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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 covers a broad range of topics in statistics, as well as in artificial intelligence, big data, data science, and machine learning, focused mainly on research articles. However, review, survey, and teaching papers, as well as material for statistical discussion, could be also published exceptionally. Each paper published in the ChJS must consider, in addition to its theoretical and/or methodological novelty, simulations for validating its novel theoretical and/or methodological proposal, as well as an illustration/application with real data.

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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ELEVENTH VOLUME – SECOND NUMBER
EDITORIAL PAPER

Confirming our international presence with publications and submissions from all continents in COVID-19 pandemic

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Welcome to the second issue of the eleventh volume of the Chilean Journal of Statistics (ChJS), published on 30 December 2020. The ChJS celebrates eleven years of life during very testing times due to the coronavirus pandemic. The new coronavirus has affected the whole world in different ways, which was first identified in November 2019 in Wuhan, China. This is an ongoing pandemic of coronavirus disease caused by severe acute respiratory syndrome named coronavirus 2, also known as SARS-CoV-2 or COVID-19. Such a pandemic is also a key period for statistics, because its use has allowed governments around the planet to establish regulations aimed at stopping the spread of the virus. The World Health Organization declared the outbreak an international public health emergency in January 2020 and a pandemic in March 2020. Today, more than 82.1 million of cases have been confirmed and more than 1.79 million of deaths have been attributed to COVID-19 around the world. Medicine, science, statistics, and generation of new knowledge have played a fundamental role during this year, with scientific journals playing a relevant role as they publish research of quality. We believe the world will overcome this situation, but we are sure new customs acquired during this period, such as interconnectivity, telework, teleconferencing, virtuality, among others, will remain forever. Although their development was initiated much before this pandemic, areas of big data, data science, machine learning, and statistics have been emphasized in 2020. All of these areas play an important role not only in artificial intelligence, science, and engineering, but in practically all areas of knowledge.

The scientific and editorial production of this volume of the ChJS would not have been achieved without the valuable contributions of many people. Renowned international researchers from the all five continents have honored us by publishing their interesting works in our journal so that we thank their contributions. In addition, we also thank all the anonymous reviewers who have contributed to keeping the high quality standards of the ChJS. Furthermore, our editorial board is grown from this issue. Welcome on board Dr. Yolanda Gómez from Chile, Dr. Diego Gallardo from Chile, and Dr. Danilo Alvares from Brazil/Chile. We are sure that with their enthusiasm, dynamism and talent, our journal will benefit greatly. We are honored by their acceptance to be part of the ChJS. Moreover, we are obliged and pleased to thank our prestigious editorial board, composed of colleagues from all five continents and listed in <http://chjs.mat.utfsm.cl/board.html>, who have collaborated from different perspective to increase our visibility and quality of the papers published by the ChJS. Of course, we must also thank the President and the Board of Directors of the Chilean Statistics Society (listed in <https://soche.cl/quienes-somos>) and the entire Chilean statistical community for placing in us, the Editors-in-Chief of the ChJS, their trust in our work.

The second issue of the eleventh volume of the ChJS comprises six papers authored by researchers from Algeria, Brazil, Chile, Colombia, India, Netherlands, Saudi Arabia, and United Kingdom (UK):

