Dear members of the ISBIS community,

This will be my last contribution to ISBIS News as President of ISBIS. A new team will take over the leadership of ISBIS at the ISI World Statistics Congress taking place in Rio in July. For those of you who will attend the conference in Rio, please make sure to attend also the ISBIS General Assembly on Tuesday, July 28th from 7:30 to 9:00 am in Room 208. It will be a great opportunity to renew contacts with current ISBIS members but also to get to know new members and exchange with ISBIS Executive Committee and Council so as to participate more actively in the future initiatives of ISBIS and thus contribute to its further development with your ideas and energy.

As already announced earlier this year, I am very pleased to confirm that the month of July will be rich of interesting ISBIS events.

An ISBIS satellite meeting in Campinas (Sao Paulo, Brazil) on Quality Control and Improvement will take place on 22-24 July 2015 at the Institute of Mathematics, Statistics and Scientific Computation (IMECC) of the University of Campinas and will be run in memoriam of Emanuel Pimentel Barbosa (1951-2014). This satellite meeting includes a short course on Multivariate Process Control offered by Emmanuel Yashchin from IBM T.J. Watson Research Center, NY, who is a leading expert in this area.

I strongly encourage those of you who have not yet registered for the meeting in Campinas to have a look at the programme of the conference at 2015.isbis.galoa.com.br. Our deepest gratitude goes to Veronica González-López, the chief local organizer in Campinas, and to her team, whose enthusiasm and efficient work have been key factors to the successful organization of the conference.

The ISI World Statistics Congress will take place in Rio de Janeiro, Brazil on 26-31 July 2015. As usual, the programme of this Congress is very rich. With a focus on ISBIS, let me just remind you the novelty of the very prestigious “William S. Gosset ISBIS Lecture” that will be delivered by Bill Meeker, Iowa State University on: “Reliability in the 21st Century”.
By looking at the past couple of years, I feel that many things have been accomplished:

- An intensive program of statistical capacity building activities including organization of workshops and regional conferences but also endorsement of specialized symposia. A special thank goes to Nalini Ravishanker and David Banks for their successful endeavors on promoting and organizing such activities.

- A significantly improved and more effective communication plan via ISBIS News (with new sections!) and the website isbis.org. Our deepest gratitude goes to Román Viveros-Aguilera for having accomplished an excellent job in deeply renovating ISBIS News and regularly editing 4 issues a year. Román enjoyed the collaboration of Yili Hong and David Steinberg for ISBIS News, as well as of Naveen Naidu Narisetty for the ISBIS website.

- An increased visibility of ISBIS at the ISI World Statistics Congresses, for instance with the first-time ever “William S. Gosset ISBIS lecture”.

- An established series of international biennial meetings with Best Paper and Poster Awards. ISBIS-2016 will take place in Barcelona, Spain on 3-6 July 2016. Many thanks to Pilar Munóz who will be the chief organizer of ISBIS-2016.

- An increasing (but never enough!) number of contributions of ISBIS members to the ISBIS scientific outlet: the ASMBI journal published by Wiley. A special thank-you goes to Fabrizio Ruggeri and his editorial team who manage the Journal with unlimited engagement in a highly competitive environment.

- Strengthened links with other scientific societies and communities: ENBIS (the European Network for Business and Industrial Statistics), ASA (the American Statistical Association) and, of course, ISI as a whole and our sister Societies.

- A more regular follow-up of ISBIS membership. A special thank goes to Martina Vandebroek for her rigorous approach to this important chapter of ISBIS administration in close collaboration with the ISI Permanent Office.

- Some new initiatives are being planned for the near future. For instance, thanks to an idea of David Steinberg, we are launching a section of ISBIS News with pointers to articles published in journals not normally seen by ISBIS members. More information is provided elsewhere in this issue.

While we have very good reasons to be proud of our successful outcomes, I also feel that not everything has advanced as vigorously as I had initially wished. Other projects are still to be improved and developed in the future. Among others, I am thinking of:

- Planning short courses, selecting high quality web materials and more generally providing additional and more focused benefits to ISBIS members.

- Spreading ISBIS activities over a wider range of geographical regions and providing a significant contribution to a larger scientific and professional community so as to become a larger and more influential Society.
Further developing y-BIS, the special group of Young Business and Industrial Statisticians, and building up a junior researcher-mentoring program.

At the end of my fourth year on the ISBIS Executive Committee, I can indeed testify to the hard work invested by many colleagues all over the world who significantly contribute, as volunteers, to the development of our Society. This human capital is a great asset for ISBIS as well as for the incoming Executive Committee and Council (the new composition of these teams is provided elsewhere) who will build on this to assure an even brighter future for our Society.

As usual, I encourage all of you to submit news and items that might feed the content of both ISBIS News and ISBIS website. We need to make ISBIS communication tools the showcase of the activities and the achievements of the ISBIS community. As such, you need to be the lead actors! ISBIS News Editorial team and Webmaster (contacts available at isbis.org/executive.html) will be delighted to receive your contributions.

