



IASE REVIEW November 2001

INTERNATIONAL ASSOCIATION FOR STATISTICAL EDUCATION

<http://www.cbs.nl/isi/iase.htm>

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1. Report from the IASE President



The past year has been a very successful one for the IASE. I would like to express my gratitude to all the 1999-2001 IASE Executive Committee members and co-opted members: Brian Phillips, Dani Ben-Zvi, Joan Garfield, Lionel Pereira-Mendoza, Gilberte Schuyten, M. Gabriella Ottaviani, Susan Starkings and Tae Rim Lee, who devoted so much time and effort to the various IASE activities. I heartily welcome and thank the new Executive committee (see page 3 for a complete list) and thank them for accepting the challenging task of continuing to improve the Association for the next two years.

Next year we celebrate our **ICOTS-6 Conference** in Durban, South Africa. Most of us work in isolation or in small groups in different departments and institutions. The major aim of ICOTS is to provide the opportunity for people, who are involved in statistics education, from around the world to exchange ideas and experiences, to discuss the latest developments in teaching statistics and to expand their networks of statistical educators. By now the ICOTS-6 programme is almost finished thanks to the excellent work by the IPC Committee and in particular to the efforts by Gabriella Ottaviani, Brian Phillips, and Dani Ben-Zvi. The second announcement is available at the **ICOTS IPC web site** (<http://www.beeri.org.il/icots6/>) and includes both the scientific and the social programme. Our local organisers, chaired by Delia North, are doing their best to receive us and make us feel as home while in South Africa. I encourage you not to miss this event and contribute to what promises to be a memorable conference. See page 13 for more details about ICOTS.

We are also working to prepare our programme for the **54th Biennial Session of the ISI** to be held in Berlin, Germany in August 2003. Gilberte Schuyten, our IASE representative on the ISI Programme Co-ordinating Committee for Berlin has organised a wide and varied list of topics for Invited Paper Meetings, both those organised by the IASE alone and in conjunction with other ISI Sections and Committees (see the list of topics in page 13 of this issue). In 2004, the **ICME-10** (International Congress on Mathematical Education) will be held in Copenhagen, Denmark. Conversations are being held with Mogens Niss, the chief organiser of ICME-10, to help in organising some statistical education activities during the conference. Immediately before or after ICME-10, we will celebrate our next **IASE Round Table Conference** at a location close to Copenhagen. The theme of the conference will be "*Curricular Development in Statistics Education*" and Gail Burrill gburrill@nas.edu will be the Conference Chair.

We are starting to think about the **55th Biennial Session of ISI**, to be held in 2005, Sydney, Australia and Chris Wild <c.wild@auckland.ac.nz> has agreed to represent the IASE on the ISI Programme Co-ordinating Committee. Chris will shortly be looking for possible themes and organisers for the IASE Invited Paper Meetings and would welcome any good ideas for new topics. We are also taking some early steps in the organisation of **ICOTS-7** in 2006. Within the incoming IASE Executive, Lisbeth Cordani will be responsible for continuing with this planning.

We plan to continue our work on various publications. Chris Wild has agreed to be the IASE representative to the editorial board of the ISI's journal, *International Statistical Review*. Gilberte Schuyten will continue to edit the *IASE Matters* insert that appears in each issue of the journal *Teaching Statistics*. Susan Starkings will now edit the IASE pages that appear quarterly in the *ISI Newsletter* and Carmen Batanero will edit the yearly *IASE Review*. The title of the *Statistics Education Research Newsletter (SERN)* will be changed to *Statistics Education Research (SER)* effective with the first issue in 2002. Along with the title change, there will several other exciting changes (see page 12 for details). Carol Joyce Blumberg will help facilitate communication between the various IASE publications. If you have anything that you wish to appear in an IASE publication and are not sure which publications are appropriate for it, please contact her at <cblumberg@winona.edu> and she will assist you in making sure it is forwarded to the proper publications. Finally, Brian Phillips will continue maintaining our web site (<http://www.cbs.nl/isi/iase.htm>), which it is now an important resource for anyone working in statistics education.

Recently the ISI Council asked IASE to have the **World Numeracy Project** come under its umbrella. Carol Joyce Blumberg, in her role as one of the IASE Vice Presidents and as part of her sabbatical year, has agreed to head up this effort (See page 10 for more details).

We plan to continue our policy of collaboration with other associations and professional bodies interested in statistics education. Dani Ben-Zvi will serve as a link with mathematical education societies and I will be the contact with statistical societies. Brian Phillips will continue to coordinate the **National Correspondents Network** (see page 12 for details). Many other people are willing to serve the IASE in a number of ways including being a National Correspondent in their country, as organisers of sessions for ICOTS-6, the ISI-54 Session or in other meetings, as speakers or discussants in any of our conferences, in providing information for our publications and in helping recruit new members. We hope to continue receiving your help in all these tasks in the future, since it is only with the help of all members that IASE can continue to be a strong association. I look forward to a fruitful two years ahead for the IASE.

2. IASE Executive 2001-2003

President	Carmen Batanero (Spain)
President-Elect	Chris Wild (New Zealand)
Past President	Brian Phillips (Australia)
Vice Presidents	Dani Ben-Zvi (Israel) Carol Joyce Blumberg (USA) Lisbeth Cordani (Brazil) Gilberte Schuyten (Belgium) Susan Starkings (UK)
Co-opted members	Gail Burrill (USA) Delia North (South Africa) Maria-Gabriella Ottaviani (Italy)
Executive Director	Marcel Van den Broecke (The Netherlands)

See full information on the IASE Executive at
<http://www.swin.edu.au/mathematics/iase/exec2001.html>



Some present and past members of the IASE Executive in Seoul, August, 2001

3. IASE Invited Paper Meetings at the 53rd Session of the ISI

3.1. IASE Organised Invited Paper Meetings

IPM55. Forum: IASE and Statistics Education in Developing Countries

Report by the organiser Maria-Gabriella Ottaviani, <Mariagabriella.Ottaviani@uniroma1.it>

The four papers presented in the Forum allowed delegates to see different situations in the teaching of statistics from around the world. As Youri Ivanov explained in his paper "*Selected aspects of education in statistics in Russia*", in his country the teaching of statistics is done only at university level. During the last ten years, the system of education in the field of statistics has undergone noticeable changes as a result of economic reforms, changes in the set up of institutions, and changes in organization and methodology of official statistics.

In Argentina (Ana Silvia Haedo: "*An overview on the teaching of statistics at schools and university in Argentina*") as well as in Pakistan (Munir Ahmad: "*On fifty years of university and pre-university teaching of statistics in Pakistan*") statistics teaching is done both at university and at school. These two countries have statistics in the school curricula, but the problems in these countries, as everywhere else, comes from the teachers who have not been introduced to the discipline and have huge difficulties in teaching it

In Francophone Africa (Koffi N'Guessan: "*L'Enseignement des statistiques en Afrique*", [40 years of developing statistics in Africa]) there are well organised programmes to train official statisticians. It is important that the IASE pay attention to the three situations presented in this IPM, if we want statistics literacy to develop. In particular, as Carmen Batanero observed it is important to help these countries to enhance their teaching of statistics and their research in statistics education, since this is an investment that will benefit the Association and statistical educators in the future, due to the fresh results of new people engaged in the field and new research in statistics education.

