

NOTE: DUE TO SOME UNKNOWN TRANSMISSION ERROR THE VERSION OF THIS COLUMN ACTUALLY PRINTED IN THE OCTOBER 2004 ISSUE OF THE ISI NEWSLETTER WAS INCOMPLETE. THIS FILE CONTAINS THE FULL VERSION

**International Association for Statistical Education
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FORTHCOMING IASE ACTIVITIES

ICOTS 7



Working Cooperatively in Statistics Education
Salvador (Bahia), Brazil, July 2-7, 2006
<http://www.maths.otago.ac.nz/icots7>

Call for Papers

The 2006 Conference will be held in the city of Salvador, in the state of Bahia, Brazil, July 2-7. It will be organised by the IASE and the Brazilian Statistical Association (ABE), with support of the Brazilian Institute of Geography and Statistics (IBGE).

Statistics educators, statisticians, teachers and educators at large are invited to contribute to the scientific programme. Types of contribution include **invited papers**, **contributed papers** and **posters**. No person may author more than one Invited Paper at the conference, although the same person can be co-author of more than one paper, provided each paper is presented by a different person.

Voluntary refereeing procedures will be implemented for ICOTS7. Details of how to prepare manuscripts, the refereeing process and final submission arrangements will be announced later.

Invited Papers

Invited Paper Sessions are organized within 9 different Conference Topics 1 to 9. The list of Topic and Sessions themes, with email contact for Session Organisers is available at the ICOTS-7 web site at <http://www.maths.otago.ac.nz/icots7>, under "Scientific Programme". Those interested in submitting an invited paper should contact the appropriate Session Organiser **before December 1, 2004**.

Contributed Papers

Contributed paper sessions will be arranged in a variety of areas. Those interested in submitting a contributed paper should contact either Joachim Engel (Engel_Joachim@ph-ludwigsburg.de) or Allan MacLean (alan.mclean@buseco.monash.edu.au) **before September 1, 2005**.

Posters

Those interested in submitting a poster should contact Celi Lopes (celilopes@uol.com.br) **before February, 1, 2006**.

General issues

It is important for you to know that all participants have to register for the Conference. Details about the registration procedure will be given later.

If requested, the IASE is normally happy to give permission for authors to submit their papers (or a more comprehensive version) to other journals, such as Statistics Education Research Journal, Journal of Statistics Education, International Statistical Review or Teaching Statistics. If this occurs the author must seek approval of the editors of the ICOTS7 Proceedings and the IASE President. The paper must have an acknowledgement saying *"This article was written for, and published in, the ICOTS7 Proceedings and is reprinted (in revised form, if relevant) here with the permission of the IASE"*.

More information is available from the ICOTS-7 web site at <http://www.maths.otago.ac.nz/icots7> or from the ICOTS IPC Chair Carmen Batanero (batanero@ugr.es), the Programme Chair Susan Starkings (starkisa@lsbu.ac.uk) and the Scientific Secretary John Harraway (jharraway@maths.otago.ac.nz).

IASE Satellite Conference on Statistics Education and the Communication of Statistics, Sydney, Australia, April 4-5, 2005

The IASE satellite conference is to be held in Sydney, Australia 4-5 April which runs just before the ISI 55 conference. The conference theme is 'Statistics education and the communication of statistics'.

To be effective in the real world, students will have to be able to tackle problems through statistical investigations. Effective communication of statistical findings is one of the critically important aspects of the conference. A great deal of work has to go into the teaching of students so that they are able to communicate the findings to the general public. Questions such as:

What is going on out there?

What methods do we have for teaching students to write about, speak about, or otherwise convey, the messages they see in data?

What is working?

How do we know?

What has been tried but failed?

What new ideas do we have?

are to be addressed at the conference. Joint organisers, of this conference, are Brian Phillips email: bphillips@swin.edu.au and Kay Lipson email: klipson@swin.edu.au Information about this conference is available on the website which also contains information on abstracts, papers, fees, accommodation and social program see <http://www.stat.auckland.ac.nz/iasestat05/>

IASE Activities at the 55th Session of the ISI, Sydney, Australia, April 5-12, 2005

Chair: Chris Wild, c.wild@auckland.ac.nz.