As I finish up this final message, I want to thank the current members of the ISBIS Executive Committee and Council who have helped ISBIS and myself with their smart ideas and enlightening discussions over the last two years. I also want to express my personal appreciation to Nick Fisher and Vijay Nair who first accompanied me with their experience while I was walking my first steps as ISBIS President and then supported me throughout the term of my presidency. More generally, the whole ISBIS community has to be grateful to all past Presidents for all they have achieved in order to make ISBIS such a well established Society within ISI.

Finally, my best wishes go to the incoming team that will be serving the ISBIS community under the leadership of David Banks.

It has been my privilege and a great pleasure to serve as the President of ISBIS and it will be my honor to still provide my support in the future!

Vincenzo Esposito Vinzi, ISBIS (outgoing) President

The ASMBI Report

In the last issue I mentioned an ASMBI Discussion Paper session at ISI 2015 in Rio with a talk by Hedibert Lopes on Sparse Bayesian Latent Factor Stochastic Volatility Models for High-Dimensional Financial Time Series (co-authored with Gregor Kastner and Sylvia Frühwirth-Schnatter). Now I am glad to add that another ASMBI Discussion Paper session has been planned at the ISBIS Satellite Meeting to be held in Campinas (Brazil) just before ISI 2015: Victor Leiva will present a work on Cumulative Damage Distributions: New Developments and Goodness of Fit. Furthermore, we would like to get papers from the ISBIS meeting to be published in the journal: this is another way in which ASMBI serves its community and the society of which it is the official journal. Details will be provided to the participants by the two Editors, Nalini Ravishanker and Emmanuelli Yashchin, who will be in Campinas (and Nalini and myself will be glad to meet ISBIS members at ISI 2015 to discuss about ASMBI and possible submissions to the journal).
The third issue of 2015 is devoted to papers presented at the Mathematical Methods in Reliability (MMR) meeting held in South Africa in 2013 and it has been published just before the new MMR conference in Japan. Thanks to the cooperation of Wiley people and Maxim Finkelstein (Guest Editor of the issue), the issue has been promoted at MMR 2015, making it also available for free in June 2015 and using different Wiley channels (such as StatisticsView, www.statisticsview.com).

The next issues will be based just on regularly submitted papers but we are working on more special issues and have invited leading researchers to write thought provoking papers: you will learn more in the near future. In the meanwhile, do not forget to access the journal for free (if ISBIS member), read the papers and get (hopefully!) inspiration for your work which could be submitted, upon completion, to ASMBI: we are always looking forward to receiving your papers!

Fabrizio Ruggeri, ASMBI Editor-in-Chief (fabrizio@mi.imati.cnr.it)

ISBIS Membership

I am glad to report that the ISBIS membership is healthy. With 18 new members joining the Society in 2015, the total membership is now 282. Slightly more than half of them come from academia (116 faculty members and 48 students) and the other half from business and industry.

ISBIS members come from worldwide. A look at the addresses reveals the following membership counts for the various regions:

<table>
<thead>
<tr>
<th>Region</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Africa</td>
<td>25</td>
</tr>
<tr>
<td>Asia</td>
<td>58</td>
</tr>
<tr>
<td>Australia</td>
<td>8</td>
</tr>
<tr>
<td>Europe</td>
<td>69</td>
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<td>Middle East</td>
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</tr>
<tr>
<td>North America</td>
<td>90</td>
</tr>
<tr>
<td>South America</td>
<td>15</td>
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</tbody>
</table>

Martina Vandebroek
In April, the new password for the Members-Only-Section on the ISBIS website was sent to all members in good standing. In case you forgot the password or did not receive this information although you have paid your 2015 membership fee, please let me know (martina.vandebroek@kuleuven.be).

A reminder to current members and potential new members that ISBIS provides a variety of products and services as well as networking opportunities, including activities aimed at promoting the careers of students and recent graduates. In particular, ISBIS features:

- Biennial international conferences that cover case studies, applications, best practices, and state-of-the-art research developments, and attracts participants from across the world;
- An active slate of regional conferences and workshops as well as meetings that are co-organized with local societies to focus on the specific needs of the regions;
- An international journal, Applied Stochastic Models in Business and Industry (ASMBI) with free on-line access to ISBIS members;
- A regular newsletter, ISBIS News, sent by e-mail to all members and freely available in the ISBIS website (http://www.isbis.org/publications.html);
- 35% discount for ISBIS members on all Wiley books;
- A website www.isbis.org that provides a broad range of information;
- A Members-Only area with free access to ASMBI and ISBIS sponsored events;
- A Young Statisticians’ group (y-BIS) that was formed as part of ISBIS to facilitate communications among people starting their careers and that provides support in a variety of ways — jobs network, Help Desk, social networking site. (For more information, contact Eric Laber at eblaber@ncsu.edu);
- Lowest rates at all official ISBIS events.

Any individuals interested in joining the Society will find all the application materials at http://www.isbis.org/membership.html.

