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Aims

The Chilean Journal of Statistics (ChJS) is an official publication of the Chilean Statistical Society (`www.soche.cl`). The ChJS takes the place of *Revista de la Sociedad Chilena de Estadística*, which was published from 1984 to 2000.

The ChJS is an international scientific forum strongly committed to gender equality, open access of publications and data, and the new era of information. The ChJS covers a broad range of topics in statistics, data science, data mining, artificial intelligence, and big data, including research, survey and teaching articles, reviews, and material for statistical discussion. In particular, the ChJS considers timely articles organized into the following sections: Theory and methods, computation, simulation, applications and case studies, education and teaching, development, evaluation, review, and validation of statistical software and algorithms, review articles, letters to the editor.

The ChJS editorial board plans to publish one volume per year, with two issues in each volume. On some occasions, certain events or topics may be published in one or more special issues prepared by a guest editor.

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Tenth Volume – Second Issue
Editorial Paper

"Chilean Journal of Statistics": An international scientific forum committed to gender equality, open access, and the new era of information

We introduce the second issue of the tenth volume of the Chilean Journal of Statistics (ChJS). In this opportunity, and before presenting the interesting papers to be published in the current issue, I would like to make some reflections about the international character of our journal, but also about gender equality and the important challenges for statistics in the era of information, as well as for the open access to publications and data.

Regarding gender equality, it allows us to accelerate progress and opportunities for everyone. However, our journal is in debt in relation a such an equality, so that this is big challenge which we are assuming from now. Indeed, our editorial board is increasing the number of women starting from this issue, because it is necessary and we must do justice to the talent and empowerment of women in science, and particularly in statistics. Welcome on board Dr. Alejandra Tapia from Chile, Dr. Viviana Giampaoli from Argentina, Dr. Michelli Barros from Brazil, Dr. Teresa Oliveira from Portugal, and Dr. Ana B. Nieto from Spain. We are sure that with your enthusiasm, dynamism and talent, our journal will benefit greatly. We are honored with your acceptance to be part of the ChJS.

Related to our international character, we must recall that the ChJS is published by the Chilean Statistical Society (www.soche.cl) and belongs to the Chilean statistical community, but our prestigious Editorial Board, presented at http://chjs.mat.utfsm.cl/board.html, is composed of researchers from Argentina, Australia, Austria, Bulgaria, Brazil, Canada, Chile, China, Colombia, Greece, India, Italy, Mexico, Netherlands, Peru, Portugal, Romania, Saudi Arabia, Spain, Switzerland, UK, and US, which are distributed according to the graphical plot displayed in Figure 1 according to data visualization of data science, such as in Figure 2 below. Currently, a 20% of this Board are women and we hope to increase this number promptly. In addition to our Editorial Board, we have received papers to be evaluated from different countries and from the five continents as shown in Figure 2. The ChJS is publishing about 20% of the papers submitted to our journal. We are an open access journal, which publishes original papers free of charges for publication, allowing the international community to disseminate the statistical knowledge at no cost. This is a contribution from the Chilean Statistical Society to the knowledge economy, defined as the use of knowledge to create goods and services. Furthermore, our journal will promote the concept of open data in our next published papers.

Considering the relevant challenges for statistics in the new era of information, which we are living during these days, the ChJS is open to publish papers related to artificial intelligence, big data, data mining, data science, and text mining. We have taken into account this challenge incorporating expert researchers on these topics as part of our Editorial Board to evaluate and process possible papers regarding such topics. We hope to publish an adequate number of papers on this interesting thematic during 2020.