These conferences of the International Statistical Institute (ISI) are held every two years. As it does at each major ISI conference, IASE will be organising 10 statistics education sessions for ISI 55. Here follows the list of meetings with the contacts.

IPM 45: Reasoning about variation. Chris Reading, creading@metz.une.edu.au

IPM 46: The use of simulation in statistics education. Andrej Blejec, Andrej.Blejec@nib.si

IPM 47: Teaching statistics online. Larry Weldon, weldon@sfu.ca

IPM 48: Statistics for life: what are the statistical ideas or skills that matter most and why? Chris Wild, c.wild@auckland.ac.nz

IPM 49: Research in statistics education. Kay Lipson, klipson@swin.edu.au, Maria Gabriella Ottaviani, Mariagabriella.ottaviani@uniroma1.it

IPM 50: Quality assurance in statistics education. Matthew Regan, m.regan@auckland.ac.nz

IPM 51: Promotion of statistical literacy among students. Pilar Guzman, pilar.guzman@uam.es (IASE & IAOS)

IPM 52: Using history of statistics to enhance the teaching of statistics. Carol Blumberg, cblumberg@winona.edu (IASE & ISI History of Statistics Committee)

IPM 63: Educating the media on how best to report statistics. Jacob Ryten, (IASS, IASE, IAOS)

IPM 81: Ethical Standards in statistics education. Mary Gray, mgray@american.edu (IASE & Ethics)

IPM 82: Bayesian statistics. Murray Aitkin, Murray.Aitkin@newcastle.ac.uk (Bernoulli & IASE)

IPM 83: Challenges in the teaching of survey sampling. Wilton de Oliveira Bussab, bussab@fgvsp.br (IASS & IASE)

For more information about ISI 55 and the IASE ISI 55 page, see the websites at

<http://www.tourhosts.com.au/isi2005/> and <http://www.stat.auckland.ac.nz/iase55>

SRTL-4: The Fourth International Research Forum on Statistical Reasoning, Thinking, and Literacy, Auckland, New Zealand, July 2-7, 2005.

Maxine Pfannkuch, m.pfannkuch@auckland.ac.nz

The SRTL series has been an extremely successful format for advancing statistics education research. The topic of the fourth Forum is "Reasoning about Distribution". If you are interested in finding out more, see the SRTL-4 web site at <http://www.stat.auckland.ac.nz/srtl4>

Reports of Summer Conferences and Meetings

Statistical Education Presentations at The International Congress on Mathematical Education (ICME-10) - TSG 11 - Research and development in the teaching and learning of probability and statistics Report by Joe Wisenbaker

The 10th International Congress on Mathematical Education was held this summer in Copenhagen, Denmark from July 4-11. As a part of the overall program, Topic Study Group 11 was organized around the theme of research and development in the teaching and learning of probability and statistics. TSG11 was organized by a representative team many of whose members have longstanding ties with the IASE. Its co-chairs were Jun Li from East China Normal University (China) and Joe Wisenbaker from the University of Georgia (USA). The other team members were Dani Ben-Zvi from the University of Haifa (Israel), Manfred Borovcnik from the University of Klagenfurt (Austria) and Maxine Pfannkuch from the University of Auckland (New Zealand).

The presentations made for TSG11 at the meeting in Copenhagen were organized into four sessions. The first session was entitled 'Exemplary Work in Statistics Education'. It began with opening remarks by the co-chairs, featured an invited address by Jane Watson, and presentations by Iddo Gal and Dani Ben-Zvi, and Susan Starkings.

The second session was entitled 'Research on Reasoning about Variation and the Use of Technology in Statistics Education'. It featured an invited address by Mike Shaughnessy, presentations by Robert

delMas and Yan Liu, Dor Abrahamson and Uri Wilensky, and a discussion by Maxine Pfannkuch and Dani Ben-Zvi.

