TASE

International Association for Statistics Education

Editorial Address Andrei Ble

Andrej Blejec, National Institute of Biology, Vecna pot 111 POB 141, SI-1000 Ljubljana, Slovenia Tel: +386 1 423 33 88. Fax: +386 1 2412 980

E-mail: andrej.blejec@nib.si

and

K. Laurence Weldon, Department of Statistics and Actuarial Science,

Simon Fraser University, 8888 University Drive, Burnaby, BC, Canada V5A 1S6

Tel: +1 604 291 3667. Fax: +1 604 291 4368

E-mail: weldon@sfu.ca

President

Gilberte Schuyten, Department Data Analysis

University Ghent, H. Dunantlaan 1, B-9000 Gent, Belgium

Tel: +32 92 64 63 86, Fax: +32 92 64 64 87 E-mail: gilberte.schuyten@ugent.be

Website:

http://www.stat.auckland.ac.nz/~iase/members/profile view ind.php?id=545

IASE Website http://www.stat.auckland.ac.nz/~iase

President's Report

The IASE Executive Committee for the 2005-2007 term consisted of

President: Gilberte Schuyten, Belgium President-Elect: Allan Rossman, USA Past President: Chris Wild, New Zealand

Vice-Presidents: Andrej Blejec, Slovenia; John Harraway, New Zealand; Christine Reading, Australia; Michiko Watanabe, Japan; Larry Weldon, Canada.

Executive Director: Daniel Berze, The Netherlands

Special assignments were given to Carmen Batanero (Spain; ICOTS-7 and ICMI/IASE Joint Study), Carol Joyce Blumberg (USA; ISLP), Beth Chance (USA; SERJ), Lisbeth Cordani (Brazil; ICOTS-7), Iddo Gal (Israel; SERJ), Helen MacGillivray (Australia; ISI-57), Brian Phillips (Australia; Satellite 2007), Juana Sanchez (USA; SERJ), Tom Short (USA; SERJ), Susan Starkings (UK; ICOTS-7).

The IASE Executive Committee for the 2007-2009 term is

President: Allan Rossman, USA

President-Elect: Helen MacGillivray, Australia Past President: Gilberte Schuyten, Belgium

Vice-Presidents: Andrej Blejec, Slovenia; John Harraway, New Zealand; Delia North, South Africa; James Nicholson, England;

Enriqueta Reston, The Philippines.

Executive Director: Daniel Berze The Netherlands

The past two years have been very successful for the IASE. The main event was our ICOTS-7 Conference in Salvador, Brazil, in 2006. The conference was a big success thanks to the excellent work by the International Programme Committee and, in particular, the efforts by Carmen Batanero, Susan Starkings and John Harraway as well as by the excellent local organisation by Lisbeth Cordani, Pedro Morettin and their team. A main result is the ICOTS-7 Proceedings CD-ROM

edited by Allan Rossman and Beth Chance, which is now freely available on the publication page of IASE.

The first steps towards organising next ICOTS-8 in 2010 have already been taken by the IASE Executive. After having venues on different continents, ICOTS-8 returns to Europe in Ljubljana, Slovenia, July 11-16, 2010. The conference theme Data and Context in Statistics Education emphasizes two concepts that are key concepts at nearly all levels of statistics education. The subtitle Towards an Evidence-Based Society offers a gateway to reflections about the past, present and future status of statistics in society and about the impact of statistics education on learning objectives. The International Programme Committee Executive consists of: John Harraway, (New Zealand; IPC Chair), Roxy Peck (USA; Programme Chair), John Shanks (New Zealand; Information Manager), Helen MacGillivray (Australia; Scientific Secretary) and Alan McLean (USA; Editor Proceedings). The Local Organising Committee is chaired by Andrej Blejec (Slovenia). You can access the ICOTS-8 website at: http://icots8.org/.

