Editorial

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Ten years later

More than ten years ago, two colleagues and I developed an idea for a new journal that promised, as we stated in the preface of the first issue, "to bring together three main areas of applied mathematics, namely, classical applied mathematics, applied statistics, and operations research." We believe that we have succeeded in our goal as is evident in over 170 articles spanning such areas as biofuel production, dynamics growth games, convex and nonconvex optimization, robustness of sample correlation, global optimization, dynamical system modeling, decision support system, and much more.

Although the initial focus of this journal was to fill the gap in applied mathematics and decision sciences research that existed in New Zealand, the journal quickly grew to become an international journal with over thirty editors across the globe.

In our first issue, we also promised our readers and potential contributors that the *Journal of Applied Mathematics and Decision Sciences* (JAMDS) would "appeal to practitioners as well as theoreticians with carefully reviewed articles, be inexpensively priced, and be published rapidly." Today, we continue striving to satisfy all these goals. Every article that appeared in our journal has been diligently reviewed by two or more referees, followed by a careful examination by the editor in charge, and depending on the nature of the article, a final review by an area editor or the editor-in-chief. We continue to be a leader in our response time to authors and though our journal has been reasonably priced throughout its life, as of this year, we have made the journal available at no cost to the readers through a novel business model called *Open Access Program*.

To celebrate a decade of successful publications and our association with a new publisher, Hindawi Publishing Corporation, we have devoted this special issue to the current

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and former editors of JAMDS. The articles that appear in this issue illustrate the quality and the diversity of our editorial board.

D. J. Best et al. present a paper on "Nonparametric analysis of blocked ordered categories data: some examples revisited." This article demonstrates the use of Cochran-Mantel-Haenszel (CMH) statistics in nonparametric analysis of general block design. Several important examples for randomized block designs with or without missing values, for balanced incomplete block designs, and for supplemented balanced designs are given and investigated. By implementing the idea on four known examples in the literature, the authors show how CMH statistics can also be applied in less standard situations. Additionally, several well-known nonparametric statistics are shown to be special cases of CMH statistics.

In "Stochastic dominance for location-scale family," Wing-Keung Wong makes an interesting contribution to the theory of mean-variance criterion by extending some results previously developed independently by Meyer, Tobin, and Levy. His results include the development of some properties for first- and second-degree stochastic-dominance efficient sets and the mean-variance efficient set.

In "Comparison of two common estimators of the ratio of the means of independent normal variables in agricultural research," Chin-Diew Lai et al. address the problems of estimating the ratio of the means of independent normal variables in agriculture research. Their results, tested in data from rice breeding multienvironment trials in Jilin, China, demonstrate the validity of this proposed approach.

In "Effectiviness of high-interest rate policy on exchange rates: a re-examination of the Asian financial crisis," Jack Penm et al. examine the effects of higher-interest rates during the Asian financial crisis. Their results indicate that sharply higher-interest rates helped support the exchange rates in various Asian countries.

Y. X. Lin et al. in the "Loss protection in pairs trading through minimum profit bounds: a cointegration approach" use cointegration principles to develop a procedure that embeds a minimum profit condition within a pairs trading strategy. Necessary conditions for such a procedure are derived and incorporated in the implementation of a five-step procedure for identifying eligible trades. Using this technique, in which its statistical validity is verified through simulation data, the author provides exploitable information on long-run time series behavior of share pairs that is not currently available in statistical methods.

In "Mapping the convergence of genetic algorithms," Zvi Drezner and George A. Marcoulides apply "MD cluster analytic" procedure, which was devised by the authors, to fully investigate the structure of the population and convergence of genetic algorithms. This is illustrated using a hybrid genetic algorithm and applying it to the well-known quadratic assignment problem (QAP). The use of the tools provided here is highly recommended and is shown to be effective in the construction of better and more efficient genetic algorithms.

F. Beltrán and N. Santamaría use simulation in "A measure of the variability of revenue in auctions: a look at the revenue equivalence theorem" to verify certain known results in auction theory, such as revenue equivalence theorem. They also attempt to develop a criterion to guide the auctioneer in deciding about the type of auction to be used. The

paper presents an interesting statistical analysis in its verification process. The variability of the results obtained about the average is measured for each type of auction, for increasing number of auctions, and for increasing number of bidders. These results are further illustrated in several companion plots.

In "A simulation framework for networked queue models: analysis of queue bounds in a G/G/c supply chain," M. Amouzegar and K. Moshirvaziri present a closed stochastic simulation network model and several approximation and bounding schemes for G/G/c systems. The analysis was, originally, conducted to verify the integrity of simulation models used to develop alternative policy options for the United States Air Force. The authors showed that the theoretical bounds could be used to derive superior approximation for mean capacities at various queues. In "An analytical characterization for an optimal change of Gaussian measures," H. Schellhorn presents an alternate characterization of the solution of an optimal control problem by considering two Gaussian measures. The author is also interested in the optimal speed of mean reversion that is shown to follow a Riccati equation. This equation is solved analytically when the volatility curve takes specific shapes. An application of the result to simulation is further discussed.

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