Martina Vandebroek, Vice-President for Membership
ISBIS Officers and Council Members for 2015-2017

ISBIS is pleased to announce that, following the recent election, the new list of officers and Council members is as follows:

Executive Committee for 2015-2017:

David Banks (USA), President
Nalini Ravishanker (USA), President-Elect
Roger Hoerl (USA), VP for Membership and Outreach
Kristina Lurz (Germany), VP for y-BIS
Pilar Muñoz (Spain), VP for Communications
Kwok Tsui (Hong Kong), VP for Scientific Program

Newly elected Council members for 2015-2019:

Narayana Balakrishna (India)
Birger Madsen (Denmark)
Changsoon Park (South Korea)
Paulo Rodrigues (Brazil)

Current and continuing Council members for 2015-2017:

Oliver Chinganya (Tunisia)
Luis A. Escobar (USA/Colombia)
Irena Ograjenšek (Slovenia)
Galit Shmueli (India)

Please note that the term of the incoming Executive Committee and Council starts right after the ISI WSC in Rio. There will be meetings of the current and incoming Executive Committee and Council as well as an Open ISBIS Meeting at Rio.
Preparations are nearly complete for ISBIS-2015. The conference will be held in the installations of the Institute of Mathematics, Statistics and Computer Science (best known as IMECC) at Unicamp. An exciting and varied program, covering a large spectrum of topics in business and industrial statistics, awaits you in Campinas. The activities include a reception, a workshop, keynote addresses, and invited and contributed paper sessions. Below is the invited program.

**Workshop (July 22)**

“Advanced methods in statistical process control,” Emmanuel Yashchin, IBM T. J. Watson Research Center, USA

**Keynote Speakers (July 23-24)**

“Statistical Aspects of Early Warning Systems,” Emmanuel Yashchin, IBM T. J. Watson Research Center, USA

“Statistical Information: A Bayesian Perspective,” Carlos Alberto de Bragança Pereira, University of São Paulo, Brazil
Invited Sessions (July 23-24)

1. Recent Advances in Time Series Modelling and Forecasting, Organizer: Paulo Canas Rodrigues, Federal University of Bahia, Brazil
   
   Talk 1: “Prediction Intervals in Singular Spectrum Analysis,” Paulo Canas Rodrigues, Federal University of Bahia, Brazil
   
   Talk 2: “Some Theoretical Aspects of the Multivariate Singular Spectrum Analysis,” Rahim Mahmoudvand, Bu-Ali Sina University, Iran

2. Statistical Inference, Organizer: Luis Gustavo Esteves, University of São Paulo, Brazil
   
   Talk 1: “Estimation of Causal Functional Linear Regression Models,” José Carlos Simon de Miranda, University of São Paulo, Brazil
   
   Talk 2: “On Making Statistical Inference Under Model Nonidentifiability,” Luís Gustavo Esteves, University of São Paulo, Brazil

3. Statistical Methods for Predictive Modeling using Sensor Data, Organizer: Bianca Zadrozny, IBM Research, Brazil
   
   Talk 1: “Bus Travel Time Predictions Using Additive Models,” Matthias Kormaksson, IBM Research, Brazil
   
   Talk 2: “A Data Driven Method For Sweet Spot Identification In Shale Plays Using Well Log Data”, Bianca Zadrozny, IBM Research, Brazil

4. Time Series Modeling with Applications in Business and Finance, Organizer: Nalini Ravishanker, University of Connecticut, Storrs, USA
   
   Talk 1. “On the Long Run Volatility of Stocks,” Hedibert F. Lopes, Insper, Brazil
   
   Talk 2. “State Space Modeling of Multivariate Time Series of Counts,” Refik Soyer, George Washington University, USA
   
   Talk 3: “Clustering Nonlinear and Nonstationary Financial Time Series,” Nalini Ravishanker, University of Connecticut, USA
5. Theory and Applications of Copulas, **Organizers: Roger Nelsen**, Lewis & Clark College, USA, and **V.A. González-López**, University of Campinas, Brazil

**Talk 1:** “A p-variate Dependence Test Based on the Size of the Longest Increasing Path in a Sample,”
J. E. García, University of Campinas, Brazil

**Talk 2:** “A Statistical Tool for Management Based on Copula Conditional Expectation,” Mariela Fernández, BM&FBovespa, Brazil

**Talk 3:** “Pairwise and Global Dependence in Trivariate Copula Models,” Roger Nelsen, Lewis and Clark College, USA

6. Applications in Business and Economics, **Organizer: David Banks**, Duke University, USA

**Talk 1:** “Dynamic Text Networks,” David Banks, Duke University, USA

**Talk 2:** “Composite Index of Measurement of Development Policies Efforts,” Agbobby-Atayi Ayikoué, Honoré, National Statistical Department, Togo

**Talk 3:** “Link Between the Default Rate and the Economic Situation,” Lao Kenao, Ministry of Agriculture, Togo

7. Enbis Session: Bayesian Models for Engineering Problems, **Organizer: Raffaele Argiento**, National Research Council (CNR), Italy