By the time this Report becomes public, we will have just held a two-day Satellite Conference on Assessing Student Learning in Statistics, Guimarães, Portugal, August 19-21, 2007, with Brian Phillips and Beth Chance as Joint Chairs of the Programme Committee. Allan Rossman (USA) organised the topics for Invited Paper Meetings for the 56th Session in Lisboa and the Invited Paper Meetings for 57th Session in Durban are being organised by Helen MacGillivray (Australia). The IASE Programme Committee for ISI-57 has chosen the theme Statistics Education for the Future.

In addition, there have been IASE sponsored sessions at the 2005 Joint Statistical Meetings (Minneapolis 2005) organised by Carol Blumberg. IASE also co-sponsored a number of activities such as the Stochastic Thinking and Reasoning Research Forum 4 (New Zealand, July 2-7, 2005) and Forum 5 (UK, August 11-17, 2007).

Planning for the IASE Round Table Conference in Monterrey, Mexico, June 30-July 4, 2008, is underway. This Round Table is one of the components of the ICMI/IASE Joint Study Statistics Education in School Mathematics: Challenges for Teaching and Teacher Education.

The IASE research flag SERJ is in good shape. Four very interesting issues were published in 2005-2006; in Vol. 4, No. 1 (May 2005) a special section was included about Reasoning about Variation with guest editors Joan Garfield and Dani Ben-Zvi) and a special issue Vol. 5, No. 2 (November 2006) dealt with Reasoning About Distribution with guest editors Maxine Pfannkuch and Chris Reading. Plans are underway to continue with special issues dedicated to a central theme.

The flow of submissions is increasing and thanks to the efforts of the editorial board under the leadership of Iddo Gal and Tom Short the journal is growing in prestige.

The International Statistical Literacy Project (ISLP) has been under transition. Under the leadership of Carol Joyce Blumberg from the start in 2001 up to mid-2006, Carol constructed a website that offered a gateway on Internet towards Statistical Literacy and towards IASE. Juana Sanchez is taking over and has a great vision about ISLP. In collaboration with the INE of Portugal, ISLP conducted in 2007 a statistical literacy game in some schools around the Guimarães area. By the time this report become public, we will know the winners of the first ISLP Statistical Literacy Games held in Portugal. The semi-final took place on Saturday, August 18, 2007, in Guimaraes, where teams of students 10-18 years participated in these games.

The important collaboration with ICMI Statistics Education in School Mathematics Challenges for Teaching and Teacher Education, which started in 2005 under the leadership of Carmen Batanero, is making progress.

This ICMI/IASE project consists of several components, one of which is the IASE Roundtable in 2008 in Mexico.

During the period 2005-2007, Past President and Website Editor Chris Wild made many important additions. All conference proceedings, are delivered from the IASE publications page

 ${\it http://www.stat.auckland.ac.nz/}{\sim} iase/publications.php.$

Also, significant archival content was added in 2006 including the Proceedings of ICOTS-3 (1990) and the Proceedings of the First Scientific Meeting of the IASE held in Perugia in 1993. The scanning for all of the above was done by the Department of Statistics at the University of Auckland and Carol Joyce Blumberg's assistants at Winona State University. We are still on the lookout for volunteers to scan other important Proceedings or even just send the books to Chris Wild. For example, we are still missing ICOTS 1, 2 and 4. In terms of effort for webmaster Stephen Cope, the biggest job has been exporting Carol Joyce Blumberg's ISLP pages from Winona State University and recreating them as a wiki, so that it is easy for many people around the world to work on the content remotely. Many regular features have been updated. For example, we now have about 24 statistics education doctoral dissertations in full version at

http://www.stat.auckland.ac.nz/iasedissert and about 18 abstracts. Then, of course, there have been the regular additions to the archives of IASE Matters, ISI Newsletters, SERJ and so on

Extensive reports of all activities are given in the 2005 and 2006 issues of the IASE Review available from the IASE website, as well as the Proceedings of all conferences, all issues of SERJ, the electronic journal co-published by the IASE and ISI, and all other IASE publications. We plan to continue our policy of free access on our website for our

publications and of cooperation with other statistics education journals and professional bodies interested in statistics education.

We also plan the alteration of the name of the association. The new name International Association of Statistics Education was submitted to and approved by the General Assembly of the IASE on 28 August 2007. This change is in line with other similar associations.

