



# International Society for Business and Industrial Statistics

Newsletter of the

A Section of the International Statistical Institute (<http://isi.cbs.nl/>)

**ISBIS News**  
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**Editorial**



Again with a (now longer) delay (of one month) you are receiving herewith the “June” edition of our newsletter. The reason for this delay was that I wanted it to include the report of the ISBIS annual meeting in this issue (for this reason we may shift the whole schedule by one month in the future).

Due to the fact that ISI has decided to cancel its own newsletter ISBIS-News importance as a source of information and a manner of communication amongst ISBIS members has increased decisively. This is reflected by the growing number of pages and I encourage you strongly to start and continue contributing to the next issue by submission to me by end of November. Remember that a lot can be of interest to our readers, particularly biographic news from members, new books or software and any other relevant activities. Please help to make this outlet of communication a success by contributing content.

In this issue you will as usually find and address from our president, as well as the regular columns from our young peoples group ybis and the editor of our journal ASMBI. Let me particularly draw your attention to an announcement of a student competition on process improvement at the end of this newsletter.

I wish you all an enjoyable summer, best regards

Werner G. Müller

Editor ISBIS News

**President’s column**



Dear IS-BIS members!

Hopefully will this newsletter find you all in good

shape and enjoying the summer season!

This certainly should be the case if you had the chance to participate to the **ISBIS-2010** symposium that was held last July in a beautiful location between Portoroz und Piran on the Slovenian coast of the Adriatic Sea. You can read below the detailed report of the meeting. But let me add that the combination of high quality presentations from world class experts with the fantastic location (the conference hotel was basically on the sea side) is hard to match!

Where will our next **ISBIS-2012** biennial conference be? Well, since ISBIS wants to be truly an international society and our last conferences were held in Europe, the next one will be on another continent! Although the definitive location has not been decided yet, the executive committee is currently actively engaged in evaluating a possibility in Bangkok. If this should not work out, then an alternative location will most likely be in the USA. More about this in the next Newsletter.

I would like to give you a feedback on the **financial support** that the World Bank has been granting us to help statisticians from developing countries to attend ISBIS2010. Thanks to this fund we were able to support a total of 11 participants from 8 different countries: Iran, Mexico, Russia, India, Ukraine, Indonesia, Poland and the Philippines. This is a success since very little time was available between the announcement of the fund and the deadline for candidacy evalu-



ation. We do hope that this fund will continue to be available in the future which looks promising at this time. We also used this fund to support young statisticians from developing countries to attend the **y-BIS mixer** for young statisticians (by the way, who is a young statistician? Well if you ask, then you probably aren't one!). Over 40 such participants were able to attend. Networking with professionals is extremely important for people at the beginning of their career, especially if living in a part of the world where contacts with other specialists in your field is not easy. ISBIS and in particular y-BIS wants to continue to foster on this issue in the future

Finally let me inform you that the **ISBIS website** ([www.isbis.org](http://www.isbis.org)) has been technically improved. The new site will be launched during August. Most changes concern portability and modularity, and so may not be immediately apparent. However you will notice the better accessibility and password protection of the area reserved to ISBIS members. I remind you that from there you can easily access our Journal ASMBI (Applied Stochastic Models in Business and Industry). An announcement to the membership will be done as soon as the new site is up and running.

As you may know the ISI has stopped producing its Newsletter, since now all the materials are available online from its new website ([www.isi-web.org](http://www.isi-web.org)). This naturally makes our **ISBIS Newsletter** even more important! So please, if you have some materials that you would like to share within the ISBIS community, do not hesitate to contact our editor Werner! Thanks in advance!

Best regards

(Yves-Laurent Grize)

### ISBIS Conferences

REPORT ON THE BIENNIAL INTERNATIONAL CONFERENCE OF THE INTERNATIONAL SOCIETY FOR BUSINESS AND INDUSTRIAL STATISTICS (ISBIS) HELD AT THE GRAND HOTEL BERNARDIN IN PORTOROSE, SLOVENIA FROM 5-9 OCTOBER 2010



The International Society of Business and Industrial Statistics (ISBIS) holds a major international Symposium every two years, focusing on important statistical issues relating to quality and productivity improvement and decision-making at all levels of business, industry, financial and health services. The third biennial conference (ISBIS-2010) was held at St. Bernardin, Adriatic Resort & Convention Center in the coastal resort of Portoroz (Portorose) in the Slovenian Republic, during July 6 - 9, 2010, preceded by a Workshop day on July 5, 2010.

