

Regional Newsletter, December 2016



In this issue

ROLAND LANGROCK

Welcome to the December 2016 issue of the BIR Newsletter. For this issue we've gathered reports from recent meetings and activities alongside the regular offerings from our regional officers. We also look forward to some of our plans for 2017, including the Channel Network Conference in April.

Do make a note of our forthcoming events in your diary, and we'd love to hear from you if you have items you'd like to share in future newsletters. To get in touch, just send a message to roland.langrock@uni-bielefeld.de.

President's corner

MARTIN RIDOUT

First of all, my congratulations to outgoing President John Matthews on completing his term of office as President. My impression is of a very successful two years for the Region, with some very well attended meetings. Fortunately for me, John remains on the Committee for a further year as Outgoing President, and I am sure I will continue to seek his advice on many issues. My thanks also to the Region's other officers Sue Welham (Secretary), Mark Brewer (Treasurer) and Rhian Daniel (Membership Secretary) for helping me to ease into the role of President.

As this is my first President's corner, I wanted to start off by introducing myself. Like quite a few statisticians of my generation, I started my statistical education by taking the MSc in Biometry at University of Reading. At the time, the Department of Applied Statistics was headed by Robert Curnow, and my project supervisor was Roger Mead. We were encouraged to take up student membership of the IBS, and as far as I can recall I've been a member ever since.

From Reading, I moved a few miles up the road to the now defunct Grassland Research Institute at Hurley, and later to the East Malling Research Station in Kent. I moved to the University of Kent in 2000 and have been there ever since. My interests are quite broad, but remain

mainly focused on applications of statistics in biology and ecology.

It was a surprise and of course a great honour to be asked to become the President of the Region. I think my last involvement with the committee of the BIR, which then was just the British Region, was as Treasurer in 1992-1995. At that time, the role was combined with Membership Secretary and the membership records at the time consisted of a card index. The card index is long gone, but some things don't change — I remember the Committee having to deliberate a sharp fall in the dollar exchange rate in 1993; the dollar rate is very important to the BIR, as Mark Brewer explains later in this issue. Congratulations are due to Mark, who has recently been elected to the International Biometric Society Executive Board for 2017.

My congratulations also to Jane Hutton, who was awarded The Rob Kempton Award for Outstanding Contributions to the Development of Biometry in the Developing World, based on her substantial contributions to the development of biometry in Africa. An article in the latest Biometric Bulletin includes a picture of Jane receiving her award.

Later in this issue you can read about two meetings in the spring. Nowadays data are everywhere, but it's not always obvious how they can be used. The first meeting, organised jointly with the South of England Genetic Epidemiology Group (SEGEG) on "Exploiting publicly available genetic data" should be a great help in this regard. The second major event is the 6th Channel Network Conference (CNC), to be held at Hasselt University in Belgium. As those who have attended previous CNCs will know, these conferences provide a great opportunity to network with colleagues from Belgium, France and the Netherlands. The Chair of the Scientific Committee rotates around the regions, and this time is the turn of BIR. I'm very grateful to Daniel Farewell, for the work he has put into this role, as well as to the other BIR reps on the committee, Dan Jackson and Tom Nye. I encourage everyone to consider attending what should be a very interesting and enjoyable meeting.

In conjunction with the Fisher Memorial Trust, we are again offering bursaries to help students and career-



young members of the region to attend the CNC, details below. The reports we received from bursary recipients for the IBC in Victoria indicated both that attendance would not have been possible without the bursary and that they had benefited from the breadth of the conference and the opportunity to discuss their work with interested colleagues. One wrote "The conference provided an invaluable opportunity for me to get feedback on my work, both during the questions session directly after my talk, as well as during the rest of the conference, since I was approached by various researchers to further discuss my presentation and related research. One of these discussions resulted in an invitation for me to deliver a seminar in another university."

Another way in which we support young biometricians, again with the support of the Fisher Memorial Trust, is through the biennial Young Biometrician Award, which is next awarded in 2017. Details are below. Although the nomination period doesn't start until 1 March, it's not too early to start thinking about whether there is someone who you might nominate.

Lastly, I'd like to thank the people who are leaving the BIR committee, James Carpenter, John Hinde, Dan Jackson, Jannette McQuillan, Doug Speed, and extend a welcome to our new committee members, Lisa Hampson, Elizabeth Williamson and Hannah Worthington.