IPM56. Undergraduate Level Statistics Programmes

Report by the organiser Shen Shir Ming, <smshen@hkuspace.hku.hk>

The four papers presented in the meeting reported experiences concerning different aspects of teaching statistics at the undergraduate level. The papers covered the development of undergraduate statistics curriculum, enrichment of statistics courses by using forensic examples and how to prepare undergraduates in specific topics such as Markov Chains, and data analysis for non-statistics major students.

In order of presentation, Wing K. Fung reported his experience of using forensic examples to bring life to statistics. There are usually interesting real life forensic data, such as the Simpson case, which can be handled effectively by applying statistical skills. Students would be interested in the background of the cases and appreciate the usefulness of statistics.

Ann-Lee Wang then presented her experience in teaching Markov Chains with actual examination scripts to

demonstrate the importance of allowing time to review the necessary probability theory and mathematical techniques. She emphasised the three R's, Recall, Repeat and Reinforce, in learning new concepts.

Susan Starkings presented her joint paper with Jerome Healy. Her experience of teaching non-statistics major undergraduates was echoed by many. In her university, the Learning and Development Centre offered two specially designed remedial courses in statistics to social science students which turned out to be very effective in helping the students to build up their confidence in dealing with numbers.

C. R. Rao summarised his experience of statistics curriculum development and teaching over the decades in both India and United States. He pointed out the importance of handling real data in order to understand data collection, exploration and the importance of cross checking, meta analysis and explain the deficiencies of data and methodologies.

The discussant, James L. Rosenberger, enriched the session by supplying the Penn State University's experience in developing their lab-based statistics course which makes use of the web and impressed the audience by their very successful team work results of their development including dynamic visual displays and activities for small groups.

IPM57. The Future of Statistics Education Research

Organiser: Joan Garfield, <jbg@maroon.tc.umn.edu>

In this session there were three presentations. Carmen Batanero, Juan D. Godino and Rafael Roa discussed "*Developing new theoretical tools in statistics education research*". In this paper they presented a theoretical model, which was developed at the University of Granada. A research agenda in statistics education based on this model was illustrated with examples from research carried out on textbook analyses, problem solving, questionnaire development, and teaching experiments.

Flavia Jolliffe described her project to carry out "*An international survey of research in statistical education*". She plans to undertake and publish the results of an international survey to find out who is doing statistical education research, and the details of their past, current, and planned research in this area. This will provide a useful resource for other researchers and for teachers of statistics. The results will give an indication of the directions in which current research is moving and, perhaps, of where research is needed in the future.

Beth Chance presented her paper with Joan Garfield "*New approaches to gathering data on student learning for research*". In assessing students' conceptual understanding, reasoning abilities and attitudes, and their development, alternative methods of gathering student data are needed that move beyond traditional forced response test items. This presentation suggested additional methods for obtaining information on how students develop an understanding of statistics based on classroom research and videotaped student interviews/observations.

The discussants were *Gilberte Schuyten and Maria-Gabriella Ottaviani*.

IPM58. Research on Teaching Statistics at School and University Levels

Report by the organiser Susan Starkings, <starkisa@sbu.ac.uk>

The three papers from different countries presented at the above session demonstrated a depth of realism and understanding of what is meant by statistical education.

"*New strategies for teaching statistics at school*" is the title of the paper from Italy. The authors Anna Maria Milito, Maria A Pannone and Silio Rigatti Luchini carried out a teaching experiment in which the research was aimed at creating a model for introductory statistics courses. They refer to this model as Data Oriented Approach (DOA). The DOA is based on the hypothesis that working with real data reflecting a real life phenomenon favours greater understanding of statistical methods and helps to develop students' interests in the subject. The Italian Ministry of University and Scientific Research supported the work. The research was carried out by four Italian Universities namely Universities of Rome, Padua, Perugia and Palermo and involved 145 teachers and 2129 pupils from primary schools (age 6-10), 86 teachers and 1514 pupils from lower secondary school (age 13-14) and 107 teachers and 2500 pupils from secondary school. The research team identified the statistical content on which the experiment would be carried out at the three school levels. Training programmes were developed to prepare the teachers to use the experimental materials. Preliminary and post course tests on the students' ability were administered. The authors present the procedures carried out and the respective findings of this interesting experiment.

The paper by James Nicholson and Gerry Mulhern from Queen's University of Belfast, Northern Ireland is entitled "*Supporting statistics teaching and learning at A-level: Using computer based materials*". This paper looks at the use of using Information and Communications Technology (ICT) in schools as a vehicle for delivery of the curriculum. In the

United Kingdom the Government has attached a specific priority to the use of ICT. The authors advocate that there is very little empirical evidence identifying whether or not the use of ICT improves the quality of teaching and learning in the classrooms. Teachers and students have tried out statistical materials using ICT which have been developed. Revisions to the materials have been made after discussions with respective parties. The paper outlines the realistic benefits of using ICT in conjunction with these materials. The difficulties associated with using ICT are also highlighted.

Dani Ben-Zvi's and Abraham Arcavi's paper is entitled "*Developing experts' points of view on local-global approaches to data and data representation*". The paper reports on a study, carried out in Israel, on the learning process of seventh grade students working through a carefully designed statistics curriculum in a computerised environment. The study was divided into two parts. Part I looks in detail at ways in which two 13 year old students begin to make sense of data and data representations. For Part II an assessment task of 80 students was undertaken, two weeks after the end of the course. The authors propose a description of what it may mean to learn exploratory data analysis and draw educational implications.

All three papers involve original research into how students learn and the authors present an honest and detailed report of their findings. Discussant was Flavia Jolliffe.

IPM59. Undergraduate Statistics Education in Non-Statistics Degree Programmes

Organiser: Elisabeth Svensson, <elisabeth.svensson@esa.oru.se>.

In the paper "*Teaching statistics in pre-clinical and pharmaceutical departments*" Kerstin Wiklander suggested that both people in industry and students with other major subjects other than statistics often need statistics without having the adequate qualifications to use it. The statistics needed is often so complicated that it can be difficult to show to them the necessary tools when their education and background is not suited for this. For example, their knowledge and skill in mathematics may be insufficient. Some experiences on this important and difficult problem were discussed

Carol Joyce Blumberg in her paper "*Is there life after introductory statistics?*" described the results of a survey done looking at what statistics classes were taught at various institutions around the world beyond introductory statistics for students whose major programme of study is not Statistics or Mathematics. She then discussed the reasons why students take more statistics. She ended the presentation with the reasons given for why major programmes do not require more statistics and the reasons given for why students do not take more statistics.

P K Ito discussed the presentations and presented his ideas on undergraduate statistics education.

IPM60. Continuing Statistics Education in the Workplace

Report by the organiser Carol Joyce Blumberg, <cblumberg@winona.edu>

The papers presented in this Invited Paper Meeting described three different methods for delivering further statistics knowledge to statisticians working full-time in the workplace. The papers are available through the 53rd Session Proceedings and all contain many insights into the successes and difficulties of each method.