The international symposium, ISBIS-2010, was organized by Nick Fisher (ValueMetrics, Australia and Past President of ISBIS), while the scientific programme was organized by Stefan Steiner (University of Waterloo, Canada). They were ably assisted by professional conference organizer Milena Zeithamlova (Action M Agency).

ISBIS-2010 provided a varied and stimulating scientific program of invited and contributed papers, and excellent opportunities for formal and informal exchanges. It had four main themes, namely Statistical Image Analysis, Large and Complex Data Sets, Statistics in Financial Services and Quality in Health Services.

The conference opened and closed with plenary sessions led by two world leaders in their areas. The opening Keynote Address was

presented by Jean Serra, co-founder with George Matheron of the morphological approach to Image Analysis, in which he reviewed the history and development of the subject. In one of the parallel streams, Jean provided a tutorial introduction to Image Analysis, while the final session featured case studies presented by Adrian Baddeley, Leanne Bischoff and Luc Vincent. The closing plenary session was held on the future of statistical analysis for Large and Complex Data Sets, and featured William Cleveland, Suptarshi Guha and John Morrison, while the closing Keynote Address on the future of statistical computing for massive data sets was presented by Lee Edlefsen.

Several sessions, of particular interest to younger members of the statistical profession, were organised by the ISBIS Young Statisticians group, y-BIS.



The scientific programme featured many invited and contributed speakers from all over the world, organized in 5 parallel sessions covering topics such as Financial Time Series, Statistical Quality Control, Credit Scoring, Image Analysis, Statistics in Information Science, Object Oriented Data Analysis, Risk Modelling, Health and Safety, Extreme Value Statistics, Environmental Statistics, Statistic and Networks, Transportation Data Analysis, Learning Models, Analysis of High Dimensional Complex Data, Chemometrics, Experimental Design, Data Mining and many more.

It is clear that a conference delegate had many options to choose from. Sometimes I felt torn between two or three sessions I



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wanted to attend, but could only select one! The presentations, in most of the sessions I attended, were excellent. The effort that the organizers put into the establishment of this programme should be applauded. Authors of invited and contributed papers were invited to submit extended versions of their papers for publication in a special issue of the Society's journal, *Applied Stochastic Models in Business and Industry*. A prize for the best paper delivered by a young statistician was awarded to Veronika Czellar, from HEC Paris, France.

On the social front the conference offered accompanying person tours to various tourist attractions in Slovenia. For delegates a welcome reception was planned on the Terrace International St. Bernardin Church Square, but due to rain it was shifted to the foyer of the Grand Hotel Bernardin. (This was the only rainy day in a week of excellent weather!) A y-BIS Mixer was held at the Tropic Bar of the same Hotel on the Wednesday afternoon followed by the ISBIS-2010 Dinner at Tri Vdove Restaurant in the old city of Piran. The latter included a boat trip on the Adriatic Sea from St. Bernardin to Piran. The social events were professionally organized and gave ample time for delegates to meet and mingle. All and all this was one of the best organized conferences I have attended in a long time. From arriving in Ljubljana on Monday until getting back to Ljubljana I experienced no problems, only well organised events including the transport to and from Portoroz.



About 200 delegates from 42 countries registered for this conference. The conference was followed by the ICOTS8 conference that was held in the following week in Ljubljana.

All in all the conference achieved several objectives of ISBIS, in particular international collaboration among statisticians and users of statistics in business and industry was fostered. The meeting also contributed significantly towards the advancement and exchange of knowledge in business, financial and industrial statistics. Most of all, relationships between statisticians from developing and developed countries were formed and strengthened.



A special word of thanks to the organisers of this excellent conference! This was echoed by ISBIS president Yves Grize in his closing address. The organizing committee gratefully acknowledges the support given by sponsors:

World Bank – supported participation of several young statisticians from Developing Countries

SAS

National Institute of Statistical Sciences (NISS) – supported an Invited Speaker

National Institute of Statistical Sciences and American Statistical Association (ASA) – provided \$US1000 for the Best Paper Award for a Young Statistician

REvolution Computing – supported participation of Dr Lee Edlefsen, the closing Keynote Speaker

Riaan de Jongh  
ISBIS Council Member, South Africa.