Young Biometrician Award

SUE WELHAM

The BIR, jointly with the Fisher Memorial Trust, award a prize every two years for young biometricians who are BIR members. All such biometricians who have worked for no more than 5 years (or full-time equivalent) since completing full-time education are eligible, including students. The award recognises the research of one paper published, or accepted for publication, in a refereed journal and comprises a diploma and a prize of £1000. This is the fourth time the award will be made; it was won in 2011 by Rachel McCrea (University of Kent), 2013 by Doug Speed (UCL) and in 2015 by David Robertson (MRC Biostatistics Unit, Cambridge).

A call for nominations for the 2017 award will be made next spring, with the closing date for nominations as 31 May 2017. The full rules of the competition can be found at <http://bir.biometricsociety.org/award>. To make a nomination, simply send a copy of the paper, with a covering message, to the BIR Regional Secretary (stat4biol@gmail.com) before the closing date. In the case of

co-authored papers, a full statement of the contribution from the young biometrician is also required.

Please take this chance to encourage any younger colleagues and students to join the IBS in 2017 so they can be eligible for this excellent opportunity!

50th anniversary of the Cormack-Jolly-Seber model

BYRON MORGAN



Steve Buckland and Richard Cormack

Just over 50 years ago, three papers appeared which independently described the fundamental approach for analyzing capture-recapture data. It is now called the Cormack-Jolly-Seber model. This anniversary is celebrated in the second issue of *Statistical Science*, 2016, guest edited by Steve Buckland and Byron Morgan. It features transcribed interviews with George Seber and Richard Cormack. In addition there are eight research papers that demonstrate how the capture-recapture area is still developing, with applications to genetics, social and medical areas, as well as ecology.



Byron Morgan with George Jolly's two daughters



Shown in the photographs are Steve presenting a copy of the issue to Richard, in St Andrews University, Rachel Fewster, a co-author of two of the papers in the issue, presenting a copy to George Seber, in the University of Auckland, and Byron presenting two copies to George Jolly's two daughters Heather Hannah and Fiona Davies. A third copy goes to their brother David Jolly, who lives in Saudi Arabia.



George Seber and Rachel Fewster

Report on the meeting “Design of experiments in medicine”

MARTIN RIDOUT

The final regional meeting of 2016 was held at Chandler House, University College London, immediately following the AGM. It was organised by the outgoing president, John Matthews, and began with his presidential address entitled “Stepped Wedge — Cluster or Crossover?”. Stepped wedge designs are a type of cluster-randomised trial that is becoming increasingly popular, in particular in studies of health service delivery. But they can also be regarded as a type of crossover design, and the talk explored how this perspective allows additional insights that are helpful in looking at the efficiency of different designs.

John was followed by Rosemary Bailey, who talked about “Design of dose-escalation trials”, describing some of her work as a member of a Royal Statistical Society working party, set up following a disastrous study in which all treated volunteers were admitted to intensive care within a few hours of treatment. Rosemary explained how her experience in quite different areas nonetheless enabled her to come up with new designs that gave more information but used the same number

of volunteers in a safer way. Whilst the benefits of these designs seems irrefutable, the subsequent discussion suggested that they have not yet been widely adopted by the pharmaceutical industry. One thing that came across from both of these talks is the way in which classical design concepts, perhaps assisted by modern developments like computer searches, continue to be very useful in application areas that did not exist when the theory was first developed.

The last talk before tea was by Lisa Hampson on “Optimal data combination rules in seamless Phase II/III clinical trials”. The basic problem here is to select the most promising amongst a set of treatments in a Phase II trial to be taken forward to a Phase III trial. A seamless design uses data from both Phases can be used in the final analysis, to decide whether the treatment selected at Phase II is better than the control. The challenge which Lisa addressed is to find suitable decision rules that provide good power under a wide range of conditions. Two such rules were identified, and the use of a seamless design was found to have the potential for large savings in sample size.

After tea, Rebecca Walwyn and Steve Gilmour gave a joint presentation on “Building on design of experiments methodology for clinical trials of complex interventions”. The Medical Research Council (MRC) defines complex healthcare interventions as ‘interventions that contain several interacting components’, suggesting that, rather than regarding a complex intervention as a single ‘treatment’, it might be better represented by several treatment variables, allowing ideas of factorial design and response surface methodology to be exploited. The talk developed this idea, considering how four aspects of intervention complexity identified by MRC map onto existing and novel experimental designs, with the aim of unravelling the complexity of these interventions.

In the final talk of the afternoon, Thomas Jaki returned to the theme of selecting promising treatments in clinical trials, in a talk entitled “Optimal designs for multi-arm multi-stage clinical trials”. Multi-stage designs have the potential to improve efficiency compared to single-stage designs by eliminating ineffective treatments early and giving the opportunity to stop early if treatment efficacy is clearly established. But the challenge is to design efficient multi-stage designs for comparing several treatments with a control. Tomas demonstrated a computationally efficient and readily implemented procedure for finding designs that are close to optimal.