**Talk 1:** “Probabilistic Support Vector Regression of Time Series Data for Prognostics in Nuclear Power Plants,” Valeria Vitelli, University of Oslo, Norway

**Talk 2:** “Semi-Markov Modelling of Electricity Co-generation in Residential Applications with Time-dependent Covariates,” Raffaele Argiento, National Research Council (CNR), Italy

**Talk 3:** “Flexible Classes of Linear Degradation Models,” Rosangela Helena Loschi, Federal University of Minas Gerais, Brazil

8. Topics on Statistical Applications in Business and Industry, **Organizer: Victor Leiva**, Adolfo Ibáñez University, Chile

**Talk 1:** “A New Direction of Attribute Control Charts for Product Duration,” Victor Leiva, Adolfo Ibáñez University, Chile

**Talk 2:** “Birnbaum-Saunders Capability Indices for Industrial Processes,” Carolina Marchant, Federal University of Pernambuco, Brazil

**Talk 3:** “An Optimized Methodology with Dependent Demand for Food Industry,” Fernando Rojas, University of Valparaíso, Chile

**Talk 4:** “Birnbaum-Saunders Control Charts Applied to Pharmaceutical Industry,” Juan A. Vega, University of Tarapacá, Chile
9. Topics in Computational Advertising, Organizer: David Banks, Duke University, USA
   
   Talk 1: “Estimating Conversion Rates of Rare Events through a Multidimensional Dynamic Hierarchical Bayesian Framework,” Hongxia Yang, Google, USA
   
   Talk 2: “Convex Biclustering,” Genevera Allen, Rice University, USA

10. ASMBI Discussion Paper Session, Organizer: Fabrizio Ruggeri, National Research Council (CNR), Italy

   Talk: “Cumulative Damage Distributions: New Developments and Goodness-of-fit,” Victor Leiva, Adolfo Ibáñez University, Chile
   
   Chairs: Nalini Ravishanker, University of Connecticut, USA and Emmauel Yashchin, IBM, USA
   
   Discussant: Raffaele Argiento, National Research Council (CNR), Italy
   
   Discussant: Rosangela Loschi, Federal University of Minas Gerais, Brazil

11. Time Series Modeling Approaches, Organizer: Nalini Ravishanker, University of Connecticut, USA

   Talk 1: “Dynamic Stochastic Equilibrium Models with Heteroscedastic Shocks,” Hélio Migon, Federal University of Rio de Janeiro, Brazil
   
   Talk 2: “Simulated Maximum Likelihood in a Markov Switching Stochastic Volatility Model,” Bovas Abraham, University of Waterloo, Canada
   
   Talk 3: “Analyzing Durations in High Frequency Data using Estimating Functions,” Aerambamoorthy Thavaneswaran, University of Manitoba, Canada

12. Estimation in Partition Markov Models, Organizers: J. E. García and V.A. González-López, University of Campinas, Brazil

   Talk 1: “A Copula-Based Partition Markov Procedure,” V.A. González-López, University of Campinas, Brazil
   
   Talk 2: “Copula-Based Analysis of Rhythm,” M. L. Lanfredi Viola, Federal University of São Carlos, Brazil

Six additional invited sessions are being finalized. We hope to see many of you in Campinas!

Verónica González-López (Chair, University of Campinas, Brazil)
Nalini Ravishanker (Co-Chair, University of Connecticut, USA)
Laura Rifo (Co-Chair, University of Campinas, Brazil)
Although our ISBIS-2016 conference is still a year away, meeting preparations continue steadily. Recently, we put together and submitted a detailed proposal for funding to the Ministry of Economy and Competitiveness of the Government of Spain. The Ministry has a section devoted to provide support for the organization of international conferences held in Spain. Our proposal emphasizes the importance of business and industrial statistics, and the distinguished participants expected to attend and present their research at the meeting.

We have also begun work on putting together a Local Organizing Committee and allocation of individual responsibilities. In particular, for the booking of buildings and rooms for the conference in the UPC campus. We will have a colleague responsible for creating and maintaining the conference website.

We warmly invite the ISBIS membership to consider attending the conference. In addition to the high professional level of the meeting, the city of Barcelona has much to offer in terms of arts, culture, architecture and shopping. At one time or another, many of the renowned Spanish masters of the arts and architecture made their home in Barcelona, including Gaudi, Salvador Dalí, Picasso, Joan Miró, Antoni Tapies, ... and a long list. Their creative testament can be seen in stunning buildings around the city and a large number of museums holding masterpieces unseen anywhere else.

Should you have any questions, please do not hesitate to contact me at pilar.munyoz@upc.edu.

Maria Pilar Muñoz, Organizing Committee Chair and ISBIS Council Member
ENBIS-15 in Prague (Czech Republic)

ENBIS – the European Network for Business and Industrial Statistics – is a platform where statistical practitioners and academic statisticians from Europe and beyond meet, exchange ideas and design new projects. ENBIS sponsors an annual conference and numerous additional events, many of them web-based.