In the Coming of Age of Statistical Education, Vere-Jones (1995) discusses a threefold purpose of IASE: (1) IASE is a professional group representing the interest of statistics teachers, (2) IASE is a research organisation promoting research into statistics education and (3) IASE is an organisation representing the statistics community in education matters.

The above mentioned activities of IASE demonstrate that IASE has been working during 2006 on all three roles. In order to fortify the IASE as an organisation representing the statistics community in education matters, I would like to invite ISI members to become a member of IASE. If you are not yet a member of another ISI Section, it is free of charge. Please send an e-mail to Margaret (*mmly@cbs.nl*) indicating that you are an ISI member and that you would like to join IASE. If you are an ISI member and already a member of another ISI Section, then there is a nominal charge (see the application form on the IASE website or send an e-mail to Margaret). If you have any further questions, please write to me *Gilberte.schuyten@ugent.be*.

I would like to express my gratitude to all the 2005-2007 IASE Executive Committee members, IASE members with special assignments and all people who participated in the many IASE activities.

Contributed by Gilberte Schuyten



Announcement and Call for Conference Papers: Joint ICMI /IASE Study Statistics Education in School Mathematics

(This is also the IASE 2008 Round Table Conference) June 30 to July 4, 2008, Monterrey, Mexico

The International Commission on Mathematical Instruction (ICMI, http://www.mathunion.org/ICMI/) and the International Association for Statistical Education (IASE, http://www.stat.auckland.ac.nz/~iase/) are pleased to announce the Joint ICMI /IASE Study Statistics Education in School Mathematics: Challenges for Teaching and Teacher Education.

Following the tradition of ICMI Studies, this Study will comprise of two parts: the Joint Study Conference and the production of the Joint Study book. The Joint Study Conference will be merged with the IASE 2008 Round Table Conference.

The Joint Study Conference (ICMI Study and IASE Round Table Conference) will take place at the Instituto Tecnológico y de Estudios Superiores, Monterrey, Mexico (http://www.mty.itesm.mx/), from June 30 to July 4, 2008. Participation in the Conference is only by invitation, based on a submitted contribution and a refereeing process. Accepted papers will be presented at the Conference and will appear in the Proceedings that will be published by ICMI and IASE as a CD-ROM and on the Internet.

The second part of the Joint Study – the Joint Study book – will be produced after the Conference and will be published in the ICMI Study Series. Participation in the Joint Study Conference does not automatically assure participation in the book, since a second selection and rewriting of selected papers will be made after the Conference. Proposed papers for contributions to the Joint Study Conference should be submitted by e-mail no later than October 1, 2007, to the IPC Study Chair (Carmen Batanero, batanero@ugr.es). Papers should be relevant to the Joint Study focus and research questions, as described in the Discussion Document (which is available at the Joint Study Website

(http://www.ugr.es/~icmi/iase_study/) or directly at http://www.ugr.es/~icmi/iase_study/Discussion_Document.pdf) Guidelines for preparing and submitting a paper are also available in the Discussion Document.

Please address questions to Carmen Batanero, batanero@ugr.es.

International Programme Committee:

Carmen Batanero (Spain, Chair), Bernard Hodgson (Canada, representing ICMI), Allan Rossman (USA, representing IASE), Armando Albert (México), Dani Ben-Zvi (Israel), Gail Burrill (USA), Doreen Connor (UK), Joachim Engel (Germany), Joan Garfield (USA), Jun Li (China), Maria Gabriella Ottaviani (Italy), Lionel Pereira Mendoza (Singapore), Maxine Pfannkuch (New Zealand), Mokaeane Victor Polaki (Lesotho), and Chris Reading (Australia).

Contributed by Carmen Batanero



ISLP NEWS

Statistical Literacy Competition in Northern Portugal a Success

The winners of the Statistical Literacy Competition organised by the ISLP in Schools in northern Portugal received their awards from Chris Wild, Past President of the IASE, on August 18, 2008, at the University do Minho, Guimaraes, Portugal. We can see in the figures below the high school winning team (top) and the winning team from the middle school (bottom).