More than 40 people attended the meeting. The well-presented talks gave a clear sense that, despite occasional reports of its demise, design of experiments continues to provide interesting challenges for research that have immediate practical implications.

Report on the meeting “Challenges and opportunities of analysing citizen science data”

LAURA GRAHAM & RACHEL MCCREA

This meeting was jointly organised by the British and Irish region of the International Biometric Society, British Ecological Society and the Environmental Section of the Royal Statistical Society. The aim of the day was to identify some of the recurrent difficulties of analysing citizen science data and to discuss the possible solutions. The event brought together those working with citizen science data in a range of ways: statisticians, ecologists working with citizen science data, ecologists organising citizen science schemes and more. Attendees came from a range of universities, research institutes, and public and charitable organisations.

The first part of the day focussed on talks centred around how we can think about and model the human aspect of the data collection process in terms of observer bias (Michael Pocock, Ali Johnston); how to identify and model other aspects of bias (Jonas Geldmann, Nick Isaac); and reconstructing and comparing trends obtained from citizen science and structured data (Steffen Oppel, Emily Dennis).

The afternoon session moved to discussions which gave participants a chance to network and discuss particular challenges and solutions for working with citizen science. These discussions included sources of bias and statistical methods to correct for these; which came first — the data or the question; and methodological directions.

2017 Channel Network Conference at Hasselt University

DANIEL FAREWELL

The 2017 Channel Network Conference of the International Biometric Society (IBS) will take place at Hasselt University, Campus Diepenbeek, Belgium, from 24-26 April 2017. This biennial conference is organized by four

regional IBS societies: the Belgian Region, the French Region, the British & Irish Region and the Netherlands Region. This conference brings together biostatisticians to discuss the advances in statistical methodology and their application to the analysis of biological and medical data. The conference lasts three days, comprising invited and contributed sessions, and will be preceded by two courses. Typically around 150 researchers from both academia and industry participate in the conference.



Grote Markt Hasselt (photo by Paul Hermans)

We are delighted that Peter Diggle, current President of the Royal Statistical Society, will be our keynote speaker. In addition, we will have invited sessions on:

- High-dimensional Bayesian variable selection (organised by Alex Lewin)
- Analysis of human growth (organised by Sophie Swinkels)
- Neuroimaging (organised by John Aston)

Carel Peeters and Wessel van Wieringen will be teaching a course on network modelling for high-dimensional data, and Sherri Rose will be presenting her course on targeted minimum loss based estimation. We are honoured that Rebecca DerSimonian has agreed to give our closing plenary lecture.

Important deadlines include:

- Abstracts for posters and contributed talks: 31 January 2017
- Early bird registration: 7 March 2017
- Final registration: 14 April 2017

For more information, see <http://www.uhasselt.be/channel-network-conference-2017>.



Bursaries to attend the 6th Channel Network Conference

SUE WELHAM

The BIR and the Fisher Memorial Trust are awarding up to 5 bursaries each of £300 to help career-young biometricians attend the 6th Channel Network Conference in Belgium (24-26th April 2017) to present their work. In this context, career-young means within full-time education working on biometrical topics or employed as a biometrician for less than 5 years.

Applicants must be members of the BIR and employed or studying in the UK or Ireland at the closing date. Applications should be submitted by email to the Regional Secretary (stats4biol@gmail.com) by 31st Jan 2017 and applicants will receive a decision by 28th Feb 2017.

Applications should consist of a cover letter, a brief CV, and the abstract submitted to the conference website. The cover letter should make the case for support, stating clearly any other financial contributions sought to attend the conference and the relevance of the conference to the applicant. The CV should include sufficient detail to verify eligibility as a career-young biometrician.

The award is contingent on the abstract being accepted for oral or poster presentation and attendance at the conference. A report on the conference and its benefits for young biometricians will be required on return.

Meeting on “Exploiting publicly available genetic data”

DOUG SPEED

There will be a joint meeting of the South of England Genetic Epidemiology Group (SEGEG) and the International Biometric Society (IBS) on 10th March 2017 (organised by Doug Speed and Paul O'Reilly), with the theme “Exploiting publicly available genetic data”, most likely to be held at UCL. Hugues Aschard, Heather Elding, Jonathan Marchini and Helen Warren have been confirmed as speakers, and so it should be a fantastic meeting!

More details and registration to follow early in the new year.