"*Statistical education outreach = unlimited learning*" was given jointly by Kenneth J. Koehler and W. Robert Stephenson of the Department of Statistics, Iowa State University, USA. The paper focused on the delivery of a Master's degree program to via distance learning. The distance learning students complete the same classes as the on-campus students. All lectures are videotaped and mailed to the on-site co-ordinator at each site, who then distributes the videotapes and other materials. The on-site co-ordinator also administers examinations. The faculty members teaching each class provide help via web pages, telephone calls, and emails to the distance learning students. The distance learning students must complete all assignments (with a one week delay) in the same amount of time as the on-campus students.

"*Recent e-learning initiatives related to the international training in official statistics*" was presented by Marten Boon of the United Nations Statistical Institute for Asia and the Pacific (UN-SIAP) in Japan. The Institute provides training for governmental officials of developing countries in the Asia and Pacific regions in the various aspects of surveys and the analysis, interpretation and dissemination of statistical output. Until recently, the learning has been traditional classes held at various sites. Recently the Institute began to develop an E-learning system in order to expand the effectiveness of its limited resources. The system is internet based and uses a virtual training system with well-structured curriculum units that contain lessons, printable reference documentation, link to others information resources (such as websites), and a virtual discussion-room. Students are also expected to complete assignments and tests. An important feature of the system will be the linking of students, teachers, and experts from different social, cultural, economic, and experiential backgrounds.



Kenneth J. Koehler, Carol Joyce Blumberg, W. Robert Stephenson, Marten Boon, Elizabeth Taylor, René Smulders, and Ryoichi Shimizu.

The challenges for providers of international statistical training was given by Elizabeth A. Taylor of the U.S. Bureau of Labor Statistics. The intensive training seminars described in the paper last from 4 to 6 weeks. The seminars either are for a group of 6 to 12 statisticians from different countries or are specialised programs for those from a particular country or region. All training is done at the Bureau of Labor Statistics in Washington, DC. All participants must pay their own expenses including tuition, travel costs, and living expenses, although many receive help from third party sponsors. Providing statistical training to groups composed of representatives of different countries poses many challenges. Ways of dealing with these challenges and thoughts on what further must be done in order to make the training as effective as possible were discussed.

The two discussants were René H. M. Smulders of Statistics Netherlands and Ryoichi Shimizu of The Institute of Statistical Mathematics in Tokyo, Japan. Dr. Smulders emphasised that no matter what form the continuing education takes, for it to be a success the participants must have not only the intelligence and proper background, but must be careful planners and organisers, have patience, perseverance, and flexibility, be able to survive with little sleep, and have a supportive family/partner. He also pointed out that all of these programs described in the three papers are ventures by a single institution. He asked each if their efforts might be improved by co-operation with other institutions. Dr. Shimizu began his remarks by pointing out that the main difficulty in many continuing education training efforts is the need to address the diversity or heterogeneity of the student groups. However, for the training to be effective, some degree of homogenisation is necessary is desirable. He called this homogenisation by the name localisation. He further pointed out that localisation it is a necessary step towards globalisation. He then applied the ideas of localisation and globalisation to each of the three papers.

IPM 61. Postgraduate Training of Statisticians

Report by the organiser Gilberte Schuyten, <Gilberte.Schuyten@rug.ac.be>

The three invited papers were presented by Seymour Geisser (USA), Yuki Miura (Japan) and Brian Phillips (Australia). The two discussants were Raoul Depoutot (France) and Els Goetghebeur (Belgium).

Seymour Geisser started the session with "*Observations on graduate programs in statistics II*". He reviewed predictions, some that came to pass and others that did not, that he had previously made around 1980-1988 regarding those issues and events that would influence university graduate programs in Statistics. In his opinion we have now deviated too far from mathematics in the direction of raw computation with the largest issue, as he sees it, being the pervasive use of simulation procedures in the last 15 years. He also mentioned the rising tide of Biostatistical endeavours fuelled by the increasing funding of health research. He stressed that the foundation of a statistics graduate program depends on a basic canon of theory and methodology; where Motivation, Model, Mode and Method are the various dimensions of the field of statistics.

Yuki Miura presented an overview of post-graduate training in the fields relating to statistics in Japan and discussed the problems in his paper "*Post-graduate training of statisticians in Japan*". A peculiar feature of statistical education in the higher-level educational institutions in this country is that there is no university or college with an independent faculty or department of statistics. In view of the importance of statistical literacy in any fields of study, lectures on elementary statistics are offered across the faculties and departments in most universities and colleges. In addition, statistics in specific fields such as mathematical statistics, economic statistics and statistical data analysis are taught in undergraduate courses of departments in the particular fields. Miura discussed the advantages and disadvantages of this absence. He stated that theory and application of statistics have to develop hand in hand and that the real problem is that the number of post-graduate students who intend to specialise in statistics is insufficient.

Brian Phillips summarized the activities of a Round Table meeting held in Tokyo, in August 2000 in his paper "*Report on the IASE Round Table Conference on The Training of Researchers in the Use of Statistics*". The IASE, the ISI, the Japanese Institute of Statistical Mathematics and the Japan Statistical Society sponsored the conference. After the conference, the authors revised their papers and Carmen Batanero as editor has produced a book, which is now available from the ISI. As the editor says in the introduction: "It is hoped this will serve as a starting point for other lecturers, researchers and statistics educators to reflect on the statistical training of researchers in empirical sciences, to

change their teaching approaches, to improve the interest to collaborate in applied research and to start new didactical research on some of the problems described." This talk outlined some of the issues discussed at this conference.

Discussant Raoul Depoutot, who had to leave before the session, focused his written comments on training for statisticians involved in economic and social measurement. He proposed a list of quality components linked with the necessary training courses. For him economic and social statisticians are in charge of the measurement of various aspects of society for the members of the society: they must understand it, be able to face the challenge of quantifying facts for a whole society, and communicate the results to the various audiences. Academic training should reflect this challenge in its entirety.

Discussant Els Goetghebeur started her discussion with four questions: What to teach? How to teach? Whom to teach? Where can I get help? She sees seemingly opposite qualities that must be reconciled like the yin and yang of life. Knowledge or skill? Depth or breadth? Harmonisation of programs or diversity? Expertise or needs? She reflected on reasons for lack of statistics' popularity and stressed that more work is needed on our image, showing the excitement, and highlighting the breakthroughs. She closed with a request for help. Let us not get isolated in our statistics departments but reach out and share our teaching experience. The IASE might play an ever greater role in promoting this.

3.2. Invited Paper Meetings Joint with Other Associations and Committees

IPM10. Technology in Statistical Education (Joint with International Association for Statistical Computing)

Report by the organiser Tae Rim Lee, <trlee@av9500.knou.ac.kr>

Jung Jin Lee and Gunseog Kang in their paper "*An educational software for the design of experiments*" introduced a software package called the Information Statistics Provider (ISP), which has many modules on teaching statistics as well as data processing. The ISP is a GUI oriented, interactive, and user-friendly system with multiple sheets. This paper focused on modules in the Design of Experiments, which show the design sheets of an experiment and enable a post-analysis.

Marta Bilotti Aliaga, in her presentation on "*Information is not knowledge: the information revolution*" discussed the advantages and disadvantages of an introductory statistics course in the information revolution age. She suggested that what we teach should be relevant to the present and fit our students' lives and the society needs. In good teaching students should become aware of the fact that information cannot replace knowledge.