- (i) Our first paper is authored by Ibrahim M. Almanjahie, Mohammed Kadi Attouch, Omar Fetitah, and Hayat Louhab, who derived a family of robust nonparametric estimators for a regression function with unknown scale parameter based on the kernel density method and functional data. The authors accompanied their theoretical results with a simulation study to evaluate the good performance of their proposal, and applied it to real functional ergodic data concerning air pollution.
- (ii) The second paper is authored by Ricardo Puziol de Oliveira, Marcos Vinicius de Oliveira Peres, Jorge Alberto Achcar, and Nasser Davarzani, who developed a trivariate Marshall-Olkin-Weibull distribution for the modeling of right-censored data. In addition, the authors performed simulations to assess the performance of the corresponding model estimators, and applied their results to real data from industrial engineering.
- (iii) In the third paper, Henrique José de Paula Alves and Daniel Furtado Ferreira introduced a new alternative test to the Hotelling T² and likelihood ratio methods for multivariate normal and non-normal population mean vectors. In this paper, the authors accompanied their methodological findings evaluating the performance of the proposed new tests by Monte Carlo simulations, calculating the type I error probabilities and power of the tests. Addition, an illustration with real data of contents of sand and clay from Amazon, Brazil, was provided to show potential applications.
- (iv) The fourth paper is authored by Josmar Mazucheli, André F.B. Menezes, Sanku Dey, and Saralees Nadarajah, who developed and characterized a reparametrize Chaudhry-Ahmad distribution. In this paper, the authors accompanied their theoretical results with a Monte Carlo simulation study to compare the proposed estimators and their bias-corrected versions, obtained from the Cox-Snell formula and parametric bootstrapping. This paper closes with an application by using wind speed data from Brazil.
- (v) The fifth paper is authored by André Leite, Abel Borges, Geiza Silva, and Raydonal Ospina, who presented an integer programming formulation to handle a real instance of a courses-to-lecturers timetabling problem based on a case study with real data from Brazil.
- (vi) This issue of the ChJS closes with a paper authored by Jorge Figueroa-Zúñiga, Rodrigo Sanhueza-Parkes, Bernardo Lagos-Álvarez, and Germán Ibacache-Pulgar, who presented and characterized an ingenious distribution to model bounded data with equal and unequal proportions of cases at the tails. The authors named this the trapezoidal Kumaraswamy distribution and applied it to data sets from education and engineering.

An aspect of which we are proud at the Chilean Statistical Society and ChJS is that we are and will continue to be an open access journal, publishing works free of any article processing charges (APC). In addition, we are working on implementing an online platform for submissions, which should facilitate the work of Editors and Reviewers, as well as the submission process for authors. Moreover, we are pleased and happy to count with a new indexation for the ChJS corresponding to the Scopus system of Elsevier, which joins the emerging sources citation index published by the Clarivate Analytics from the Institute for Scientific Information (ISI) belonging to Web of Science Group. We feel very motivated because this year we received 51 submissions, coming from 30 countries (of all five continents) and 132 authors. We detail the information generated from these data on countries of authors and submissions in Figures 1 and 2.

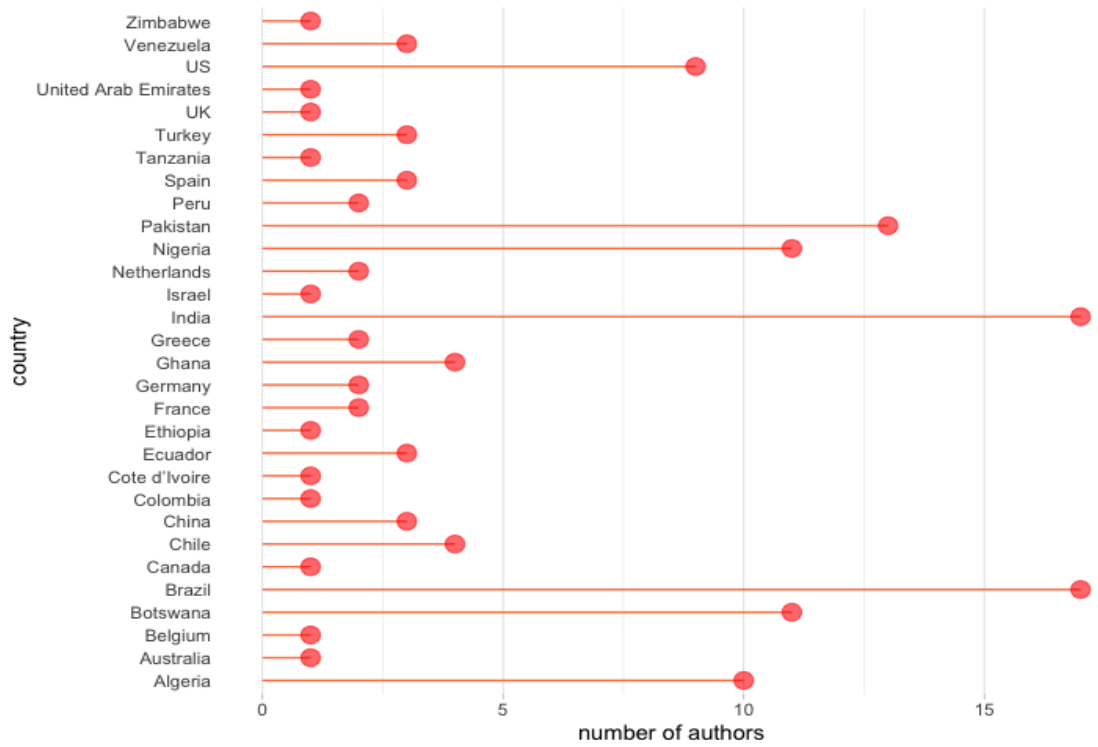


Figure 1. Distribution of authors of the articles submitted to the ChJS during 2020 with respect to their country.

