SPECIAL ISSUE "IN MEMORY OF PILAR LORETO IGLESIAS ZUAZOLA"
REVIEW PAPER

Pilar Iglesias: A life of contributions to statistics

Guido del Pino[1,*], Gloria Icaza[2]

[1]Department of Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile,
[2]Instituto de Matemáticas y Física, Universidad de Talca, Talca, Chile

Abstract

This article intends to give some idea of the large impact of Pilar Iglesias Zuazola on
the development of statistics in Chile, and to some extent on other countries. For those
that met her this article would be essentially a reminder; but she did so much in so
many different areas that the authors think that very few are fully aware of it. For the
younger generations she sets up a high ideal to be followed, both as a scientist and as a
person.

This paper covers both personal and professional aspects. In the second case this
includes her scientific production in the discipline, but also her work in the Chilean Sta-
tistical Society (SOCHE), her many activities in statistical education, and her excellence
as a teacher.

1. INTRODUCTION

This first volume of the Chilean Journal of Statistics is dedicated to the memory of Pilar
Loreto Iglesias Zuazola, one of the most influential persons in the development of statistics
in Chile and a leader of Bayesian statistics in Latin America. Pilar Iglesias passed away on
March 3, 2007. Her scientific accomplishments alone would make her worth of the highest
academic recognition. Nevertheless, this falls short of her true impact among us since her
many contributions encompass a wide range of activities. Secondly, her human qualities
make Pilar a truly remarkable person, quite independently of the statistical aspects. This
biographic article intends only to touch briefly on the many aspects of Pilar's life. In regard
to her scientific contributions, the opinions cited here are taken from those generously
expressed by statisticians that worked with her, or who are knowledgeable about her
research area. To even strive for objectivity or completeness would be a task deemed for
failure, and so it is definitely not our purpose. Our goal is to help preserve for future
generations the memory of an outstanding Chilean statistician, teacher and human being.
Our community is fortunate to count with such a magnificent example, which hopefully
will inspire us to keep contributing to the development of statistics.

The outline of the paper follows. Section 2 described the period at Valparaíso, a city
she loved and where she spent about half of her life. It goes from her early childhood,
her school days, the university and the Master's program at CIENES. Section 3 succinctly

---

*Corresponding author. Email: gdelpino@mat.puc.cl

discusses a very important period for her growth as a scientist, namely, her participation as a doctoral student at the Institute of Mathematics and Statistics at Universidad de São Paulo (IME-USP), and her later stay as a postdoctoral student and as a teacher. Through the rest of her life her academic career continued at the Department of Statistics at Pontificia Universidad Católica de Chile (PUC); this is detailed in Section 4. Pilar was a person who put great passion on everything she was involved, and she felt compelled to do this in many areas, mostly because of an acute sense of social commitment. Section 5 refers to her prolonged involvement in the Chilean Statistical Society (SOCHE), of which she was its president for two periods. Section 6, summarizes her activities in Statistical Education. The next section provides some personal opinions of her as a teacher. The following two sections are devoted to her direct scientific contributions. Section 8 deals with one of her main loves of her life, namely, Bayesian statistics, for which she is most widely known internationally. Section 9 contains the unedited answers of a number of coworkers about her main areas of statistics and about her key papers, in the personal view of those asked. The article ends with a small section which attempts to convey some aspects of this outstanding Chilean woman and statistician. The authors readily admit that any effort in this regard is doomed for failure, since it is impossible to put in paper what she meant. However, they hope that some of this is partially fulfilled. At the end of this paper a full list of Pilar Iglesias' publications is included.

2. The Valparaíso Period

Pilar Iglesias was born in Valparaíso, Chile in September 4, 1960. She was the third daughter of Manuel Iglesias and Irma Zuazola. Though an outstanding student, her most striking feature was solidarity, as revealed, for instance, in that being still a small girl, she taught her maid Virginia to read. Her first choice for university studies was Law School, and was admitted at Universidad de Concepción. Not been able to leave Valparaíso, she enrolled in Statistics at Universidad de Chile - Valparaíso, today Universidad de Valparaíso (UV). Although this choice was a fortunate one, we are also sure that she would have been a hell of a lawyer. Two of her classmates at UV, Ruth Hernández and Marisol Pastene, told us that starting the second year Pilar clearly manifested herself as a good student, and a good friend, with a joyful and healthy personality. She sat in the first row, asked lots of questions, and completed all problem lists. She asked her classmates whether they had understood the lectures. They recall that Pilar offered her home at Lautaro Rozas street, Cerro Alegre, where about ten students got together. She had a blackboard and continued to teach them. Manuel Galea, who had the opportunity to meet Pilar throughout her life, first did it as his teacher at UV, in a course of stochastic processes; his recollections about her fully agree with those expressed by her classmates. Héctor Allende, from Universidad Técnica Federico Santa María (UTFSM) also taught Pilar in 1980 at UV and again she impressed him as an enthusiast and talented young woman. In 1981 she started the Master's degree in Mathematical Statistics at the Interamerican Center for the Teaching of Statistics (CIENES), where she was also a student of Héctor Allende in a time series course given in 1981. Inés Guerrero, currently the Head of Statistics at Universidad Católica de Valparaíso (UCV) was her classmate at CIENES and always told her students that Pilar was a sort of genius, always getting the best grades. Emilio Ellena, who was in charge of this Master's program remembers her as a very good student, but above all for her joyful personality and the warm relationship with her classmates. After graduation from CIENES she initiated her undergraduate thesis "Complementary identification methods for univariate time series" under the supervision of Héctor Allende, which was completed in 1982, receiving the highest honors. It lead to an article in Revista de la Sociedad Chilena de Estadística.

