



# IASE SATELLITE CONFERENCE – STATISTICS EDUCATION AND OUTREACH

18-19 AUGUST 2011

MALAHIDE, DUBLIN, REPUBLIC OF IRELAND

<http://www.conkerstatistics.co.uk/iase/>

## Introduction

This, the sixth ISI Satellite Meeting of IASE, was held in the lovely setting of the Grand Hotel in Malahide, a coastal town just outside Dublin. The two-day Conference attracted 61 delegates from 23 countries. Apart from IASE's own membership, the Programme Committee was delighted to welcome 8 student delegates, 14 non-IASE members and 4 participants from developing countries.

In the call for abstracts, the over-arching theme *Statistics Education and Outreach* was divided into 6 sub-themes, namely

- 1 (A, B and C) The School/ University interface. Activities that encourage more school students to take statistics at university; activities that lead to a more statistically literate population in general. Student competitions.
- 2 School or University engagement with employers. How do we prepare students for the world of work and how do we involve employers in this process? What elements of our undergraduate curriculum specifically prepare our students for their future careers? How can we improve these elements?
- 3 Interaction with the Media – how do we help journalists to have a better understanding of statistics?)
- 4 Interaction with other professions e.g. the law, medicine, members of parliament.
- 5 (A and B) Engagement with other academics/learned societies who use statistics e.g. in geography, psychology, business studies, health care, the sciences, social sciences.
- 6 School or university engagement with the local community. Improving statistical reasoning, thinking and literacy in the general public.

None of the 62 abstracts submitted, covered sub-theme 3, so this was dropped from the programme. Only 4 abstracts were rejected as not relevant to the Conference theme. Unfortunately, a further 18 presentations were withdrawn between acceptance and the Conference, for a variety of reasons Hence 40 presentations were given over the two days of the Conference, which meant that some sessions had to be run in parallel.

The presentations were organised according to the sub themes, with a poster session covering a variety of them.

## The Refereeing Process

Papers for inclusion in the proceedings as refereed publications were reviewed by at least two referees selected from a panel of peers. When requested by the authors the full papers were reviewed and needed to be accepted by at least two referees before being accepted for presentation as a refereed paper. The review

process was double-blind – identification of both authors and referees was removed from the documentation. The papers that satisfied the refereeing process are designated as such in the proceedings.

The Programme Committee would like to thank the referees who gave generously of their time and expertise; of the 19 papers submitted to the refereeing process only 5 were accepted. This is partly due to the fact that while many presenters had useful and worthwhile messages to convey about *Statistics Education and Outreach*, not all were suitable as a refereed paper.

In order to reflect this and in contrast to previous IASE Satellite Conferences, presenters were not required to submit a paper beforehand, but could choose to submit either a paper or a Powerpoint presentation afterwards.

### **Disclaimer**

The content, condition and completeness of any submission to these proceedings is the responsibility of the author(s) only.

## **Programme Committee**

Penelope Bidgood (Chair)	Kingston University, UK
Aisling Leavy (Local Organiser)	University of Limerick, Ireland
Helen MacGillivray (IASE President)	Queensland University of Technology, Australia
John Marriott	RSSCSE, Plymouth University, UK
James Nicholson	University of Durham, UK

## **Webmaster**

Brad Payne	Conker Statistics, UK
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## **Referees**

Penelope Bidgood	Kingston University, UK
Ayse Bilgin	Macquarie University, Australia
Gail Burrill	Michigan State University, USA
Geoff Cumming	La Trobe University, Australia
Robert delMas	University of Minnesota, USA
Glenda Francis	Swinburne University of Technology, Australia
Iddo Gal	University of Haifa, Israel
Beverley Hale	University of Chichester, UK
Ailish Hannigan	University of Limerick, Ireland
John Harraway	University of Otago, New Zealand
Rossi Hassad	Mercy College, New York, USA
Kay Lipson	Swinburne University of Technology, Australia
John Marriott	RSSCSE, Plymouth University, UK
James Nicholson	University of Durham, UK
Brian Philips	Swinburne University of Technology, Australia
Jim Ridgway	University of Durham, UK
David Stern	Maseno University, Kenya
Doug Stirling	Massey University, New Zealand
Alexander White	Texas State University, USA

In addition the Programme Committee would like to thank R Adam Molnar, from Bellarmine University, USA, for volunteering to edit check three papers where the authors' first language was not English. All the authors expressed their gratitude to Adam for improving the presentation of their papers

## PRESENTATIONS

The papers and Powerpoint slides are available in pdf format. Hence they can be read but not edited. They are presented as Paper number Author(s) or Powerpoint number Author(s) according to presentation number given in the table below. Please note that 1C.1 and 6.2 were each presented by two authors.

