

FORTHCOMING IASE CONFERENCES

2019 IASE SATELLITE CONFERENCE

Sasana Kijang, Kuala Lumpur, Malaysia, 13–16 August, 2019



The conference theme is *Decision Making Based on Data*. The satellite conference is committed to different models of decision making and to the interface between the agent making decisions and the data required.

The topics are

- Inference from data
- Making sense of big data
- Evidence-based decision making under risk and uncertainty
- Statistics education in the 21st century

The following speakers have agreed to deliver a keynote:

- Richard De Veaux (Williams College, Williamstown, MA; USA):
Data Science for all. Sure, but who, where, what, how and why?
- Azami Zaharim (National University of Malaysia, Kuala Lumpur, Malaysia)

There will also be three workshops:

- What should a good statistical poster look like? (Reija Helenius, James Nicholson)
- The usage of *R* in understanding statistical subjects (Mohd Bakri Adam)
- The role of simulation in building conceptual understanding of statistical inference (Gail Burrill)

More information: iase-web.org/conference/satellite19/.

62nd WORLD STATISTICS CONGRESS OF THE ISI

Kuala Lumpur, Malaysia, 18–23 August, 2019



As with the previous World Statistics Congresses, there will also be a representative coverage of invited-papers sessions with topics on statistics education. There will also be a panel discussion about organising a journal with a special focus on *Statistics Education Research Journal*.

For details, see the conference calendar in *Statistics Education Research Journal*, 17(2), 266–278, or www.isi2019.org/.

ISLP INTERNATIONAL POSTER COMPETITION FOR 2018–19
International Statistical Literacy Project



This competition invites school students from around the world to design a statistical poster. From the 34 countries that organised a national competition this time, nearly all have participated in all age groups so that we have 23 national teams in the Younger Division, 27 in the Older Division, 21 in the Undergraduate Division.

The jury is in the process of evaluating the projects. The winners will be announced at the 62nd World Statistics Congress in Kuala Lumpur; their posters will be available from the ISLP website.

More information: iase-web.org/islp/Poster_Competition_2018-2019.php.

ISLP BEST COOPERATIVE PROJECT AWARD 2019
International Statistical Literacy Project



The topics of the submitted projects are very impressive; they reach from Handbooks for statistics teachers, Investigations of statistical awareness in a country, Big data analytics, to Literacy programmes supported by multimedia, and Establishing a research network for statistics education. The winning project will be announced at the World Statistics Congress of the International Statistical Institute in Kuala Lumpur (18–23 August).

For those who might think of joining the competition in two years, the guidelines and aims will not change drastically so that one can get an orientation on the ISLP website. There, the winner's project will also be shown after the award ceremony.

More information: iase-web.org/islp/Competitions.php?p=Best_Cooperative_Project_2019.

2020 IASE ROUNDTABLE
“THEME IS NOT YET FIXED”
Nanjing, China, 7–10 July, 2020



The 2020 Roundtable will (probably) be in Nanjing, two hours away from Shanghai the site of ICME 14. Chair of the International Programme Committee is Sibel Kazak (Pamukkale University, Denizli, Turkey.)

If you want to shape the theme and the detailed topics of the conference you might contact: skazak@pau.edu.tr.

Details will be available from iase-web.org/Conferences.php?p=Upcoming.

14th INTERNATIONAL CONGRESS ON MATHEMATICAL EDUCATION (ICME 14)
Shanghai, China, 12–19 July, 2020



After Hamburg 2016, the series of the Topic Study Groups under the flagship *IASE at ICME* will be continued in Shanghai, China. Two groups concern statistics education.

Topic Study Group 11 (TSG 11): Teaching and learning of probability

Chair: Egan Chernoff (Canada), Co-chair: Ernesto Sánchez (Mexico)

Team: Ali Rejali (Iran), Sibel Kazak (Turkey), Kan Guo (China)

The goal of TSG 11 is to promote the discussion of a variety of perspectives related to probabilistic thinking and the learning and teaching of probability. TSG 11 will provide an overview of the international discussion on probability education. In particular, TSG 11 will make every effort to display the progress of the discussion in the years since the preceding congresses of ICMI. In order to meet these objectives, the organisers have identified the following themes for TSG 11:

- Conceptual frameworks to develop probabilistic thinking
- Connecting probability with statistics
- The role of technology in teaching and learning probability
- Task design and learning trajectories
- Probabilistic knowledge for teaching
- Other related notions

