

BIOMETRIC BULLETIN

International Biometric Society Internationale Biometrische Gesellschaft Société International de Biométrie
 “Biometry, the active pursuit of biological knowledge by quantitative methods.” - R.A. Fisher, 1948

President's Corner



Greetings!

Janus, the two-headed god of Roman mythology for whom the month of January is named, is the god of transitions, beginnings and endings, and, as 2016 winds to a close, it is time to look both back and to the future of our IBS.

Looking back, things from *IBC2016* in Victoria are now finalized. There is a wonderful collection of photos on our website. The *Young Statisticians' Wednesday Walking Tour* attracted members of all ages, and my favorite photo is of the happy group on the point at Victoria Harbor. Also on our website under the 'Education' tab are recorded invited sessions and a short course – a big thank you to the speakers of those sessions for allowing their sessions to be recorded and posted online. One item in our planning is a better organization of all our educational materials, so eventually they will be easier to navigate on the website, but they are all already there to be enjoyed now. Even the accounts are finalized, showing that, aided by the currency exchange rates, *IBC2016* made a small profit.

Looking forward, things are already moving for *IBC2018* in Barcelona. At Victoria, the International Program Committee (IPC) and Local Organizing Committee (LOC) were approved; I thank all those members for their willingness to serve. The *Calls for Invited Sessions and Short Course Proposals* are about to go out, and work on the conference website is beginning. However, 2017 comes before 2018, with many exciting conferences planned by IBS Regions and Networks. I encourage all of you to participate in your

own regional meetings and other regional meetings also where possible. We are a society of regions, and these more local conferences are a great place for younger members to present their first papers and to start to get involved in IBS and a great place for longer-term members to meet with the next generation of Biometric Statistical Scientists. I also remind members of Developing Countries that they can apply to the *Awards Fund* for help in attending regional meetings of our Society in *non-IBC* years. This is a relatively new program that got off to a great start in 2015, making awards to members from eight different developing countries to attend four different regional meetings. Let's try to do at least as well in 2017!

Looking back, there are many things for which I much thank our retiring Officers, Past-president John Hinde and Secretary-Treasurer James Carpenter, but first I would like to thank them for all the work they have done to consolidate and clarify *IBS Policies and Procedures*, following the establishment of the new governance structure under former IBS Presidents Kaye Basford and Clarice Demetrio. While this is not a glamorous or exciting task, it is an important one. The 'policies and procedures' document is the operating manual of our Society, and with our constantly changing roster of volunteer leadership, it provides the framework and continuity for what we do. In preparing for the in-person *Executive Board (EB) Meeting* in Victoria and for our more recent virtual *EB Meeting*, and working with our new Executive Director Peter Doherty, I have become very aware of the key importance of this document.

Looking forward, of course this is a constantly evolving document, as changes are made

IN THIS ISSUE

| | |
|---|----|
| President's Corner | 1 |
| From the Editor | 2 |
| Region Key. | 2 |
| XXIX International Biometric Conference .. | 3 |
| New Feature: Polling and the U.S. Presidential Election | 5 |
| <i>Biometrics</i> | 7 |
| <i>JABES</i> | 7 |
| IBS Past President: Niels Keiding | 8 |
| Software Corner: Visualizing Variable Clustering with Correlations in R. | 10 |
| Regions | 12 |
| *Meet the Presidents of IBS Regions (Part II) | 12 |
| *News | |
| *Australasian Region. | 14 |
| *Belgian Region | 14 |
| *British & Irish Region | 14 |
| *Dutch Region | 15 |
| *Eastern Mediterranean Region. | 15 |
| *Eastern North American Region. | 18 |
| *French Region | 19 |
| *German Region. | 20 |
| *Japanese Region | 20 |
| *Group of Poland | 21 |
| *Spanish Region | 21 |
| *Western North American Region .. | 22 |
| Announcements. | 22 |
| Meetings | 23 |

in response to new concerns or new initiatives. At our recent meeting of the Executive Board we approved several changes, including two new subsections. First, you may recall that IBS has formalized its relationship with the International Statistical Institute (ISI) through a *Memorandum of Understanding (MOU)* which calls for, among other things, each Society to appoint a liaison to the other: ISI had previously appointed former IBS President Kaye Basford (AR) as ISI liaison

Continued on p. 6

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From the Editor

Dear Readers,

While writing my fourth *Editor Column* for the *Biometric Bulletin* I realized that I have completed a full year of being the *Bulletin's* Editor. I am happy and excited to continue for the next two years. Since you'll be receiving this issue at the beginning of the New Year, I would like to share my thoughts regarding the *Bulletin* with you. I am happy I was able to maintain the *Regional News* section and would like to thank the Regional correspondents who collaborate with me so fruitfully. In 2017 I hope to be able to include special sections of common topics of IBS Regions. In each of the four issues published in 2016, I made an effort to include the *New Feature* article written by our professional journalist, Daria Steigman – an entrepreneur, writer and founder of marketing/PR consultancy, Steigman Communications. There were occasions where the idea of the topic came to my mind just three weeks before the submission deadline of the *Bulletin*. I would like to thank Daria for pulling efforts together with me and my ideas and for writing these articles, which include interviews by phone with various contact persons, so swiftly and with lots of talent. A new section of the *Bulletin* since the first issue of 2016 was the *Software Corner*. Thank you Urko Aguirre Larracochea (*Spanish Region*), Garth Tarr (*AR*) and Simon A. Jackson (School of Psychology, University of Sydney, Australia) for writing the four wonderful articles which appeared in the *Bulletin* in 2016. I do hope to continue with this section. Last but not least I would like to thank Alphonsus Baggett, Director of Education, from the International Biometric Office (IBO) Staff. We often times work under pressure and tight deadlines due to various Holidays in Israel, as well as the US, which rarely overlap, and Alphonsus does an excellent job. Thank you All!

One thing that I would like to improve in 2017 is the level of communication between the readers and me, the Editor. Please do feel free to write to me and suggest ideas for the content of the *Bulletin* or even just to comment that you enjoyed a specific article. It would mean a lot to me. I do hope we will have more communications in the coming year.

In this issue I am happy to continue with another new section, *Meet the Regional Presidents of IBS*. This fourth issue will introduce the Presidents of the Australasian Region (AR), Eastern Mediterranean Region (EMR), Eastern North American Region (ENAR) and

Region Key

Regions

RArg - Argentinean Region
AR - Australasian Region
ROeS - Austro-Swiss Region
RBe - Belgian Region
GBoT - Botswanian Region
RBras - Brazilian Region
BIR - British and Irish Region
RCAC - Central American-Caribbean Region
GCI - Chilean Region
CHINA - Chinese Region
EMR - Eastern Mediterranean Region
ENAR - Eastern North American Region
ECU - Ecuadorian Region
GEth - Ethiopian Region
RF - French Region
DR - German Region
GGha - Ghanian Region
IR - Indian Region
RItI - Italian Region
JR - Japanese Region
GKe - Kenyan Region
Rko - Korean Region
GMal - Malawi Region
GNI - Nigerian Region
NR - Nordic-Baltic Region
PKSTAN - Pakistani Region
GPol - Polish Region
GRo - Romanian Region
SING - Singaporean Region
GSaf - South African Region
REsp - Spanish Region
ANed - The Netherlands Region
GUgan - Ugandan Region
WNAR - Western North American Region
GZim - Zimbabwean Region

Networks

CEN - Central European Network
CN - Channel Network
SUSAN - Sub-Saharan Network

French Region (RF). In the section, *Software Corner*, I have invited Simon A. Jackson, a Postdoctoral Research Fellow (School of Psychology, University of Sydney, Australia), whom I met on Twitter, to write an article about "*Visualizing Variable Clustering with Correlations in R*". I hope you will enjoy the article and the nice graphs included. Also in this issue, John Hinde, the Society's Immediate Past President, has kindly agreed to interview former IBS President Niels Keiding (1992-93). Thanks John for this very interesting interview.

Two days before the *U.S. Presidential Election*, and before I heard the surprising, unexpected results, I had an idea to write an article about this topic. Leslie McClure, ENAR's correspondent, recommended interviewing Prof. Jordan Ellenberg (Department of Mathematics, University of Wisconsin, USA)

Continued on p. 4

XXIX International Biometric Conference

BARCELONA IBC 2018

XXIX INTERNATIONAL BIOMETRIC CONFERENCE
Barcelona, 8-13 July, 2018

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Fred van Eeuwijk (The Netherlands)



From the Editor

Continued from p. 2

who is the author of the book *How Not to Be Wrong*, which includes a chapter on the **2000 Election**. Daria Steigman, our professional journalist, wrote an article based on the interview with Prof. Ellenberg and with Prof. Andrew Gelman (Statistics Department & Political Science Department, Columbia University, USA). Prof. Gelman is the author of the book *Red State, Blue State, Rich State, Poor State: Why Americans Vote the Way They Do*. Daria's article is about polling, sampling and the

election, and although it is not pure Biostatistics, we thought it would be of interest to you, the readers.

Note that preparations for the **29th International Biometric Conference** being held July 8-13, 2018 in Barcelona, Spain have already started. Invited session proposals should be submitted by **1 February 2017**.

I wish you all the best for 2017, and Happy New Year.

Havi Murad

2018 International Biometric Conference

Call for Invited Session Proposals

Please submit by 1 February 2017!

The International Program Committee (IPC) of the International Biometric Society's (IBS) **XXIXth International Biometric Conference (IBC2018)** calls for invited session proposals. **IBC2018** will be held 8-13 July 2018 at the Barcelona International Convention Centre in Barcelona, Spain.

Barcelona, the capital of Catalonia, is one of the world's leading tourist, cultural, architectural and entertainment hubs, with a rich influence on arts, media, education and fashion. It is home to many World Heritage Sites, as designated by the United Nations. It has a great number of museums and parks and is also famous for its beaches. Barcelona is also recognized for its excellence in research and innovation.

An **IBC** invited session brings together a small number of speakers (two–four) on a particular statistical topic. A discussant may also form part of a session. A discussant should describe the latest research in the area of statistical theory or application of the session and make it accessible to a 'non-expert' audience, as well as provide commentary on the various talks in the session.

We encourage the submission of proposals covering a wide range of topics in the theory and application of statistics to biological and life sciences; moreover, sessions that involve speakers from diverse geographical regions are encouraged where possible.

Invited session proposals should be sent by email to the **IBC2018** IPC

Chair, Charmaine Dean: ibc2018@uwo.ca. **Proposals should be submitted on or before 1 February 2017.**

All IBC2018 invited session proposals should include:

- Your name, affiliation, contact address and email address
- Full name of **all** authors/speakers needing access to the submission, including their affiliation email address
- Suggested session title and keywords
- Motivation for the proposed session
- Suggested organizer (possibly yourself), speakers and discussant
- Tentative titles for all talks of invited speakers

Use of a specific template for all proposals is compulsory. The template, along with additional information on the **IBC2018**, is located <http://www.biometricsociety.org/meetings-events/ibcs/>.

Please note that a session organizer cannot be an invited speaker of the same session.