**The 58th Biennial Session of the ISI** to be held in *Dublin, Ireland*, August 20<sup>th</sup>-27<sup>th</sup> 2011.



The Programme Committee has now produced a draft list of invited sessions. Thanks to your submissions it was possible to select 6, which are now tentatively in the programme, running under ISBIS lead.

These are

“Current Developments in Healthcare Engineering” organized by Ronald Does,

“Boundary Crossing Probabilities and their Applications” by Liquan Wang,

“New Applications of System Signatures in Reliability” by Frank Samaniego,

“Sequential Computer Experiments” by Luc Pronzato,

“Credit & Credit Scoring” by Jake Ansell, and

“The Statistical Perspective to Social Network Analysis” by Giuseppe Giordano.

On the water theme day ISBIS is represented with the session “Understanding water resources and quality through analysis of massive data sets” by Karen Kafadar.

ISBIS is further cosponsoring a yet undetermined number of sessions and is thus well represented in the programme.

Topic contributed sessions can now be proposed directly to the local organizers via [www.isi2011.ie](http://www.isi2011.ie) and I am sure that they will be happy receiving further high-class ISBIS submissions.

Werner G. Müller  
Programme Committee member



## Other Events

**The South African Statistical Association's (SASA) annual conference** to be held at *Potchefstroom, South Africa from the 9th to 11th of November 2010.*

The business stream at this conference will be jointly organised by SASA and ISBIS. For more information on this conference visit [www.sasa2010.co.za](http://www.sasa2010.co.za) or view the scientific programme at [www.sasa2010.co.za/program.php](http://www.sasa2010.co.za/program.php). Apart from a young statisticians stream (again jointly organised by SASA and ISBIS), a young statisticians breakfast will be held which is sponsored by ISBIS.

R. de Jongh

**Forum for Interdisciplinary Mathematics (FIM):** Nineteenth International Conference on

**Interdisciplinary Mathematical and Statistical Techniques**  
(IMST 2010-FIM XIX)

December 18 - 20, 2010, Patna University, Patna 800 005, Bihar India

CALL FOR PAPERS:

<http://sites.google.com/site/conferenceinindia/home/conf2010/patna-conference>

FIM, as you perhaps know has been organizing International Conferences in India and abroad alternatively. A good number of mathematicians working in different areas of mathematics and its sister disciplines from across the globe are expected to attend the Patna conference.

Beside

- (i) Plenary talks / invited talks
- (ii) Paper presentations
- (iii) Ph.D. Scholar Best Paper award;

there shall be several symposia held during the conference.

It is my pleasure to inform of this **symposium of Fuzzy Set theory** during this conference.

The symposium is an opportunity for all persons involved in research in any aspect of fuzzy set theory to attend the conference and present their researches and to interact with others working in this area. Several leading researchers in Information Theory & Coding are being invited.

Please send as abstract of your paper (in 250-300 words) to me with a copy to Prof. Arun Sinha ([arunksinha@yahoo.com](mailto:arunksinha@yahoo.com)) and Prof. Bhu Dev Sharma ([sharmaforum@yahoo.com](mailto:sharmaforum@yahoo.com)).

With warm regards

D. S. Hooda

**Fifth IFC Conference to be held at the BIS in Basel on 25 and 26 August 2010.**



the Chairman of the Irving Fisher Committee (IFC) on Central Bank Statistics is inviting ISBIS members to participate in the 5th IFC Conference to be held in Basel on 25 and 26 August 2010. The conference focuses on "Initiatives to address data gaps revealed by the financial crisis".

If you are interested in this topic, you can find more information in the circulated letter, describing the conference and the call for paper.

**IFC is also introducing an award for the best paper presented by a young statistician at this conference.**

**The y-BIS column**, the Young People's group in ISBIS



For the first time the y-BIS had an active role in a biennial international conference of the ISBIS, the ISBIS 2010. In my opinion it was a great start and we have already many ideas of how to improve even more the next participation in 2012.

On the first day of the conference a half-day y-BIS Development Workshop was organised and presented by Ron Wasserstein (Executive Director, American Statistical Association), Sastry Pantula (North Carolina State University, US National Science Foundation, 2010 ASA President) and Robert Rodriguez (SAS Institute, 2012 ASA President). It was attended by 14 young statisticians and covered topics as vast and useful as:

- A Career as a Statistician?: Roles, Opportunities, Challenges
- Solid Footing: the Educational Preparation of the Modern Statistician
- The People Factor: Improving Your Soft Skills
- Ethics and the Professional Statistician
- Professional Accreditation for the Statistician
- New Career Opportunities for Statisticians in Business and Industry.