The **annual conference** takes place every September and hosts presentations from a wide variety of sectors, ranging from manufacturing to service, from private to public sector. This year, the ENBIS-15 conference will be held on **6-10 September 2015 in Prague, Czech Republic**. ENBIS-15 will feature a number of distinguished keynote speakers, invited and contributed sessions, workshops and panel discussions, as well as short pre- and post-conference workshops.

A number of distinguished keynote speakers will give plenary talks at ENBIS-15. The list includes:

**Ronald Does**  
University of Amsterdam (The Netherlands)  
*Process Improvement in Healthcare*

**Robin Willink**  
National Metrology Institute (New Zealand)  
*The Statistics of Measurement Uncertainty*
Confirmed **pre- and post- conference events** in the framework of ENBIS-15 are:

- Workshop on **Generalized Regression with JMP**, by Volker Kraft.
- Industrial visit to the **Staropramen Brewery** ([www.staropramen.com](http://www.staropramen.com)).

**Interactive sessions** at the ENBIS conference will give participants the opportunity to discuss their own problems and case studies with specialists:

- **Live Problem-Solving Session** by Christian Ritter: Are you facing a problem in industrial and business statistics and need outsider input? Please send the problem description to christian.ritter@ridaco.be and take advantage of our network members' ideas!

- **Measuring Uncertainty** by Franco Pavese and Robin Willink. Are you facing a problematic measurement uncertainty issue? You are encouraged to submit your case in advance to Antonio Pievatolo who will forward it to Franco and Robin.

For further information on the 15th Annual Conference of ENBIS (ENBIS-15) please do not hesitate to contact **Bart De Ketelaere**, Katholieke Universiteit Leuven (Belgium) and **Antonio Pievatolo**, CNR-IMATI (Italy), Co-Chairs of the ENBIS-15 Programme Committee ([bart.deketelaere@biw.kuleuven.be](mailto:bart.deketelaere@biw.kuleuven.be), [antonio.pievatolo@mi.imati.cnr.it](mailto:antonio.pievatolo@mi.imati.cnr.it)) or **Gejza Dohnal**, Czech Technical University (Czech Republic), Chair of the ENBIS-15 Local Organizing Committee ([gejza.dohnal@csc-sro.cz](mailto:gejza.dohnal@csc-sro.cz)).
Highlighting Interesting Articles that are NOT in the Statistics Literature

Most of us come across new ideas and interesting research by attending conferences and reading journals. Naturally, we begin with those meetings and journals that are in our own field. However, many articles with interesting statistical content appear in other journals and meetings. This should not be surprising: statistics is a part of research in almost every discipline and sometimes the statistical challenges themselves are first presented in articles aimed at those in a particular field of study, whether economics, chemistry or marketing. A good example is conjoint analysis, which was developed largely by researchers in marketing.

The goal of this column is to bring such interesting articles to the attention of ISBIS members. Three examples from different areas are presented here. The first is an article on the efficiency of allocation schemes for on-line experiments (so-called A/B testing). The second describes the use of random effects models to characterize performance curves for a medical treatment. The third derives and studies a model for generating a housing price index that can be adapted to local time and geographical scales.

I think that articles like these will be of interest both at the applied and the research level. For practitioners, they provide novel applications in journals that would otherwise have been completely missed. For researchers, they may be first clues to "hot" new problems where they can make constructive advances in study design or data analysis.

We intend to make this column a regular feature of the ISBIS Newsletter. Let us know if you agree with us that it is a worthwhile addition to the Newsletter.

To make this idea work, of course, requires getting good article descriptions. So I want to appeal to you, our members, to consider contributing a description for the newsletter. Here are some guidelines for contributions to the column. Articles should have interesting statistical content but be published in a non-statistical venue (including arxiv). The article might present an interesting application or a problem or data source that requires new statistical methods. The article might itself develop methods. Article summaries should be short (say up to 2/3 page). They should describe the problem and why it should interest other ISBIS members. Sometimes it will suffice just to copy the abstract. Often, though, abstracts are directed toward those with knowledge of the field, who don't need to be convinced why it is important. See yourself as a sales person – you found this article interesting, so tell us why. What makes it worth reading? You will want to include bibliographic information on the article so that other members can easily find it. Send contributions to me at dms@post.tau.ac.il

If you regularly read field journals, please keep this column in mind so that you can share with your colleagues some of the interesting material that you read.
Examples


IT companies have become major users of designed experiments. They run “A/B experiments” to compare alternative definitions of internet pages, with the goal of increasing the number of users who click on relevant links and, ultimately, purchase services. These experiments are often run on high volume sites, making it important to learn quickly which options are best and then to implement them. This paper studies one of the popular sampling strategies, known as Thompson Sampling. This is a randomized algorithm in which the experimental landing page is sampled from among all options with the probability that it is the best of all the options. As experimental evidence accumulates, more and more users are presented with the page(s) thought to be best. This interesting article by Agrawal and Goyal presents a theoretical analysis of what is achieved by Thompson sampling. Their analysis focuses on what is known as the *regret* – the difference between the best landing page that could possibly have been offered and what the algorithm achieves. They show that the regret for Thompson sampling is bounded by a term that is logarithmic in the experimental horizon.