Naoko Sakurai, Michiko Watanabe, Kazunori Yamaguchi, Akinobu Takeuchi, Katsuyuki Suenaga, Hiroshi Yadohisa, and Chooichiro Asano presented "*Interactive education system for learning statistics on the Internet*". Recently, it has been seen in both the academic and business worlds that the global abilities demanded of students and working people have begun to change with dizzying rapidity. Particularly in the social science departments the need for integrated statistical ability, data analysis and information processing has been growing rapidly. On the other hand, the recent surprising availability of computer networking, technology and multimedia capabilities have brought a great impact and change to education systems in every department and university. In this paper the authors make a proposal concerning statistics, econometrics and statistical data analysis education from a broad perspective using new smart media technology in order to help both teachers and students teach and learn the skills for these tasks effectively.

Kay Lipson presented "*Ongoing individualized student assessment using the Internet*". The potential of computer technology to enhance the student's learning experience is being increasingly recognized and utilized. This paper describes an internet based assessment tool which has been developed and successfully utilized in an Introductory Statistics Course taught at tertiary level to a group of about 800 undergraduate students each year. The development and implementation of an online assessment instrument was both expensive and time consuming. Given the large numbers of students participating in the subject, the requirement for continuous assessment with timely feedback to students, and the move to teach the subject both on and off campus, the investment has proved to be worthwhile from both the teacher and student perspectives

Discussants were Masakasu Murakami and Joongkweon Shon

IPM11. Women's Contributions to Leadership in Statistical Education

(Joint with Women in Statistics Committee)

Organiser: Martha Aliaga, <Aliaga@Umich.Edu>

The paper by Tae Rim Lee "*The role of the Internet in statistical education*" reviewed the background of web-based courseware for teaching statistics and examined the effectiveness of this type of instruction for schooling. Using

web-based statistics courses, students showed higher course completion and student performance. Also it appeared that more than 70% of the students were satisfied with various aspects of the web-based courses. It was found that physical access to the environment, content design strategies and online activities seemed to be the most important factors affecting the effectiveness of web-based instruction

Pilar L. Iglesias, & Gloria Icaza discussed "*Leadership research in teaching and learning statistics in Chile*". They described several methodologies which have been used in various research projects on teaching statistics to primary school teachers, students, and the public in general. They emphasised the role of women in teaching statistics at university, professional and secondary levels.

Shyamala Nagaraj presented "*Women's role in shaping future directions in statistical education*". She considered the role of women in shaping future directions in statistical education. First, she discussed the need for statistics in a global-information world, and then looked at women's participation in this new world. This was followed by a review of the role of women in statistics, as students, teachers, workers and professionals. Some suggestions for improving the position of women in statistics were then considered. The author concluded with some implications for the future role of women.

Elsa C. Servy described the "*Statistical education at the National University of Rosario, Argentina*". The purpose of this communication was to share with the audience her experience in the task of heading the School of Statistics, at the University of Rosario, Argentina. From this particular case, she discussed some common problems for those women that have chosen a non traditional profession like that of Statistician, and a challenging job such as Education.

Discussion was carried out by Mary H. Regier and Beverley Carlson who represented Mary Gray.

**IPM14. The Role of Official Statistics in University Curriculum
(Joint with the International Association for Official Statistics)**
Report by the organiser Reiner Staeglin, <rstaeglin@diw.de>

Erkki Pahkinen and Risto Lehtonen presented a paper on "*Masters' programmes in statistics as a platform for cooperation between university and official statistics*". Official statistics is not a university discipline but cuts across and borrows from several university disciplines, including Statistical Science, Sociology, Economics and Computer Science and Informatics. Although the universities have no departments or faculties for official statistics, in some countries there exist special programs, usually at the Master's level, geared to official statistics. The Joint Program in Survey Methodology (JPSM) in the USA is an example, with a mixed statistical science and behavioural science content. A more clearly Mathematical/Statistical orientation is found in Finland's Master's program in Statistical Systems (MPSS), run jointly by the with Department of Mathematics and Statistics, University of Jyväskylä, and Statistics Finland. In this paper the authors discuss the MPSS as a platform for co-operation between the university and the National Statistical Institute (NSI).

Sibylle Schmerbach's presentation was about "*Official statistics in German university education*". Today, in Germany, official statistics define their role as a double function: a) as an authority, being a part of public administration that contributes to planning and controlling politics, b) but at the same time also as a scientific institution outside of universities, whose methods and products are part of science and research and increasingly as a service institution, that provides an "information infrastructure" about all elements of society to the entire society. The current public impression of the role of official statistics as a provider of a very important "public good" doesn't correspond with its great importance. Only complete confidence in the working methods and full acceptance of its products can change the situation. Confidence and acceptance are caused by knowledge about the contents and working principles of official statistics. At universities of the Federal Republic of Germany, official statistics are mainly taught in connection with economic statistics. Only a quarter of German universities offer courses in official statistics in their curriculum, nearly half of them are basic and half of them are on an advanced level with different credits per course. At the Humboldt-University of Berlin, in the Department of Economics official statistics in connection with economic statistics are an important part of advanced level curriculum. Lectures, seminars and workshops give a different impression of the relationships between official statistics, science, politics and society. Future activities should be to include contents of official statistics as discussed above, in the curricula of all German universities, with the primary focus on the curricula of



Martha Aliaga, Pilar Iglesias, Mary Regier, Shyamala Nagaraj, Beverley Carlson, Tae Rim Lee, Elsa Servy, and Gloria Icaza

economics departments. Internships and studies for the students in statistical offices should support this process. Carmen Feijo discussed "*An approach to the teaching of social accounts in the Brazilian university curricula*". In Brazil the university curricula assign great importance to official statistics as it is part of the minimum curricula of several courses. However, the discipline is not very praised by students and teachers, as there is not a satisfactory design to tackle such a wide subject. Textbooks in Portuguese are either out of date or exclusively oriented towards macroeconomic discussions without explaining the building of the macroeconomic aggregates. This paper proposed that the Social Accounts course should be centred in the System of National Accounts, 1993 as the main organising system of the production of statistics. The final aim of the course would be to develop skills in reading and interpreting official data about relevant aspects of the social and economic life of a country or region. In this sense students should be better trained to do empirical research.

Discussion were Ada Van Krimpen and Ernst Stadlober.

IPM15. Education and the Internet: Effective Structures for the Net

(Joint with the International Association for Official Statistics)

Report by the organiser Brian Phillips, <bphillips@swin.edu.au>

The first talk by Larry Weldon (Canada), was titled "*Statistical education with official statistics on the Internet*." Larry addressed the question "How should the modern developments in official statistics, and the explosion of use of the internet, affect statistical education?" He described how the increasing importance of official statistics for business, government, and education, needs recognition in our assessment of what topics are "basic" for statistical education. Furthermore, he discussed how the internet has greatly increased the feasibility of easy communication of huge data sets at all levels. Not only does this provide an opportunity for enriching application examples, it also increases the importance of certain tools associated with large data sets, and raises problems of data management that expand the boundaries of the statistics discipline. He suggested how these issues could be responded to in basic statistics courses and alluded to the potential for online statistical education which makes use of official statistics via the internet.



