



# Statistics Education Research Journal

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## **Statistics Education Research Journal**

SERJ is a peer-reviewed electronic journal of the International Association for Statistical Education (IASE) and the International Statistical Institute (ISI). SERJ is published twice a year and is free.

SERJ aims to advance research-based knowledge that can help to improve the teaching, learning, and understanding of statistics or probability at all educational levels and in both formal (classroom-based) and informal (out-of-classroom) contexts. Such research may examine, for example, cognitive, motivational, attitudinal, curricular, teaching-related, technology-related, organizational, or societal factors and processes that are related to the development and understanding of stochastic knowledge. In addition, research may focus on how people use or apply statistical and probabilistic information and ideas, broadly viewed.

The Journal encourages the submission of quality papers related to the above goals, such as reports of original research (both quantitative and qualitative), integrative and critical reviews of research literature, analyses of research-based theoretical and methodological models, and other types of papers described in full in the Guidelines for Authors. All papers are reviewed internally by an Associate Editor or Editor, and are blind-reviewed by at least two external referees. Contributions in English are recommended. Contributions in French and Spanish will also be considered. A submitted paper must not have been published before or be under consideration for publication elsewhere.

Further information and guidelines for authors are available at: <http://www.stat.auckland.ac.nz/serj/>

### **Submissions**

Manuscripts should be sent to co-editor Flavia Jolliffe (F.Jolliffe@kent.ac.uk), by email, as an attached document in Word format. These files should be produced using the Template available online. Full details regarding submission are given in the Guidelines for Authors on the Journal's Web page: <http://www.stat.auckland.ac.nz/serj>

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## EDITORIAL

This issue marks the end of SERJ's third year of operation. It is special in several ways, both because of its content and of the fact that we are announcing several important changes in SERJ's Goals and Policy Statement as well as in the type of papers we publish. We thus encourage you to read further, and follow forthcoming updates to our guidelines on the SERJ website: [www.stat.auckland.ac.nz/serj](http://www.stat.auckland.ac.nz/serj).

**Focus: Variation.** This issue is a Special issue focused on research on reasoning about variation and variability. We thank the Guest Editors, Joan Garfield (University of Minnesota, USA) and Dani Ben-Zvi (University of Haifa, Israel) for organizing and supporting this project. Their Forward paper describes the background of this Special issue and introduces the five papers in it, of which one is invited and four are refereed. We are also planning to have a special section with several more papers on the same topic of variation and variability as part of our next issue planned for May 2005. Joan Garfield and Dani Ben-Zvi will again serve as Guest Editors of this special section. In this way we hope to extend the contribution of new research and reflective papers to current knowledge in the important yet little-studied area of reasoning about variation.

**Revised goals for SERJ.** Recently, SERJ's Editorial Board has adopted a new Goals and Policy Statement which expands in several ways the scope of issues and topics sought in manuscripts. Below is our revised statement, followed by brief explanations of our rationale.

SERJ aims to advance research-based knowledge that can help to improve the teaching, learning, and understanding of statistics or probability at all educational levels and in both formal (classroom-based) and informal (out-of-classroom) contexts. Such research may examine, for example, cognitive, motivational, attitudinal, curricular, teaching-related, technology-based, organizational, or societal factors and processes that are related to the development and understanding of stochastic knowledge. In addition, research may focus on how people use or apply statistical and probabilistic information and ideas, broadly viewed.

The Journal encourages the submission of quality papers related to the above goals, such as reports of original research (both quantitative and qualitative), integrative and critical reviews of research literature, analyses of research-based theoretical and methodological models, and other types of papers described in full in the Guidelines for Authors. All papers are reviewed internally by an Associate Editor or Editor, and are blind-reviewed by at least two external referees. Contributions in English are recommended. Contributions in French and Spanish will also be considered. A submitted paper must not have been published before or be under consideration for publication elsewhere.

This statement maintains SERJ's focus on research related to core aspects of learning and teaching of statistics and probability in classroom-based contexts at primary, secondary, and tertiary levels. However, it reflects the growing recognition that learning occurs in many types of out-of-school contexts, such as in the workplace or at home. People of all walks of life, not only "pupils" or "students", engage with diverse tasks and situations where knowledge of statistics or probability, however acquired, is called for and put to use. The growing availability of computers, and the dissemination of statistical data and information via the Internet, further contribute to blurring of traditional boundaries between formal and informal learning. Hence, teaching, learning, and using are increasingly intertwined and have to be seen as occurring within a broadening social sphere. Our revised Goals and Policy Statement therefore encourages research that addresses an expanded set of issues related to improving the way people understand and use statistical and probabilistic knowledge.

**Paper types and revised author guidelines.** The updated Goals and Policy Statement lists a range of the kinds of paper which are sought by SERJ. In addition to research papers based on diverse methodologies, we are also encouraging other types. Among these are reflective or theoretical analyses, epistemological studies, and critical or integrative literature reviews which are based on research and which can contribute to future research, theory-building, or educational practice.

We are also pleased to announce **a new paper format - Brief Reports**. Such papers, up to 2500 words, can report, for example, on replication and extension studies, psychometric studies, results of program evaluations, or preliminary conclusions from innovative research projects. While such studies could of course lead to full-length manuscripts, the possibility of submitting a Brief Report offers international researchers an additional and more economical publication channel that has the potential for faster turnaround, while maintaining the same scientific standards as in full-length papers.

We are presently revising our Guidelines for Authors, in light of the changes described here, as well as due to the need to fine-tune details of paper formatting and other technical aspects of preparation of papers either for submission for review or for publication. Further details about Brief Reports and about changes in paper submissions will be included in these revised Guidelines for Authors which will appear in early 2005 on the SERJ Website. Please contact either of the editors if you seek information on the Brief Report format before the updated Guidelines for Authors are published.

**Alert regarding duplicate conference and journal submissions.** We draw readers' attention to issues concerning submissions of papers originally written for a conference for possible publication in SERJ. Many authors use a conference presentation as a springboard for preparation of a paper for later submission to a research journal; we are happy to be part of that cycle. However, due to the blurring of what a "publication" means in this age where the Internet enables rapid worldwide availability of full papers, we want to reiterate the need to avoid duplicate publication, which is a standard policy in many journals. Our policy is that papers "published" by conference organizers (on the Internet, in printed Proceedings, or on CD) will *not* be accepted for consideration and review by SERJ unless they include substantial new data and textual material, beyond what appeared in the published conference paper. This applies to both refereed and non-refereed conference papers.

In closing, we thank our readers for their continued interest and support of SERJ, which is reflected in the increasing number of entries to and downloads from the SERJ website. We are especially grateful to our dedicated referees, whose names are listed in this issue. Finally, we thank the other members of SERJ's Editorial Board, whose counsel and support underlies the announcements of the various changes announced in this issue.

FLAVIA JOLLIFFE AND IDDO GAL