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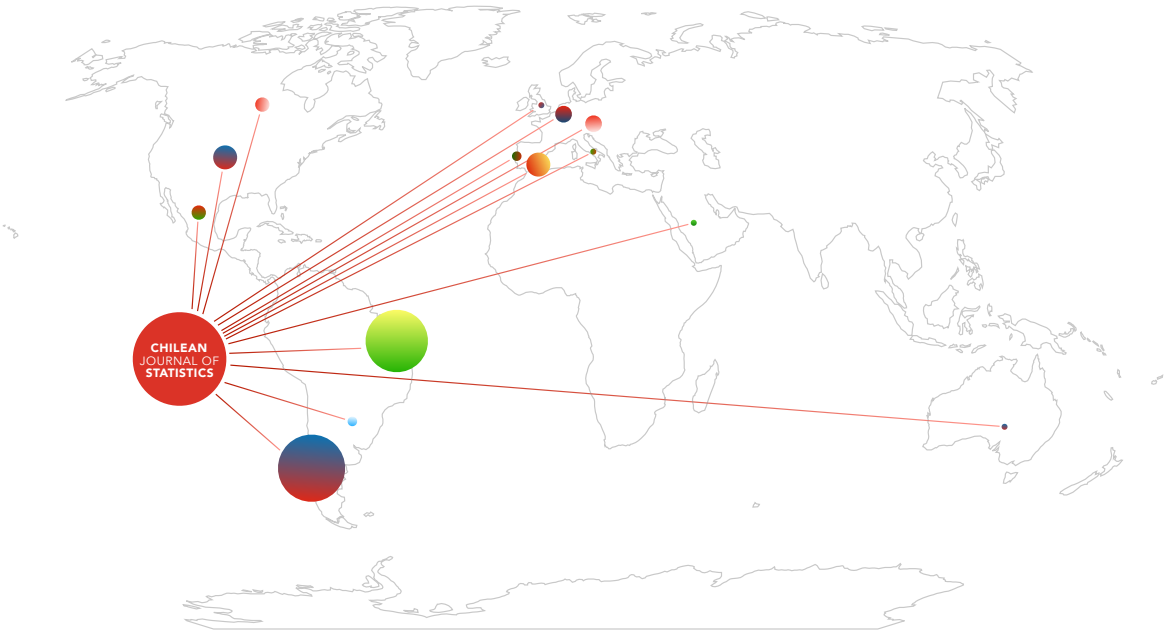

Figure 1. Distribution of the Editorial Board's members in relation to their country.

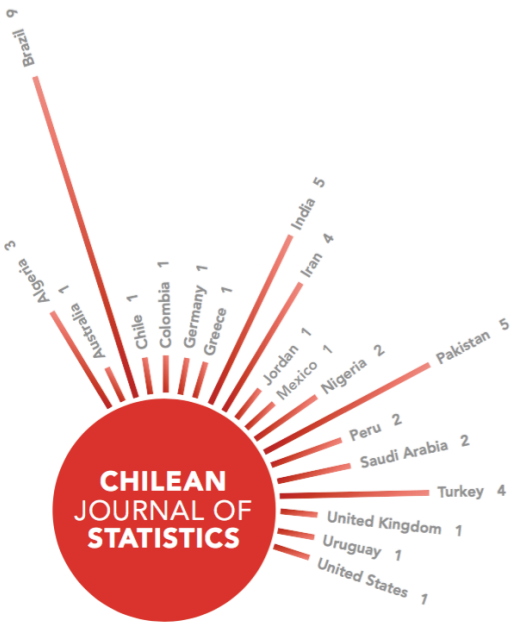

Figure 2. Dstribution of the authors who submit papers to the ChJS in relation to their country.

About the Directory of the Chilean Statistical Society (https://soche.cl/quienes-somos), firstly, I would like to thank its President, Dr. Mauricio Castro, for the trust placed in me to be appointed as the Editor-in-Chief of the ChJS from March, 2019. Also, I want to congratulate Dr. Castro for his excellent work in this high position of the SOCHE. He assumed as President with great leadership during a complicated period for our beloved scientific society. Secondly, I wish to congratulate as well to Dr. Jorge Figueroa for being recently elected as the new President of the SOCHE from 2020, to whom I thank also his trust to continue in my editorial position. They and all the community can rest assured that I will make my best effort to bring the ChJS to the highest standards of professionalism, impartiality and quality that all scientific journal must strive for.