Shown in the pictures from left to right are: Juana Sanchez, Director of the ISLP, the winning team, Chris Wild and Bruno de Sousa, from University do Minho. The teams came from Escola Secundaria de Caldas das Taipas and Escola EB2,3 de Valenca do Minho, respectively. They received as prizes games provided by the sponsor APM (Mathematics Teachers Association of Portugal), an ISI watch provided by the ISI, and a \$100 check to cover expenses of their travel to Guimaraes for the final and travel to the local site where they competed in the premilinary games. The monetary award was jointly provided by funds from the sponsor Statistics Education Section of the American Statistical Association and the IASE. In addition to this award, these students will have expenses paid

During the preliminary games in Valenca do Minho, Porto and Guimaraes, the students received small prizes provided by sponsors Statistics Portugal, Australian Bureau of Statistics, APM, University do Minho and the DREN (North Portugal Regional Education Authority). The students also heard inspiring presentations by statisticians who gave them an overview of the use of Statistics in everyday life and career opportunities in Statistics.

Other sponsors were UCLA department of Statistics and SOCR. We cannot thank enough the help we received from Pedro Campos of Statistics Portugal, Maria Manuel da Silva Nascimento of UTAD and Bruno de Sousa of University do Minho. Without them and the sponsors, the competition would not have been possible.

The ISLP web page

http://www.stat.auckland.ac.nz/~iase/islp/game

contains a very detailed description of the competition at the different locations (Valenca, Porto, Guimaraes) and many photos. The games that the students did can also be found there.

Best Cooperative Project Award and Volunteers Awards

During the ISLP Open Meeting at the ISI Session in Lisboa, Pedro Campos of ALEA received for ALEA the Best Cooperative Project Award 2007. ALEA (http://www.alea.pt) was one of the sources of materials for the ISLP games, but it was also a source of inspiration and a model to imitate in Statistical Literacy. The project is cooperation among a high school, the North Portugal Regional Education Authority and Statistics Portugal. Not only does it provide lessons and materials for adult and children's statistical education, but it also contains a huge amount of creative spaces where anyone can learn about Portugal while having fun and learning statistics at the same time. The award was also recognition for Pedro Campos' help since the beginning of the games.

Volunteer awards were given to Bruno de Sousa, Maria Manuel da Silva Nascimento and Chris Wild, for their immense support and help during the statistical literacy competition. We can say that their work in Statistical Literacy in Portugal is a source of inspiration for many in any country.

The ISLP will continue to award a "Best Cooperative Project Award in Statistical Literacy" in years to come and "Volunteers Certificate Awards". The rules and call for applications in the former will soon be released on the ISLP website.

First International Statistical Literacy Competition Register before February 28, 2008

On page 11 of this *Newsletter*, we are advertising the International Statistical Literacy Competition. Please note that non-English speaking teachers can also register, but at a different site that they can find on the ISLP web page listed on the flyer.

Contributed by Juana Sanchez



Research and Development in the Teaching and Learning of Probability Call for Papers

Topic Study Group #13
Monterrey, Mexico – July 6-13, 2008, http://tsg.icme11.org/
Team Chairs:

Manfred Borovcnik (Austria) manfred.borovcnik@uni-klu.ac.at Dave Pratt (U.K.) d.pratt@ioe.ac.uk

Silvia Alatorre Frenk (Mexico) alatorre@solar.sar.net Team:

Carmen Batanero (Spain) batanero@ugr.es Wu Yingkang (China) ykwu@math.ecnu.edu.cn

Aims and focus

Probability and statistics education are relatively new disciplines. Both have only recently been introduced into main stream school curricula in many countries. While application-oriented statistics is undisputed in its relevance, discussion about probability is more ambivalent. When probability is reduced to its classical conception, mainly based on combinatorics or its formal treatment in higher mathematics, it can be seen as irrelevant, and may be abandoned to leave only the statistical element of the stochastics discipline. However, we believe that there are some powerful arguments in favour of a strong role for probability within stochastics curricula:

- i) Sound probabilistic judgements support people's rational decision-making in important situations, such as medical tests, jury verdicts, investments, assessment, etc.
- ii) Equally, reasoning about uncertainty is an important everyday skill. For example, the concepts of risk (not only in financial markets) and reliability, closely related to probability, impact on our everyday decision-making.
- iii) Probability is essential in understanding any inferential procedures in statistics.
- iv) Probability offers a tool for modelling and "creating" reality. For example, modern physics cannot be formulated without reference to probability concepts.