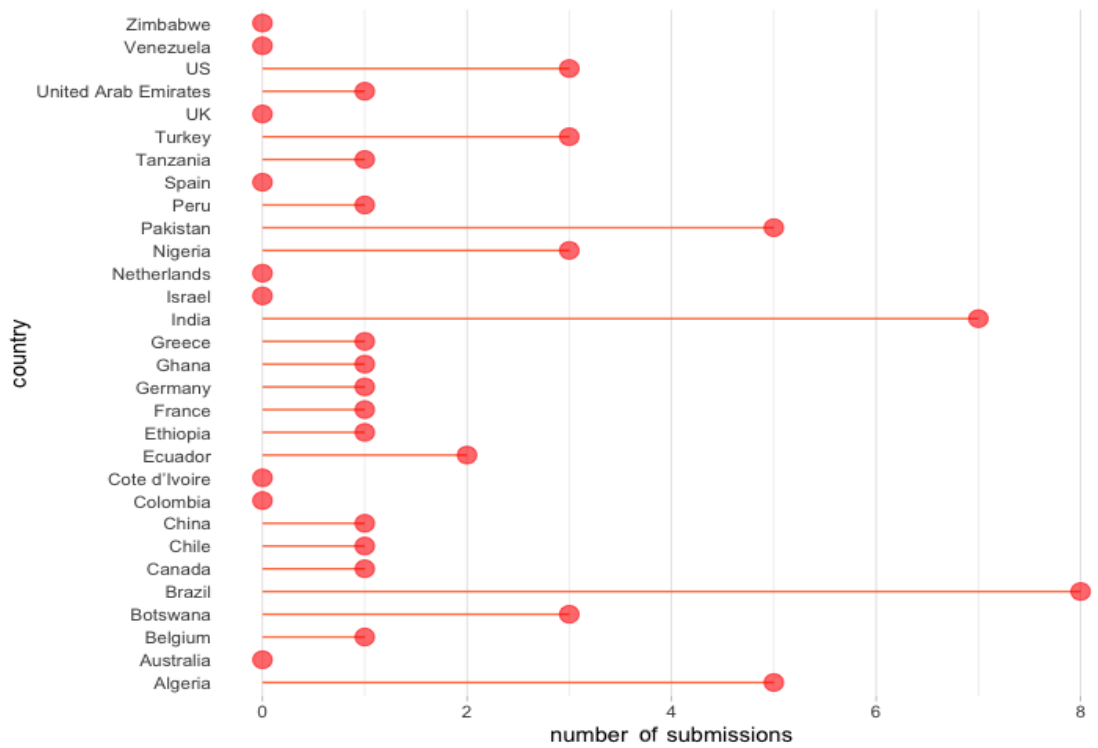


Figure 2. Distribution of papers submitted to the ChJS during 2020 according to the country of the corresponding author.

Finally, we would like the statistics and data science communities around the world, our Editorial Board, and authors who have published with us, to champion the ChJS as a high quality open access journal, free of APC, that cares for gender equality, and is independent from global systems. We are proud to be an eleven-year-old international journal with high and fair standards of review, so we encourage past and new authors to submit their works to the ChJS. As mentioned above, currently we are indexed by several international systems, including the ISI Web of Science and the Scopus database of Elsevier for abstracting and citations. We face important challenges for the future, such as implementing our online platform for submissions, reaching the Science Citation Index, and looking for partnerships with scientific publishers, societies and associations. Just as with any other scientific endeavor, the success of the ChJS depends on a team effort. We are all important to meet these challenges, so we need all of you.

Víctor Leiva and Carolina Marchant
Editors-in-Chief
Chilean Journal of Statistics
<http://soche.cl/chjs>

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 the Editors-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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