

Editorial

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Dear readers,

It is a pleasure to present the first issue of volume 48th of the *Revista Colombiana de Estadística*, published by the National University of Colombia. In this edition, we conclude a cycle of editorial leadership under my direction, as I have served as Editor-in-Chief for the past two years. I believe that my dedication and commitment have been fundamental to the growth and consolidation of the journal as a benchmark in the field of statistics. Starting with the next issue, Professor Jimmy Corzo, distinguished for his 43 years of service as a full professor in the Department of Statistics, will assume the role. His extensive experience and leadership ensure the continued development and strengthening of the journal.

This edition includes eleven articles covering various statistical fields, ranging from Bayesian inference to models applied in economics, public health, and environmental sciences. These papers represent original contributions from researchers worldwide, highlighting the diversity and international scope of our journal.

Among the featured articles, we highlight the work of Sadeghkhania on the estimation of closed predictive densities for the bivariate gamma distribution applied to flood analysis. This research proposes analytical solutions in Bayesian contexts, reducing the need for computationally expensive methods. Another significant contribution is the article by Debastiani Neto and collaborators, who introduce the discrete xLindley distribution to model overdispersed data, with practical applications in count studies.

In public health, Hamdeni and his team present a comparative analysis of COVID-19 survival and recovery rates using parametric and non-parametric approaches, emphasizing geographic and demographic differences in the results. Kumar and collaborators contribute with a product-ratio estimator to address measurement errors and nonresponse in surveys, improving accuracy in sensitive studies.

This edition also features methodological innovations such as efficient estimators of population means proposed by Grover and Sharma for data with missing values and measurement errors. Astaíza-Gómez explores prediction quality in

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the presence of informational uncertainty, providing relevant tools for financial decision-making. Hussain and colleagues introduce a flexible discrete probability model for environmental data, applicable to the analysis of partly cloudy days.

In the field of economics, Arrieta-Prieto and Nieto propose a coincident index to evaluate the state of the Colombian economy, using linear combinations of dynamic factors to improve predictions. Gómez-Escobar and collaborators present a model for longitudinal data and functional covariates, useful in the experimental analysis of chlorophyll concentration in chili pepper plants. Ferraz do Nascimento examines revenue collection from speeding fines using compound Poisson processes, combining extreme value theory and Bayesian approaches.

Finally, Misas-Arango and her team propose a hybrid methodological approach that combines resampling (bootstrap) and oversampling (SMOTE) techniques to address problems of small and unbalanced datasets. Its application to COVID-19 patient data in Colombia highlights the model's utility in the early identification of high-risk individuals, improving emergency response systems.

It is worth highlighting that, over the past two years, the journal has experienced a significant increase in the volume of articles received and published, accompanied by a substantial reduction in publication times. These advances would not have been possible without the joint effort of the editorial team, the authors, the reviewers, and, in particular, Patricia Chávez, who has played a crucial role as assistant and administrative coordinator. Her dedication has ensured the efficient operation of the journal.

We express our deepest gratitude to Patricia Chávez, the authors for their valuable contributions, the reviewers for their academic rigor and time, and the new editor, Jimmy Corzo, for taking on this challenge with enthusiasm. We trust that this edition will continue to be a source of inspiration and reference for the global statistical community.

Kind regards,

Juan Sosa, Ph.D.

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