

# Welcome to the Proceedings of the IASE ICOTS-8 on “Data and context: towards an evidence-based society”

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The International Conferences on Teaching Statistics (ICOTS) are one of the most important means of interchange that the International Association for Statistical Education (IASE) offers to the community of professionals and researchers concerned with statistics education.

ICOTS history started 28 years ago when the Education Committee of ISI decided to hold an International Conference on Teaching Statistics. The success of ICOTS-1 (1982, Sheffield, UK), ICOTS-2 (1986, Victoria, Canada), ICOTS-3 (1990, Dunedin, New Zealand) demonstrated that statistics teachers felt a strong need to unite, talk, and discuss the problems experienced in the course of their daily activities. It also gave specialists in statistics, psychology and statistics education a forum to present the results of their research.

In 1991 IASE was created as a section of the International Statistical Institute (ISI). The IASE is the international umbrella organization for statistics education. It fosters international cooperation, and stimulates discussion and research. It disseminates ideas, strategies, research findings, materials and information using publications, international conferences, and its website, <http://www.stat.auckland.ac.nz/~iase/>.

Since then IASE has continued organizing ICOTS every four year (ICOTS-4, 1994, Marrakech, Morocco; ICOTS-5, 1998, Singapore; ICOTS-6, 2002, Cape Town, South Africa; ICOTS-7, 2006, Salvador, Brazil). The major objective of ICOTS is to provide the opportunity for statistics educators and practitioners from all over the world to meet, present and discuss information, ideas, experiences and research in learning and teaching statistics, and to expand the network of statistics educators. With over 50 countries represented at ICOTS8, and a packed and enticing programme, ICOTS again has lived up to its reputation as the high point in international gatherings on statistics education.

During twenty-eight years of continuous critical work and progress in the field of statistics education, the ICOTS conferences have provided international forums for those involved in statistics education to exchange their ideas and to present their research and experiences in teaching statistics. This effort is reflected in the eight volumes of ICOTS Proceedings, which now constitute a valuable contribution to statistics education as a research discipline and a desired reference for teachers and researchers. From ICOTS-6 onwards, IASE has also offered an optional refereeing process for people submitting a paper, organised and coordinated by the editor(s) and the International Programme Committee for each ICOTS. Papers for which their authors requested refereeing, and which met the criteria and standards required of refereed papers in a high-standard scholarly journal, are designated as such in the Proceedings.

As president of IASE, I am happy to present to you the Proceedings of ICOTS-8.

The ICOTS-8 theme of “Data and context: towards an evidence-based society” embraces many aspects of growing importance in statistics education. Successful statistics learning experiences involve data and contexts that are meaningful to students, whether these are everyday or in another discipline in which the student is already familiar. The past two decades have seen increasing emphasis on rich contexts and data throughout all statistics teaching to reflect and capture the extent and nature of statistics in action in real and often complex problems. Such emphasis goes hand in hand with the use and development of statistics in evidence-based progress in other disciplines, and hence the teaching of such approaches. Evidence-based practice should also be employed in statistics education itself. The three distributions around the three-headed mountain on the ICOTS-8 logo represent students, teachers and researchers, demonstrating that learning, teaching and discovering overlap and progress in harmony.

The papers presented in these proceedings are the product of the effort of the International Programme Committee, the Topic Convenors, the Session Organisers, the authors and the referees. More than 220 invited papers, which were planned well in advance, aim to present a synthesis of the main developments in statistics education. The papers in all topics contribute to the overall ICOTS-8 theme, but Topic 1 focuses particularly on it. The other invited papers have been organised around the following 9 main topics: Statistics education at school level, Learning to teach statistics, Statistics education at the post-secondary (tertiary) level, Assessment in statistics education, Statistics education, training and the workplace, Statistics education and the wider society, Research in Statistics education, Technology in Statistics education, and An international perspective on Statistics education. The Proceedings are completed with about 120 Contributed Papers and over 50 abstracts of Posters.

Planning an ICOTS conference is a long process which usually starts just after the previous ICOTS has been held, and in which many different people are involved, including the ICOTS-8 International Programme Committee, and the Local Organisation Committee, IASE past and current Executive Committees, ISI officers, the Sessions Organisers and Topic Convenors, speakers, referees and organisers of special sessions, demonstrations, or other activities. On behalf the IASE, I would like to express our gratitude to all of them, and in particular to John Harraway (Chair), Andrej Blejec (Local Organisers Chair), Christine Reading (Editor), John Shanks (Information Manager) and Roxy Peck (Programme Chair).

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