Proposals will be evaluated by the IPC, and the authors will be informed by early March 2017 of acceptance, rejection or need for revision (of topic and speakers). Revised proposals will need to be resubmitted by 15 March 2017. By early April 2017, authors of revised proposals will be informed about the decision of the IPC on proposals submitted. **Please note that there are a limited number of invited session slots, and that, unfortunately, the IBC is unable to provide funding to cover travel expenses or registration fees for speakers participating in invited sessions.** Thank you for your support of the **IBC**! We look forward to seeing you in Barcelona.

taught by one or more instructors on a topic that is of interest to many potential **IBC** participants.

Normally, short courses are held on the Sunday before the start of the conference, which will be 8 July 2018. The course can either last the full day (six – eight hours) or a half day (four hours).

Proposals should include motivation, proposed content(s) and potential target audience of the course, as well as a description of the previous teaching experience and subject area expertise of the instructor(s). We also ask that the proposal include contact information for one – two participants of a previous course taught by the instructor(s) whom we may contact if needed.

Please download and complete the submission form provided

Call for Short Course Proposals

Please submit by 15 March 2017!

The International Biometric Society (IBS) Education Committee is calling for short course proposals in support of the **XXIXth International Biometric Conference (IBC2018)**, to be held 8-13 July 2018 at the Barcelona International Convention Centre in Barcelona, Spain.

Our goal is to provide courses that will attract registrants from a number of different application areas. We also want to reach out to potential participants from economically developing countries. Course selection will be by committee consensus and will take into account how the courses complement and enhance the scientific program of the conference. A conference short course is usually

([download the proposal form here](#)) for the proposal, and send by email to the Education Committee Chair, Pascale Tubert-Bitter: pascale.tubert@inserm.fr with a copy to the International Biometric Office (IBO) at conference@biometricsociety.org.

Proposals for short courses should be submitted electronically on or before 15 March 2017. Proposals will be selected by the Education Committee by 15 June 2017. Thank you for your support of the **IBC!** We look forward to seeing you in Barcelona.

New Feature: Polling and the U.S. Presidential Election

By **Daria Steigman**

On October 30, FiveThirtyEight ran a post with the provocative headline, “[The Cubs Have a Smaller Chance of Winning than Trump Does](#).” Three days later the Chicago Cubs ended the baseball franchise’s 108-year World Series drought. They won.

A week after that, Donald Trump was president-elect of the United States.

Almost every poll had Trump losing to Hillary Clinton. It seemed so “inevitable” that even Trump’s sons were talking about life after the election—and they didn’t mean the White House.

How did everyone seem to get this so wrong?

Three days after the election, statistician Nate Silver suggested that while the result might have been shocking it perhaps was not surprising. The founder of FiveThirtyEight [wrote](#):

“Based on what most of us would have thought possible a year or two ago, the election of Donald Trump was one of the most shocking events in American political history. But it shouldn’t have been that much of a surprise based on the polls — at least if you were reading FiveThirtyEight. Given the historical accuracy of polling and where each candidate’s support was distributed, the polls showed a race that was both fairly close and highly uncertain.”

What did we miss?

Minding the 2%.

To find out, [Biometric Bulletin](#) talked with Andrew Gelman, a professor of statistics at Columbia University who has done research on why campaign polls are so variable when elections are so predictable. We asked him what happened.

“Polls consistently showed Donald Trump with 48 percent of the two-party vote,” says Gelman. “While Trump lost the popular vote, he won the electoral college because of the way that votes were distributed.”

Gelman explained that the errors in the polls were in line with historical findings, as reported in an article in the [New York Times](#) entitled [When You Hear the Margin of Error Is Plus or Minus 3 Percent, Think 7 Instead](#). “Those errors in key swing states made all the difference,” he said.

Gelman added that “while a 2-percent error is within what one might expect from nonsampling error in national poll aggregates, nonsampling error has a reason: it’s not just random.” In other words, there were reasons why the predictions were off.

Here are 5 possible reasons the polls were wrong.

While Gelman is still analyzing the results (and many people likely will be analyzing the 2016 election for years to come), he cited a number of possible explanations for what happened.

- 1. Differential voter turnout.** The [Los Angeles Times](#) [reported](#) that Hillary Clinton received about the same vote total as President Obama had four years earlier. Despite that, she lost because of where her votes were (i.e., concentrated in California and New York).
- 2. Last-minute deciders.** According to exit polls, Donald Trump had a 7-point advantage among the 14 percent of voters who made up their minds late. That bumped his percentage average up about one-half a percentage point.
- 3. Differential nonresponse.** Gelman noted that swings in the polls don’t always correspond with real changes in voter preferences but rather differences in nonresponse patterns (and whose supporters were responding to specific polls).
- 4. Pollster choice.** Gelman said different pollsters will crunch numbers in different ways. To illustrate the point, he noted that Nate Cohn of the [New York Times](#) asked [four different pollsters](#) in September to analyze a Florida pre-election poll. Gelman, along with colleagues Sam Corbett-Davies and David Rothschild crunched the numbers and came back with Trump +1. The others three polling groups arrived at Clinton +1, Clinton +3, and Clinton +4. Gelman said that the main reason his estimate was different from everyone else’s was that “one of the variables we adjusted for was party registration.” He added that the particular sample had more registered Democrats than you’d expect based on 2012 voting patterns and the state’s current demographics. (Trump won Florida by by 1.3 percent.)
- 5. Third-party collapse.** Nationwide, only about 5.5 percent of voters opted for a third-party candidate. There was no large, Republican anti-Trump vote. You need to look

no further than Utah, a state some thought would either vote third-party for Evan McMullin or split the conservative vote and give Clinton an outside chance of winning the state. Neither happened. Trump won 45.9 percent of the vote, followed by Clinton (27.8%) and McMullin (21%).

Finally, Gelman points out the Trump not only outperformed the polls in several swing states, but he also did far better than expected in states like North Dakota and West Virginia that were already solidly Republican.

How we think about elections.

In our quest for answers, **Biometric Bulletin** also talked to Jordan Ellenberg, the John D. MacArthur professor of mathematics at the University of Wisconsin. Ellenberg wrote about the 2000 election in his book, *How Not to Be Wrong*. He also pointed out that the polls really weren't all that off—the result just wasn't what people expected.

Ellenberg told **Biometric Bulletin** that the Bush v Gore election “put pressure on the way many Americans think about what an election is for and should do.” He added that this election is likely to do much the same.

Here's Ellenberg's argument: Americans think presidential elections are about the will of the people and who voters want to lead the country. But they're also about processes and procedures that produce a certain result. He noted that more people

supported Gore in 2000, so they wondered: “how did we end up with Bush?” Similarly, over 2.5 million more people voted for Clinton than for Trump.

So maybe that's the answer: Elections aren't really about *who* should be president but about a procedure that produces an outcome. And sometimes that outcome might not be statistically surprising but still manages to shock everyone.

FiveThirtyEight 1: <http://fivethirtyeight.com/features/the-cubs-have-a-smaller-chance-of-winning-than-trump-does/>

FiveThirtyEight 2: <http://fivethirtyeight.com/features/why-fivethirtyeight-gave-trump-a-better-chance-than-almost-any-one-else/>

New York Times 1: <http://www.nytimes.com/2016/10/06/upshot/when-you-hear-the-margin-of-error-is-plus-or-minus-3-percent-think-7-instead.html>

Los Angeles Times: <http://www.latimes.com/politics/la-na-pol-election-final-20161209-story.html>

New York Times 2 (4 different pollsters): <http://www.nytimes.com/interactive/2016/09/20/upshot/the-error-the-polling-world-rarely-talks-about.html>

President's Corner

Continued from p. 1

to IBS, and IBS has now appointed Jane Hutton (BIR). I welcome both Kaye and Jane in their new roles and look forward to their planned collaboration in the area of Biometric Science education in the developing world. Second, through the initiative of incoming President-elect Louise Ryan, IBS has become a member of **Friends of Committee of Presidents of Statistical Societies (COPSS)**. Of course IBS is already represented in COPSS through our North American Regions ENAR and WNAR, but **Friends of COPSS** is a broader grouping of Societies with a more international focus. The leadership of these Societies meets at **Joint Statistical Meetings (JSM)** each year, providing a forum for discussion of matters of mutual interest and concern.

The end of an even-numbered year, this is also a time of transition in our Executive Board. Our 12 Board members serve four-year terms; every two years one-half of them step down. Four members are leaving the Board: Sharon-Lise Normand (ENAR), Paulo J. Ribeiro (RBras), Alan Welsh (AR) and Ernst Wit (ANed). I would like to thank them for their service to IBS, as well as the two Board members (José Pinheiro (ENAR) and Andreas Ziegler (DR)) who were re-elected to a second four-year term. Our Board members show huge commitment to IBS and are always willing to step forward when things need to be done. In place of the four leaving members, I welcome new Board members Mark Brewer (BIR), Elizabeth Brown (WNAR), Brian Cullis (AR) and Luzia Trinca (RBras). I look

forward to meeting them virtually at January's **New Board Members' Orientation Session** and then in person at the **2017 Board Meeting** at the **EMR Regional Meeting** in Thessaloniki, Greece in May.

Looking back, above all, I thank John Hinde as he moves on from his role as Immediate Past President and Organizing President of **IBC2016**. I thank him not only for his very active role in ensuring an excellent and enjoyable **IBC**, but more generally for the commitment and wisdom with which he has led the IBS the last three years. Many thanks are also due to Secretary-Treasurer James Carpenter who steps down after a three-year term. In place of John and James, I welcome incoming President-elect Louise Ryan (AR) and Secretary-Treasurer Brad Biggerstaff (WNAR). Although they do not formally take office until January 2017, Brad and Louise are already participating in our discussions, and I look forward to working with them.

So to all of you, as we all look both back and forwards, I give my thanks to all for your participation in IBS, not only as members of Representative Council or on IBS Committees, but also as members, as authors in our journals **Biometrics** and **JABES**, as participants in regional and international meetings and as mentors to our future members.

I wish you all the best for a good 2017 ahead.

Elizabeth Thompson

Biometrics

March 2017 Issue Highlights

The March issue includes diverse articles from a range of applications and methodological areas. The *Biometric Methodology* section features “Comparing large covariance matrices under weak conditions on the dependence structure and its application to gene clustering,” by Jinyuan Chang, Wen Zhou, Wen-Xin Zhou, and Lan Wang; “Adaptive contrast weighted learning for multi-stage multi-treatment decision-making,” by Yebin Tao and Lu Wang; “A random effect model for reconstruction of spatial chromatin structure,” by Jincheol Park and Shili Lin; “Convex biclustering,” by Eric C. Chi, Genevera I. Allen, and Richard G. Baraniuk; and “Estimating the average treatment effect on survival based on observational data and using partly conditional modeling,” by Qi Gong and Douglas E. Schaubel.

In *Biometric Practice*, articles include “Using the SAEM algorithm for mechanistic joint models characterizing the relationship between nonlinear PSA kinetics and survival in prostate cancer patients,” by Solene Desmee, France Mentre, Christine Veyrat-Follet, Bernard Sebastien, and Jeremie Guedj; “Time series modeling of pathogen-specific disease probabilities with subsampled data,” by Leigh Fisher, Jon Wakefield, Cici Bauer, and Steve Self; “Sufficient dimension reduction for censored predictors,” by Diego Tomassi, Liliana Forzani, Efstathia Bura, and Ruth Pfeiffer; and “Multivariate Bayesian variable selection exploiting dependence structure among outcomes: application to air pollution effects on DNA methylation,” by Kyu Ha Lee, Mahlet G. Tadesse, Andrea A. Bacarelli, Joel Schwartz, and Brent A. Coull.