In many studies, performance is studied by tracking a curve over time. Interesting statistical issues arise for modeling such performance curves. This article examines the healing process for pressure ulcers, exploiting detailed data over a period of approximately 40 days from the initiation of treatment. Sophisticated imaging equipment was used to make weekly measurements of the size of the ulcers. The data set included a total of 147 images from 13 wounds on 10 patients. The modeling challenges include how to characterize the trend over time, how the performance curves differ across wounds and subjects, and whether random effect terms are necessary to describe this variation. The authors present several different mixed effect models, both linear and nonlinear, that might be considered for representing these data. The best fitting model was a mixed-effects exponential decrease model, in which observed wound size is predicted by time and by initial wound size. Random effects capture individual differences with respect to the healing pattern. The model is used to investigate some metrics for healing and to compute personalized prediction intervals based on the initial data from a patient.

Understanding how housing values evolve over time is important to policy makers, consumers and real estate professionals. Existing methods for constructing housing indices are computed at a coarse spatial granularity, such as metropolitan regions. However, real estate prices often have important local dynamics; regional estimates are unable to reflect and model these local features. A major challenge in deriving estimates at a local level is the sparsity of house sales data in the relevant spatio-temporal window. Ren, Fox and Bruce develop a novel analysis to address this challenge, producing monthly estimates at the census tract level. The central idea in their approach is a latent factor model for clustering census tracts into groups that have similar property value dynamics. The latent factor is characterized by similarities in market behavior and not by geographical proximity. The authors note that tracts that have similar market activity are often geographically distant from one another; as an example they note the similarity of tracts with waterfront properties. A non-parametric Bayesian clustering approach is used for the latent process. The clustering is entirely data driven. The authors explore methods that can be used to scale the methods to finer levels of spatial and temporal resolution. They also suggest how to take advantage of parallel computation. They illustrate the method by analyzing a large data set from the metropolitan Seattle area, which includes more than 120,000 transactions on 140 census tracts over more than 15 years.

David Steinberg, ISBIS VP for Communications
Dr. Caterina Liberati is a tenured Assistant Professor of Statistics for Economics at University of Milano-Bicocca, Italy. She is also a member of the Bicocca Applied Statistics Center (B-ASC), a University Center devoted to provide statistical solutions to complex problems for business and industry.

Caterina was born in Chieti, a small town located around the center of the Italian boot and a few kilometers away from the Adriatic Sea. The town belongs to the Abruzzo region, a region known as the “Greenest Region in Europe” due to having set aside one-third of its territory, the largest in Europe, as national parks and protected nature reserves. Caterina stayed with her family in Chieti until she became eighteen. Her second level studies were done at the College of Science “F. Masci” in Chieti. Early on Caterina developed an interest in Math and Economics. This led her to look for university programs that combined those subjects.

Caterina left her town to study Economic Statistics (undergraduate program) at University of Bologna. Her interest in world business led her to undertake master studies in marketing. In her master thesis she developed a segmentation analysis for a big insurance company using a Latent Class Model. The idea to be challenged by new real business problems or to find effective statistical solutions for survey data drove her towards consulting. This landed her a position as a statistician at Simbologica (SAS Silver partner), between Bologna and Milan. She held this position for almost two years.

In 2003 Caterina was awarded a scholarship for the doctoral program in Statistics of the Statistics Department at University of Bologna. She left the company and started a thesis in business statistics with Prof. F. Camillo. The research project was on Kernel Discriminant Analysis and Information Complexity, and was developed under the supervision of Prof H. Bozdogan of University of Tennessee, USA. The thesis focused on the selection of the kernel and the ridge when one performs a supervised classification into the Features Space (Reproducing Kernel Hilbert Space). The statistical problem is not simple because the projection of the data into such a huge space makes the between-covariance matrix ill posed. The use of the Information Complexity Index, proposed in the thesis, provided a robust solution in terms of classification error rate and in terms of the flexibility of the model proposed.

Caterina’s current research lies in the supervised classification arena, with a focus on the application of kernel discriminant analysis in a business context. Unlike standard classifiers, kernel-based discriminants (such as Least Square SVM or Kernel Discriminant Analysis) are flexible and outperform traditional statistical techniques, but they still suffer from some problems such as the lack of interpretation that prevent massive application of such algorithms in the business/industrial world. The basic idea of the kernel-based methods is to use the so-called kernel trick, which implicitly maps the data from the original Space to a high dimensional Feature Space in order to make data more separable. Such projection is done via dot product operation, in
that way the link with the original variables is lost. Her more recent research developments (conducted jointly with Prof. F. Camillo and Prof. G. Saporta) have produced a new strategy of analysis that linearly reconstructs a kernel-function. Such process allows retrieval of the linear relationship between the discriminant function and the explanatory regressors, while preserving most of the good performance of the classifier.

