

PROLOGUE

We are pleased of presenting this issue devoted to the 80th onomastic of prof. Dr. Carlos N. Bouza-Herrera (CB). He was born and lived in La Habana Cuba, where he studied at public schools. At the age of 17 he began working at Cuban Telephone Company and continued secondary school studies. CB got involved in the tide of political changes that occurred in his country and stop studying for a while. In 1966 he matriculated in the School of Mathematics of Universidad de La Habana and selected the specialization in Mathematical Statistic's. He shared working, studying and politics.

The new Cuban society developed a series of research institutions in medicine and agriculture. The country was urged of having trained statisticians. The different university careers included now the teaching of statistics in their curriculums and there was a lack of such teachers. Advanced students of Mathematical Statistics were incorporated to teach and CB got involved, including these activities in his daily life. Once graduated, he was ubicated in the corresponding department of the School of Mathematics.

Research institutes of the country needed of statistical aids, and projects with them were promoted systematically. Cb specialized in modeling survey sampling for biologists, engineers and sociologists mainly. These applications produced several reports as early as 1973. A PNUD-UNESCO project supported the superation of professors of statistics and computer sciences. Prof. Dr. Vitomir Erdeljan was in charge, for 2 years, of working with statisticians. CB was one of the trainees and under his advisory obtained his MSC (1974) in Cuba and PhD (1978) in the ancient Yugoslavia.

CB has directed 69 projects, 2 are running. In 1977 within the national quinquennial planning CB headed a national project on Mathematical Modeling for Economics. This project was extended for two more periods. In the meanwhile, CB developed theoretical and applied research, publishing his first paper in an international journal in 1978 on subsampling non-respondents. The thematic of the following papers were unequal probability sampling, non-sampling errors and other themes motivated by applications. Afterwards, the spectrum of themes was amplified to some outside sampling as Stochastic Programming becoming a member of the International Committee of Mathematical Programming 7.7 of the International Federation Of Information Processing. His interests to applications of optimization methods to statistics was another line. By the ending of the decade of the 90's he devoted more time to sampling.

Now, he already has a niche in Ranked Set Sampling, Randomized Responses and Non-Responses. Previously, he had visited different institutions around the world and particularly he made various visits to Indian Statistical Institute of Kolkata supported by the Third World Academy of Sciences, where was started a long-term cooperation with generations of statisticians. Actually, he has been invited by 47 research institutions and universities. To our knowledge, he has published more than 270 papers, edited more than 30 books, participated in 155 congresses. CB is member of 15 professional societies and networks and acts as referees or member of the boards of 51 journals all around the world. CB has been awarded with more than 50 awards with diplomas and medals in his country.

In january 2022 he exhibited the following indexes

Yasni Vip 331, Research Gate 31.33, Citations Rg 7442, Google Citations H 13 10, I10 20 10. AD-Scientific Index - World Scientist Rankings – 2023 reports the scientific impacts of him as follows

H Index: Total 17, Last 5 years 13, total: 0,765

i10 INDEX Total Last 5 year Last 5 years 17, total 0,708

CITATIONS: Total 910, Last 5 years 555 , total 0,610

ADSI ranked CB as 33th in his university, and 113th among the scientists of Cuba

Our collaboration with CB has a long data. He participated as a teacher in our MSc program and as advisor of thesis of graduation MSC and PhD thesis and different researches. Collaborating with other institutions has been a motivation for developing joint research within networks. Red Iberoamericana de Estudios Cuantitativos Aplicados is one of them. This network connects researchers of iberomerica and collaborators of institutions of France and produce yearly a book with results of the cooperation. Note that, though he is pensioned, CB continued actively working both in teaching and investigating, having the leadership of programs, projects and several activities where his experience is needed.

The international research developed by him is exemplified in this issue, where his contributions with different researchers or using as source some of his papers are present. All the contributions in this issue deal with the lines of research on development. Sinha-Khanna paper considers using auxiliary information in estimating, See that the papers of Raykundaliya-Patel which deals with Ranked Set Sampling; contributions on Non-Response are those of Singh-Nigam and Singh et al.; Randomized response modeling is the theme of the contributions of Khalil- Gupta. CB presents here results of his joint research in the line of stratification and using additional information with Swain et al., Rather et al., Yadav,S; Arya et al. ; the theme probability proportional to size sampling is connected with paper published by Singh, et al and robustness of a new estimators with the paper of Hussain, et al. Applications motivated are the contributions searching best fitted regression models for the production of mango and sugarcane yields and the estimation of the difference of the means of Anti-Sars-Cov-2 Igg and Igm antibody levels of recovered patients at their discharge,

CB is happily married with Sira Allende and they have a daughter, Gemayqzel. They are mathematicians too. As a person, his sense of humor is proverbial, in good and bad times. That stimulates his colleagues with looking for a solution, when the expected results are not satisfactory. Distressing is innate and in the joint work with his colleagues, friends and relatives, his advises come not as reprimands but as a product of some philosophical reflection. He is prompt to aid everyone, not only in the classrooms or the research laboratories but also in current life. His experience in living provides to people, ideas for solving seemingly too cumbersome problems, that new generations have to deal with. We and his network congratulate him and express our wishes of a long life.

Agustin Santiago-Moreno and Jose Maclovio Sautto Vallejo.
Editors