Brian Phillips, Els Goetghebeur, Gilberte Schuyten, Larry Weldon, Yuki Miura, Seymour Geisser, and J. L. Mercy

The second talk, written by Photis Nanopoulos (Eurostat) and presented by J. L. Mercy, was titled "*Distance learning: Eurostat's activities*". In 1998 EUROSTAT initiated the development of a Computer Assisted Training System (CATS) prototype used for the teaching of statistics. This aimed (i) to reinforce the availability and diffusion of computer assisted training systems for statistical training in Europe, focusing particularly to the former Eastern European countries and (ii) to raise awareness of CATS and to promote the common use of tools and the exploitation of common training means in every domain of statistical training. As a result of this work a new distant learning project, the so-called VL-CATS project, Virtual Library for Computer Assisted Training in Statistics, was initiated in 2000.

The third speaker Carl Lee (USA) was unable to attend but his paper titled "*Classroom experience in using the net for teaching*" was based on the constructivist view of learning. It appears in the Proceedings and his PowerPoint presentation can be obtained from the website below. It included many interesting web sites and directions to a STAT ACTION resource page with activities which can be found at the website <http://www.cst.cmich.edu/users/lee1c/statact/>

Some of the papers and presentations can be seen at <http://www.swin.edu.au/mathis/iase/isi53/>

4. IASE Satellite Conference on Statistical Literacy Seoul, 21-22 August, 2001

Programme committee and local organisers : Brian Phillips (Australia) (Chair), Yong Goo Lee, (Korea) Tae Rim Lee (Korea), Carmen Batanero (Spain), Larry Weldon (Canada), Tae Rim Lee (Korea) and Myung-Hoe Huh (Korea).

The 53rd Session of ISI in Seoul, Korea was preceded by a satellite conference on statistical literacy which was jointly organised by the IASE and the Korean Statistical Education and Consulting Section of the Korean Statistical Society. It provided an opportunity for people to attend presentations by those with a special interest in statistical literacy. These included discussions of the main components in statistical literacy and the relevance of statistical literacy in the general education of citizens. About 60 participants from 16 countries attended this most enjoyable and worthwhile program on statistical literacy.



Yong Goo Lee at the IASE Satellite Opening

We are very thankful to our Korean hosts, especially Yong Goo Lee, for their wonderful hospitality including a tour in a Korean Tradition Street and a wonderful dinner in the garden of the private home that used to be owned by the former President of South Korea. Having a small focussed meeting was an excellent prelude to the large ISI conference as participants were able to establish relationships before being immersed in a meeting with some 2500 people. It is planned that a proceedings of the talks will be produced. All details, along with some of the presentations, a list of participants and a photo gallery of the activities is available on the web site www.swin.edu.au/math/siase/statlit.html

Authors and titles of presentations

- Larry Weldon (Canada), *Probability in First Service Course*.
- Pilar Iglesias (Chile), *Explora: A Chilean Science and Technology Outreach Program in Probability and Statistics*.
- Yong Goo Lee (Korea), *Teaching Statistical Concepts in the Elementary School*.
- James Nicholson (UK), *Outcomes of a Teaching Experiment*.
- Saleha Naghmi Habibullah (Pakistan), *'KISC' and 'CODAK': An Indirect yet Effective way of Promoting Statistical Thinking in the General Community of Students and Teachers*.
- Nick Broers (The Netherlands), *From Propositional Knowledge to Conceptual Understanding of Elementary Statistics*.
- Jung Jin Lee and Gunseog Kang (Korea), *An Educational Software for the Design of Experiments*.
- Elizabeth Taylor (USA), *The Graphical Presentation of Data in Everyday Life*.
- Juan D. Godino, Carmen Batanero and Rafael Roa (Spain), *Training Teachers to Teach Probability*.
- Shrikant I. Bangdiwala (USA), *Teaching Statistical Reasoning in Elementary Schools Using Age-appropriate Methods*.
- Beth Chance and Roxy Peck (USA), *Workshop on Statistics of Illumination*.
- David Moore (USA), *Statistical Literacy and Statistical Competence*.
- Stephen Clarke (Australia), *Can Statistics Demonstrate a Home Advantage in the Olympic Games?*

5. IASE 2004 Research Round Table on Curricular Development in Statistics Education

The goal of the *Round Table Conferences* is to bring together a small number of experts, representing as many different countries as possible, to discuss one another's views and approaches on a given topic area. The Round Table Conferences provide opportunities for developing better mutual understanding of common problems, and for making recommendations concerning the topic area under discussion. A main outcome is a monograph containing a set of papers, which have been prepared for, and discussed during, the conference. This monograph presents a global overview of the conference subject, to serve as starting point for further research on the selected theme.

The topic for the IASE Round Table Conference in 2004 will be *Curricular Development in Statistics Education*. The need for processing the increasing amount of data people receive in the course of their work and lives has made it imperative that students leave elementary and secondary schools prepared to make reasoned decisions based on sound statistical thinking. Countries and communities have approached this problem in different ways. The Round Table will provide the opportunity for sharing what works and to highlight the challenges and potential solutions researchers have faced as they design and implement curricula to produce statistically literate citizens. The Round Table will be held in close proximity to the Tenth International Congress on Mathematical Education, which will be held in Copenhagen, Denmark in 2004. As soon as plans for the specific site and dates for the Round Table are firm, they will be posted on the IASE website.

Those interested can contact Gail Burrill, Division of Science and Mathematics Education, College of Natural Science, Michigan State University, 116 North Kedzie, East Lansing MI 48824, USA, E-mail: <gburrill@nas.edu>.

6. Ideas Needed for the World Numeracy Project

An ISI committee was established in 1994 to stimulate the spread of quantitative skills around the world in areas and populations (especially in developing countries and among the young) that could benefit from increased knowledge of

numbers and their applications, with particular regard to statistics. The committee was chaired by Prof. Luigi Biggeri (Italy). Under his chairmanship some very concrete successes were realised.

In 2000, it was decided that this Project would now come under the umbrella of the IASE. Carol Joyce Blumberg, one of the Vice Presidents of IASE, has agreed, as a major portion of her sabbatical year, to work on the development of a working plan for the World Numeracy Project. If time permits, she will also begin on the implementation of this plan once it is approved by the IASE Executive Committee and the ISI Council.

Her first step in developing the World Numeracy Project is to gather information from as many people as possible as to what directions they want the World Numeracy Project to take. In order to do this, she needs anyone reading this article to give her suggestions as to what tasks the World Numeracy Project should undertake. Below is a list of possible ideas that were given in various reports from the ISI Committee chaired by Professor Biggeri. You may use this list as a starting point for your thoughts. But, what is also very important to her is to have people give her ideas that are NOT on this list.

List of Ideas from Former ISI Committee on the World Numeracy Program

- (1) Promotion of national numeracy programs
- (2) Production of a TV series
- (3) Survey of international statistical training efforts
- (4) Survey of national statistical training efforts
- (5) Register of International Statistical Standards
- (6) Hall of Fame of Great Statisticians
- (7) Museum of Numbers
- (8) Developing a code and/or booklet on correct data collection procedures
- (9) Addressing the needs of teachers, media, and journalists
- (10) Addressing the needs of national and local governments
- (11) Promoting on a World Statistics Day or World Statistics Month
- (12) Assisting with the development of national and international training efforts in statistics
- (13) Assisting with the development of national and international training efforts in the teaching of statistics and numeracy.