Topic Study Group 12 (TSG 12): Teaching and learning of statistics

Chair: Enriqueta Reston (Philippines), Co-chair: Andreas Eichler (Germany)

Team: Leandro de Oliveira Souza (Brazil), Gail Burrill (USA), Qian Chen (China)

The importance of teaching and learning statistics as the “science of data” is increasingly gaining recognition at all educational levels. The study of statistics provides students with tools, skills, ideas, and dispositions to use in order to react intelligently to information in the world around them. Reflecting this need to improve students’ ability to think statistically, statistical literacy and reasoning are becoming part of the mainstream school and university curriculum in many countries. The organisers expect TSG 12 to discuss major issues in statistics education research in any of the four themes:

- Recent research on teaching and learning statistics
- Development and assessment of statistical literacy, including social issues
- Development of statistics teachers and of statistics teacher educators
- The impact of “big data” and technology-rich learning environments

More information including a detailed description of the goals of these two Topic Study Groups and a call for papers may be found at www.icme14.org/static/en/news/37.html?v=1557467247882.

General information about ICME 14: www.icme14.org/static/en/index.html.

OTHER CURRENT AND FORTHCOMING CONFERENCES

US CONFERENCE ON TEACHING STATISTICS (USCOTS 2019)

The Penn Stater Conference Center, State College, PA, USA, 16–18 May, 2019



The conference theme is *Evaluating Evidence*. The theme embraces all aspects of evaluating evidence:

- Understand the reasoning process of statistical inference
- Recognise limitations of statistical inference
- Design studies to facilitate evaluating evidence
- Conduct research in a reproducible manner
- Consider alternatives to traditional methods for inference
- Reflect on the role of inference in big data & data science

Plenaries will be

- Jane Watson (Australia): Practice of statistics at school: What does evaluating evidence look like in the classroom?
- Ron Wasserstein & Allen Schirm (USA): Moving to a world beyond $p < 0.05$
- John Kruschke (USA): Teaching Bayesian and frequentist methods side-by-side
- Kari Lock Morgan (USA): Teaching introductory students how to evaluate evidence

There will also be pre-conference workshops, breakout sessions with interactive engagement of participants, poster sessions, and lunch discussions among statistics educators.

More information: www.causeweb.org/cause/uscots/uscots19.

2019 ANNUAL MEETING IN CALGARY

University of Calgary, Calgary, AL, 26–29 May, 2019



The Canadian Statistical Society has a strong committee on Statistics Education. A positive aspect of the Canadian meetings is that they consistently use English and French throughout their plenaries, sessions, and workshops, which reflects the country's official languages and which illustrates the feasibility of multi-language use.

There will be a Statistics Education Workshop (Natasha Kenny, Bruce Dunham, Jim Stallard): *Developing a Teaching Portfolio*.

Invited sessions related to statistics education are

- Innovations in data science for undergraduates in Canada
- Effective implementation of statistics capstone courses
- Building the pipeline: the international Data Science in schools project
- Best practices in experiential learning

Furthermore, there will be a contributed session on *Innovations in Statistical and Data Science Education*.

More information: ssc.ca/en/meetings/2019-annual-meeting.

XXXIII REUNIÓN LATINOAMERICANA DE MATEMÁTICA EDUCATIVA (RELME 33)
 Universidad de Ciencias Informáticas, Habana, Cuba, 7–12 July, 2019

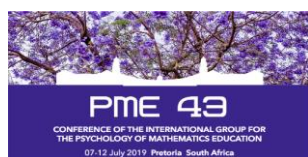


These conferences organised by the Comité Latinoamericano de Matemática Educativa host quite a few sessions that might interest researchers in statistics education.

More information will be available from clame-relme.org/.

**ANNUAL CONFERENCE OF THE INTERNATIONAL GROUP FOR
 THE PSYCHOLOGY OF MATHEMATICS EDUCATION (PME 43)**

Pretoria, South Africa, 7–12 July, 2019



The theme of the conference is *Improving Access to the Power of Mathematics*. While it would be interesting to see how the power of mathematics could help to understand statistics, from the four plenary talks none touches statistics or probability issues.