As always, lists of papers to appear can be found at the *Biometrics* website. Papers to appear in future issues may also be found under the “Early View” link at the Wiley-Blackwell website, which may be accessed by IBS members by visiting <http://www.biometricsociety.org/>, selecting “Biometrics” from the drop-down menu at the “Publications” link at the top of the page, and accessing the “Click here” link.

Publishing Agreement

The publishing agreement the IBS has with Wiley to publish *Biometrics* ends 31 December 2016. The current agreement is a three-year extension of the previous five-year agreement that began in 2008. The IBS, the Editors, and the Editorial Manager have been pleased with the service Wiley has provided. Thus, the IBS leadership has moved forward with continuing the relationship, and no effort to consider other publishers for the next five year period has been made.

Because of the move to *ScholarOne Manuscripts* a little over a year ago and modifications to the production process for the journal, rather than implementing another extension of the current agreement in which minor updates are made in an amendment document, the IBS and Wiley have opted to implement a new publishing agreement for the period 1 January 2017 – 31 December 2021. At the time of this writing, Wiley has prepared a new draft agreement, and negotiations are ongoing to reach a final version, which will be approved by the IBS Executive Board.

Journal of Agricultural, Biological, and Environmental Statistics (JABES)

Editor Report

The *Special Issue* on “Space-time Analysis of Natural or Anthropogenic Catastrophes”, edited by Jorge Mateu and Emilio Porcu, appeared in September. It included an introduction by the Guest Editors, together with six papers: “Effective sample size for line transect sampling models with an application to marine macroalgae” by J. Acosta, F. Osorio and R. Vallejos; “Testing self-similarity through Lamperti transformations” by M. Lee, M.G. Genton and M. Jun; “Composite likelihood inference for multivariate Gaussian random fields” by M. Bevilacqua, A. Alegria, D. Velandia and E. Porcu; “Non-stationary dependence structures for spatial extremes” by R. Huser and M.G. Genton; “European population exposure to airborne pollutants based on a multivariate spatio-temporal model” by A. Fasso, F. Finazzi and F. Ndongo; and “Point pattern analysis of spatial deformation and blurring effects on exceedances” by A.E. Madrid, J.M. Angulo and J. Mateu.

There were also four standard papers in the September issue: “Latent process modelling of threshold exceedances in hourly rainfall series” by P. Bortot and C. Gaetan; “A varying coefficients model for estimating finite population totals: a hierarchical Bayesian approach” by C. Velasco-Cruz, L.F. Contreras-Cruz, E.P. Smith and J.E. Rodriguez; “A fused lasso approach to nonstationary spatial covariance estimation” by R.J. Parker, B.J. Reich and J. Eidsvik; and “A note on the Royle-Nichols model for repeated detection-nondetection data” by L.M. Haines.

The next *Special Issue* will feature Animal Movement Modeling, with Mevin Hooten, Ruth King and Roland Langrock as Guest Editors. It should appear in late 2017.

We are keen to publish papers that summarize the state of methodological development in subject areas for which technological advances are generating a demand for new statistical approaches. If such papers also speculate on likely future developments, so much the better. If you feel that you could offer such a paper, or can suggest a topic together with possible authors, I would be very pleased to hear from you.

For more information on upcoming issues, the editorial board, and the aim and scope of the journal, please visit our website <http://link.springer.com/journal/13253>. We also accept submissions of books to review in the upcoming issues of *JABES*; to submit a book for review, please see the above website (click on “Editorial Board”) or contact Ken Newman (ken_newman@fws.gov).

Steve Buckland
Editor in Chief

IBS Past President: Niels Keiding

Interview by John Hinde (IBS Immediate Past President)

John: Niels, thanks very much for taking time to talk to me today for the 'Biometric Bulletin'. Perhaps first we could talk about your background and how you became interested in statistics.

Niels: This is an unusual story because most biostatisticians I know have had a complicated route getting into the subject, but this was different for me. While at high school I learned about biostatistics from my father who was an entomologist working at the Danish Government Pest Infestation Laboratory testing whether various insecticides could kill the house fly. However, the flies quickly developed resistance, and more testing had to be done, resulting in a lot of dose-response studies that my father handled using Finney's probit analysis book from 1947. (I still have his copy, something that I mentioned to David Finney relatively recently.) Biostatistics seemed to me an ideal way of combining mathematical interests with concrete natural science.

In 1958, Professor A. Hald at the University of Copenhagen had just launched a Statistics Program, so when I graduated from high school in 1962, I became one of the first to enter that program, where I studied mathematics as well as statistics and probability. The Danish University teaching was and in many ways still is quite different from the Anglo/Saxon tradition. Denmark did not have a Bachelor degree. We have a Candidate Program, which is a five–six year program specializing from the start. I graduated from University of Copenhagen as a Candidate of Statistics in 1968 when I was 24. I then got a job at the Institute of Mathematical Statistics where I had studied – my first task was to develop further the exercises in applied statistics in the Statistics Program. I used contacts (several through my father) to get real data, not previously handled by statisticians, to be analyzed by students who had very little experience, and only mainframe computers existed. This was too ambitious, but it exemplified where I wanted to go. I continued working as a Lecturer in Mathematical Statistics and kept on trying to get going in genetics and population dynamics. I also participated in a consulting service run by the Danish Medical Research Council.

In 1973–1974 I had a very fruitful one year's study leave at Stanford University, partly in the Statistics Department and partly in Biological Sciences. I also attended weekly seminars in biostatistics over at the medical school where, at the time, the statistical analysis of the Stanford heart transplant data was the big thing.

John: Really then this marks your first move over into classical biostatistics, in terms of medical statistics.

Niels: Yes, although I already had various ad hoc contacts with doctors who wanted help. A little later the Medical and Social Science Research Councils in Denmark joined forces and created a new center – the Statistical Research Unit. The idea was to stimulate high-quality applied statistical analysis in the medical and social sciences. I developed this project, and the Research Councils provided me with a five-year grant for a unit with, in principle, rather free activities. We were four statisticians with secretarial assistance and 'computer money' to pay for use of a mainframe. In 1978 I appointed two recent graduates (Per Kragh Andersen and Lene Theil Skovgaard) who are still working with me after 38 years. Our task was to develop quality applied statistics – which turned out much more successfully in medicine than in the social sciences.

John: You had a very successful, long career – very productive with over 200 papers, numerous book chapters, co-authorships, etc. Are there particular highlights or projects that excited you?

Niels: In the 1970s the big developments in survival analysis started with Odd Aalen's 'PhD thesis' at Berkeley. This revolutionized the mathematical development of survival analysis, and we became involved in Copenhagen. Odd spent about nine months with us, and we had the privilege of learning about the new approach by personal contact. I was later asked to write a monograph for Springer, which was realized by four of us: Per Kragh Andersen, Ørnulf Borgan, Richard Gill and me. We worked on this book for 10 years, and it was published in 1993. Survival analysis has been a central interest of mine ever since.

John: What about current/new developments over the 20 or so years from the book appearing?

Niels: There are still new things going on in survival analysis. Special observational patterns that require care, selection bias problems, so perhaps surprisingly, survival analysis is still much alive. As for my own interests, I also keep an eye on historical developments in demography and epidemiological methodology and maintain many applied collaborative projects.

John: Would you like to reflect on events or individuals who have had an influence on your career?

Niels: I had no major role models as a biostatistician in Denmark, but from my close environment, Prof. Hald was very supportive and believed in what I wanted to do, and I always felt well supported by my peers.

John: So you were left to pioneer the route?

Niels: Yes, that's fair to say. Of course, I listened to what was going on in other countries and tried to learn from that. But I should say that my main driver has been the basic pleasure of combining the statistical modelling and inference with real biological phenomena. I much prefer the inductive way of doing statistics, going from the data to the models – there is too much of the opposite. You can only analyze data really well if you can talk to the people who collected the data.

John: Turning now to the International Biometric Society – when did you first become a member? Was there any particular driving force, perhaps David Finney?

Niels: No. In 1970, shortly after graduating, I attended a combined meeting of the European IMS and the International Biometric Society in Hannover in Germany. So this was an 'IBC' combined with a European meeting on mathematical statistics, and when the Society was soliciting membership, I joined them. I very much felt having come home at that meeting and have stayed a member ever since.

John: Well, in 1992 you actually became President of the Society. Would you like to say something about what the Society was like at that time?

Niels: What led to my Presidency was that I had been Program Chair for the IBC in Budapest in 1990. This was very different from today, as back then the Program Committee produced and developed the program, whereas now it votes on proposals submitted by others.

When I became President, in '92 and '93, the Society was pretty much as it is now, composed of Regions that make it more international than many other societies, but make it a challenge to keep things together. In '92 we were not very far into the 'computer age'; email had just begun,

and the management of the Society was done in an old-fashioned way. One of the challenges was to go to an organization management company, in our case Bostrom. But, from the point of view of the members, things were much the same as today. In terms of membership, in 1990 the Society had 6,480 members (40% from ENAR). See 'Appendix – Growth of the International Biometric Society' in the years 1948 – 1995.



Niels Keiding (IBS President) and Lynne Billard (President-elect).

John: Rather interestingly in your 'Presidential Address' you listed four important concerns, and I think that they still apply to the Society today. The first was 'Are we serving all areas of biological science well enough?' Have things gotten better?

Niels: When I looked back on these concerns in preparation for this interview, I started to think about a slightly different question – what can a society do to carry innovation? In some areas there were vested interests – some were afraid that their fields were shrinking, and they were losing influence. Medical statistics was becoming larger, getting much more money than other traditional areas in the Society. This is still going on. Within medical statistics and other areas, there are much more 'computer-heavy' applications than what was possible back then. I remember Sue Wilson, who became IBS President, seriously proposing to change the name to the International Bioinformatics Society, primarily to be able to compete in the area where the action was.

It is a somewhat passive ambition to serve all areas of biological science well enough, and I think that we are not doing any worse than before. But we are not doing much to host important innovations; maybe this is simply too hard for a large international body... instead innovation is better stimulated in smaller groups.



Local Organizer (1992) Harold Henderson, Local Organizer (1994) Peter Macdonald, Niels Keiding and Secretary Roger Mead.

John: We've talked a little about the rise of medical statistics in the Society, but it was during your Presidency that the 'JABES' journal was launched with American Statistical Association (ASA).

Niels: The initiative came from the Publication Committee of the ASA, and the North American Regions of IBS were eager to join to maintain their balance between the various application areas. 'JABES' occupied quite a bit of our energy while I was President, and other initiatives were put on hold. Actually at that time some of us in medical statistics felt a need for stronger statistics in that subject; this opportunity was realized by the successful launching of Biostatistics by a commercial publisher in 2000.



The Executive Committee and Editors of 'Biometrics': (Back row) G. K. Shukla, Stephen George, Roger Mead, Niels Keiding, Klaus Hinkleman; (Front row) Richard Tomassone, Elizabeth Barath (new Secretary), Lynne Billard (Elected Vice-president), Charles McGilchirst (Incoming Biometrics Editor), Elsie T.

John: You said you were Chair of the Program Committee for 'IBC1990', and that was held in Hungary behind the Iron Curtain. Our links to some countries have always been challenging, and it can also be difficult to maintain momentum – in 1990 the Hungarian Region was very active; now there are no current members. How can the Society maintain its truly international role across the whole world?