In the next days of the conference, the y-BIS activities continued in both Scientific and Social ways. Four invited paper Sessions were organized by and/or for young statisticians in several subjects, namely: (i) Time Series and Spectral Modelling (organized by Paulo C. Rodrigues); (ii) Extreme Value Statistics (organized by



Miguel de Carvalho); (iii) Chemometrics (organized by Paulo C. Rodrigues); and (iv) Some Interesting Statistical Problems and Challenges (organized by Nick Fisher). Other sessions had many young statisticians presenting their work.

On Wednesday July 7, a Mixer for y-BIS at Tropic Bar was organized by Nick Fisher which provided a nice environment to meet and interact with other young statisticians.

A Special Invited Session with the Editors Fabrizio Ruggeri, Bill Woodall, Bill Meeker and Karen Kafadar was organized by Paulo C. Rodrigues. This Session aimed to clarify some questions that young (and not so young) statisticians had, concerning paper submission and publication. More than 30 people attended to this session and the fruitful discussion stranded for almost 90 minutes.

For the first (of many) time an award was given to the best paper presented by a Young Researcher. The NISS / ASA Best y-BIS Paper Award 2010, valued at \$US1000, was generously provided by the American Statistical Association and the National Institute of Statistical Sciences. The award committee was composed by Paulo C. Rodrigues (chair), P.G. Sankaran, Vincenzo Esposito Vinzi, Stefan Steiner and Yves Grize. Ten applications were obtained and 4 finalists were selected to be evaluated in Portoroz during the sessions. Namely:

Giorgio Russolillo, CNAM, Paris, France

Miguel de Carvalho, Nova University of Lisbon, Portugal

Veronika Czellar, HEC Paris, France

Petra Posedel, University of Zagreb, Croatia

And the winner, based on both scientific content of the paper and presentation skills, was chosen to

be **Veronika Czellar**. Congratulations to Veronika and to the other 3 finalists!

I would like to thank to the ASA and NISS for the financial support, to Nick Fisher to make it possible, and to the award committee for their help with this important task.

For the near future we are planning to start a "Mentorship program" where senior and experienced statisticians will be available to help young statisticians (mostly, but not only) from developing countries, in their career choices.

To keep y-BIS growing within IS-BIS and outside the Society we need all the possible help you can provide. My request for young people is to join y-BIS and contribute as much as you can (free for full time students and very cheap if you have just finished your PhD). To senior statisticians I would like to ask you to spread the information about y-BIS across your students and others that may be interested.

You can find more information about y-BIS in the website

[sites.google.com/site/ybisisbis/](http://sites.google.com/site/ybisisbis/)



or by writing me.

Paulo Canas Rodrigues  
([paulocanas@gmail.com](mailto:paulocanas@gmail.com))

Chair of the Founding y-BIS

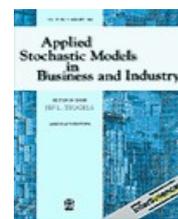
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or on

[www.action-m.com/isbis2010/](http://www.action-m.com/isbis2010/)

Paulo Canas Rodrigues

Chair of the Founding y-BIS

**What's new in ASMBI?**



I just came back from the ISBIS conference in Portorose, where I organised another ASMBI Discussion Paper session. The

speaker was Bill Meeker who presented a joint paper with Li and Holland on "Automatic Crack Detection Using a Matched Filter for Vibrothermography Movie Data". Discussants were Petr Volf and I. Meeker's paper is an example of what I would like to receive more and more: a paper stemming from a real problem, using good math and, finally, solving the problem (or, at least, improving our knowledge). When submitting a paper to ASMBI (and I invite you to do it!), please keep in mind that real applications and good math are what we expect in the journal.

The journal is doing very well; the impact factor just increased by 50% but the current value (0.529) is still far from where we would like to go. Further efforts by the editorial board and, even more, by the authors are needed to establish ASMBI as a reference journal on business and industrial statistics.