A second topic, pursued jointly with Prof. P. Mariani from her department at University of Milano-Bicocca, is the Analysis of Dynamic Customer Satisfaction. The increased availability of data in business raised interest on models capable of estimating the evolution of customer behavior. Therefore, in order to both synthetize the dimension of the data matrices and monitor the process judgment of the subjects, they proposed the use of a Three Way Factor model. Such technique allows the visualization of customer trajectories onto a compromise plan that can be interpreted in terms of survey items of different waves.

Finally, the last research topic relates to textual analysis. The growth of Internet and the information technology has generated big changes in subjects’ communication, which nowadays occurs through social media or via thematic forums. This challenges the traditional notion of Customer Relationship Management (CRM) and pushes businesses to prompt and accurate understanding of sentiments expressed, in order to address their marketing actions. In a joint effort with Prof. F. Camillo, they have come up with a combined application of a supervised Sentiment Analysis (SA) with a probabilistic kernel discriminant to provide a robust classifier of texts polarization that allows identification of the key concepts characterizing the satisfied customers from the dissatisfied ones.

Caterina has built an impressive publication record. Her papers have appeared in top international journals, including *Journal of Pattern Recognition Research*, *Journal of Applied Quantitative Methods*, *Advances in Data Analysis and Classification* and *International Journal of Data Warehousing and Mining*, among others. She has presented her work at many international conferences, including ISBIS-2014 in Durham, NC, where she spoke about “Visualization and Measuring of Dynamic Customer Satisfaction: A Banking Case.”

When asked about what attracted her to business and marketing statistics, this is what she had to say: “*I do like to study business statistics because it permits analyzing real and operative problems that most of the time are very complex to solve. Unlike theoretical areas, business statistics has to provide not only effective and meaningful solutions, but also solutions that can be easily interfaced with enterprise architectures. Moreover, investigating about customer behaviors is what challenges me the most as statistician and economic researcher.*”

Caterina is a sea lover. When she moved to Bologna she decided to enroll in a course on swimming. Since then she developed the habit of swimming twice per week. For her, this is a way to clean her mind from those tricky research problems, and to dispel stresses and worries.
NEWS AND OTHER ANNOUNCEMENTS

MEXICO

Víctor Aguirre-Torres, who is a Professor in the Department of Statistics at the Instituto Tecnológico Autónomo de México (ITAM), Mexico City, has been awarded the 2014 Academic Merit Award. The award recognizes Prof. Aguirre-Torres’ excellence in academic performance and distinguished research accomplishments over the 2014 year. His research interests include statistical methods, econometrics, design of experiments and reliability. A member of the Mexican National Academy of Sciences and an elected member of the National System of Researchers (Tier II) of Mexico, Prof. Aguirre-Torres also received the Best Paper Award at the 2009 International Conference of Computational Statistics and Data Engineering in London, England.

SOUTH KOREA

Changsoon Park, who is a Professor in the Department of Statistics at Chung Ang University, Seoul, has been elected President of the Korean Statistical Society. His research interests cover many aspects of quality control, including development of control charts, economic design of charts, computational aspects and applications. He has authored or co-authored over 75 research publications and several books. Prof. Park has served as Director of The Research Center for Data Science, Dean of Admission Affairs, Director of the Statistical Research Center, and Head of the Department of Statistics, all at Chung-Ang University. This spring, Prof. Park was elected to serve in the ISBIS Council.

UAE

Faisal Khamis has been promoted to Associate Professor of Statistics, Mathematics, Operations Researches & Computers, in the College of Business Administration at Al Ain University of Science and Technology. Khamis holds the titles of Chartered Statistician, Chartered Scientist, and Consultant in Statistics, all from the Royal Statistical Society. He is Editor-in-Chief of the International Journal of Statistics and Analysis (IJSA), India, and the Journal of Islamic Banking and Finance (JIBF), USA. He also serves as Associate Editor for Academia Publishing (National Journal of Social Sciences), UK; SCIKNOW Publications (Econometrics, Open Journal of Mathematical Modeling, International Journal of Maternal and Child Health, and Open Journal of Social Science Research), USA; and the International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS), India. Dr. Khamis’ research interests cover the areas of applied multivariate statistics, public health, spatial statistics, and simulation.
USA

Ron Fricker has joined the faculty of Virginia Tech as a Professor and the Head of the Department of Statistics. He was formerly a Professor in the Operations Research Department of the Naval Postgraduate School in Monterey, California. His research focuses on studying the performance of various statistical methods for use in biosurveillance, particularly syndromic surveillance, and statistical process control methodologies more generally. His recent biosurveillance-related research includes developing new spatio-temporal algorithms, useful for both early event detection and situational awareness, and methods for optimizing the performance of biosurveillance systems. Ron is a Fellow of the American Statistical Association (ASA), an Elected Member of the International Statistical Institute, and a former chair of the ASA Section on Statistics in Defense and National Security. A contributing editor to Interfaces, Ron is also on the editorial boards of Statistics, Politics, and Policy and the International Journal of Quality Engineering and Technology.