Niels: Yes, in Hungary in 1990, that was an active group. It is very difficult especially with the changing role of societies with competition from so many other types of contacts through the internet. We have experience in the Nordic-Baltic Region where we have no members from Latvia and only few from Lithuania.

John: Well, that leads on nicely to one of the other issues that you raised in 1992, namely potential collaborations with other international organizations. Now you have a good perspective on this as in 2005-2007 you were President of the International Statistical Institute (ISI), and there are many similarities between the ISI and the IBS.

Niels: IBS and ISI are both really world-wide organizations, and there are not many like that. One question that has always been around is: should there be a Life Sciences Section of the ISI? Many of us, including Peter Armitage, thought that this would not be advisable as an ISI section, since the IBS would be too similar and therefore compete for attention and resources (personal and financial).

So for many years we ran a defensive course of not forming a Life Sciences Section but at the same time trying to incorporate biological science-related sessions in the ISI meetings. My first ISI meeting was in Warsaw 1975, and there were four joint sessions on statistical and mathematical aspects of infectious diseases. As far as I remember, these were organized jointly by the ISI and IBS, and this was the latest massive effort to do something together.

John: We have come back to something closer to that – at the Rio 'ISI Session' in 2015, there were several sessions organized by the IBS. There are many potential links between the two societies, and we do have similar interests, particularly supporting developing countries. In recent years there has been a very positive attitude between us, reflected in the recently signed 'Memorandum of Understanding'.

Niels: That is very good news.

John: Well, that leads us nicely to reflect on the role of the IBS. Do you have views on what you think are the strengths and virtues of the Society?

Niels: The regional structure, combining independent activity at the regional level with interaction within the International Biometric Society is a particular strength. When I was President of the ISI, we thought of a re-organization with a regionalized structure but ended up not recommending it. But I still think that the Society should be very proud of the way it has managed this regional activity for many years.

John: Looking to the future what do you see as the greatest challenges for the IBS?

Niels: Well, there are challenges for all societies, and a very important activity is the conferences. The journals are also important, and during my Presidency I was very involved in recruiting editors, and then later, as Chair of Editorial Advisory Committee, we designed the current rotation system with editors from various parts of the world.

John: On a personal note, what has membership of the Society meant

to you over the years, as a member, a Past President and an Honorary Life Member?

Niels: Well, the best answer is that when I joined in 1970 I felt that this was like home for me. I have kept the same feeling over all these years. That goes for all of the activities from my early background interests in ecology and animal genetics to now many years working in medical statistics. The interplay needed between real data and its quantitative description, as formulated in the general motto of the Society, has made the Society home for me, and it always will be.

John: Niels, well thank you very much for your time. I hope to see you at many more IBS events over the coming years.

IBS 1996 Membership Directory

GROWTH OF THE INTERNATIONAL BIOMETRIC SOCIETY

| Region or Group | 1948 | 1953 | 1959 | 1963 | 1968 | 1971 | 1975 | 1979 | 1986 | 1990 | 1995 |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|
| AL | 99 | 72 | 77 | 70 | 94 | 87 | 91 | 98 | 108 | 101 | 89 |
| ANed | 37 | 42 | 41 | 36 | 37 | 38 | 38 | 39 | 39 | 39 | 39 |
| AR | 111 | 178 | 207 | 249 | 285 | 276 | 372 | 374 | 441 | 427 | 400 |
| BR | - | 22 | 113 | 138 | 241 | 219 | 200 | 432 | 600 | 741 | 868 |
| ENAR | 478 | 499 | 594 | 1058 | 1248 | 1417 | 1728 | 2208 | 2528 | 2558 | 2172 |
| IBR | - | - | - | - | 10 | 14 | 15 | 15 | 14 | 15 | 15 |
| IR | 43 | 13 | 29 | 29 | 38 | 38 | 15 | 19 | 41 | 105 | 87 |
| JR | - | 38 | 50 | 72 | 89 | 91 | 97 | 118 | 230 | 257 | 282 |
| NR | - | - | - | - | - | - | - | - | 184 | 174 | 163 |
| RIIe | - | 64 | 85 | 99 | 94 | 79 | 89 | 87 | 89 | 58 | 81 |
| RIBra | - | 9 | 56 | 86 | 89 | 87 | 92 | 171 | 201 | 145 | 120 |
| REsp | - | - | - | - | - | - | - | - | - | - | - |
| RF | 47 | 59 | 77 | 101 | 123 | 112 | 111 | 148 | 46 | 91 | 83 |
| BGDR | - | - | - | - | 32 | 32 | 54 | 313 | 249 | 224 | - |
| RBI | - | 51 | 90 | 99 | 123 | 119 | 106 | 160 | 150 | 158 | 200 |
| RDeS | - | 14 | 32 | 92 | 108 | 130 | 175 | 203 | 280 | 288 | 289 |
| WNAR | 73 | 94 | 131 | 219 | 282 | 278 | 396 | 484 | 578 | 645 | 574 |
| GCh | - | - | - | - | - | - | - | - | - | - | 29 |
| GCol | - | - | - | - | - | - | - | - | - | 21 | 22 |
| GDe | - | 15 | 14 | 17 | 15 | 18 | 21 | 22 | - | - | 32 |
| GKe | - | - | - | - | - | - | - | - | - | 27 | 22 |
| GKs | - | - | - | - | - | - | - | - | - | 19 | 28 |
| GMax | - | - | - | - | 30 | 33 | 37 | 39 | 47 | 30 | 34 |
| GMe | - | - | - | - | - | - | - | - | - | - | 12 |
| GNo | - | - | 12 | 12 | 12 | 13 | 14 | - | - | - | 12 |
| GPa | - | - | - | - | - | - | - | - | - | - | - |
| GRo | - | - | - | - | - | 20 | 20 | 20 | 17 | 11 | 18 |
| GSaf | - | - | - | - | - | - | - | - | - | - | 25 |
| Gsd | - | 10 | 13 | 15 | 19 | 20 | 32 | 33 | - | - | - |
| GUg | - | - | - | - | - | - | - | - | - | - | 11 |
| GVen | - | - | - | - | - | - | - | - | - | - | 29 |
| GZim | - | - | - | - | - | - | - | - | - | - | 18 |
| NGI | - | - | - | - | - | 23 | 17 | 15 | 13 | 13 | - |
| | 488 | 1142 | 1963 | 2455 | 3036 | 3229 | 3972 | 4928 | 6140 | 6485 | 6305 |

REGIONAL AND GROUP ABBREVIATIONS

| | | | | | |
|------|-------------------------------|-------|--|------|--------------------|
| AL | All Large | IBR | Regiono Brasiliana | GCol | Group Columbia |
| ANed | Affiliating Netherlands | REsp | Regiono Española | GKe | Group Kenya |
| AR | Austrian Region | RF | Région Française | GKs | Group Kenya |
| BR | British Region | BGDR | Deutsche Demokratische Republik Region | GMax | Group Mexico |
| IR | Deutsche Region | RH | Regiono Italiana | GMe | Group Morocco |
| ENAR | Eastern North American Region | RIBra | Regiono Brasileira | GPa | Group Poland |
| IBR | Regiono Indica | RDeS | Regiono Österreichisch-Südost | GRo | Group Romania |
| IR | Hungarian Region | WNAR | Western North American Region | GSaf | Group South Africa |
| JR | Japanese Region | | | GUg | Group Uganda |
| NR | Nordic Region | | | GVen | Group Venezuela |
| RIIe | Regiono Belgica | GIB | Group Indonesiana | GZim | Group Zimbabwe |
| | | GCh | Group China | NGI | Group Indonesia |

Appendix – Growth of the International Biometric Society in the years 1948 – 1995 (p. 16 of 1996 Membership Directory, International Biometric Society).

Software Corner

Visualizing Variable Clustering with Correlations in R

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Correlations are an important statistic and the cornerstone of many models that seek to reduce dimensions or find associations. Variable correlations also help to identify problems such as multicollinearity. However, when we have many variables, it is sometimes difficult to see a general picture. We often end up scanning through large correlation matrices with little hope of identifying clusters or getting a feel for latent structures. This article, which makes use of material appearing on [blogR](#) and [R-bloggers](#), will present two methods for visualizing the clustering of variables by their correlations using the R package, corr.

Preparation

The examples that follow will use the `airquality` and `mtcars` data sets that are available in R. The first is a data frame with numeric columns about air quality over time and the second with features of different cars. For more information about these data sets use the command: `?airquality` or `?mtcars`.

We will also use the pipe operator `%>%` from the `magrittr` package, which `corr` imports. This operator is used in the form `x %>% f(y)`, which is equivalent to `f(x, y)`. That is, the object on the left-hand side of the operator becomes the first argument of the function on the right-hand side. If you're unfamiliar with this operator, I'd recommend watching [Pipelines for data analysis in R](#), presented by RStudio's Chief Scientist, Hadley Wickham.

corr and correlate()

The `corr` package was developed to help explore correlations in R. Using `corr` begins with the `correlate()` function. You use it exactly as you would use the `cor()` function in base R. However, there are a few important differences about the object returned by `correlate()`:

- It is a tibble (modern data frame) with an additional class, `cor_df`.
- It includes a `rowname` column.
- The diagonal is set to missing (NA).

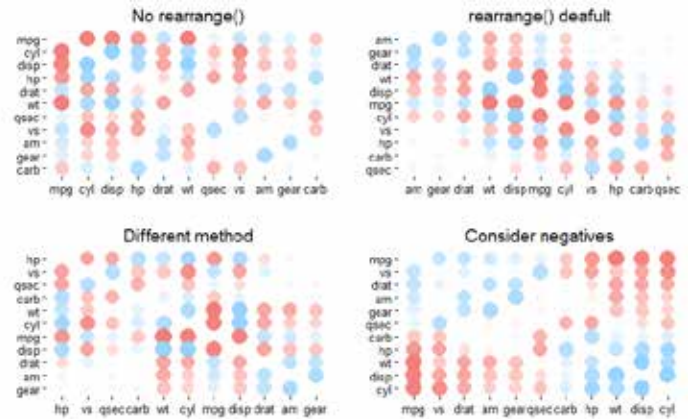
Following is an example of a code which shows how to find the correlations between all columns in a data frame such as the `airquality` data set:

```
library(corr)
airquality %>% correlate()
```

rearrange() %>% rplot()

We can now examine `corr`'s visualization functions, starting with `rearrange()` and `rplot()`. The `rearrange()` orders the correlations based on their strengths. `rplot()` plots the correlations (ordered or not) as blue and red points for positive and negative, with size and transparency being related to the absolute value of the correlation. These, and various arguments of `rearrange()`, are demonstrated in the examples below.

```
mtcars %>% correlate() %>% rplot() # No rearrange()
mtcars %>% correlate() %>% rearrange() %>% rplot() #
rearrange() default
mtcars %>% correlate() %>% rearrange(method = "HC")
%>% rplot() # Different method
mtcars %>% correlate() %>% rearrange(absolute = FALSE)
%>% rplot() # Consider negatives
```



Thanks to `rplot()`, we have a visual representation of the correlations rather than a large matrix of numbers. You'll also notice that once `rearrange()` is included in the pipeline, the correlations nearest to the diagonal are stronger than those furthest from the diagonal. This is an easy way for us to start looking for clusters of variables.