Thus, the challenge is to teach probability through designing materials and tools that help understanding. The focus has to be on creating approaches to probability that are more accessible and motivating, utilising practical applications as appropriate. Pedagogy should embrace schools of thought such as the frequentist and subjective views of probability.

We see the emergence of approaches that promote the visualisation of abstract concepts. Simulation is one such strategy, but there are many others. The use of technology also enables a change in emphasis from the technicalities of calculation to conceptual underpinning. At the same time, we recognise the fundamental importance that pedagogy addresses personal attitudes and intuitions in its approach.

With these challenges in mind, we encourage presentations at ICME 11 that will help us to share the diversity of endeavours in research on understanding and teaching of randomness, chance and probability. May future teaching take advantage of this exchange, which we expect will initiate new research projects on the teaching and learning of probability.

We invite submissions related to the following topics:

Individuals' corner

- Students' understanding and misunderstanding of fundamental probabilistic concepts;
- · Ideas of probability in young children;
- Impact of technology;

- The use of technology for students' learning of probability;
- Using specific software to study probability and sampling distributions:
- Special issues in e-learning.

Teacher's corner

- Teacher education on the topic of probability;
- · Teachers' conceptions about teaching probability.

Fundamental ideas

- The probabilistic idea of random variable, distribution, expectation;
- The central limit theorem, convergence;
- Bayes theorem and conditional probability, independence, exchangeability;
- Probabilistic modelling a probabilistic look at distributions.

Submissions and proposals

Individuals may submit a paper for consideration by the Organizing Team of the Topic Study Group to be accepted for oral presentation in the TSG or as a paper presented by distribution within the group. Send proposals to manfred.borovcnik@uni-klu.ac.at (with the reference "ICME 11 proposal" to filter the mail accordingly). Accepted papers will also be published on the website of the conference and on a conference CD. If you do not specify presentation by distribution, we will assume that you wish your paper to be considered for oral presentation. As only a limited number of papers can be presented orally, you may be asked to accept presentation by distribution. The time for presentation will be limited to 15 minutes; some talks of general interest may have 30 minutes.

Preliminary schedule

Short outline/proposal (2 pages) Jan. 1, 2008 Answer to the authors Jan. 22, 2008

Paper Submitted March 1, 2008

Papers reviewed by the organizing team April 15, 2008 Final paper submitted and posted on the TSG website May 15, 2008

Note: Late submissions (until April 15) will be considered for presentation by distribution.

Practical information

Length of proposal: 2 pages plus references – Length of final paper: 4-6 pages plus references.

Templates with the format conditions will be downloadable from the website.

Other activities linked to probability education at and around ICME

TSG #14: Research and development in the teaching and learning of statistics at ICME-11

More information: http://tsg.icme11.org/

Team Chairs:

Rolf Biehler (Germany) biehler@mathematik.uni-kassel.de Mike Shaughessy (U.S.A.) mikesh@pdx.edu

Omar Rouan (Marocco) esanchez@cinvestav.mx

Joint ICMI/IASE Study

This conference takes place at the ITESM, Monterrey, June 30-July 4, 2008 (the week before ICME).

More information: http://www.ugr.es/~icmi/iase_study/ Chair: Carmen Batanero (Spain) batanero@ugr.es

ELEE: Latin American Statistics Education Meeting (in Spanish and Portuguese)

This meeting is specifically directed to Latin American
Statistics Educators and takes place at the ITESM, Monterrey,
July 4-5, 2008.

Contributed by Manfred Borovcnik and Dave Pratt
More information:

http://www.ugr.es/~icmi/iase study/encuentro.htm