The third session was entitled 'Issues in Teaching Statistics from Multiple Perspectives'. It featured an invited address by Joan Garfield (delivered by Robert delMas in her absence), presentations by Robert Gould and Roxy Peck, Alejandra Sorto and Alexander White, and a discussion by Manfred Borovcnik.

The last session, 'Exploring Issues of Reasoning about Distribution, Data and Graphs', began with an invited address by Koeno Gravemeijer, presentations by Yingkang Wu, Helen Chick, Carlos Monteiro and Janet Ainley, Maxine Pfannkuch, Stephanie Budgett, Ross Parsonage and Julia Horring, and closing remarks by the co-chairs.

There were also several excellent papers chosen for presentation by distribution contributed by José Carmona, Christine Duller, Sibel Kazak and Jere Confrey, W. M. Luh, J. H. Guo, and J. M. Wisenbaker, Mike Perry and Gary Kader, Milo Schield, and Ödön Vancsó.

Nearly all of the invited presentations and papers selected for presentation were posted to the conference website at www.icme-organisers.dk/tsg11/. The ICME organizers intend for that site to remain available until ICME11 in the summer of 2008.

ICOTS -7 Meeting at ICME 10

The planning meeting for ICOTS-7, chaired by Carmen Batanero IPC Chair and Susan Starkings Programme Chair, was well attended by a variety of colleagues. These included past ICOTS-6 and current ICOTS-7 Topic Convenors, Session Organisers and speakers as well as IASE members from Brazil, Honduras and Peru. Many useful suggestions were made regarding the current state of the programme and the conference in general. The participants were most supportive of the idea of having sessions in Portuguese and Spanish, provided that the slides were translated into English. After the happy hour, the conference rooms will be empty and there were several suggestions about possible complementary activities that could be organised at this time at no extra financial cost. Suggestions include meeting the plenary speakers for informal discussions, meeting of interested groups such as STRL, Statistical Societies in South America meeting and a meeting with colleagues interested in technology. Another complementary activity suggested was a poster or project competitions for schools. The IPC also received a number of suggestions about possible places for advertising the conference and for getting sponsorships.

In general colleagues were very supportive of the work that has been done so far and considered the website to be well organised with clear and upto date instructions. A lot was gleaned from the ICOTS-6 website and from the ICOTS-6 IPC who have provided advice and guidance. The meeting was successful and the ICOTS-7 IPC are most grateful to all the participants as well as those who could not attend who have helped us with their comments and advice.

The ICOTS-7 first announcement leaflets were given out at the meeting, to the Topic Study Group 11 delegates and to IASE members to give out to interested groups.

IASE Roundtable on Curricular Development in Statistics Education

Report by Gail Burrill

What do we know about the statistics curriculum across countries? What directions should we be thinking about as we develop curriculum and what should we be considering as we do so? The IASE Roundtable on Curricular Development in Statistics Education held in Lund, Sweden on 28 June to 3 July 2004 provided a forum for 26 participants from nine countries to consider aspects of the statistics curriculum from primary school to the tertiary level and across courses in statistics, mathematics and related subjects, dined at the historic Grand Hotel and spent a day of leisure exploring the island of Hven on bicycles (the one day the sun was out the entire day!).

Questions that framed the discussion included: How do we help the world understand that statistics education is vital in a world where social policy, technology, environment and so on all depend strongly on careful design of investigations and very fine analysis of data? What is important to teach, when should it be taught and how? How do we carefully structure the curriculum? What do we know

about when concepts should be taught and how? How can we make statistics education more inviting? What do we know? Themes that emerged included the very prevalent role of frameworks as a guide to thinking about curriculum development, assessment, levels of progression in developing concepts, and teachers practice. Somewhat related were papers and discussion that involved the recognition of the need for and subsequent design of scaffolding experiences for learning key concepts such as measures of centre or the interpreting box plots. A general trend that emerged across the papers was the lack of student's ability, at use of real data and real situations, and the use of technology both as a means to develop understanding of concepts and to enable students to apply their knowledge and skills in problem solving situations.