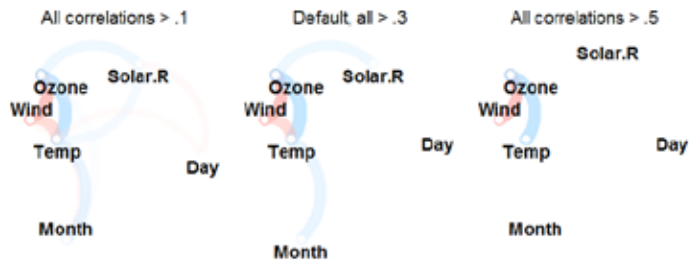
We can make a couple of important adjustments to this rearrangement. The ordering itself is decided by way of the `seriate()` function from the `seriation` package. `seriate()` provides a range of methods for determining the order. For a complete list of available methods, look at the help page with the command: `?seriation::seriate`. The default method is principal components analysis, which can be changed using the `method` argument. In one of the examples above, the method is adapted to hierarchical clustering by the argument `method = "HC"`. The other argument in `rearrange()` is `absolute`. This Boolean argument specifies whether the absolute values for the correlations should be used for clustering or not. If `TRUE`, then `rearrange()` will use absolute values of the correlations to determine their order, thus ignoring correlation signs. R uses `absolute = TRUE` by default so that the magnitude of the correlations determines the order rather than their signs. However, we can override this, forcing more negative correlations to be further from the diagonal line than more positive correlations with `absolute = FALSE`.

network_plot()

An alternative for visualizing variable clustering is the function `network_plot()`, which is illustrated in the following examples:

```
airquality %>% correlate() %>% network_plot(min_cor =
.1) # correlations with absolute value > .1
airquality %>% correlate() %>% network_plot() # default -
correlations with absolute value > .3
airquality %>% correlate() %>% network_plot(min_cor =
.5) # correlations with absolute value > .5
```

Unlike `rplot()`, `network_plot()` displays a point for each variable rather than for each correlation. The proximity of the variables to each other represents the overall magnitude of their correlations, meaning we can see clusters of variables. For example, it is apparent from the above plots that Ozone, Wind and Temp are clustering together, which makes sense. For the technically inclined, this positioning is handled by multidimensional scaling of the absolute values of the correlations.



Each path represents a correlation between the two variables that it joins. A blue path represents a positive correlation, and a red path represents a negative correlation. The wider and less transparent the path is, the stronger the correlation is. For example, we can see that the positive correlation between Ozone and Temp is stronger than the positive correlation between Ozone and Solar.R.

You'll notice that not all of the correlations are being visually represented. This is because only correlations of a certain magnitude (in absolute terms) or higher are plotted. By default, this magnitude is .30. So any paths that do not appear in the plot are correlations that are weaker than this (between -.30 and .30). The reason for this is so that we can visualize the strongest relationships while not being distracted by the weakest ones. This can be changed with the `min_cor` argument. This argument, which is set to .30 by default, determines the minimum correlation (in absolute terms) to be included in the plot. For example, the plots above show how this can be changed to plot all correlations with an absolute value above .1 or .5 by respectively setting `min_cor = .1` and `min_cor = .5`.

Going Further with `corr`

There are a range of additional adjustments that can be made to the methods described above using `corr`. Visit the package's home page on [GitHub](#) for an introduction to the range of features offered.

Regions

Meet the Regional Presidents of IBS (Part II)

Australasian Region (AR)

- 199 regular members
- 17 retired members
- 22 student members
- 1 honorary member
- 8 supporting members

Total: 247 members

President: Ross Darnell (2015-2016) – Principal Research Scientist, CSIRO, Brisbane, Queensland, Australia.



Research interests:

- Reviewing available information and tools available to agricultural producers to make informed decisions
- Modelling the risk associated with the production of aflatoxin in maize crops in eastern Africa from survey data
- Reporting the water quality for water storages across south east Queensland

IBS related activities:

- Member of the IBS Conference Advisory Committee
- Member of the IBS Representative Council
- Member of Local Organizing and Science Program Committees for the *Australasian Region Conference*, November 2017

Eastern Mediterranean Region (EMR)

- 64 regular members
- 132 student members

Total: 196 members

President: Ilker Unal (2015-2017) – Assistant Professor, Cukurova University School of Medicine, Department of Biostatistics, Adana, Turkey.



<http://biostat.cu.edu.tr/new/eng/sayfa.asp?id=3>

Research interests:

- The design and analysis of studies of screening and diagnostic tests
- Receiver Operating Characteristic (ROC) curve studies

IBS related activities:

- In July 18-20, 2016, a short course titled "Survival Analysis" was organized in Bulgaria and financially supported by IBS. The speakers were Laura Antolini and Davide Bernasconi from Italy. 30 participants were registered for the course; 17 of them attended.

Eastern North American Region (ENAR)

- 1120 regular members
- 14 retired members
- 463 student members
- 6 honorary members
- 9 supporting members

Total: 1612 members

President: Jianwen Cai (2016) – Cary C. Boshamer Distinguished Professor and Interim Chair of Biostatistics at the Gillings School of Global Public Health, University of North Carolina, Chapel Hill.



Research interests:

- Survival analysis and regression models
- Design and analysis of clinical trials
- Analysis of correlated responses and recurrent events
- Epidemiologic methods – particularly case-cohort study designs
- Collaborations in a variety of areas as well, including cardiovascular disease, dentistry, geriatrics, obesity, Hispanic/Latino health and general disease prevention

IBS related activities:

- She served in several roles prior to being elected as President-elect in 2015.
- She planned and organized the **2016 ENAR Spring Meeting**, which included a scientific program, short courses, tutorials and round-table luncheon discussions. During the **2016 Spring Meeting**, a mobile app was first developed and implemented.
- The ENAR webinar series (**WebENAR**) was launched during her President-elect year.
- During her presidency, she has begun to explore the possibility of involving statisticians from developing countries becoming involved with ENAR, with help from IBS.
- During her presidency, ENAR has also started discussions regarding the risks and benefits of ENAR having a social media presence, including establishing the first Social Media Subcommittee for the group.
- During **IBC2016** in Victoria, she was honored to meet with the IBS President and other regional presidents, to learn what other regions are doing to meet the IBS mission.

- In the upcoming year, as immediate Past President, she will chair the committee that reviews the submissions for the student travel awards for the **2018 ENAR Spring Meeting**.

French Region (FR)

- 60 regular members
- 6 retired members
- 9 student members

Total: 75 members

President: Daniel Commenges (2015-2017) – Director, Research Emeritus at INSERM, Bordeaux Population Health Center, France; <https://sites.google.com/site/danielcommenges/home>.



Research interests:

- Multistate models with applications in epidemiology
- Mechanistic models with applications to HIV infection and the immune system
- Causality from the point of view of dynamical systems

IBS related activities:

- Member of various committees of IBS
- Organization of several scientific meetings: invited sessions within the Conference of the French Statistical Society in Montpellier (2016) and in Avignon (2017); conference (joint with the Research Group "Statistique et Santé") in Lyon (2016) and in Bordeaux (2017); and Scientific Committee of the IBC in Barcelona (2018)
- Launch of the thesis award Daniel Schwartz

Region News

Australasian Region (AR)

Australasian Regional Conference

The next regional conference of the Australasian Region titled "Biometrics by the Border" is to be held at the Mantra on Salt Beach, Kingscliff which is located just south of the Gold Coast in Australia. It is a 20 minute drive from the Gold Coast International Airport and a 1 hour 45 minute drive from the Brisbane International Airport. The dates of the conference are from 26 – 30 November 2017 which is the last week of Spring in the great south land. At that time of the year, Kingscliff's average daily minimum is around 19C with a maximum of 27C and with daily sunshine averaging between 8.5 to 9 hours.

The science program committee is finalizing keynote speakers, but we already have confirmed Dr. Jean Yang and Dr. Rachel Fewster as speakers, leading experts in bioinformatics and statistical ecology, respectively.

The venue provides a range of accommodation types and budgets. It is adjacent to a great surf beach which is patrolled during that period.



Mantra on Salt Beach (Gold Coast, Australia), the venue of Biometrics by the Border.

The local organizing and program committees are working hard to make this a conference you will appreciate attending from both a social and science perspective.

Further information will soon be available from our regional website: <http://www.biometricsociety.org.au/>.

International Conference on Robust Statistics

The *International Conference on Robust Statistics (ICORS) 2017* will take place at the University of Wollongong, Australia, from 3–7 July 2017. The aim of the ICORS conferences is to bring together researchers and practitioners interested in robust statistics, data analysis and related areas. This includes theoretical and applied statisticians as well as data analysts from other fields and leading experts as well as junior researchers and graduate students.

Held annually since 2001, the ICORS meetings create a forum to discuss recent progress and emerging ideas in statistics and encourage informal contacts and discussions among all the participants. They also play an important role in maintaining a cohesive group of international researchers interested in robust statistics and related topics, whose interactions transcend the meetings and endure year round.

We are excited to announce our four keynote speakers for *ICORS 2017*: Professor Irène Gijbels (University of Leuven), Professor Graciela Boente (University of Buenos Aires), Professor Noel Cressie (University of Wollongong) and Professor Ray Chambers (University of Wollongong).

The final day of the conference (Friday, 7 July 2017) will include a workshop on *Robust Inference for Sample Surveys*.

Further details can be found at <http://niasra.uow.edu.au/icors2017/>,

Vanessa Cave

Belgian Region (RBe)

Annual Meeting of the Belgian Statistical Society

The *24th Annual Meeting* of the Belgian Statistical Society was held in Namur during 12-14 October 2016. The Quetelet Society (Belgian Branch of the Biometric Society) organized two sessions, meeting with great success. During the first session, the two winners of the *Quetelet Prize* presented their work. The *Quetelet Prize* is a possibility given to Institutional Members of the Quetelet Society to award one or more students for excellence of their master thesis in Statistics. Mai Phuong Thao TRAN (Hasselt University) presented her work on the longitudinal modeling of antibody dynamics during Herpes Zoster infection. She used the imprinted lifespan model proposed by Amanna and Slifka (2010). Katrijn De Paepe (Gent University) compared twelve methods for differential gene expression using RNA-seq data. She presented the results of a concordance analysis on several real RNA-seq datasets and of a simulation study. During the second session, the invited speaker Tomasz Burzykowski (Hasselt University) reviewed the methods for surrogate endpoints validation and presented current research topics on the subject.

Sophie Vanbelle

British & Irish Region (BIR)

Challenges and Opportunities of Analyzing Citizen Science Data

On 10 October 2016, the British and Irish Region, jointly with the British Ecological Society and the Environmental Section of the Royal Statistical Society, organized a one-day meeting on "Challenges and opportunities of analyzing citizen science data". The aim of the day was to identify some of the recurrent difficulties of analyzing 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 organizing citizen science schemes and more. Attendees came from a range of universities, research institutes and public and charitable organizations.

The first part of the day focused on talks centered 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.

Laura Graham
(British Ecological Society)

Dutch Region (ANed)

First ‘Hans van Houwelingen Award’ handed to Hein Putter

On 24 June 2016, the *Annual Dutch BMS-ANed Spring Meeting* took place – again a very interesting afternoon, with the topic *Biostat’s Better Half*.

