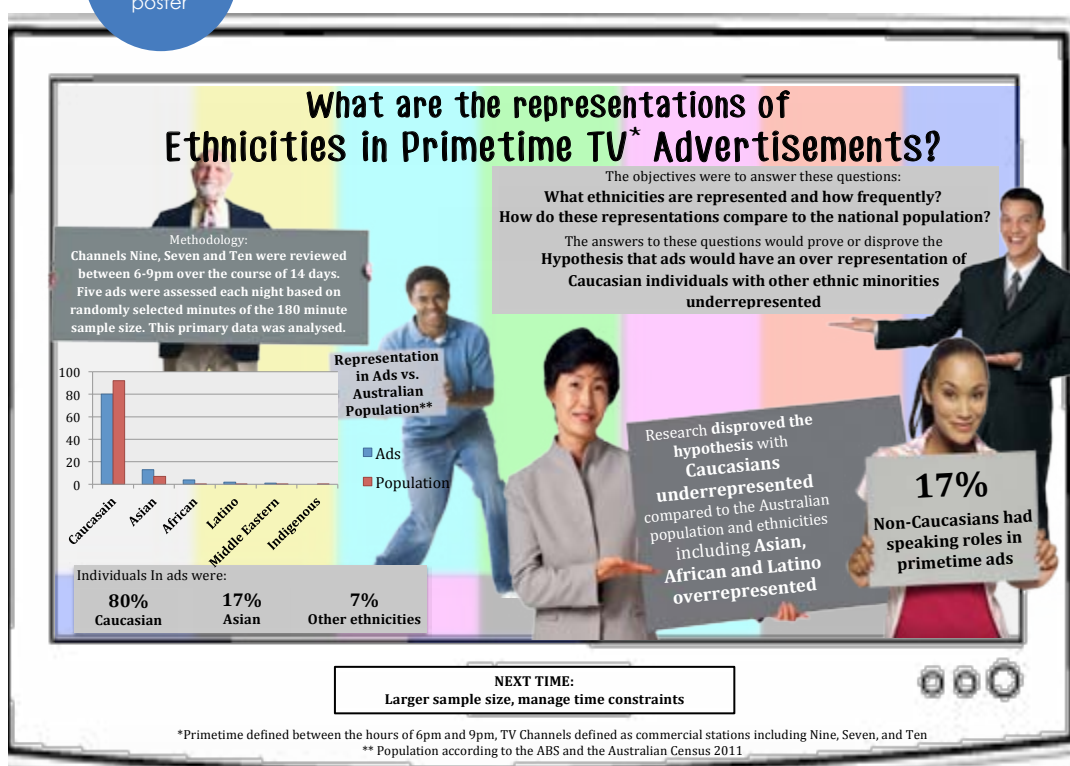
Further photos and information have been uploaded to the poster competition's website <http://www.ssaipostercomp.info/>, and we will have at least one additional 2015 sponsor in the Teachers Mutual Building Society. As we seek to expand the competition we will be reaching out to other organisations to sponsor this growing event.

So, would you like to know more, possibly be involved as either a mentor or coordinator around Australia as we expand this competition in 2015? Perhaps you are near the Hunter Region or know of others who would be keen to be a mentor, or are secondary school student teachers – whatever the connection, please spread the word....people from all fields of interest are invited to be involved in this national secondary schools poster competition. We welcome others nationally to get on board and to contact **Peter (peter.howley@newcastle.edu.au or phone 02 49 215518)** to discuss any aspect of the competition including coordinating it and hosting local display and awards nights.

Peter Howley and Michael Martin

Co-chairs of the Statistical Education Section

Winning Year
11-12 division
poster





XXVIIIth International Biometric Conference VICTORIA CONVENTION CENTRE, JULY 10 – 15, 2016



"I warmly invite you to the XVIIIth International Biometrics Conference in Victoria, Canada, traditional territory of the Lekwungen First Nations, and capital city of British Columbia. Victoria is located on the southern tip of Vancouver Island, off Canada's Pacific Coast. The conference will be held at the Victoria Conference Centre, adjacent to the famous Empress Hotel. Victoria is named the City of Gardens and has easy access to recreational activities such as kayaking, whale watching, hiking, and much more. The temperate climate and relaxed island lifestyle should make for a memorable 28th IBC."