Secretary's corner

SUE WELHAM

As another year gallops to a close, I'd like to invite members to get more involved with the regional activities next year. We are now starting to establish a network of champions in universities around the country — our champions advertise our meetings and opportunities like travel bursaries and the Young Biometrician award and encourage BIR membership, especially for students (for whom it is free!). If you would be willing to perform this function in your department or institution, then please do let me know. If you have ideas of suitable topics for a regional meeting or would be interested in helping to organise or host such a meeting, then again please get in touch. And we would ask all mid- or late-career members to encourage any career-young colleagues to join and apply for our bursaries or be nominated for our prize.

Looking ahead to 2018, the next IBC will be held in Barcelona from 8-13th July 2018. A call for invited sessions is open until 1 Feb 2017, so if you have ideas for a session that you would like to see at this conference, now is the time to put your ideas onto the official submission form and send them in. You can find full details on the IBS website at <http://www.biometricsociety.org/meetings-events/ibcs/>.

The IBS, The British and Irish Region, and Brexit

MARK BREWER

The result of the EU Referendum in the UK has led to a dramatic fall in currency exchange rates for the pound sterling. This has consequences for the Region as the subscription rates to the international Society are set in US dollars, but the local rate is paid by members in pounds. The international “full member” rate has been set at \$60 for a number of years now, and recently the equivalent Region rate of £40 has largely gone directly to the central office of the IBS. Post-referendum, \$60 now cost around £45 to buy (at the time of writing...), meaning that the Region committee was faced with either raising the Regional subscription to cover the difference, or to eat a little into our reserves.

Given the considerable uncertainty with regard to both the politics and the economics surrounding Brexit, and given the Region has reasonable reserves which can be reduced to this extent without any immediate threat



to our financial position, the committee have taken the decision not to raise the Regional subscription rates for 2017. This does mean that we stand to lose around £5 for each full member subscription, but we wanted to allow time for the situation to stabilise in order to minimise the number of changes we are forced to make. Regrettably, we offer prior warning that unless the recent slide in the value of the pound is reversed, subscription rates for 2018 will almost certainly need to increase, although we will do our utmost to limit any increases. Of course, this issue has a much lesser impact on Irish members of the Region, who will in fact experience a small reduction in subscription costs in 2017.

2017 Subscriptions due!

MARK BREWER

Your membership of the International Biometric Society, British and Irish Region is now due for renewal. The fees for 2017 remain unchanged:

- Full Member: £40
 - Retired Member: £20
 - Biometrics and the Biometric Bulletin: £7 extra
 - JABES and the Biometric Bulletin: £7 extra
 - JABES, Biometrics and the Biometric Bulletin: £14 extra
 - Student Member: Free (Note: please renew your membership for 2017 on the website)
- If you are a full or retired Member, there are several ways that you can pay for your membership for next year.
- Standing order: If you have set up a standing order your membership renewal is automatic each year. If you would like to set up a standing order please contact Mark Brewer (Mark.Brewer@bioss.ac.uk);
 - Paypal: Go to <https://biometricsociety.org.uk/amember/signup> to pay your membership fees;
 - Cheque: If you pay by cheque, please send the form at the end of this newsletter with your cheque to Mark Brewer (address is on the form).
- Please advertise the society widely amongst your colleagues! Any new members can join the society by visiting <http://bir.biometricsociety.org/membership>.





International Biometric Society, British and Irish Region

RENEWAL OF MEMBERSHIP for (name)

MEMBERSHIP CATEGORY: Please check

- FULL member** ☐ (Annual Subscription 40 pounds sterling) Full benefits of the Society including electronic subscription to Biometrics, Journal of Agricultural, Biological, and Environmental Statistics (JABES) and the Biometric Bulletin, voting privileges and the right to hold elective office.
- RETIRED member** ☐ (Annual Subscription 20 pounds sterling) All the rights of Full Membership. The retired category is open to anyone who has been a member for at least 10 years, and who is no longer in paid employment (working less than 0.2FTE).

Members have the options of receiving paper copies of the journals. Please check if applicable:

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Please detail any changes to contact details here:

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You can renew your subscription online at <http://bir.biometricsociety.org/membership> (see foot of page). If this is not possible, then please send this form with a cheque made payable to 'BIOMETRIC SOCIETY' to Mark Brewer (Treasurer), BioSS Office, The James Hutton Institute, Craigiebuckler, ABERDEEN, AB15 8QH.

If you would prefer to pay by standing order or bank transfer, please contact Mark at M.Brewer@bioss.ac.uk for details. Note that with online membership renewal, payment can be made via PayPal (but please note you do not in fact need a PayPal account – just a debit or credit card).