The plenaries are

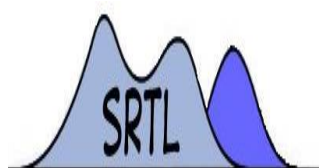
- Sizwe Mabizela (S. Africa): Mathematics & Mathematical Literacy: Gains & losses
- Nuria Planas (Spain): Representational coherence in instruction as a means of enhancing students' access to mathematics
- Peter Liljedahl (Canada): Institutional norms: The assumed, actual, and the possible
- The plenary panel is on international comparative studies: What is proven to work in successful countries should be implemented in other countries

One could think of implementing such a study with the focus of statistics and probability.

More information: www.pme43.up.ac.za.

**STATISTICAL REASONING, THINKING AND LITERACY
 RESEARCH FORUM (SRTL 11)**

University of California Los Angeles (UCLA), CA, USA, 14–20 July, 2019



The conference theme is *New ways of interacting with data, context, and chance in statistical modelling processes*. With the advent of data science, there are new opportunities for statistics education research to re-think what it means to model. Innovations in simulations, visualisation, and handling of complex data have opened new ways for students to address complex problems.

By focusing on modelling processes (rather than the model itself), the modeller becomes the designer, drawing on a rich repertoire of experiences, mediated by technological tools, peers, and their own explanations. These developments provide new stimulus for growth in the rethinking and study of the role of statistical modelling in helping students develop statistical reasoning and to interact with data, context, and chance.

Presenters (as of now, no topics are publicly available): Rolf Biehler, Michel Dvir, Anna Fergusson, Daniel Frischmeier, Michael Huberty, Sibel Kazak, Frauke Kreuter, Jennifer Noll, Anne Patel, Andee Rubin, Marianne van Dijke, Michelle Wilkerson, and Lucia Zapata.

Organisers: Katie Makar, Dani Ben-Zvi, Rob Gould, and Linda Zanonian.

Participants will be able to access the papers one month prior to the meeting from a platform. The papers will be published as usual. More information: blogs.uni-paderborn.de/srtl/srtl-11-2019/.

2019 JOINT STATISTICAL MEETINGS

Colorado Convention Center, Denver, CO, USA, 27 July–1 August, 2019



The 2019 theme is *Statistics: Making an Impact*. Topics range from statistical applications, to methodology and theory, to the expanding boundaries of statistics, such as analytics and data science. There will be presentations on continuing education and statistics education organised by the Section on Statistics and Data Science Education of the American Statistical Association. A search in the online programme with the keywords *Education* and *Teaching* delivers 89 entries. There are more that are relevant to statistics education. The interested reader might try to get a personal overview. We list only a few of the topics which are covered

- Educational fun and story telling
- Do students learn from their mistakes?
- Cultivating classroom dynamic
- Cultivating fundamental concepts
- Paradoxes for understanding reasoning
- Using history for teaching
- Underprepared Intro Stat students
- Understanding of confidence intervals
- Active learning for Bayesian inference
- Capstone assessment tools
- Student evaluation
- Engaging health sciences students
- Interactive examples using *R* Shiny
- Web-based activities, online tools

Contact: Stacey Hancock, Montana University: stacey.hancock@montana.edu.

More information: ww2.amstat.org/meetings/jsm/2019.

Online programme: ww2.amstat.org/meetings/jsm/2019/onlineprogram/index.cfm.

**15th INTERNATIONAL CONFERENCE OF
THE MATHEMATICS EDUCATION FOR THE FUTURE PROJECT**

Maynooth University, Kildare, Ireland, 4–9 August, 2019

Theme of the conference is *Theory and Practice: An Interface or a Great Divide?* The Mathematics Education for the Future Project supports innovation in mathematics, statistics, science, and computer education. There will be workshops, small interactive working groups, and the creative open forum of ideas. The key notes are: Douglas Butler, Bradford Hansen-Smith, and Luckson Muganyizi Kainois.

More information:

directorymathsed.net/public/Ireland/IrelandConferencePreliminaryAnnouncement.pdf.