– LAURA COWEN, UNIVERSITY OF VICTORIA, LOCAL ORGANIZING CHAIR

SCIENTIFIC PROGRAMME

- Opening Ceremony & Presidential Address
- Invited Oral Sessions
- Contributed Oral and Poster Sessions
- Young Statisticians Showcase Session
- Biometrics and JABES Showcase Session
- Short courses

SOCIAL PROGRAMME

SUNDAY JULY, 10

Welcome Reception

MONDAY JULY, 11

Young Statisticians Mixer

TUESDAY JULY, 12

Regional Officers' Reception

WEDNESDAY JULY, 13

Range of social excursions

THURSDAY JULY, 14

Gala Cultural Event



For constantly updated information,
please see the website www.biometricsociety.org



CANBERRA BRANCH

2014 Knibbs Lecture: “Predictive Inference for Big, Spatial, Non-Gaussian data”

The 2014 Knibbs lecture to the Canberra Branch was given on 4 November 2014 by Prof Noel Cressie of the National Institute for Applied Statistics Research Australia at the University of Wollongong, with discussants Phil Kokic of the CSIRO and Daniel Elazar of ABS. The title of the lecture was “Predictive Inference for Big, Spatial, Non-Gaussian Data: MODIS Cloud data and its Change of Support”.

Noel's work was undertaken jointly with Aritra Sengupta, his former PhD student at Ohio State University.

MODIS [MODerate resolution Imaging Spectroradiometer] cloud data are obtained from the MODIS instrument on board NASA's Terra satellite: the resolution is 1 km x 1 km, and the observations are radiances in various spectral bands. The radiances are processed so as to give a 'clear sky' confidence level, where 1 is clear sky and 0 is cloudy: there are 2.75 million such spatial data in a granule. However, there are inaccuracies in that processing, and the talk described a spatial analysis that addressed those.

The particular dataset analysed was a granule obtained in June 2006 over the Atlantic Ocean. The initial analysis of these massive data dealt with sun-glint and nearest-neighbour corrections, so that a cloudy pixel surrounded by clear ones is assigned a 'probably clear' status.

A hierarchical spatial statistical model was used to make predictions for any area larger than the pixel size, but full-rank models are computationally infeasible, leading to reduced-rank models. After discussing some options, Noel developed the strategy he and Dr Sengupta used:

- a hidden binary variable denoting the presence or absence of clear sky at each pixel, and
- this being conditioned on a hidden underlying spatial clear-sky-probability process.

The last process is modelled using a spatial Gaussian field defined according to the Spatial Random Effects (SRE) model. The result is an empirical hierarchical model whose parameters are estimated using the EM (Expectation-Maximisation) algorithm, and prediction of the hidden clear-sky process is carried out using MCMC (Markov chain Monte Carlo).

Other potential applications discussed by Noel included extension to spatio-temporal problems such as climate processes, subgrid-scale physical parameterisation of climate models, and spatial data fusion for remote sensing applications.

In summary, the SRE model for the MODIS cloud data allows fast computations and can deal with nonstationarity. Their EM-followed-by-MCMC approach is simple, computationally efficient, and gives samples from the predictive distribution of the clear-sky-probability process. The empirical hierarchical model produces optimal spatial maps (predictive mean) and enables uncertainty quantification (predictive standard error and predictive quantiles) and change of support. The change-of-support relationship allows one to address geophysical questions involving cloud fractions at coarser resolutions in a statistically efficient manner.

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Noel Cressie



Phil Kokic



Daniel Elazar

The first discussant, Phil Kokic, gave examples of why accurate measurements of cloud cover are important – in that clouds reflect short-wave and trap long-wave radiation, influence temperature, precipitation, and evapo-transpiration. Hence, cloud cover is an important element in climate- change models.

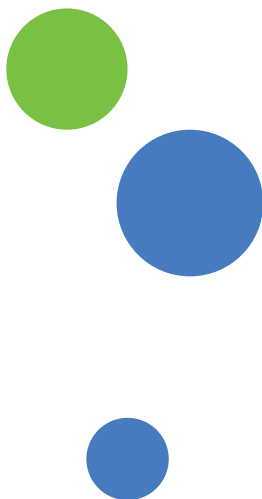
Addressing what is new and useful about Noel's work, Phil noted that the problem is big-N spatial modelling for a non-Gaussian variable. The computation is made feasible by the use of a reduced number of spatial random effects in a non-Gaussian hierarchical model. Nonstationary spatial correlation and inclusion of known structure through spatial basis functions are important features. The model uses the EM algorithm to estimate parameters and MCMC to produce the predictive distribution.