Please send your ideas and comments by email to Carol Joyce Blumberg at cblumberg@winona.edu. If you prefer regular mail, please send to her at the Department of Mathematics & Statistics, Winona State University, Winona MN 55987-5838, USA. She can also be reached by telephone (+1-507-457-5589) or fax (+1-507-457-5376).

7. IASE Publications

The IASE regularly has publications relating to its activities. Details of these publications, including proceedings of past conferences, can be found on the IASE web site at <http://www.swin.edu.au/mathstats/iase/publications.html>.

7.1. Training Researchers in the Use of Statistics Book

The *Round Table Conference on The Training of Researchers in the Use of Statistics* was held at the Institute of Statistical Mathematics in Tokyo, August 7-11, 2000 and was sponsored by the IASE, the ISI, the Japanese Institute of Statistical and the Japan Statistical Society. In 2001 a book was published with the conference papers and discussions. We hope this book will serve as a starting point for other faculty, researchers and statistics educators to change their teaching approaches, to increase the interest to collaborate in applied research and to start new research on the statistical training of researchers in empirical sciences.

Book reference:

Training Researchers in the Use of Statistics
IASE Round Table Conference, Tokyo 2000
Edited by Carmen Batanero, ISBN 90-73592-19-4
Published by: International Association for Statistical Education, International Statistical Institute
Available from: ISI Permanent Office, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, The Netherlands
Price: US\$25, including postage.

Web version

The book is now also available in pdf format from the web page: <http://www.ugr.es/local/batanero/iasert.htm>

7.2. IASE SERN: Statistical Education Research Newsletter

This year the IASE was glad to present the second volume of the *IASE Statistical Education Research Newsletter* (3 issues), which is located at www.ugr.es/local/batanero/sergroup.htm. Carmen Batanero, Joan Garfield, M. Gabriella Ottaviani and John Truran were members of the editorial committee.

At the moment there is a plan to gradually transform SERN, which will be published in 2002 with the name *Statistics Education Research*, with 2 issues a year. In SER the aim will be to gradually increase the number of short papers and research reports. We need of your collaboration and we encourage you to send your short research papers, summaries of your projects and results that you consider of interest for other colleagues to Carmen at <batanero@ugr.es>. The Editorial Board for SER will consist of Carmen Batanero and Flavia Jolliffe as co-editors with Maria-Gabriella Ottaviani, Christine Reading, John Truran, and Chris Wild as Associate Editors. Joan Garfield has decided to no longer serve on the Editorial Board. We are very grateful to Joan for all her work on the Newsletter since its inception in 1988.

All members of IASE automatically receive the *ISI Newsletter* and the *IASE Review*. SER is free and distributed electronically to those that request it. To be added to the mailing list for SER, contact Carmen Batanero at <batanero@ugr.es>.

8. National Correspondents

The IASE national correspondents help provide communication between local membership in their countries and the IASE. This includes passing on information about the IASE activities to those concerned with teaching and learning statistics as well as letting the IASE know about activities in their countries. Below is a list of the present national correspondents.

We urge you to contact your national correspondent about items and issues of interest to those interested in statistics education in your country and other countries. Your national correspondents will then see that your information gets forwarded to others in your country and to the IASE for publication in appropriate publications. If there is no National Correspondent for your country and you feel that you can help in sending us information about statistics education activities in your country, in distributing information about our activities or in getting new members, please contact Brian Phillips at <bphillips@swin.edu.au>.

IASE National Correspondents

- Argentina: Teresita Teran, <tteran@arnet.com.ar>
- Australia: Brian Phillips, <bphillips@swin.edu.au>
- Bangladesh: Kazi Saleh Ahmed, <ksahmed@bangla.net>
- Belgium: Herman Callaert, <callaert@luc.ac.be>
- Brazil: Paulo A Dasilva, <estatistica@openlink.com.br>
- Bulgaria: N.T. Tsankova, <nadats@mbox.infotel.bg>
- Canada: Linda Gattuso gattuso.linda@uqam.ca and Larry Weldon, <weldon@sfsu.ca>
- Chile: Guido del Pino, <gdpelpino@riemann.mat.puc.cl>
- Colombia: David Ospina, <dospina@matematicas.unal.edu.co>
- Croatia: Ante Rozga <rozga@efst.hr>
- Cuba: Mercedes Delgado, <mdelgado@ind.ispjae.edu.cu>
- Czech Republic: Richard Hindls, <hindls@vse.cz>
- Egypt: Fayed M. Mina, <fmmmina@link.com.eg>
- Estonia: Katrin Niglas, <katrin@tpu.ee>
- Fiji: Parul Vera Deoki, <deoki_pv@usp.ac.fj>
- Finland: Simo J. Puntanen, <sjp@uta.fi>
- France: Annie Morin, <annie.morin@iris.fr>
- Germany: Joachim Engel, <engel_joachim@ph-ludwigburg.de>
- Greece: Theodore Chadjipadelis, <chadjii@eled.auth.gr>
- Honduras: M. Alejandra Soto, <sortomar@pilot.msu.edu>
- Hong Kong, China: Chi Ming Wong, <davy.wong@ust.hk>
- Iran: Abbas Bazargan, <abazarga@chamran.ut.ac.ir>
- Ireland, Philip J. Boland philip.j.boland@ucd.ie
- Israel, Dani Ben-Zvi dani.ben-zvi@weizmann.ac.il
- Italy, Enzo Lombardo lombardo@scce.eco.uniroma1.it
- Ivory Coast: Ouagnina Hill, <o_hili@yahoo.fr>
- Japan: Kensei Araya, <araya.k@oregano.ocn.ne.jp>
- Korea, Rep. of: Tae Rim Lee, <trlee@av9500.knou.ac.kr>
- Luxembourg: Rudolf Teekens, <rteekens@tes-institute.lu>
- Malaysia: Ann-Lee Wang <j2wang@cc.um.edu.my>
- Mali: Lamine Diop, <afristat@malinet.nl>
- Mexico: Ernesto Sánchez, <esanchez@mail.cinvestav.mx>
- Morocco: Mohamed Mahmoudi, <mahmoudi@insea.ac.ma>
- New Zealand: Maxine Pfannkuch, <pfannkuc@scitec.auckland.ac.nz>
- Nigeria: Joseph S. Oke, <jsktoke@infoweb.abs.net>
- Norway: Henrik Dahl, <Henrik.Dahl@hia.no>
- Pakistan: Munir Ahmad, <drmunir@brain.net.pk>
- Palestine: Mahmoud K. Okasha, <m.okasha@palnet.com>
- Peru: Luis Palomares, <lpalomar@correo.ulima.edu.pe>
- Poland: Jan Kordos, <j.kordos@stat.gov.pl>
- Portugal: Helena Bacelar Nicolau, <hbacelar@fc.ul.pt>
- Singapore: Lionel Pereira-Mendoza, <lpereira@nie.edu.sg>
- Slovenia: Andrej Blejec, <andrej.blejec@uni-lj.si>
- South Africa: Michael J. Glencross, <glencross@getafix.utr.ac.za>
- Spain: Carmen Batanero, <batanero@goliat.ugr.es>
- Sweden: Elisabeth Svensson, <eliss@math.chalmers.se>
- Tanzania: Vitalis E. Muba, <eastc@ud.co.tz>
- The Netherlands: Tjaart Imbos, <tjaart.imbos@STAT.UNIMAAS.NL>
- UK: Margaret Rangecroft, <F.M.Rangecroft@shu.ac.uk>
- Ukraine: Ruslan Motoryn, <vitro@kneu.kiev.ua>
- Uruguay: Ramon Alvarez, <ramon@chaja.edu.uy>
- USA: E.J. Dietz, <dietz@stat.ncsu.edu> and Gail Burrill, <gburrill@nas.edu>
- Venezuela: Audy Salcedo, <audysalc@yahoo.com>
- Yugoslavia: Katarina Cobanovic, <katcob@polj.ns.ac.yu>