RSS 2019 INTERNATIONAL CONFERENCE – FOR STATISTICIANS AND DATA SCIENTISTS

Belfast, Northern Ireland, 2–5 September, 2019



This conference is intended for all statisticians and users of data. The programme will be organised by “streams” as well as broader presentations on new developments and thinking in statistics:

- Applications of statistics
- Communicating and teaching statistics
- Data science
- Environmental/spatial statistics
- Industry and finance
- Medical statistics
- Methods and theory
- Official statistics and public policy
- Professional development
- Social statistics

Interestingly, among the keynote speakers there are people outside universities as the list includes writers, journalists, broadcasters, and the founder of Africa Check:

- James Ball (writer and journalist)
- Siobhan Carey (Northern Ireland Statistics & Research Agency)
- Peter Cunliffe-Jones (Founder, Africa Check)
- Timandra Harkness (writer, broadcaster and presenter)
- Peter Mueller (University of Texas at Austin)
- Marian Scott (University of Glasgow) – Barnett Lecturer
- Charlotte Watts (DfID) – Champion Lecturer

More information:

events.rss.org.uk/rss/frontend/reg/thome.csp?pageID=83705&ef_sel_menu=1647&eventID=270.

COLLOQUE FRANCOPHONE INTERNATIONAL SUR L'ENSEIGNEMENT DE LA STATISTIQUE (CFIES) – THE FRENCH INTERNATIONAL COLLOQUIUM ON STATISTICS EDUCATION

Strasbourg, 25–27 September, 2019

cfies 2019

Colloque francophone international sur
l'enseignement de la statistique
Université de Strasbourg, France
du 25 au 27 septembre 2019

SF_dS

The aim of these colloquia is to bring together teachers and researchers in statistics but also in mathematics, education sciences, knowledge engineering, didactics of statistics, computer science, and all those in companies who have to deal with staff training in statistical techniques.

It is worthy to note that there will be a plenary on Statistics with Python for secondary-level statistics, another one discussing the goal of an ethically responsible artificial intelligence. For university level and professional development, plenaries will cover topics such as A European Master in official statistics, Statistics education in Africa, and, of course, one on Data science.

More information: cfies2019.sciencesconf.org/.

**AUTUMNAL MEETING 2019 OF THE STUDY GROUP “STOCHASTICS”
HERBSTTAGUNG 2019 DES ARBEITSKREISES STOCHASTIK**

Bad Herrenalb / Karlsruhe, 27–29 September, 2019



The theme of the next meeting is *Teacher pre- and in-service education in stochastics oriented towards understanding – Bridges between research and teaching*. Again, there will be time for presenting current dissertation projects in the field of stochastics education research.

Deadline for submissions: 7 July 2019.

More information: www.math.uni-frankfurt.de/ak-stochastik/naechste-herbsttagung.html.

PAST IASE CONFERENCES

INTERNATIONAL CONGRESS ON MATHEMATICAL EDUCATION (ICME 13)

Hamburg, Germany, 24–31 July, 2016



The series of *IASE at ICME* was also continued at ICME 13 in Hamburg (2016). Among the 38 books that emerged from the conference, the proceedings of the Topic Study Group on Statistics and the TSG on Probability, the Topic-Survey booklets prior to the conference as well as the invited lectures might be of interest for the statistics education community:

- Batanero, C., Chernoff, E. J. (Eds.) (2018). *Teaching and learning stochastics. Advances in probability education research*. ICME-13 Monographs. Springer International.
- Burrill, G., Ben-Zvi, D. (Eds.) (2019). *Topics and trends in current statistics education research international perspectives*. ICME-13 Monographs. Springer Nature.
- Batanero, C., Chernoff, E. J., Engel, J., Lee, H. S., Sánchez, E. (2016). *Research on teaching and learning probability*. ICME-13 Topical Surveys. Springer Online.
[Online: doi.org/10.1007/978-3-319-31625-3_1]
- Eichler, A., Zapata-Cardona, L. (2016). *Empirical research in statistics education*. ICME-13 Topical Surveys. Springer Nature. [Online: doi.org/10.1007/978-3-319-38968-4]
- Kaiser, G., Forgasz, H., Graven, M., Kuzniak, A., Simmt, E., Xu, B. (Eds.) (2018). *Invited lectures from the 13th International Congress on Mathematical Education*. ICME-13 Monographs. Springer International. [Online: doi.org/10.1007/978-3-319-72170-5]

Some chapters from the last book that are more relevant to statistics education are

- Popularization of probability theory and statistics in school through intellectual competitions (Ivan R. Vysotskiy)
- Enactive metaphorising in the learning of mathematics (Jorge Soto-Andrade)
- Activity Theory in French didactic research (Fabrice Vandebrouck)
- Building Bridges between the math education and the engineering education communities: A dialogue through modelling and simulation (Ruth Rodriguez Gallegos)
- Changes in attitudes towards textbook task modification using confrontation of complexity in a collaborative inquiry: Two case studies (Kyeong-Hwa Lee)
- Storytelling for tertiary mathematics students (Ansie Harding)
- Hidden connections and double meanings: A mathematical viewpoint of affective and cognitive interactions in learning (Inés M. Gómez-Chacón)
- History of mathematics, mathematics education, and the liberal arts (Michael N. Fried)

More details about the ICME-13 Monograph Series: www.springer.com/series/15585.