Phil suggested extensions to other bounded variables and, through the Poisson distribution, to ecological models. Phil then raised the very important issue of model validation – that just because a model fits data well it does not necessarily follow that it will predict well. Some of the things we should validate include point predictions, distributional accuracy at specific locations, joint distributions over several locations, and accuracy of dependencies over time and space.

The second discussant, Daniel Elazar, outlined how the ABS uses satellite imagery for agricultural statistics, especially for crop area and yield, and for supporting the ABARES-crop-yield forecasts. He then outlined how Noel's talk was useful to the ABS, in adjusting for informative bias due to cloud cover and as a basis for estimating crop type. For these problems, the degree and type of cloud cover is more important than the clear-sky problem Noel addressed, so Daniel wondered whether the methods could be modified to handle that.

After the talk, the annual dinner of the Canberra Branch was held at Mama's Trattoria.

Ray Lindsay



NSW BRANCH

Young Statisticians Conference

After crossing the footbridge over the River Torrens on a bright and sunny morning to reach the University of Adelaide, I spent Thursday and Friday 5-6 February 2015 with a wonderful group of academic and industrial statisticians at the Young Statisticians Conference.

Kicking off with a “not-too-demanding technical” keynote speech by Terry Speed, it quickly became clear that an immensely broad range of topics and statistical skills were on offer. Keynote talks by Geoff Lee, detailing the range of experiences stemming from a 32 year career at the ABS; Anna Munday, similarly describing her varied experiences working with Data Analysis Australia; and Sheila Bird, with an essential A-Z of aspects in biostatistics, left the audience of young statisticians suitably impressed and excited.

Parallel sessions spanning both days showcased the work of over forty talented speakers, each met with thoughtful questions from the audience. My presentation in detecting allele specific gene expression from RNA-Seq data received some insightful suggestions as to why we observed some of the interesting and perplexing results I had displayed.

The conference dinner, held at nearby Lincoln College, was a great way to let our hair down, and also learn something new via trivia-style games, with some new books up for grabs.

Further highlights included the academic and industry careers panel sessions, offering a deep insight into not only the passion each speaker showed for their work, but also the nature of the work itself. Common themes touched on amongst academia and industry included finding a mentor and learning from them as much as possible, that involvement in professional societies is an invaluable tool to meeting new people and forging lasting relationships, and that being a good statistician requires more than just doing good technical statistics.

Before the close of the conference, the final session was a panel with the keynote speakers entitled “*Data Science and Statistics*”. The take-home message I received was that while data science sounds new and sexy, the reality is that data science is encompassed by all that statistics has to offer.

Overall YSC2015 was a wonderful way to connect with young statisticians both inside and outside of academia, something that isn't at all trivial to achieve. I thank the conference organisers for their tireless efforts and the SSAI for generously providing me with a travel grant to attend this event.

Shila Ghazanfar

Report on attendance of Young Statisticians Conference 2015

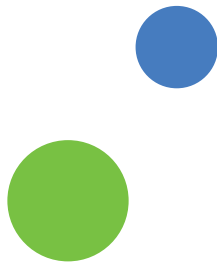
It was very exciting for me to attend my first Young Statisticians Conference (YSC), held in Adelaide, South Australia. The YSC is a biennial conference with presentations from young statisticians from Australia and abroad. This conference was very successful for me as I presented my work, attended a number of sessions related to my field, attended career panel sessions, plus met like minded statisticians and renowned scholars in the field of statistics.

I attended a paper presented by Professor Terry Speed on "*Instrumental variables and negative controls*". Through this lively presentation, I learnt about various technical aspects of causal inference, and more importantly, skills to present statistics to a more general audience. This conference also had ample sessions on both the theory as well as application of modern statistical techniques. The career panel discussions gave me a comprehensive idea about various aspects and challenges related to the field of statistics in both academia and industries in Australia. I met and got advice from renowned statisticians, who were very successful in their statistical careers.

Overall, I definitely gained a lot from attending this conference and meeting academics from different disciplines and fellow doctoral students who had such diverse views. I was also introduced to new methodologies and theories which I will study in detail in the next couple of months to determine what could be important for my research.

I would like to thank the SSAI NSW branch for funding that gave me the opportunity to participate in YSC2015. Apart from learning more about the emerging field, I feel greatly encouraged to pursue my own research and attend future conferences. I am looking forward to the next YSC event.