**Theme 1** (A, B and C): The School/ University interface.

**Theme 2:** School or University engagement with employers.

**Theme 4:** Interaction with other professions

**Theme 5** (A and B): Engagement with other academics/learned societies who use statistics

**Theme 6:** School or university engagement with the local community.

PRESENTERS	THEME	TITLE	FORM OF SUBMISSION
ASCARI, Barbara	1C.1	Istat's new strategies to increase statistical literacy	Non-refereed paper and Powerpoint slides
BEDWELL, Mike	P1	Death to the Textbook!	Non-refereed paper and Powerpoint slide
BIDGOOD, Penelope	1A.4	What statistics do budding teachers learn and is it adequate?	Powerpoint slides
BILGIN, Ayse	2.1	Reflections on designing a statistical consulting capstone unit	Refereed paper
BOROVCNIK, Manfred	P2	Risk in Health: more information and more uncertainty	Non-refereed paper
BURRILL, Gail	1A.1	The Role of Statistics in Improving Education	Non-refereed paper
CUMMING, Geoff	5B.1	Using forest plots to introduce meta-analysis, including simple moderator analysis, early in statistics education	Refereed paper
CUMMING, Geoff (on behalf of KALINOWSKI, Pav)	P3	How do students understand confidence intervals? Identifying competing intuitions through semi-structured interviews	Powerpoint slide
EASTERLING, Robert G.	5B.4	Passion-Driven Statistics	Powerpoint slides
FORBES, Sharleen	6.1	Collaboration and cooperation: the key to reaching out	Non-refereed paper
FRANCIS, Glenda	6.2	Outreach through Open Education	Powerpoint slides
GAL, Iddo	2.2	Using customer satisfaction surveys as a teaching resource in statistics education: Methods and benefits	Refereed paper
GARRATT, Andrew	6.3	The Royal Statistical Society's GetStats campaign	No submission
HALE, Beverley	5A.1	Reaching out to the sports science setting: The impact of academic practice on students' statistical literacy	Non-refereed paper
HANNIGAN, Ailish	2.3	Preparing students for the world of work: an evaluation of undergraduate work placements by students and employers	Refereed paper
HARRAWAY, John	1C.2	Use of case studies and new software to motivate statistics teaching and learning at school	Powerpoint slides

		and undergraduate university	(with abstract)
HASSAD, Rossi A.	5B.3	Attitudinal Predictors of Reform-based Pedagogy in Introductory Statistics Education	Powerpoint slides
KO, Eun-Sung	P4	Fifth graders' Consideration of Variability: In Measurement and Chance Situations	Powerpoint slide
LEAVY, Aisling	1A.2	Looking in classrooms: Improving the teaching and learning of statistics in primary classrooms	Powerpoint slides
LEE, Tae Rim	P5	Smart Learning for Teaching Statistics	Powerpoint slide
LEM, Stephanie	P6	Coordinating between histograms and box plots	Refereed paper
LIPSON, Kay	6.2	Outreach through Open Education	Powerpoint slides
MACGILLIVRAY, Helen	5A.3	Statistical thinking foundations for postgraduates across disciplines	Powerpoint slides
MARRIOTT, John	5B.2	Teaching statistics through problem solving: using real time data retrieval	Powerpoint slides
MARTINS, José Alexandre	1A.3	Attitudes of Portuguese teachers towards statistics: a qualitative analysis	Powerpoint slides
MOLNAR, R. Adam	4.1	Statistics and the Working Nurse	Non-refereed paper
MORTATI, Francesco	1C.1	Istat's new strategies to increase statistical literacy	Non-refereed paper and Powerpoint slides
NASCIMENTO, Maria Manuel	P7	wsd (2010)...what A wonderful day!	Powerpoint slides
NICHOLSON, James	1C.4	What happens if non-overlapping universes collide? Reaching out into the statistical unknown	Powerpoint slides (with comments)
NORTH, Delia	1A.5	Rolling out a sustainable program to upgrade statistics knowledge of in-service teachers through a TEAMWORK approach in South Africa	Powerpoint slides
NWOSU, Chioma	4.4	Making statistics friendly to users	Non-refereed paper
PARK, Min-Sun	1B.1	Comparison of Data Sets as a Precursor to Inferential Statistics	Non-refereed paper
PAYNE, Brad	1B.2	Nappy Changing Challenge and Classroom Olympics: Competitive and cooperative hands on data collection activities	Non-refereed paper
PONOMARENKO, Alexey	P8	The new institution for the professional training of Russian speaking statisticians: International Institute for Training in Statistics, Moscow	No submission
REFUGIO, Craig N.	6.5	Statistical Literacy among Barangay Officials and Senior High School Students: A University Outreach Program	Non-refereed paper
SCHIELD, Milo	6.4	Teaching the Social Construction of Statistics	Non-refereed paper
SIROTIN, Viatcheslav	5A.2	Teaching statistics to economists: Statistical Department in Higher School of Economics (Moscow)	Powerpoint slides
STIRLING, Doug	1C.3	Mastery tests to cope with mixed backgrounds in an introductory statistics course	Powerpoint slides
SUNDEFELD, Maria Lucia	4.3	An interactive methodology to teach sampling and statistical inference	Non-refereed paper
TAM, Siu-Ming	4.2	Building statistical capability for evidence based decision making in the government sector: Initiatives of the Australian Bureau of Statistics	Powerpoint slides
VEGA QUIRÓS, Maria M	1B.3	Statistics in life and for life	Non-refereed paper
VERHOEVEN, Pieternella	2.4	Taking statistics outside the classroom: researching the community	Non-refereed paper

## DELEGATES

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