OTHER PAST CONFERENCES

DAGSTAT CONFERENCE 2019 – THE FIFTH CONFERENCE OF THE DEUTSCHE ARBEITSGEMEINSCHAFT STATISTIK

Ludwig-Maximilians-Universität München, Munich, Germany, 18–22 March, 2019



The scientific program consisted of talks from various fields of application like medicine, economics, and engineering. Plenary speakers were: Sara van de Geer, Per Kragh Andersen, Donald B. Rubin, and Michael Jordan. One of 31 invited-paper sessions was on *Statistical Literacy and Statistical Education* (organisers J. Engel, K. Schüller).

Of interest for statistics education were the sessions *Data Science* and *Visualisation and Exploratory Data Analysis* and *Data Literacy: Key competencies for the 21st century* (Katharina Schüller).

We list some papers of the invited-papers session mentioned earlier as the topics are in the focus of debates on the future of statistics education:

- Data science at school level—a pilot project (Rolf Biehler)
- Flipped classroom in large statistics lectures (Constantin Weiser)
- Shiny for the development of Apps (Sigbert Klinke)
- Statistical Literacy and Statistical Education (Laura Martignon)
- Civic Statistics (Joachim Engel)
- A new approach for developing statistical thinking (Ana Kolar)
- Improve medical decisions by natural frequencies (Leah Braun)
- epiLEARNER: e-learning for medical students (Ursula Berger)

The interested reader might consult the conference website for more details:

www.dagstat2019.statistik.uni-muenchen.de/index.html.

III INTERNATIONAL VIRTUAL CONGRESS ON STATISTICAL EDUCATION (CIVEEST)

University of Granada, Spain, Internet, 21–24 February, 2019



The Statistics Education Research Group at the University of Granada has organised a virtual congress to promote research and innovation in statistics education in Latin America. The congress was also a tribute to Carmen Batanero. Papers (videos) are available in English and partly also in Spanish.

The following plenaries were held:

- Carmen Batanero: Thirty years of stochastics education research: Reflections and challenges
- Manfred Borovcnik: Informal and “informal” inference
- Joachim Engel: Statistical literacy and society: What is civic statistics?
- Iddo Gal: Understanding statistical literacy: About knowledge of contexts and models.
- Juan Godino: Statistics-education research based on the onto-semiotic approach

There have also been quite a few invited papers, communications, and posters.

Proceedings are available from: www.ugr.es/~fqm126/pagesCIVEEST/conferencias.html.

**11th CONGRESS OF EUROPEAN RESEARCH IN
MATHEMATICS EDUCATION (CERME 11)**

Utrecht University, Utrecht, The Netherlands, 5–10 February, 2019



The working group on probability and statistics education was led by Caterina Primi.

Themes for 2019 were

- Probabilistic and statistical thinking and its relationship to mathematical thinking
- Dispositions, attitudes, and beliefs towards probabilistic and statistical thinking
- The role of context in statistics
- The professional development of teachers to teach statistics and probability
- Computer-based tools on the learning and teaching of probability and statistics
- Theoretical frameworks that may provide insightful models for interpreting evidence
- Big data and analytics in K-12 education.
- Assessment in statistics education

Quite a few presentations were on teachers' content knowledge and on professional development of teachers. Other themes included contributions that focused on probability and conditional probability, on pitfalls in probability, on systematically biased strategies to evaluate probabilities, but also on establishing a scale for measuring probabilistic understanding. Another strand focused on difficulties in understanding statistical inference, finding innovative forms of teaching inference in order to decrease these difficulties, and using informal inference to avoid comprehension difficulties by teaching a restricted approach to statistical inference. Unfortunately, the conference website does not display the details of the Thematic Working Groups.

The proceedings will soon be available from the ERME website:
www.mathematik.uni-dortmund.de/~erme/.