Md Hamidul Huque



A short summary of my experience at the 2015 YSC

The 2015 Young Statisticians Conference (YSC) is one of my highlights for this year. The four keynote addresses were very inspiring. Sheila Bird shared her interesting thoughts on recent changes in statistical science, and how important it is that statisticians are trained, and that they should collaborate with other disciplines in order to achieve high quality research. Terry Speed's talk was insightful. Like "Big data", data science is a new buzzword, but what it really boils down to is statistics. Instead of relying on technological advancement, we should keep honing our statistical and computational skills to problem solve in real life. The personal experiences shared by Geoff Lee as a methodologist at the Australian Bureau of Statistics was eye-opening, and it allowed me to appreciate the sort of challenges and difficulties that arise in relation to official statistics research. As a part-time statistical consultant, I found Anna Munday's talk was most useful. She gave a personal account of the journey that led her to develop as a professional consultant at Data Analysis Australia. Not only did her talk have direct relevance to my current role and perhaps my future career, it is motivating me to further develop all the essential skills to be a successful, practicing statistician.

There was a great turnout of early career statisticians from around Australia and overseas. The contributed talks ranged from theoretical to applied, in various statistical applications including areas such as epidemiology and health. I was inspired by a lot of fascinating and well-communicated presentations that applied sophisticated statistical methodology to challenging research problems. I learnt a lot in just two days by sharing my research experience and discussing ideas with people with similar interests.

Despite how tired I was at the end of the day, I thoroughly enjoyed the conference dinner that was held at the Lincoln College at the University of Adelaide. The meal was delicious and the game play session was great fun!

Overall, I had an awesome time at the Young Statisticians conference and would highly recommend young people (or anyone who is young at heart) to attend this event. I would like to thank the conference organising committee for their time and effort to make sure everything ran smoothly and, more importantly, the smart, mysterious judges who awarded me my first conference presentation award. Finally, I would like to thank the Statistical Society of Australia for sponsoring me to attend this event.

Cathy Yuen Yi Lee

J.B. DOUGLAS AWARD 2014

The 15th Annual J.B. Douglas Award was held on the 25th of November 2014 at the University of Technology, Sydney. This award seeks to provide an annual platform for promising postgraduate university students to present their work within the broader NSW statistical community. University departments are encouraged to nominate their most promising student to compete for the Award (and a cash prize!).

We had postgraduate students from six NSW university departments presenting their research in 2014. Their names and titles of talks are listed below:

SPEAKER	DETAILS
Boris Beranger (UNSW)	Extremal dependence models: state of the art and new advances
Payam Mokhtariandehkordi (Wollongong)	On Outlier Robust Bounded Bootstrap Small Area Inference
Alexander Badran (Sydney)	A Market Model for VIX Futures
Marianne Menictas (UTS)	Variational Inference for Heteroscedastic Nonparametric Regression
Mark Donoghoe (Macquarie)	Semi-parametric adjustment of rate differences, risk differences and relative risks
Lucy Leigh (Newcastle)	A novel extension of Bayesian Profile Regression: application to the analysis of longitudinal sleep patterns and survival for high dimensional data



Professor Louise Ryan, President of SSAI NSW branch making a welcome and introduction speech

Our judges for the evening were Professors Murray Cameron, Louise Ryan and Robert Kohn. They had a very hard time choosing a winner from amongst the excellent student presenters. But in the end they chose UNSW student, Boris Beranger. We thanked various School and Department Heads for their enthusiastic support and the nomination of their students. We also recognised and thanked the sponsors for their generosity in supporting this event. Their logos can be seen on the background of the photo below.



Louise presenting the \$1000 cheque to the winner Boris Beranger

> Continued on page 29

Following the Award ceremony was the Annual Lecture, delivered by Professor Murray Cameron from the Australian Technology Network's (including all the technology universities) Industry Doctoral Training Centre (ATN IDTC). The title of his talk was "Statistics, Revolutions, Employment and Education". Professor Murray Cameron gave an excellent keynote address, talking about his experience as Director of the ATN IDTC. This is an innovative new program, modelled loosely after similar programs in the UK that support students to undertake PhD training whilst working with an industry partner. Industry here is interpreted broadly to include public and private organizations. Among the advantages of doing a PhD through the IDTC is that students emerge with a broad range of practical skills and valuable work experience under their belt.

Murray also had some important broader messages. More and more the data people are looking at are different to that which is analysed by methods taught in undergraduate statistics. We need to get PhD students more in touch with the non-academic community so that they have the broadest possible career opportunities and, if they follow an academic career, they can teach with a good understanding of the careers open to their students.