Abstracts of the papers and the roundtable agenda are available on the website http://hobbes.lite.msu.edu/~IASE_2004_Roundtable/. The proceedings, which will include the recommendations of working groups on technology and its relation to the curriculum, research and the statistics curriculum, teacher education, reflections for IASE, and curriculum frameworks should be available through the IASE website in early 2005.

The ARTIST Roundtable Conference on Assessment in Statistics Education

Report by Beth Chance

Over 30 statistics instructors (from 4 different countries) participated in the ARTIST Roundtable Conference on Assessment held August 1-4 at Lawrence University in Appleton. Participants gathered to present and discuss issues related to assessing student's outcomes in college statistics courses. The Conference was funded by a grant from the National Science Foundation, as part of the Assessment Resource Tools for Improving Statistical Thinking (ARTIST) Project, directed by Joan Garfield, Bob delMas, and Beth Chance. For more information see the ARTIST website <http://www.gen.umn.edu/artist/>

Plenary speakers included George Cobb, Peter Holmes, Michael Rodriguez, Roxy Peck, Noreen Sharpe, John Holcomb, and Joy Jordan; In addition, 17 talks were given on assessment theory/designing an assessment program, classroom assessment strategies, and authentic assessment methods; Participants also engaged in small group discussions about computerized testing software, developing exams that assess students at deeper levels, creating tasks that create cognitive dissonance, assessment in large classes, using classroom assessment techniques, group projects, scoring rubrics, and using writing as assessment; Participants were also oriented to, and provided feedback on, the ARTIST Assessment Builder and web resources; Papers and handouts from the conference will soon be available in a proceedings document at the ARTIST website.

Statistics Education Research Journal (SERJ)

The editorial board of the SERJ is pleased to announce the publication of the next issue of the SERJ, (Vol. 3, No.1). This new issue, as well as archives of older issues, can be found on the SERJ website <http://www.stat.auckland.ac.nz/serj>

The whole issue can be downloaded as a single PDF, less than 400K file, and individual papers can be downloaded separately. Access to issues of the SERJ is free.

SERJ is an electronic peer-reviewed research journal of IASE, and is jointly published with the ISI. Instructions for contributors and additional information about the Journal's goals and editorial policies can be found on the SERJ website.

Additional information about IASE and its collections of conference papers can be found at: <http://www.stat.auckland.ac.nz/~iase/> where links to the ISI and other websites are provided.

A special November 2004 Issue (Vol. 3, No.2), is to be devoted to research about 'reasoning on variation'.

Dissertation Abstracts

The IASE are starting to build as comprehensive a collection of recent Statistics Education PhD dissertations, for examples see the IASE website <http://www.stat.auckland.ac.nz/iasedissert>

We are trying to build a one-stop resource centre for PhD students in Statistics Education and their supervisors - still, lamentably, a very small community.

If you have or know some people that have completed a PhD in this area who are happy to share this with fellow researchers and students then the information that is required is as follows:

Year: xxx
Author: xxx
Institution: xxx
Title: xxx
Supervisors: xxx
Abstract and Dissertation.

We would really like the actual dissertation and not just the abstract because we think it is good for PhD students, particularly when they are just starting and again at write up stage, to be able to look at full dissertations that other people in the area have done. We will put them on the site as pdfs but can make pdfs from Word documents. The few people we have contacted so far have been saying, "I wish we had a something like this when I was doing my PhD"

For further information Contact Chris Wild email: c.wild@auckland.ac.nz

Update on International Statistical Literacy Project (ISLP)

Over the past four months two new pages have been added to the ISLP website. These are one on Assessment at <http://course1.winona.edu/cblumberg/islpassess.htm> and one with relevant Newspaper and Internet Articles at <http://course1.winona.edu/cblumberg/islpart.htm> If you have any good articles (especially from countries other than the USA), please submit the articles along with an approximately 3- to 5-sentence paragraph of how they can be used when training teachers to Eunice Goldberg email: egoldberg@nl.edu Please make sure to include a complete reference to where the article is located and, if possible, information on who needs to be contacted to get permission to reproduce the article on the website. For general information on the ISLP please see the following website <http://course1.winona.edu/cblumberg/islplist.htm> If you have any questions or would like to volunteer to work on the ISLP, contact Carol Joyce Blumberg email: cblumberg@winona.edu In particular page coordinators or co-coordinators are needed for several of the pages.

