Introductory Remarks

The International Conference on Statistics, Combinatorics and Related Areas (SCRA2001) and the Eighth International Conference of the Forum for Interdisciplinary Mathematics took place at the University of Wollongong (Australia) from December 19 to December 21 in 2001. The conference was cosponsored by the International Association of Statistical Computing. Over 200 delegates from more than 20 countries attended.

The program consisted of six plenary sessions, 32 invited sessions, six contributed sessions, two student competition sessions, and one poster session. The plenary session speakers were: Lynn Billard (University of Georgia), Clive Granger (University of California), C.C. Heyde (Australian National University), C.R. Rao (Penn. State University), P.K. Sen (University of North Carolina), and J. Gani (Australian National University).

A total of 117 papers were presented at the invited sessions, with 32 papers at the contributed sessions, nine papers at the FIM student competition sessions, and three papers at the poster session.

There were three pre-conference workshops held at the same venue as the conference. 'nvironmental/Ecological Statistics Workshops', held on December 17 and 18, were given by Professor Bryan Manly (WEST Inc., Cheyenne, Wyoming) and Dr Jennifer Brown (University of Canterbury, Christchurch, New Zealand). An 'Education Workshop', held on December 18, was organized by Professor David Griffiths (University of Wollongong) and Professor Kerrie Mengersen (University of Newcastle).

In the Invited Sessions there were 30 topics, including Cointegration, Computer Security, Data Mining, Ecological and/or Environmental Statistics, Estimating Function and Quasi-likelihood, Experimental Design, Generalized Linear Models, Goodness of Fit, Image Analysis, Industrial Data Analysis, Multivariate Statistics, Ranked Set Sampling, Sample Surveys, Statistics in Finance, Stochastic models, and Time Series.

At the end of the Conference, awards were presented to the nine students from Australia, India, Japan and USA who participated in the FIM Student Competition Sessions. Papers were judged by a panel of judges with Professor Joe Gani as chair. Tomohiro Ando (Kyushu University), Riccardo Biondini (University of Wollongong), and Yee Hwa Yang (University of California, Berkeley) shared the first prize pool. Professor Ashis SenGupta of the Indian Statistical Institute proposed the idea of a student paper competition, participated in the planning, organization and judging phases and saw it through its fruition.

A selection of the papers included in the Proceedings are being published in *Advances in Statistics, Combinatorics and Related Areas*, published by

World Scientific in November 2002, and in this special issue of the *Journal of Applied Mathematics and Decision Sciences*. The editors of the Proceedings were: Chandra Gulati, School of Mathematics and Applied Statistics, University of Wollongong, Wollongong, NSW, Australia, Yan-Xia Lin, School of Mathematics and Applied Statistics, University of Wollongong, Wollongong, NSW, Australia, Satya Mishra, Department of Mathematics and Statistics, University of South Alabama, Mobile, Alabama, USA and John Rayner, School of Mathematics and Applied Statistics, University of Wollongong, Wollongong, NSW, Australia.

The editors of this issue of the *Journal of Applied Mathematics and Decision Sciences* are John Rayner, Satya Mishra, and John Best, Research Fellow, Institute of Mathematical Modelling and Computational Systems, University of Wollongong, Wollongong, NSW, Australia.

We would like to thank Chandra Gulati and Yan-Xia Lin, as the editorial work in the Proceedings and this issue overlapped. We would also like to thank Riccardo Biondini for his considerable assistance in converting files to the required format.

In selecting papers for this issue we were mindful of several factors. Foremost was quality. Of course there were several fine papers that were unavailable for publication here: for example, the contributions of the invited plenary session speakers that properly *had* to be published in the Proceedings. Another factor was themes we want to see established or perpetuated in the *Journal*. In an interdisciplinary journal such as ours, the paper by Lin and McCrae, straddling Finance and Statistics, was an easy choice. Time series and goodness of fit are areas where the journal already has published several important papers, and this led to three more selections. The application of statistics to ecology is an area in which we would welcome more submissions. We are fortunate to have a contribution here from a universally respected expert Bryan Manly. Similarly submissions in sample surveys will be especially welcomed in the future, and we would have published a longish paper from David Steel, if only we had the space. Since we do not, that paper must wait for a later issue of the *Journal*. Olivier Thas, Glen Rayner and Qiying Wang are all early career researchers, and their presentations at the conference had a vigour and enthusiasm that bodes well for the future of our discipline. We hope they, and other early career researchers will look to our *Journal* when seeking avenues for dissemination of their work.

John Rayner, on behalf of the editors

Special Issue on
Time-Dependent Billiards

Call for Papers

This subject has been extensively studied in the past years for one-, two-, and three-dimensional space. Additionally, such dynamical systems can exhibit a very important and still unexplained phenomenon, called as the Fermi acceleration phenomenon. Basically, the phenomenon of Fermi acceleration (FA) is a process in which a classical particle can acquire unbounded energy from collisions with a heavy moving wall. This phenomenon was originally proposed by Enrico Fermi in 1949 as a possible explanation of the origin of the large energies of the cosmic particles. His original model was then modified and considered under different approaches and using many versions. Moreover, applications of FA have been of a large broad interest in many different fields of science including plasma physics, astrophysics, atomic physics, optics, and time-dependent billiard problems and they are useful for controlling chaos in Engineering and dynamical systems exhibiting chaos (both conservative and dissipative chaos).

We intend to publish in this special issue papers reporting research on time-dependent billiards. The topic includes both conservative and dissipative dynamics. Papers discussing dynamical properties, statistical and mathematical results, stability investigation of the phase space structure, the phenomenon of Fermi acceleration, conditions for having suppression of Fermi acceleration, and computational and numerical methods for exploring these structures and applications are welcome.

To be acceptable for publication in the special issue of Mathematical Problems in Engineering, papers must make significant, original, and correct contributions to one or more of the topics above mentioned. Mathematical papers regarding the topics above are also welcome.

Authors should follow the Mathematical Problems in Engineering manuscript format described at http://www.hindawi.com/journals/mpe/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/ according to the following timetable:

Manuscript Due	March 1, 2009
First Round of Reviews	June 1, 2009
Publication Date	September 1, 2009

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