The Annual Dinner following the talk was held at the Aerial UTS Function Centre. We had about 50 people attending the dinner, including many students. The food was good and plentiful and the wine flowed freely. We enjoyed it all very much, and of course each other's company as well. We also had a lot of fun at dinner, responding to a list of actual job interview questions from tech companies such as Google, Microsoft etc. compiled by branch president Louise Ryan. Classic examples include "How honest are you?" – a good answer might be "too honest to answer this stupid question!", a comment later given by Louise. Quite a few people stayed until late, and it is very likely they kept chatting because of the interesting dinner questions.

We would like to thank Ms Melissa Oey, Administration Assistant to the Distinguished Professors at UTS for booking the venue and arranging the catering, Mr Kevin Wang, SSAI NSW Branch Treasurer for setting up the Eventbrite to handle dinner payment and Mr Ryan Defina, SSAI NSW Branch Secretary for his work on all communications and follow up of sponsorship. Overall, we received excellent feedback from participants. We hope to see more excellent student talks and an even higher attendance this year!

Dr Arthur Hung and Mr Richard Walton

Event Co-ordinators & SSAI NSW Branch Councillors



VIC BRANCH

Experiences from the Young Statisticians Conference 2015

I presented my PhD research work at the Young Statisticians Conference (YSC) held 5-6 February 2015 at the University of Adelaide. I had invaluable experiences by attending the YSC, which is not just a conference; it is "the conference". First, I attended the pre-conference SAS workshop on SAS Enterprise Guide: Querying and Reporting. That was a beneficial course with practical sessions and course materials provided.

Academic keynote talks from Professor Terry Speed and Professor Sheila Bird highlighted many aspects in the field of Statistics. Keynote talks from Geoff Lee and Anna Munday covered industry experience with the use of Statistics. The Panel Session consisting of all keynote speakers underlining the need to engage academia and industry. For me, the highlight of the conference was the Academic Career Session and Industry Career Session. Being a young statistician, it broadened my knowledge base to learn of others' experiences and vital ideas of academic and industry fields.

The conference was well-organized with numerous parallel sessions. Presenting my talk and listening to other presentations obviously enhanced my confidence in being able to present professionally and deal with questions from the audience comfortably. Besides, I obtained important comments on my research and presentation.

The Conference Dinner held on the first day of the conference was a delightful social event. It allowed me to share research and working experiences with leading academic experts, practitioners and junior researchers. Vivality, the network built with young statisticians will be useful throughout my whole life.

Overall, my participation in the YSC was indeed a memorable experience and a terrific learning event. I am truly grateful to the SSAI Victoria branch for funding me to attend the YSC2015. It was worth attending!

Thilaksha Tharanganie

PhD Student

Department of Econometrics and Business Statistics, Monash University



The Melbourne Analytics Charity Christmas Gala

In December, the Victorian Branch teamed up with Data Science Melbourne, Big Data Analytics, and the Melbourne Users of R Network to host the Melbourne Analytics Charity Christmas Gala. The gala was promoted on the page of the Data Science Melbourne meetup group as "an entertaining night of beer & pizza, cheese & wine, and analytics in the real world" - it certainly delivered on all of these elements.

The gala was opened by Phil Brierley, who is one of the founders of Data Science Melbourne. He started by highlighting the success of the meetup group, with membership numbers increasing from 375 in April 2014 to 1,216 in December 2014.

The format of the evening showcased the variety of research areas and careers within the field of data science – with 12 speakers each presenting for 5 minutes. The topics included: career paths in data science, start-up companies, treatment of dialysis patients, monitoring biodiversity, modelling turbulence, marketing financial products, wedding guest lists, and the more light-hearted, but timely research on the best combination of Christmas smells and sounds.

The common theme of all of the talks was the use of data to solve problems, to make decisions, or to evaluate processes. A number of speakers highlighted the need to educate businesses and clients about the fact that data science is about intelligently using data as a tool to assist decision making, rather than creating questions based on the data that are available.

As part of the charity gala, each attendee voted for a charity to receive a donation which came out of the entrance fee (introduced just for the charity event). The charities selected were Doctors without Borders and the RSPCA, who each received \$1000.

Overall, the event was a huge success and a great way to finish up the year of events for the Victorian Branch of the SSAI.

Laura Rodwell

Monika Buljan
telling us about
Christmas smells
and sounds.



