

Dr. Álvaro González Villalobos



González Villalobos is an international statistical consultant and works in the promotion of science and technology. As a survey statistician has a vast international experience in the organization of national statistical systems, and in the design and management of surveys based on stochastic, large-scale survey sampling models. He has worked and made contributions in the stochastic survey design, organization and management of censuses and national survey programmes on a variety of socio-economic fields. The fields of his work include: agriculture, livestock, population and housing, education, fisheries, industry, economics, health, epidemiology, women status, environment, and forestry. As a survey statistician he has worldwide work experience (FAO member countries). He has undertaken advisory and training missions, delivered lectures, participated, organized and chaired around 80 international statistical, scientific and technical meetings and seminars in countries of

Africa, America, Asia, Europe y Oceania.

González Villalobos is Academician (Fellow member) of the National Academy of Sciences, Argentina (Chair Julio Rey Pastor), and also elected member of the Academy's Institute of Research and Development "Dr. Amílcar E. Argüelles", and Director of its Center of Mathematics, Statistics, and its Applications.

Elected Member of the *International Statistical Institute (ISI)*, and ISI Council Member during 1997-2001; member of the Scientific Programme Committee for the 2015 World Statistics Congress in Rio de Janeiro, Brazil, and previously for the 2001 World Statistics Congress in Seoul, Korea, 2001; founding member of ISI's Gregor-Johann Mendel Committee on Agricultural Statistics. Member of the *International Association of Survey Statisticians (IASS)*, IASS Vice-President during two periods: 2003-2005 and 1987-1989, and elected Council Member during: 2011-2015 and 1993-1995; and also member of the Nominations Committee in several periods. Founding member of the *International Association for Official Statistics (IAOS)*, and member of the *International Association for Statistical Education (IASE)*. Elected Emeritus Member of the *Inter-American Statistical Institute (IASI)*. He is also Fellow Member of the *Argentine Association for the Advancement of Science (AAPC)*, and elected Council Member for the period 2007-2009. Member of the *Argentine Scientific Society*. He is also honorary member of other professional associations and editorial boards.

He has two well differentiated major scientific and technical areas of interest during his career: first, he was a pure mathematician, researcher and university professor of mathematical analysis, mainly probability theory, Fourier and Laplace transforms. Later, he became a Survey Statistician and worked as statistical advisor, manager of survey programmes, or held senior technical positions in national and international institutions.

His main interest as survey statistician has been the introduction and dissemination of probability sample survey methods to conduct baseline national statistics in a variety of countries and occasions (*national censuses and sample surveys to obtain basic socio-economic data to allow proper further scientific studies*). His specialization is on the design and management of complex survey designs to conduct large-scale probability surveys. Statistical designs that may include area and multiple frame sample surveys and involve the use of geographic information systems (GIS), satellite images, satellite and aerial photos, remote sensing technology, personal digital assistants (PDAs), and the use of combination of digital registers. That is, statistical designs with a very strong emphasis on the application of informatics and present technology. Probably his main contribution has been to introduce large-scale probability sampling designs, including multiple frame sample surveys, in a variety of fields (as mentioned above) in many occasions and countries.

González Villalobos has published research papers on probability theory and stochastic processes, and theory of Fourier and Laplace transforms. Published several books and more than eighty papers on statistical survey methods and practices for conducting censuses and surveys. His two-volume book entitled *Multiple Frame Agricultural Surveys*, was published by FAO in six languages: Arabic, Chinese, English, Farsi, French and Spanish. It provided world standards and was a reference book on agricultural surveys in many countries. It has been quoted as a landmark in the field of agricultural statistics. The FAO also published the book entitled *Conducting Agricultural Censuses and Surveys* - González Villalobos was author of three methodological chapters: 5, 6 and 7- in several languages: Arabic, English, French and Spanish; also considered a reference book on the topic. Author of the book "Diseño de la Muestra del Censo Nacional de Población y Vivienda de 1980 - Argentina", with S. Novaro, M. Bernacchi and M. Segre, published by the National Statistical Institute of Argentina.

González Villalobos was Senior Statistician at FAO (Food and Agricultural Organization of the United Nations) Statistics Division, in Rome, from 1992 to 2003. He was then in charge of Survey and Census Methods, the World Census of Agriculture Programme, which involved the preparation of the official United Nations publications on statistical methods, classifications and international standards for the planning and execution of national agricultural censuses & surveys; including the preparation and maintenance of a worldwide agricultural census database. He also worked on formulation and supervision of a number of statistical projects and activities in countries of Africa, America, Asia and Europe; the application of remote sensing technology to agricultural statistics; and was responsible for the organization of international seminars and workshops on statistical methods and practices.

González Villalobos was: General Manager of the 1991 Population and Housing Census of Argentina at the National Statistical Institute of Argentina (INDEC) in Buenos Aires during 1990-1992; General Manager at the National Space Research Institute in Brazil (INPE), responsible for the direction of Brazil's Current Agricultural Statistics Program (San José dos Campos, Brazil, 1985-1989). Worked also at the INDEC during other two periods: Head of the Census Methodology Area for the 1985 National Census of Industries, the Evaluation Survey for the 1985 Economic Censuses of Argentina, and the initiation of the Annual Survey Program of Industries (1984-1985); Head of the Population Census Methodology Area in charge of the census implementation, survey design, data analysis and publication of results for the 1980 Population & Housing Census of Argentina (1980-1982). He was Permanent Statistical Advisor to the Technical Director's Cabinet at the Brazilian National Statistical Institute (IBGE) in Rio de Janeiro, Brazil during 1974-1980. He has also been Statistical Consultant of international and national organizations for the design and organization of a wide range of large-scale national surveys and censuses in many countries: consultant for several United Nations agencies like the FAO, the ILO, the UNESCO, the WHO, the WB (World Bank), as well as the IADB (Inter-American Development Bank). Consultant of the AAIC (Agricultural Assessment International Corporation), and the Ministry of Science and Technology of San Luis, Argentina. Research Scientist at the National Research Council of Argentina (CONICET), and consultant of several of its institutes: Institute for Psychiatric Epidemiology, Interdisciplinary Institute in Mathematical and Experimental Psychology, Argentine Mathematics Institute, Latin American Center for Mathematics and Informatics, and the National Fisheries Research and Development Institute. He has been also consultant for other private national and international corporations concerning statistical research and development. Previously, as a mathematician and statistician, he was a professor or visiting scholar in several universities and research institutes: the University of Chicago (USA), the University of Buenos Aires (Argentina), the University of Brasilia (Brazil), the University of Michigan (USA), the National School of Statistical Sciences (Brazil), the Institute of Pure and Applied Mathematics - IMPA- of the Brazilian National Research Council, among others.

Born in Buenos Aires, having Argentinean and French citizenships, González Villalobos has working knowledge of several languages (English, French, Italian, Portuguese and Spanish). He received his M.Sc. (Master of Science) and Ph.D. (Doctor of Philosophy) in Mathematics from The University of Chicago.

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