In addition to this presentation note, the second issue of the tenth volume of the ChJS comprises five papers, which correspond to valuable contributions of renowned international researchers who have honored us by publishing their interesting works in our journal; all of these papers are available for free at http://chjs.mat.utfsm.cl/issues.html. We also thank our Associated Editors and the anonymous reviewers who have contributed to keeping the top quality standards of the ChJS. Our first paper is authored by Paulo H. Ferreira, Taciana K.O. Shimizu, Adriano K. Suzuki, and Francisco Louzada. The authors introduced an asymmetric extension to the tobit model by assuming that the error term follows a tilted-normal distribution. The model parameters were estimated by a standard method, whose performance was evaluated with Monte Carlo simulations for different sample sizes and parameter settings. Also, adequacy of the tobit formulation was assessed by using model selection criteria. An illustration with real data was also given including a diagnostic analysis. The second paper is authored by Eduardo Horta and Flavio Ziegelmann. The authors provided sufficient conditions ensuring that mixing properties hold for the sequence of empirical cumulative distribution functions associated with a conjugate process. Also, numerical examples were provided to illustrate the results obtained in this work. The third paper is authored by Guilherme Parreira da Silva, Cesar Augusto Taconeli, Walmes Marques Zeviani, and Isadora Aparecida Sprengoski do Nascimento. The authors evaluated the performance of Shewhart control charts based on neoteric ranked set sampling to monitor the mean of normal and non-normal processes. They used mean, median and standard deviation of run lengths to make this evaluation based on Monte Carlo simulations. The impact of imperfect ranking and non-normality were also assessed and an illustration with real data was provided to show the potential applications. The fourth paper is authored by Lucas Pereira Lopes, Vicente Garibay Cancho, and Francisco Louzada, who provided a GARCH methodology to describe a more realistic pricing option using stocks from two Brazilian companies. The methodology was confronted with a type Black-Scholes model, obtaining good results. Concepts of copulas, marginal models and asymmetry were considered in this study making the joint modeling more flexible and realistic. The empirical aspects of the obtained results were relevant in financial emerging markets, where non-normality seems to be evident. This second issue closes with a fifth paper authored by Boubaker Mechab, Nesrine Hamidi, and Samir Benaissa. The authors investigated nonparametric estimation of the relative error in functional regression and censored data. The almost complete consistency and the asymptotic normality of the estimator of the regression operator in the case of a censored response given a functional explanatory variable were studied. The finite sample performance based on the mean square error between standard and relative error regressions was assessed by simulations. A real data illustration was carried out to apply the results obtained.

Finally, I would like the statistical and data science communities, our prestigious Editorial Board, and authors to champion the ChJS as an international scientific forum committed to gender equality, open access, and the new era of information to encourage others to submitting new investigations to the ChJS. We are indexed by serious and rigorous international systems, including the ISI Web of Science. The ChJS continues facing big challenges for the future and we need of all the community in meeting them.

Víctor Leiva
Editor-in-Chief
Chilean Journal of Statistics
http://www.victorleiva.cl

Information for authors

The editorial board of the Chilean Journal of Statistics (ChJS) is seeking papers, which will be refereed. We encourage the authors to submit a PDF electronic version of the manuscript in a free format to Víctor Leiva, Editor-in-Chief of the ChJS (E-mail: chilean.journal.of.statistics@gmail.com). Submitted manuscripts must be written in English and contain the name and affiliation of each author followed by a leading abstract and keywords. The authors must include a"cover letter" presenting their manuscript and mentioning: "We confirm that this manuscript has been read and approved by all named authors. In addition, we declare that the manuscript is original and it is not being published or submitted for publication elsewhere".

Preparation of accepted manuscripts

Manuscripts accepted in the ChJS must be prepared in Latex using the ChJS format. The Latex template and ChJS class files for preparation of accepted manuscripts are available at http://chjs.mat.utfsm.cl/files/ChJS.zip. Such as its submitted version, manuscripts accepted in the ChJS must be written in English and contain the name and affiliation of each author, followed by a leading abstract and keywords, but now mathematics subject classification (primary and secondary) are required. AMS classification is available at http://www.ams.org/mathscinet/msc/. Sections must be numbered 1, 2, etc., where Section 1 is the introduction part. References must be collected at the end of the manuscript in alphabetical order as in the following examples:

Arellano-Valle, R., 1994. Elliptical Distributions: Properties, Inference and Applications in Regression Models. Unpublished Ph.D. Thesis. Department of Statistics, University of São Paulo, Brazil.

Cook, R.D., 1997. Local influence. In Kotz, S., Read, C.B., and Banks, D.L. (Eds.), Encyclopedia of Statistical Sciences, Vol. 1., Wiley, New York, pp. 380-385.

Rukhin, A.L., 2009. Identities for negative moments of quadratic forms in normal variables. Statistics and Probability Letters, 79, 1004-1007.

Stein, M.L., 1999. Statistical Interpolation of Spatial Data: Some Theory for Kriging. Springer, New York.

Tsay, R.S., Peña, D., and Pankratz, A.E., 2000. Outliers in multivariate time series. Biometrika, 87, 789-804.

References in the text must be given by the author's name and year of publication, e.g., Gelfand and Smith (1990). In the case of more than two authors, the citation must be written as Tsay et al. (2000).

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