WA BRANCH

YSC 2015 Conference Highlights from WA

The WA Branch was pleased to provide travel grants to two of our talented and enthusiastic young statisticians, Charley Budgeon and Joshua Bonn, to attend the young statistician's conference in Adelaide. In this newsletter issue we hear some of the conference highlights from Charley, and in the June issue we will hear from Josh.

Anna Munday

WA Branch President

YSC 2015 Conference Highlights

The Young Statisticians Conference 2015 at the historic University of Adelaide was my first academic conference I have attended as a PhD student. At this event I had the opportunity to present my current research, which is focused on assessing Alzheimer's disease, to fellow young statisticians and prestigious statisticians. The conference was held at a very convenient location within Adelaide, and the venue itself was well set up to cater for the numerous attendees.

There was a strong contingent of Western Australians attending the conference, including academics and students from the University of Western Australia and statisticians from Data Analysis Australia. The general level of the talks at the conference was very high and a fellow colleague, Michelle Trevenen, won the prize for the best poster presentation.

The keynote speakers Terry Speed, Sheila Bird, Geoff Lee, and Anna Munday, as well as the academic and career sessions were particular highlights for me. These provided young statisticians with an understanding of experienced statistician's research and working life, whether this was in an industry or an academic setting. In particular, it was a great pleasure and privilege to have a brief chat with Terry Speed, who was extremely friendly and approachable. Plus Anna Munday, the President of the Western Australian Branch of the SSAI, presented a great insight into the working life of a Consultant Statistician and what happens in the "real world".

This conference was an invaluable opportunity to attend an event where I could meet and network with other people at similar stages in their career to myself and learn about their research. I would like to make special mention of the organising committee and the sponsors of the conference, and thank them for a superb couple of days. Overall, I left the conference feeling inspired and excited for a future in statistics, and would thoroughly recommend attending these conferences to other young statisticians.

Charley Budgeon



The Western Australian contingent at YSC 2015. From L to R: Michelle Trevenen, Matthew Tuson, Robert Nguyen, Charley Budgeon, Joshua Bon, Chrianna Bharat, Anna Munday, Jennifer Bramwell, Sarah Bruce.

FROM THE OFFICE

I am writing this column as I am making my way back home from the Young Statisticians Conference (YSC) 2015 in Adelaide. Attending an event such as this conference reminds me of why I enjoy working for the SSAI so much. Being part of this community of statisticians makes me feel very privileged indeed! Everybody is so welcoming at these meetings, never making me feel that I am somewhat of a fish out of water, with not being a statistician and not being that young either! I really enjoyed seeing many of our young statisticians again, and meeting some new members as well. I even attended Sheila Bird's keynote presentation and I managed to follow most of it.

For me, the main benefit of attending our own conferences is hearing from our members what they think about the SSAI and more importantly, how the membership experience can be improved.

I spoke to a representative of one branch council who told me about the difficulty they have in finding volunteers to join the branch council. As a result the same members volunteer year after year, swapping from one council position to another one, and getting more and more tired of the duties related to representing a branch. At the same time another member, who has just taken on a role with our CPD Committee, told me how rewarding he found it to be part of a group that makes things happen for the SSAI. He actually said that since he started to get actively involved, he felt he got more out of his membership with the SSAI. I am so pleased that he feels this way and I know he is not alone. Research has shown that association members (of any association - not SSAI specific) will feel better about their membership and identify more with their association, if they play an active role within it.

There are many opportunities to get involved with the SSAI. There are small jobs and not-so small jobs. There are occasions when we need more senior statisticians and then there are those that would be perfect for a young statistician. **If you are interested in joining one of our many committees, please contact me at eo@statsoc.org.au.**

For 2015 I would like to get the webinar series going again, which dried up halfway through 2014. At YSC 2015 I suggested to some delegates that they might take turns moderating the webinars, and I was pleased to hear that they were interested in doing this. If you would like to moderate a webinar or if you know of a good speaker I'd love to hear from you!

Some other things we are working on is finding better ways to promote our Accreditation program and perhaps expanding it into South East Asia. Another idea that was suggested to the Accreditation Committee was to increase the levels of Accreditation.

The ASC2016 Committee is well on the way with the planning of our big conference, which will be held in Canberra on 5-9 December 2016. The CPD Committee is continuing to look for workshop opportunities, as are many branches and sections. With the next conference almost two years away, there is plenty of time to fill with other events!

If you can think of other ways where the SSAI could make a difference in SSAI's members' lives, please get in touch with me. Our Executive Committee is always willing to follow up on any sensible idea and I enjoy hearing from our members.

Marie-Louise Rankin



Marie-Louise Rankin