9. IASE Activities at the 54th Session of the ISI



The 54th Session of the ISI will be held under the patronage of the President of the Federal Republic of Germany, Mr. Johannes Rau, its Honorary Committee being chaired by Mr. Gerhard Schröder, Chancellor of the Federal Republic of Germany. Following a well-established tradition, the Federal Republic of Germany, hosting the 54th ISI Session in 2003, would like to cordially invite those interested to come to its capital Berlin in 2003. The 54th ISI Session will offer all participants an interesting programme in terms of subjects treated. More information is available from the conference web site <http://www.isi-2003.de/>

There will be seven Invited Paper Meetings and a special exhibition at the 54th ISI Session to be held in Berlin, Germany in August 2003 to be organised by the IASE alone, with another four being jointly organised with ISI, ISI sections or sister societies. Gilberte Schuyten <gilberte.schuyten@rug.ac.be> is co-ordinating our section of the programme.

- **Exhibition "History of statistics and its teaching".** Organiser: Maria-Gabriella Ottaviani (Italy),
<mariagabriella.ottaviani@uniroma1.it>

Alone IASE Invited Papers Meetings

- *IPM44 Teaching probability with a modelling approach.* Organiser: Michel Henry (France), <henry@math.univ-fcomte.fr>
- *IPM45 Statistics training for consultant or collaborator,* Organiser: Gabriella Belli (USA), <gbelli@vt.edu>
- *IPM46 Research in statistics education and international cooperation.* Organiser: Lisbeth Cordani (Brasil), <lisbeth@maua.br>
- *IPM47 Mathematics teachers teaching statistics.* Organiser: Susan Starkings (UK), <starkisa@sbu.ac.uk>
- *IPM48 Statistics education for media reports.* Organiser: Maxine Pfannkuch (New Zealand), <pfannkuc@math.auckland.ac.nz>
- *IPM49 Teaching and learning approaches aimed at developing statistical reasoning, thinking or literacy.* Organisers: Joan Garfield (USA) and Dani Ben-Zvi (Israel), <jbg@tc.umn.edu>, <dani.ben-zvi@weizmann.ac.il>
- *IPM50 Statistics teaching in the Internet age.* Organiser: Wolfgang Haerdle (Germany), <haerdle@wiwi.hu-berlin.de>

Joint IASE with other ISI Sections/ Committees and Guest Societies

- *IPM68. Education and assessment of literacy, numeracy and other life skills (proposed by the International Statistical Institute).* Organiser: Denise Lievesly (UK), <d.lievesly@unesco.org>
- *IPM69. Impact of developments in information systems on statistics education (joint session with the International Association for Statistical Computing).* Organiser IASE: Annie Morin (France), <Annie.Morin@irisa.fr>. Co-organiser IASC: Albert Prat (Spain)
- *IPM70. Teaching biostatistics (joint with the Biometrics Society).* Organiser IASE: Elisabeth Svensson (Sweden) <elisabeth.svensson@esa.oru.se>. Co-organiser Biometrics: Els Goetghebeur (Belgium)
- *IPM71. Educational implications of statistical method and modelling developments in psychometry: Is tradition stronger than statistical relevance? (joint with the European Mathematical Psychology Group).* Organiser IASE: Helena Bacelar (Portugal), <hbacelar@fc.ul.pt>. Co-organiser EMG: Francesca Cristante (Italy)

10. The ICOTS-6 International Program Committee Report



The Sixth International Conference on Teaching Statistics
Developing a Statistically Literate Society
Durban, South Africa, 7 - 12 July, 2002
IPC Website: <http://www.beeri.org.il/icots6>
LOC Website: <http://icots.itikzn.co.za/>

The Conference is organised by the International Association for Statistical Education (IASE), the International Statistical Institute (ISI) and the South African Statistical Association (SASA). As the conference theme for ICOTS-6 is '*Developing a statistically literate society*', special sessions on statistical literacy are planned. A full description of all details for preparing ICOTS-6 papers, including periodic updates of the scientific programmes and papers abstracts is available in the ICOTS-6 IPC website (<http://www.beeri.org.il/icots6>). The hard work of the membership of the International Programme Committee, the Session Organisers and the Local Organising Committee is the best indicator for the success of ICOTS-6 in South Africa. The invited and contributed papers of ICOTS-6 will be published by ISI and IASE as a CD-ROM and on the Internet and they will also be available in printed form to those who want to pay for a copy.

The second announcement is now available, either on the ICOTS-6 IPC web site, or in hard copy from Brian Phillips, <bphillips@swin.edu.au>.

Important deadlines

- For *contributed non-refereed papers* - until Jan. 1, 2002 (contact: Susan Starkings, <starkisa@sbu.ac.uk>).
- For *posters*, until Feb. 1, 2002 (contact: Andrew I. Dale, <dale@scifs1.und.ac.za>).
- For *demonstrations, forums and special sessions*, until Feb. 1, 2002 (contact: Maria-Gabriella Ottaviani, <mariagabriella.ottaviani@uniroma1.it>. For full details see ICOTS-6 IPC Website <http://www.beeri.org.il/icots6/>).
- For early registration, Jan. 15, 2002 (There are big savings for members who register early.)

IASE support to participants from developing countries

The IASE will pay for the registration fee of a limited number of participants from developing or transitional countries. They must be IASE member and come from developing or transitional country, as defined by ISI, and must have not received funds from ISI Development Fund for ICOTS-6. The funds would be especially aimed at helping young participants from different developing or transitional countries.

A first deadline to apply for the waiver of registration fee is January 1. In case on January 1st we have not reached the number of applicants we can fund, we will extend the deadline until we reach this number. Priority will be given to: a) Topic Convenors, Organisers of Sessions and presenters of Invited papers; b) presenters of Contributed papers, c) Posters d) In another capacity. People interested in applying should contact Carmen Batanero, Facultad de Educación, Campus de Cartuja, 18071 Granada, <batanero@ugr.es>; fax: 34 958246359. A copy of the application form can be found on http://www.swin.edu.au/math/iase/icots6_support.html and for the ISI Development Fund can also be found at <http://www.cbs.nl/isi/devfundtxt.htm>.