We were especially proud to hand out the first edition of the *Hans van Houwelingen Award* (formerly the *Biometry Award*), meant for the most stimulating recent paper on a biometric subject. Interestingly, the jury, headed by Hélène Jacqmin-Gadda (Bordeaux), Nicole Augustin (Bath) and Sach Mukherjee (Cambridge), selected the paper, Dynamic frailty models based on compound birth–death processes, by Hein Putter and Hans van Houwelingen, *Biostatistics 2015*.

From the jury report, “This is a very innovative paper that proposes a time-dependent frailty model with a new class of frailty processes. The work is theoretically compelling and from a more applied point of view, the impact of the frailty distribution on marginal hazard and hazard ratio is also highlighted. It has the potential to inspire more applied work.”



Hein Putter (right) and Hans van Houwelingen (left), receiving the first Hans van Houwelingen Award from Hélène Jacqmin-Gadda.

In addition, receiving an honorary mention was the paper, Combining Dynamic Predictions from Joint Models for Longitudinal and Time-to-Event Data Using Bayesian Model Averaging (Dimitris Rizopoulos, Laura A. Hatfield, Bradley P. Carlin & Johanna J. M. Takkenberg, *Journal of the American Statistical Association*, published online 2014).

The program of the afternoon was entertaining, with presentations ranging from interesting statistical problems to tips on scientific presentations, brought by five excellent speakers: Nicole Augustin (Bath), Nan van Geloven (LUMC), Helene Jacqmin-Gadda (Bordeaux), Mar Rodriguez Gironde (LUMC) and Sabine Schnabel (Wageningen).

The scientific program was followed by the *BMS-ANed General Assembly*, where three new Board members were introduced (Said

el Bouhaddani, Magnus Munch and myself), along with the new Treasurer Willem Kruijer. The afternoon ended with drinks.

We are looking forward to the winter meeting, on Friday, 20 January 2017 – *Biostatistics for the Future!*

Joanna in ‘t Hout

Eastern Mediterranean Region (EMR)

9th EMR-IBS and Italian Region Conference, Thessaloniki

The **9th Eastern Mediterranean Region – International Biometric Society Conference**, jointly with the Italian Region, will be held in Thessaloniki, Greece on 8-12 May 2017. As always, we aim at bringing together researchers from around the world in this beautiful place. Similar to the last EMR meeting, there will be sessions from other regions of IBS, student travel awards, invited lectures and some pre-conference courses. Thessaloniki is perhaps the best city to spread the message of the EMR being an international city, cross-roads of different civilizations with a long history related to all country members of EMR. Thessaloniki is also a beautiful city combining a lot of different activities and sightseeing. The venue of the meeting will be the MET Hotel in the heart of the city.

The entire meeting is devoted to the memory of Prof. Marvin Zelen (Harvard University), a keen supporter of EMR, who passed away in November 2014.

Among others we have verified sessions on the following topics:

- Missing Data
- Modern missing data problems
- High dimensional data
- STRATOS initiative
- Novel statistical methods for complex neuroimaging data
- Underdispersion
- Surrogate Markers
- Innovative Clinical Trial Designs
- Advanced Survival Models
- Causal Methods and High Dimensional Data

Of course papers on any topic related to Biometrics are welcome. **The deadline for submission of abstracts is 11 February 2017.**

On Monday, 8 May 2017 we’ve planned the following short courses:

1. Jarek Harezlak & Matt Wand – “Semiparametric Regression with R”
2. Ioannis Ntzoufras – “Bayesian Modelling Using WINBUGS with applications to Biostatistics”
3. Dimitris Rizopoulos – “An Introduction to Joint Models for Longitudinal and Survival Data, with Applications in R”

4. Andreas Ziegler – “An Intuitive Approach to Machine Learning: Boosting, Nearest Neighbors, Random Forests and Support Vector”

Note that the short courses will only run if a certain number of attendees are attained, so it would be very helpful if you express your interest for the courses as early as possible. There are available student awards. Registration and abstract submission are now open.

Details about the meeting are already available at the website of the meeting:

<http://stat-athens.aueb.gr/~emribs/page/emr2017.html>. Please visit the site for updated information. Note that before the conference there will be a symposium honoring Marvin Zelen at the same place. (7-8 May 2017 – Please note the new dates.)

Symposium Honoring Prof. Marvin Zelen, 7-8 May 2017, Thessaloniki, Greece

Frontier Science Foundation Hellas (FSFH), a non-profit organization, is organizing a symposium to honor Marvin Zelen, Co- founder of FSFH. The symposium will take place 7-8 May 2017, attached to the **9th EMR-IBS Conference**. Frontier Science & Technology Research Foundation, Inc. (FSTRF) and Frontier Science Scotland (FSS) are co-sponsoring this symposium. The venue will be the same as for the conference. Details will be posted here: www.frontier-science.gr.

Cyprus News

A successful one-day satellite seminar on the statistical topic “An introduction to Applied Multilevel Modeling using SPSS” was organized by the School of Science, Department of Health Sciences, on 8 October 2016. The instructors were Dr. Menelaos Pavlou (Research Associate, Department of Statistical Science, University College London) and Dr. Demetris Lamnisis (Assistant Professor in Biostatistics, European University Cyprus). There were 28 participants, including PhD students from the Health Sciences, postgraduate students of Statistics, statisticians, epidemiologists, doctors and dieticians. This was the first statistical seminar organized in Cyprus; it was so successful that participants asked to organize similar seminars annually with different topics in Applied Statistics.



Israel News

The **4th Meeting of the ‘Revived’ Israeli Biostatistics Forum (IBF)** was held on 27 November 2016 in Jerusalem. The local organizers were David Zucker, Micha Mandel and Or Zuk (Hebrew University Jerusalem). Despite the sudden fires from the previous four days in Israel, there was a nice participation of about 90 biostatisticians, epidemiologists and physicians.

There were five talks:

1. Netanel Goldschmit (Ministry of Health) described clinical quality in general hospitals in Israel, i.e. whether the treatment achieved its clinical objectives. Quality control in the health system, improving the efficiency of processes and setting information-based policy are critical processes for positioning the health system at a level of excellence. Failures in quality in medicine cost dearly in human life and cause inefficient utilization of limited resources and waste. Measurement of quality at a national level enables the system’s strengths and weaknesses to be assessed and improvement to be effected; therefore, improving care in hospitals through a quality monitoring program is needed. The national program for quality indicators in hospitals in Israel was established in 2013, starting with five indicators in the first year. Now the program examines 80 quality indicators in six different domains in hospitals, geriatric hospitals, psychiatric hospitals and more. Netanel presented results on selected quality indicators, e.g. a surgery for hip fractures 48 hours since hospitalization (target: 80%), etc. He also discussed several ways for individual predictions.



Natanel Goldschmidt (Ministry of Health).

2. Laurence Freedman & Havi Murad (Gertner Institute) described a project to explore the link between Diabetes and Cancer through analyzing data from the Clalit Health Care Services database. They addressed two broad questions:

- (a) Are persons with diabetes at a higher (or lower) risk of developing cancer than persons without diabetes?
- (b) Among persons with diabetes, are those with higher glucose levels or HbA1c levels at a higher (or lower) risk of developing cancer?

The Clalit database that they analyzed is a computerized file that includes information on over two million adult members over the age of 21 y on 1 January 2002, followed through the period 2002-12. They used information in the database and information on cancer incidence and death from the Israel Cancer Registry that they linked to the Clalit file. Among the topics they covered were: conducting

computer-intensive survival analyses using the Cox model with time-dependent covariates, e.g. glucose or HbA1c levels; and handling missing values in such analyses. There was a large proportion of missing data in some time-dependent covariates (30%-50% in HbA1c; 20%-40% in glucose) at each time-point. They therefore developed a procedure for time-sequential multiple imputation at each time-point for the missing HbA1c and glucose values, using the chained equations method, based on completed variables from previous time-points.



Laurence Freedman – a joint talk with Havi Murad (Gertner Institute).

3. Tan Turner (Shaare Zedek Medical Center) described how to utilize administrative big data for Population-Based Exploration of Inflammatory Bowel Diseases (IBD) in Israel. In 2011 the Israeli IBD Research Nucleus (IRN) was established. Data on patients from Israeli big hospitals were summarized. Based on this data, computerized algorithms were developed in the four Health Care Services to detect IBD with 90% sensitivity. 40 research groups in Israel were registered with research goals related to IBD. Nowadays a server that will enable these groups to work on the data from a distance is established. The data is expected to include 38,000 IBD patients and 130,000 controls.

4. Michal Shauly-Aharonov (Hebrew University) described Medical Applications of Change Detection Methods. She proposed a detection method based on the Shiryaev-Roberts approach, which considers the whole relevant history of measurements; with every new measurement, it gives an updated (“on-line”) evaluation of the likelihood that a change has taken place somewhere along the time of monitoring. When this evaluation exceeds a certain upper control limit, a warning is given that the patient is at high risk. This alarm system is designed to have reasonable sensitivity and specificity, or alternatively to provide desired probability of detection and false-alarm, as well as sufficient time for intervention. One of the examples Michal gave was: on-line detection of hazardous patterns in glucose level of pregnant women with Type I Diabetes. This example was on seven pregnant women with Type I Diabetes where only one pregnancy ended in a miscarriage after 90 days. The glucose level machine measures glucose levels every five minutes. However, a real disturbance may be masked by the variation of measurements. Michal showed that although the glucose levels of the woman whose pregnancy ended in a miscarriage did not show a real disturbance, the suggested method was able to give a warning sufficient time for intervention (e.g. 30 days before a miscarriage). It was then recognized that the variance of the woman’s glucose levels at the time of warning was large!

5. Avishai Mendelbaum (Technion) described service systems (e.g. telephone centers, hospitals, banks) from the perspective of queueing and operational characteristics (waiting, abandonment, priorities). He talked about the following models: Erlang-A (frequent in use for call centers), Erlang-R (arose from emergency departments) and Erlang-S (captures operational symmetry between servers and customers). Dynamic diagrams of call centers and hospital emergency rooms in real time were demonstrated.

Orly Manor (School of Public Health and Community Medicine, Hebrew University) was the discussant. Among the issues she discussed were:

- I. The importance of a good communication between statisticians and public health practitioners (e.g. Health Ministry representatives on the committee for clinical quality in general hospitals, related to the first talk).
- II. The possibility of accessible data. Somebody mentioned “Bridge to Data” website which shows which data are available to the public. Mosh Hoshen from Clalit Research Group invited anybody interested to investigate together, but the limitation is that the Clalit data is available only in their institute, and it is not possible to transfer data.
- III. The national program for quality indicators in community healthcare in Israel. Prof. Orly Manor, who leads this program, described the program, which reflects the vision and cooperation of various institutions working toward the common goal of improving community healthcare services in Israel. The national quality indicators focus on six major clinical fields in community healthcare in Israel: asthma, cancer screening, immunizations for older adults, child and adolescent health, cardiovascular health and diabetes.



From Left to right: Havi Murad (2nd joint-speaker and IBF Chair, Gertner Institute), David Zucker & Micha Mandel (Meeting Organizers, Hebrew University), Orly Manor (Discussant, Hebrew University), Osama Eleimy (participant, CBS), Laurence Freedman (2nd joint-speaker, Gertner Institute).