Adversarial Risk Analysis – Banks, Rios and Ríos-Insua

Authored by David L Banks, Jesus Rios and David Ríos-Insua, Adversarial Risk Analysis was published recently by Taylor and Francis. The book shows decision makers how to build Bayesian models for the strategic calculation of their opponents, enabling decision makers to maximize their expected utility or minimize their expected loss. This new approach to risk analysis asserts that analysts should use Bayesian thinking to describe their beliefs about an opponent’s goals, resources, optimism, and type of strategic calculation, such as minimax and level-k thinking. Within that framework, analysts then solve the problem from the perspective of the opponent while placing subjective probability distributions on all unknown quantities. This produces a distribution over the actions of the opponent and allows analysts to maximize their expected utilities. The methodology has applications to business, federal regulation, counter-terrorism, and other situations in which there are competing interests. David L. Banks is a professor in the Department of Statistical Science at Duke University and ISBIS President-Elect. His research interests include data mining and risk analysis. Jesus Rios is a researcher in risk and decision analytics for the Cognitive Computing Department at the IBM Research Division. His research focuses on applying risk and decision analysis to solve complex business problems. David Ríos-Insua is the AXA-ICMAT Chair in Adversarial Risk Analysis at the Institute of Mathematical Sciences ICMAT-CSIC and a member of the Spanish Royal Academy of Sciences. His research interests include risk analysis, decision analysis, Bayesian statistics, security, aviation safety, and social robotics.
On May 14, 2015, William H. Woodall delivered the 2015 David Sprott Distinguished Lecture in the Department of Statistics and Actuarial Science at University of Waterloo, Canada. Woodall is a Professor in the Department of Statistics at Virginia Tech, Blacksburg. In his talk, titled “Monitoring and Improving Surgical Quality,” Woodall discussed some statistical issues related to the monitoring of surgical quality, including the important role of risk-adjustment in healthcare, used to account for variations in the condition of patients. He also presented a new method for monitoring quality over time, and illustrated it with data from the American College of Surgeons National Surgical Quality Improvement Program, along with a case study demonstrating significant improvements in surgical infection rates and mortality. A former editor of the *Journal of Quality Technology* (2001–2003) and associate editor of *Technometrics* (1987–1995), Woodall has published over 120 papers, mostly on process monitoring. He is the recipient of the ASQ Shewhart Medal (2002), ENBIS Box Medal (2012), Jack Youden Prize (1995, 2003), ASQ Brumbaugh Award (2000, 2006), Ellis Ott Foundation Award (1987), Søren Bisgaard Award (2012), and a best paper award from *IIE Transactions on Quality and Reliability Engineering* (1997). He is a Fellow of the American Statistical Association, a Fellow of the American Society for Quality, and an elected member of the International Statistical Institute. The David Sprott Distinguished Lecture Series was created in recognition of the tremendous leadership that Prof. David Sprott had at a formative time of the Department of Statistics and Actuarial Science at University of Waterloo, having served as first Department Chair (1967-1975) and first Dean of Mathematics (1967-1972).

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**Editor’s Notes**

Welcome to the summer issue of ISBIS News!

In this issue we inaugurate a new section, Highlighting Interesting Articles that are NOT in the Statistics Literature. Created on the initiative of David Steinberg (ISBIS Vice-President for Communications) and with the unanimous endorsement of the Executive and Council, the premier aim of the new section is to bring attention to ISBIS members interesting published work, either methodological or applied, appearing outside the standard statistics outlets. We are very grateful to David for not only coming up with the idea but also for accepting to edit and moderate the section. The section entries will be posted in a special section of the ISBIS website.

I am indebted to Caterina Liberati from University of Milano-Bicocca, Italy, for accepting to be profiled in *ISBIS News*. Caterina is a young researcher who has developed sophisticated methods for a variety of problems in business. She is a perfect example of someone able to do methodological work strongly rooted in real applications.

This issue marks the end of the year in the ISBIS calendar. In addition, being an odd-numbered year, it coincides with the end of the term for the ISBIS officers and the renewal of one-half of the Council. I had the privilege of serving in Council for the past four years. I found harmony, cooperation and collegiality among fellow Executive and Council members alike. My gratitude goes to Bovas Abraham and Vijay Nair for inviting me to run for Council some four years back.
I also would like to thank President Vincenzo Esposito Vinzi for his hard work on ISBIS’ behalf over the last four years as President-Elect and President. In particular for inviting me to help as editor of *ISBIS News* a couple of years back, and for his enthusiastic support and encouragement in giving the newsletter a more robust profile as a means of communication among the ISBIS membership.

Thanks go to all who contributed to this issue. Special thanks to *ISBIS News*’ Associate Editors David Steinberg and Yili Hong for their help, and to Naveen Naidu Narizetty for his continued assistance with the ISBIS website.

Best wishes to all for a happy and safe summer.

Román Viveros-Aguilera, Editor of *ISBIS News*