IPC Chair	International Organiser	IPC Scientific Secretary
Maria-Gabriella Ottaviani <mariagabriella.ottaviani@uniroma1.it>	Brian Phillips <bphillips@swin.edu.au>	Dani Ben-Zvi <dani.ben-zvi@weizmann.ac.il>

11. Meetings related to Statistics Education in 2001

The Second International Research Forum on Statistical Reasoning, Thinking and Literacy (SRTL-2)

This conference was held at the University of New England, Armidale, Australia, August, 15-20. This was the second in a series of International Research Forums, and was sponsored by the International Association for Statistical Education, the Centre for Cognition Research in Learning and Teaching and the School of Curriculum Studies at the University of New England and the University of Minnesota. Conference Chairs were Joan Garfield and Dani Ben-Zvi. Chris Reading was the local organiser. Researchers in Statistics Education from around the world were invited to share their work, discuss important issues, and initiate collaborative projects. With emphasis on the Reasoning in Statistical Reasoning, Thinking and Literacy, an interesting range of presentations were given. Themes included Reasoning about Data and Distribution, Reasoning about Variability and Sampling, Reasoning about Comparing Distributions, Reasoning about Bivariate Data, Reasoning about Sampling Distributions. The organisers are now planning an edited book summarising the work presented, discussions conducted and emerging issues. More information is available from the conference web site: <http://www.beeri.org.il/srtl/>

European Workshop on the Teaching and Diffusion of Statistics

The General Council of Economy of the Balearic Islands Government (Spain), through the Balearic Institute of Statistics organised a two-day European Statistics Workshop on "The teaching and diffusion of statistics", which was held in Palma de Mallorca, October 10-11, with support by Eurostat and other European Statistical Offices. Conference topics included: Experiences in the diffusion and teaching of statistics, Statistics and the wider society, Statistical literacy, Attitudes towards statistics, Teaching of statistics, Statistical training for business and professional work, and Teaching resources: software, multimedia, Internet. About 30 papers were presented. More information is available from the Institute (phone: 0034 971 176755), e-mail (ibae@caib.es) or, from the conference web page: http://www.caib.es/ibae/esdeveniment/jornades_10_01/main.html

Listing of other conferences with statistics education contents

- January 2-5, 2001, 7th Islamic Countries Conference on Statistical Sciences: "Challenges of the 21st Century", Lahore, Pakistan. More information from Dr. Munid Ahmad, Email: <drmunir@brain.net.pk>.
- February, 8-10, 2001. Thematic Statistics and session on Teaching Data Analysis at JOCLAD 2001, Porto, Portugal. More information from the organiser, Helena Bacelar <hbacelar@fc.ul.pt>.
- April 19 –21, 2001, Symposium in Honour of Emeritus Professor David Vere-Jones, Victoria University of Wellington, New Zealand. More information from <http://www.swin.edu.au/math/iase/conferences1.html>

- July, 4-10, 2001, **Mathematical Literacy In The Digital Era: International Commission For The Study And Improvement Of Mathematics Education**, Rhodes, Greece. More information is available from <http://www.rhodes.aegean.gr/cieaem53>, <cieaem53@rhodes.aegean.gr>.
- July 12-17, 2001, **The 25th PME conference**, Utrecht University, the Netherlands. *Further information:* <http://www.fi.uu.nl/pme25> or contact Marja van den Heuvel-Panhuizen at <m.vandenheuvel@fi.uu.nl>. PME Stochastics Group Website: <http://www.ujaen.es/huesped/stochastics/>
- July, 16-20, **15th Latinoamerican Meeting of Mathematics Education - RELME 15**, Buenos Aires (Argentina). More information is available from the web page <http://www.cinvestav.mx/clame>
- August 6 - 9, 2001, **The Fifth International Conference on Technology in Mathematics Teaching**, University of Klagenfurt, Austria. Web page: <http://www-sci.uni-klu.ac.at/ictmt5>
- August, 19-24, 2001, **New Ideas in Mathematics Education**, North Queensland, Australia. More information from Allan Rogerson at <arogerson@vsg.edu.au>.
- September 25- 29, 2001, **32nd European Mathematical Psychology Group Meeting**, University of Lisbon, Portugal. More information from Helena Bacelar at <hbacelar@fc.ul.pt> or from the Web page: <http://correio.cc.fc.ul.pt/~cladlead/EMPG01.html>
- December 4, 5, 2001, **Australasia statistics education meeting Ozcots4**. More information from the web page <http://www.swin.edu.au/mathematics/iase/conferences2.html>

12. Benefits of Membership in the IASE

IASE offers its members the opportunity to become part of the only international community interested in the improvement of statistical education at all levels. Members can both contribute to innovations and progress in statistical education and learn from colleagues. They receive various publications free and discount rates on others as well as discount rates at IASE and ISI meetings. Please encourage colleagues, who are not already members of IASE, to join. If you are not already a member of IASE, you are strongly urged to consider joining. Members have found the publications, meetings and contacts formed through IASE membership have been most helpful in their teaching of statistics. For further information about the IASE membership benefits go to the IASE web site <http://www.swin.edu.au/mathematics/iase/benefits.html>. A membership form can be found below or on the IASE website.

IASE Executive Committee and co-opted members



Chris Wild
(President Elect)
c.wild@auckland.ac.nz



Brian Phillips
(Past President)
BPhillips@swin.edu.au



Dani Ben-Zvi
(Vice-President)
dani.ben-zvi@weizmann.ac.il



Carol Blumberg
(Vice-President)
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Lisbeth Cordani
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(Vice-President)
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Susan Starkings
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M.Gabriella Ottaviani
(Co-opted member)
Mariagabriella.Ottaviani@uniroma1.it



Gail Burrill
(Co-opted member)
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Delia North
(Co-opted member)
delian@icon.co.za



INTERNATIONAL ASSOCIATION FOR STATISTICAL EDUCATION
<http://www.cbs.nl/isi/iase.htm>

Application form

To become a member of IASE, please complete and return this form to:

ISI Permanent Office, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, The Netherlands.
Tel.: +31-70-3375737, Fax: +31-70-3860025, E-mail: isi@cbs.nl

First Name: _____ Last Name: _____ Female/Male: _____

Mail Address: _____

Tel.: _____ Fax: _____ E-mail: _____

Occupation: _____ Nationality: _____

Work Address (If different from above): _____

Areas of Interest in statistical education: _____

Annual Fees - Tick as appropriate

For people from a developed country

- I wish to become an **IASE member**, basic fee (US \$22, EURO 24)
- I also wish to subscribe to the ISR (International Statistical Review) only (US \$23, EURO 25)
- I also wish to subscribe to the SBR (Short Books Review) only (US \$9, EURO 10)
- I also wish to subscribe to the ISR **and** the SBR (US \$27, EURO 30)

or **For people from a developing country**

- I wish to become an **IASE member from a Developing Country**, basic fee (US \$11, EURO 12)
- I also wish to subscribe to the ISR only (US \$12, EURO 13)
- I also wish to subscribe to the SBR only (US \$ 5, EURO 5)
- I also wish to subscribe to the ISR **and** the SBR (US \$ 14, EURO 15)

Total amount due: _____

Please bill me I enclose a cheque⁽¹⁾ for _____ payable to the ISI

Please charge my: Euro/Mastercard Visacard for the total of _____

Card number: _____ Exp. Date: _____

Signature: _____ Date: _____

(1): Only US Dollars and Euros are acceptable