Turkish News

The Turkish Association of Biostatistics held its annual conference (the **18th National Biostatistics Conference**) in Belek-Antalya on October 26-29, 2016. There were about 150 participants from universities, the industry and governmental offices in Turkey. The organization was coordinated by the Chair of Biostatistics of Afyon Kocatepe University, together with the Turkish Association of Biostatistics, under the direction of Prof. Dr. Ismet Dogan and Prof. Dr. Reha Alpar.

From 114 submissions, a total of 58 oral presentations were selected and assigned to nine sessions. The conference opened with a keynote talk by Assoc. Prof. Eyup Erdogan (Mersin University) entitled "Causality Problem". Dr. Ismet Erdogan, Professor of Biostatistics (Afyon Kocatepe University) spoke on "Population Genetics and Biostatistics". The short courses, "Introduction to Rasch Analysis" by Prof. Dr. Atilla Elhan (Ankara University), "Meta Analysis with Applications" by Assoc. Dr. Pinar Ozdemir (Hacettepe University) and "R in Bioinformatics" by Asst. Prof. Dr. Gokmen Zararsiz (Erciyes University), Dr. Selcuk Korkmaz (Hacettepe University) and Dr. Dincer Goksuluk (Hacettepe University), were organized on 26 October 2016.

For further details, you may visit the webpage: <http://www.biostat-congress2016.com/>.



Participants of the 18th National Biostatistics Conference.



Ilker Unal (EMR President) giving his talk.

Giota Touloumi

Eastern North American Region (ENAR)

2017 ENAR Spring Meeting, Washington, DC, USA

The **2017 Spring Meeting** of the IBS Eastern North American Region, in conjunction with the Institute of Mathematical Statistics (IMS) and sections of the American Statistical Association (ASA), will be held 12-15 March at the Washington Hilton. Located in the heart of our Nation's capital, this luxury hotel is close to many of the city's attractions in one of DC's coolest neighborhoods and is within walking distance of outstanding restaurants and entertainment.

The scientific program will once again be outstanding, with a wide variety of topics including data science, genomics, analysis of microbiome data, precision medicine, clinical trials, neuroimaging, biomarkers, health policy, electronic health records, ecology and epidemiology.

The Presidential Invited Speaker will be Dr. Louise Ryan, Distinguished Professor, School of Mathematical and Physical Sciences, The University of Technology Sydney. The title of her talk is "But I'm a Data Scientist Too, Aren't I!" Dr. Ryan is well known for her methodological contributions to cancer and environmental health research. She has worked hard to promote the careers of women and other groups traditionally underrepresented in the profession. She is a former Chair of the Department of Biostatistics at Harvard University and previously served as ENAR President. She is the recipient of numerous prestigious awards, including her 2012 election to the Australian Academy of Science, a 2015 honorary doctorate from Ghent University, and the **Harvard 2015 Centennial Medal**. Dr. Ryan was recently elected President-elect of the International Biometric Society.

A complete listing of the many invited sessions to be presented at the meeting can be found at www.enar.org. In addition, the program will feature both full and half-day short courses: "Regression Modeling Strategies" (Frank Harrell Jr.); "Data Science for Statisticians" (Amelia McNemara); "Getting SMART about Dynamic Treatment Regimens" (Kelley Kidwell); "Statistical Methods for Brain Network Analysis Using Multimodal Imaging Data" (Ying Guo, Phebe B. Kemmer); "Artificial Intelligence, Machine Learning and Precision Medicine" (Haoda Fu, Yufeng Liu); "Statistical Evaluations of Medical Risk Prediction Models in the Presence of Competing Risks" (Michael W. Kattan, Thomas A. Gerds); and "Health Program Monitoring and Evaluation: The role of LQAS" (Bethany Hedt-Gauthier, Marcello Pagano).

Several tutorials will once again be offered, running concurrently with the scientific sessions. The topics range from open source computing with R/Jupyter to analyzing RNA sequencing data to NIH perspectives on peer review. Additionally, roundtables will allow an opportunity to interact with experts and peers in a less formal setting. The roundtables offer a variety of topics, both professional development and statistical, and are an opportunity to interact with some of the outstanding ENAR leaders!

Once again, **ENAR 2017** will feature two pre-conference workshops: the **Junior Biostatisticians in Health Research Workshop** will be held on Friday and Saturday, and the **Fostering Diversity in Biostatistics Workshop** will take place on Sunday afternoon. Sunday evening will also feature the new member reception, opening mixer and poster session, during which the ENAR Regional Advisory Board poster competition will be held. Throughout the day Monday, there will be thematically grouped contributed oral poster sessions in which pre-

senters will give a two-minute elevator-speech that highlights their poster. The Council for Emerging and New Statisticians will hold a student mixer on Monday night, and the Career Placement Center will take place throughout the meeting to offer assistance to those seeking employment.

We are pleased to feature the Imposteriors – a band featuring several of our ENAR members – for the Tuesday night entertainment, networking and social event! Register, and come prepared for food, giveaways and fun! The group originally played mainly Bayesian song parodies, and now plays a variety of dance music. Come hear the Imposteriors ENAR debut! For a preview, visit the band's website at: <http://imposteriors.com/>.

Special thanks to those who are working hard to help plan the **ENAR Spring Meeting**. Program Chair Nandita Mitra (nanditam@mail.med.upenn.edu) and Associate Chair Andrea Foulkes (afoulkes@mtholyoke.edu) led a tremendous effort in crafting the scientific program. This year's Program Committee was very active and included representation from 15 sections of the American Statistical Society as well as the Institute of Mathematical Sciences. A special thanks to also to Jiaqi Li (Mathematica) and Laura Hatfield (Harvard Medical School) for jumping in to provide additional assistance in translating the written program to the ENAR app and for crafting a 'beta' version of a tool to automate developing sessions for the contributed program. The Education Advisory Committee (Lance Waller, Amy Xia, Ruthanna Davi, Manisha Desai and Joan Buenconsejo) have been instrumental in developing an exciting offering of short-courses, tutorials and roundtables; and the Local Arrangements Co-chairs, Matthew Guerra and Clara Kim, have identified interesting adventures in and around Washington to keep you busy during your meeting downtime.

2017 JSM, Baltimore, Maryland, USA

The 2017 Joint Statistical Meetings will be held in Baltimore, Maryland from 29 July – 3 August 2017, and ENAR is fortunate to have Dionne Price be our representative to the Program Committee. Questions should be directed to Dionne at dionne.price@fda.hhs.gov.

2018 ENAR Spring Meeting, 25-28 March, Atlanta, GA, USA

Stay tuned for information about the 2018 ENAR Spring Meeting in Atlanta, Georgia!

ENAR Webinar Series!

Details about upcoming ENAR webinars can be found at: <http://www.enar.org/education/index.cfm>. Please contact Susmita Datta (susmita.datta@ufl.edu) if you have suggestions for webinar topics.

Leslie McClure

French Region (RF)

The French Region organized two meetings in 2016. The first one was in June in Montpellier within the Conference of the French Statistical Society (<http://jds2016.sfds.asso.fr>). A morning session featured three distinguished speakers: Hein Putter, invited by the French Statistical Society (Estimation of transition probabilities in non-Markov multi-state models), Per Andersen (Causal inference in survival analysis using pseudo-values) and Stéphane Robin (Goodness of fit of logistic models for random graphs). The second one was a two day conference jointly organized with the "Groupe de Recherche Statistique et Santé" (GDR) (<http://gdr.statsante.fr>) in Lyon on June 27 – 28.

The French Region plans to repeat these two meetings in 2017. A session will be organized within the conference of the French Statistical Society in Avignon (<http://jds2016.sfds.asso.fr>) May 29 – June 2. As for the joint conference with the GDR, it will be held in Bordeaux on October 5 – 6.

The French Region is a member of the Channel Network which includes four Regions: French, British and Irish, Belgian and the Netherlands. The next Channel Network Conference (<http://www.uhasselt.be/channel-network-conference-2017>) will be held in Diepenbeek (Belgium) on April 24 – 26, 2017.

Finally, with the aim of promoting biometric research in direction of young researchers, it has been decided to organize a conference for young researchers in Biometrics and to launch a thesis award named Prix de thèse Daniel Schwartz which will be awarded at this occasion. The first conference is planned to be held in April 2018.

Note on Daniel Schwartz

Daniel Schwartz was born January 30, 1917 and died on September 6, 2009 in Paris. Alumnus of the Ecole Polytechnique, he worked at first at Seita (The French Company of Tobacco), where he was interested in the tobacco-related diseases. He became Research Associate at the INSERM Institute (1959), then Research Director (1962). His researches concerned in particular the diseases related to tobacco consumption. He became Professor at the Faculty of Medicine of Paris XI-Orsay in 1968. He was the first in France to develop the randomized trials in medicine and in epidemiology. He had several students who in their turn spread the biostatistical methods in France; in the Center of Education of the Statistics Applied to Medicine (CESAM) he trained several thousand doctors in good biostatistical practices. In 1950, he put down the terms and the by-laws of the French Biometric Society which represents the French Region of the International Biometric Society.

More information can be found on our website: <http://sfb.univ-lyon1.fr>.

Robert Faurve

German Region (DR)

From the Working Groups of the German Region

The *BioStats Workshop 2016* took place from 19–22 September 2016 and addressed junior researchers in biology and statistics. It was organized by the Young Statisticians' Working Group of the German Region of the International Biometric Society (IBS-DR) under the leadership of Anke Hüls. Furthermore, it was supported by the IUF – Leibniz Research Institute for Environmental Medicine (host), the German Diabetes Center Düsseldorf (DDZ) and the Heinrich Heine University Düsseldorf (HHU). The first *BioStats Workshop* was held in 2011 by the Young Statisticians' Working Group of the IBS-DR at the Leibniz Institute DSMZ – German Collection of Microorganisms and Cell Cultures in Braunschweig. This year's program included an introduction to the other discipline (statistics or biology), the presentation and application of the statistics software R, the analysis and discussion of real case studies and experimental parts in the laboratory. Lectures were given by professors and scientific staff from IUF, DDZ and HHU. The participants appreciated in particular the practical orientation of the workshop. For the statisticians, it was exciting to experience daily laboratory work and to see which workload is behind the data that is going to be analyzed.



Participants of the *BioStats Workshop 2016*, organized by the Young Statisticians' Working Group of the IBS-DR.

The Working Group (WG) Spatial Statistics jointly with the WG on Medical Geography of the German Geographical Society held a meeting at 6–8 October 2016 in house Humboldtstein in Remagen, Germany. These joint meetings have been held biannually since 2004 and aim to bring together geographers, who have good access to spatial health data and health service provision data, as well as high expertise in processing and visualization of spatial data, with experts in spatial statistics.

This year's event was attended by 38 participants who presented a broad spectrum of topics in 30 oral presentations and three posters. Abstracts and slides will be provided in the archive folder of the website <http://www.med-geo.de>. The scientific program was completed by an excursion to the Rhine River's island Grafenwerth.

The WG Spatial Statistics wants to thank the long-term chairmen of WG Medical Geography who now handed over their posts, Jürgen Schweikart (Berlin) and Thomas Kistemann (Bonn), for the successful cooperation over more than a decade.



Participants of the joint meeting of the Spatial Statistics Working Group of the IBS-DR and the Working Group on Medical Geography of the German Geographical Society.