A New Website Containing Statistical Puzzles

Puzzles are powerful teaching/learning devices. So says Sarah Flannery, recent recipient of the European Young-Scientist-of-the-Year Award. In her book, *In Code* (2001), she describes how her mathematical development was jump-started and enriched by her father's puzzles. "These puzzles," Sarah notes, "challenged me and encouraged my curiosity [and] more fundamentally, they taught me how to reason and think for myself." Influenced by Sarah's comments, Professor Sky Huck (University of Tennessee, USA) is developing a new website <http://www.StatPuzzles.com> for use in secondary and post-secondary education. The primary goal is to increase students' statistical knowledge and understanding without the traditional "carrots" and "sticks" used in academic courses. Another goal is to show that statistics can be fun

Professor Huck seeks your help in this website development project! If you have created or have come across a good statistical puzzle, please consider submitting it electronically for possible inclusion in the new website. "Good" puzzles are short and clear, interesting, and "puzzling" due to no obvious answer or an obvious answer that is wrong. In addition, each puzzle should teach something through its solution, that will also be in the website. Naturally, a "credit line" will be paired with each puzzle indicating who invented or found it.

Sample puzzle: Suppose 10 people are asked to rate themselves in terms of their accumulated wisdom. The first 9 people, being overly humble, give themselves zeroes. The 10th person—with enormous arrogance—responds by saying: "I have infinite wisdom!" Suppose you are asked to convert the 10th

person's self-rating into a z-score. With the reference group defined as the 10 people from whom the self-ratings on wisdom are gathered, and with the data being 9 zeroes and positive infinity, what is the z-score for the 10th person's self-rating?

Submit your statistical puzzle(s) via email to shuck@utk.edu or via fax to +1-865-9740135 or mail them to S. Huck, Dept. of Educational Psychology, University of Tennessee, Knoxville, TN 37996-3452 USA.

News of Members

Helen MacGillivray has been awarded Honorary Life Membership of the Statistical Society of Australia (SSAI). Helen is an outstanding statistician who has made very significant contributions to the statistical profession, the IASE and the SSAI. She has filled major roles in many professional and government bodies where she tirelessly advocates the importance of statistical practice and statistical education in our society. She has filled management roles in the SSAI since 1985, rising to the level of president in 1995. Effective statistical education in Australia is crucial to the future health of statistics. Helen has made distinguished contributions to statistical education with her own excellent teaching, involvement in senior secondary school teaching in Queensland, and international conferences on teaching. She has written many influential papers on the teaching of statistics.

Susan Starkings, one of the IASE vice Presidents, has been elected to serve as Chair of the Education Strategy Group and as Honorary Education Officer for the Royal Statistical Society (RSS) for the 2004-2007 term of office. For details of the RSS Education Activities see the website <http://www.rss.org.uk/education/index.html>

Forthcoming Conferences with Statistics Education Components

The Fourth Conference of the European Society for Research in Mathematics Education (CERME 4) takes place at Sant Feliu de Guíxols, Spain, from 17 to 21 February 2005.

CERME is organised by the European Society for Research in Education, and is designed to foster a communicative spirit. It deliberately and distinctively moves away from research presentations by individuals towards collaborative group work. Group 5, Stochastic Thinking (Research on probabilistic and statistical thinking) is one such group and will have 12 hours over four days in which to meet and progress its work.

For further details, please see http://fcis1.wie.warwick.ac.uk/~dave_pratt/Group5CERMEInvite.doc or contact Dave Pratt, the Group 5 Coordinator, by email: dave.pratt@warwick.ac.uk

Website for Up and Coming conferences

If you have a conference that is of interest to statistical education the please contact Andrej Blejec email: andrej.blejec@Uni-Lj.si who will add this to the IASE website. The IASE main page for communicating about conferences is <http://www.stat.auckland.ac.nz/~iase/conferences.php> so have look to see what is up and coming.