The current issue of ASMBI contains papers from ISBIS 2008 in Prague. Participants of ISBIS 2010 can submit their paper through the website [mc.manuscriptcentral.com/asmb](http://mc.manuscriptcentral.com/asmb), mentioning, in the proper field, that the paper is for the IS-BIS2010 special issue. Please keep in mind that ASMBI cannot publish all the papers presented in Portorose but they will go through the usual, tough reviewing process (10-15% acceptance rate) to get papers with innovative methodologies and sound applications (possibly with the latter driving the former ones). The deadline for the submission is Oc-



tober, 31st (and not September, 30th, as I said in a meeting).

Besides the discussion papers I mentioned in the past issues, I just want to inform you that Peter Goos will write on "Design of Conjoint Choice Experiments in Marketing". A special issue out of the recent Quality and Productivity Research Conference, held jointly with the Spring Research Conference in the USA, is under preparation as well.

As usual, ideas about discussion papers and call for papers on "hot topics" are welcome and, last but not least, "good" papers are warmly invited! And do not forget that ASMBI is free to all IS-BIS members; just go to [www.isbis.org](http://www.isbis.org) and login.

Fabrizio Ruggeri,

Editor-in-Chief, ASMBI  
([fabrizio@mi.imati.cnr.it](mailto:fabrizio@mi.imati.cnr.it))

**Student Competition: Can you Improve a Process?**

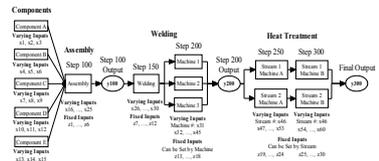
The American Statistical Association (ASA) Section on Quality & Productivity (Q&P) is pleased to announce a student team competition. The goal of the contest is to enhance the statistical expertise of students who are interested in a challenge and want to apply their training in statistical thinking and process improvement to a realistic situation. We believe that students who compete will develop their statistical talents and increase their marketability in the workforce.

If you are a student or know of some students who are ready to demonstrate how to improve a process by applying statistical knowledge and training, who are ready to solve a realistic industrial problem, and who may need money to attend the 2011 Joint Statistical Meetings in Miami USA, then the ASA Q&P Section student team competition is the perfect plan.

With full support from the ASA Q&P Committee, Stefan Steiner from the University of Waterloo is coordinating this competition. There is a simulated manufacturing process called "Wafactory" that allows users to plan and execute empirical investigations of many different types. The process map (Figure 1) captures some of the available knowledge including the 60 varying inputs ( $x_1, \dots, x_{60}$ ) that drive the output variation and the 30 normally fixed inputs ( $z_1, \dots, z_{30}$ ) that can be changed to improve the process. You can also implement various control schemes and inspection points. There are costs associated with each study and each change to the process. Each team will start with an initial virtual budget of \$10,000. Currently, there is too much variation in the critical final output  $y_{300}$ . The object is to reduce the output variation with minimal expense.

If you think you are up to the task, we are looking for teams (2-5 students with a faculty mentor) who

are learning or are knowledgeable about Six Sigma or other process improvement algorithms, who enjoy a challenge and competition and want to apply statistical thinking and methods to a realistic problem.



More background information about the process and a guest login (helpful for exploring how Wafactory works but not the same version of the process as used in the competition) are provided at

[www.student.math.uwaterloo.ca/~stat435/login.htm](http://www.student.math.uwaterloo.ca/~stat435/login.htm)

The winning team will present their results and methods at a special topic contributed session at the Joint Statistical Meeting (JSM) July 30-August 4, 2011, Miami Beach Convention Center. There is a \$500 cash prize for the winning entry plus up to \$1000 per student (max 3 students) for travel expenses to attend JSM.

If you are interested, then the faculty mentor should email Stefan Steiner [shsteiner@uwaterloo.ca](mailto:shsteiner@uwaterloo.ca) to register teams, to acquire access to the contest version of the process, and to get more information about the contest rules and timelines.

To be considered for the prize, each team must register no later than December 31, 2010 and submit a final report by March 15, 2011. The report must describe the proposed solution to the problem, how well it works, how much it costs and, most importantly, the steps taken and the logic behind these steps in reaching the solution. Detailed guidelines about the process, the contest and the judging will be provided upon registration.

Stefan Steiner

**New books from ISBIS members**

We are very pleased to announce the publication of the book



Fuzzy Sets and Information  
A Generalized Approach



Fuzzy Sets and Information: A Generalized Approach, Rakesh Bajaj, D.S. Hooda, Harinder Singh, LAP Lambert Academic Publishing (April 12, 2010) ISBN-10: 3838351487 ISBN-13: 978-3838351483