Axel Benner

Japanese Region (JR)

The 2016 Japanese Joint Statistical Meeting

The Biometric Society of Japan is one of the six sponsoring organizations of the *2016 Japanese Joint Statistical Meeting* held on 4–7 September at Kanazawa University in Kanazawa, Japan. The Biometric Society of Japan organized two invited sessions – the *Biometric Symposium* entitled “Statistical monitoring for quality control and assurance in clinical trials” and the *Memorial Lecture* by the winner of the *Young Biostatisticians Award* conferred by the Society. In the *Biometric Symposium*, Dr. Teramukai (Kyoto Prefectural University of Medicine) provided an overview on the issue in data monitoring in clinical trials. Dr. Oba (The University of Tokyo) gave an overview of statistical methods useful for safety monitoring and fraud detection. Dr. Nakatani (Foundation for Biomedical Research and Innovation) reported his experience of fraud detection in clinical trials. Drs. Ukai (Nippon Boehringer Ingelheim) and Komiyama (Pfizer) argued practical issues on data monitoring in pharmaceutical companies. In the other session, three winners of the *Young Biostatisticians Award* made their memorial lectures on their research. Dr. Komori (University of Fukui) explained his new methods for classification in the presence of heterogeneity in distributions proposed in his recent publication in *Biometrics*. Dr. Hirakawa (Nagoya University) gave an overview on recent progress in dose-ranging methodologies in cancer phase I trials following his recent publication in *Japanese Journal of Biometrics and Statistics in Medicine*. Dr. Kobayashi (Daiichi-Sankyo) discussed his newly-developed methods for the evaluation of surrogacy in endpoints following his recent publication in *JABES*.

The 2016 Special Lecture Meeting

The *2016 Special Lecture Meeting* of the Biometric Society of Japan was held on October 12, 2016 at Life Science Building in Tokyo. Dr. Virginie Roudeau (the INSERM institute) made her talk entitled “Joint models for Longitudinal Data, Recurrent Events and a Terminal Event: Predictive Abilities of Tumor Burden and Cancer Evolution”, and Dr. Frank Bretz (Novartis Pharma AG) gave us his lecture entitled “Efficient Tests to Demonstrate the Similarity of Dose Response Curves”. About thirty people attended the lectures.

The 2016 Biometric Seminar

The *Biometric Seminar* entitled "New statistical challenges on ICH E17 guideline" was held in the afternoon, December 7, 2016 at Life Science Building in Tokyo. The scientific program has been opened. Historical overviews of the multi-regional clinical trials (MRCT) were given from the viewpoints of pharmaceutical companies and regulatory. Methodological developments for the analyses of MRCTs were also reviewed, and the coming *ICH E17 Guideline* was introduced.

The 2017 Annual Meeting of the Biometric Society of Japan

The *2017 Annual Meeting of the Biometric Society of Japan* will be held on 16-17 March 2017 at Chuo University, Tokyo, Japan. An invited session will be organized discussing how biostatisticians and epidemiologists efficiently collaborate. A tutorial seminar will be also held on causal inference in observational studies.

Satoshi Hattori

Group of Poland (GPol)

The *46th International Biometrical Colloquium* was held during 5-7 September 2016 in Lublin. This year, the *Colloquium* was organized by the Department of Applied Mathematics and Computer Science at University of Life Sciences in Lublin, with the support of Polish Biometric Society and the Faculty of Mathematics and Computer Science at Adam Mickiewicz University in Poznań. The chairwoman of the organizing committee was Dr. Agnieszka Kubik-Komar. More than 30 biometricians from Poland, Czech Republic and Slovakia attended this conference.



46th International Biometrical Colloquium attendees.

During the conference, one invited lecture on "Nature inspiring inventors and designers" was presented by Prof. Andrzej Stepniewski from the Department of Physics at University of Life Sciences in Lublin; moreover, 16 contributed papers and six posters were also presented.

Some of the presented papers are published in the 46th volume of the *Colloquium Biometricum* (online), the official periodical of the Polish Biometric Society (<http://collbiom.up.lublin.pl/en/>). The conference Gala Dinner included a nice visit at Village Museum of Lublin with the wonderful dinner adorned with a common singing.

The *47th International Biometrical Colloquium* will be held in Kiry near Zakopane on 10–14 September 2017 by the Department of Experimental Design and Bioinformatics at Warsaw University of

Life Sciences. We strongly encourage you to participate in this event (conference fee approx. 210 Euro) and also to publish scientific papers in *Biometrical Colloquium* (online).

Zofia Hanusz

Spanish Region (REsp)

2nd Students' Scientific Workshop from the Spanish Region

On 8-9 September 2016 the Spanish Region of the IBS held the *II Students' Scientific Workshop* in Barcelona. The Barcelona Biomedical Research Park (PRBB) hosted this event with more than 50 participants (students) and about 20 contributed presentations and 10 contributed posters.

The Organizing Committee, completely composed of students from the Spanish Region, together with the support of the Spanish Region Society, The Barcelona Institute of Global Health (ISGlobal) and the Applied Statistic Service of the Autonomous University of Barcelona are to be congratulated on the success of the conference.



Organizing Committee of the II Students' Scientific Workshop composed of students from the Spanish Region.

The Scientific Programme also included an introductory course of Shiny Software by Dr. Isaac Subirana from Municipal Institute for Medical Research (IMIM) and a roundtable in which different concerns of young statisticians were discussed by Dr. David Conesa (University of Valencia), the Senior Research Consultant Núria Pérez (Fight AIDS foundation) and the PhD student Natàlia Vilor-Tejedor (Barcelona Institute for Global Health – Pompeu Fabra University).



II Students' Scientific Workshop at the PRBB in Barcelona (Assistants' group photo).

Website: <http://www.biometricsociety.net/ii-jornadas-cientificas-de-estudiantes-de-la-seb/>,

Anabel Forte

Western North American Region (WNAR)

2017 WNAR/IMS Meeting

The **2017 WNAR/IMS Meeting** will be in Santa Fe, New Mexico from 25-28 June hosted by University of New Mexico and will be held at the Eldorado Hotel and Spa. Santa Fe, New Mexico's capital city, is at the foot of the Sangre de Cristo Mountains. It is known for its Pueblo-style architecture and for being a center for multicultural arts. There are many recreational activities available around Santa Fe, including hiking, mountain biking, and river rafting. The local organizer is Christina Murray-Krezen. Details about the meeting will be posted on the WNAR web page www.wnar.org as they become available.

2017 WNAR Student Paper Competition

WNAR sponsors students who enter the student paper competition. All entrants receive their registration fees and banquet dinner ticket for free. Monetary prizes will be awarded to the best papers in written and oral competitions. Information on the **2017 WNAR Student Paper Competition**, registration information and program details for the meeting will be posted as they become available: <http://www.wnar.org>. We look forward to seeing you there.

Megan Othus

Announcements

IBS on LinkedIn - Join Our Group & Get Connected to Colleagues Across the Globe



IBS has created a LinkedIn Group for biometrics industry professionals to become a part of...and network with your colleagues instantaneously! Post discussions to the Group and get comments/feedback from Group members on their perspectives or experiences. A great benefit of this Group is that it's a very easy and free way to communicate with your colleagues who live all around the world. Being connected to the IBS Group will allow you to see other connection possibilities as well and broaden your professional network. The possibilities are endless. Join our Group today by visiting www.linkedin.com, and search under Groups for 'International Biometric Society.'

CALL FOR NOMINATIONS

C. R. AND BHARGAVI RAO PRIZE FOR OUTSTANDING RESEARCH IN STATISTICS

to be awarded by

PENN STATE UNIVERSITY DEPARTMENT OF STATISTICS

The C. R. and Bhargavi Rao Prize was established to honor and recognize outstanding and influential innovations in the theory and practice of mathematical statistics, international leadership in directing statistical research, and pioneering contributions by a recognized leader in the field of statistics. The Rao Prize is awarded by the Department of Statistics at Penn State University to a nominee selected by the members of the Rao Prize Committee. C. R. Rao, Emeritus Professor of Statistics at Penn State, held the Eberly Chair in Statistics at Penn State from 1988 to 2001.

Previous Rao Prize recipients are:

2003: Bradley Efron, Stanford University

2005: Jayaram Sethuraman, Florida State University (emeritus)

2007: Lawrence D. Brown, University of Pennsylvania

2009: Peter J. Bickel, University of California, Berkeley

2011: James O. Berger, Duke University

2013: Herman Chernoff, Harvard University (emeritus) and MIT

2015: Sir David Cox, University of Oxford

For additional information, see <http://stat.psu.edu/rao-prize>.

Nominations for the 2017 Rao Prize should be submitted by December 31, 2016 by email to depthhead@stat.psu.edu or by regular mail to:

Chair, Rao Prize Selection Committee

326 Thomas Building

Penn State University

University Park, PA 16802-2111

The Rao Prize shall be awarded in odd numbered years. The award recipient will receive a medal, a cash prize, and an invitation to visit Penn State and give a talk as part of a daylong workshop.

Nominations should include a letter describing the nominee's outstanding contributions to leadership and research in statistics, a current curriculum vita, and two supporting letters.

MEETINGS

2017

12 – 15 March

ENAR Spring Meeting

Washington, DC, USA

<http://www.enar.org/meetings/index.cfm>

16 – 17 March

2017 Annual Meeting of the Biometric Society of Japan

Chuo University, Tokyo, Japan

<http://www.biometrics.gr.jp/>

6 – 7 May

Symposium Honoring Prof. Marvin Zelen

Thessaloniki, Greece

www.frontier-science.gr

8 – 12 May

9th EMR-IBS & Italian Region Conference

Thessaloniki, Greece

<http://stat-athens.aueb.gr/~emribs/page/emr2017.html>

25 – 28 June

2017 WNAR/IMS Meeting

Santa Fe, NM, USA

www.wnar.org

3 – 7 July

International Conference on Robust Statistics (ICORS) 2017

University of Wollongong, Australia

<http://niasra.uow.edu.au/icors2017/>

24 – 28 July

62nd RBras Meeting

Minas Gerais, Brazil

www.rbras.org.br

29 July – 3 August

Joint Statistical Modeling

Baltimore, MD, USA

[Dionne Price \(Dionne.Price@fda.hhs.gov\)](mailto:Dionne.Price@fda.hhs.gov)

21 – 25 August

International Society for Clinical Biostatistics 38th Annual Conference

Vigo, Spain

<http://www.iscb.info/>

28 August – 1 September

Joint Conference of the Central European Network of the International Biometric Society & the International Society of Biopharmaceutical Statistics

Vienna, Austria

www.cenisbs2017.org

10 – 14 September

47th International Biometrical Colloquium

Kiry (near Zakopane), Warsaw, Poland

<http://www.biometricsociety.org/region/poland/>

26 – 30 November

Regional conference of the Australasian Region of IBS – ‘Biometrics by the Border’

Salt Beach, Kingscliff, Australia

<http://www.biometricsociety.org.au/>

2018

25 – 28 March

ENAR Spring Meeting

Atlanta, GA, USA

<http://www.enar.org/meetings/future.cfm>

8 – 13 July

XXIXth International Biometric Conference

Barcelona, Spain

<http://www.biometricsociety.org/meetings-events/ibcs/>

July 28 – August 2

Joint Statistical Modeling

Vancouver, British Columbia, Canada