Pilar started her academic career as a teaching assistant in a Probability and Statistics course offered by Héctor Allende at UTFSM. Her great talent and teaching abilities led to an appointment as a part-time instructor at this university. In the period 1984-1988 she had several teaching positions, including the supervision of the first undergraduate theses of computer science engineers, obtaining prizes for her excellence in teaching. Pilar also spent several years teaching statistics at UCV and UV. In those years she started doing some initial research and participated in local seminars. One of us (del Pino) had a regular academic interaction with Pilar in the context of a weekly seminar in Multivariate Analysis that met in Valparaíso. Her high energy and enthusiasm were already striking. It is worth mentioning that despite her great qualities, the academic career before obtaining her doctoral degree was not an easy one, but, characteristically, she worked persistently and consistently to achieve her goals.

3.   THE BRAZILIAN CONNECTION

A natural next step for a person like Pilar was to get a doctoral degree abroad (there was no doctoral program in Chile before 1998). In the XII meeting of the Chilean Statistical Society held in Antofagasta in 1985, Pilar attended the short course "The Bayesian Argument", delivered by Carlos Pereira from IME-USP. Right after this course she expressed her interest to continue her studies in USP. Pilar also attended the SINAPE meeting at Campinas in 1986, where she confirmed her good impression of Brazilian Statistics and of the Brazilian people. In 1988 she obtained a scholarship to follow the doctoral program in statistics at IME-USP. According to her thesis advisor, Prof. Carlos Pereira, she was already a wholehearted by Bayesian statistics when she entered the program. In 1992, Manuel Galea met Pilar again, this time as a classmate, finding that she have grown academically, while still remaining the nice person that she was. She obtained her degree in April 1993 with the thesis "Finite forms of De Finetti's theorem: a predictivistic vision of inference in finite populations". His advisor thinks that she was one of his best doctoral students. She was the second Chilean to obtain a doctoral degree in Statistics in Brazil. Her friends recall that Pilar readily admitted that her mathematical training was insufficient; nevertheless, much of her own work is quite demanding mathematically. An anecdote that reflects her thirst for knowledge is that she would make photocopies of everything of interest to her, to the extent the she became a sort of quick reference library and earned the nickname of "Rainha da Xerox" (Xerox's queen).

Pilar received a post-doctoral fellowship from FAPESP and was hired as an Assistant Professor at IME-USP. She was a very successful teacher, being loved by her students. It is noteworthy that in that short period she started the supervision of four doctoral students, which were finished after her return to Chile:

(1) Antonio José da Silva. "On conditions of extendibility, spherical symmetry, and Bayesian inference in elliptical models with errors in variables", January 1997 (in Portuguese).
(2) Loretta Gasco. "Prediction and predictivism in linear models with and without errors in the predictive variables", May 1997 (in Portuguese).
(3) Márcia Branco. "Calibration: a Bayesian approach", July 1997 (in Portuguese).
(4) Rosangela Helena Loschi. "Unforeseen events and their consequences", July 1998 (in Portuguese).

She also started long lasting collaborations with many Brazilian statisticians and developed ties with the Brazilian statistical community at large. Throughout the years Pilar returned often to Brazil, strengthening her academic collaborations, participating in scientific meetings, and integrating doctoral theses committees. But perhaps the most im-

portant part of the Brazilian connection was the love that Pilar quickly felt for a country that in her own words was her second home. In return, it is evident that these feeling were mutual. After her work with Carlos Pereira, which in time lead to 4 papers, the most important initial contact was Heleno Bolfarine from USP, who over the years coauthored 9 papers with her; later on, her student Rosangela Loschi was coauthored of 13 papers. But it was the Chilean student of Bolfarine, Reinaldo Arellano-Valle, who started working with Pilar in this period, the one with the most extensive scientific collaboration, reaching 17 papers.

4. Department of Statistics at Pontificia Universidad Católica de Chile (PUC)

In 1995, the Department of Statistics at PUC opened a position at the assistant professor level, which was obtained by Pilar. Not surprisingly, her enthusiasm, joy of living, and spirit of service contributed to create an excellent atmosphere both among the faculty and with the students, who saw in her an academic close to them. As it happens to many beginning faculty, Pilar did not immediately obtained the national FONDECYT grants and it took very long to publish some of the results of her thesis Iglesias et al. (2004). As it was to be shown throughout her life, her resilience was remarkable, and after a few years everything started to fall into the right place. In July 1998 Pilar faced an acute breast cancer with a very poor prognostic. She was in treatment for two years, clearly beating the odds and stayed apparently in good health for several years, soon returning to work at her normal full speed. In this period she published several papers and, very important for her, she assured that all her students finished their doctoral theses. In 1998 the doctoral program in Statistics was created, which was an important landmark for statistical education in Chile. Her previous experience at IME-USP, where she supervised four doctoral theses, was clearly very useful. In 2000 she became Associate Professor and was therefore tenured. Pilar was a successful chair of the Department of Statistics from May 2000 through May 2005, a time consuming task, spending also enormous efforts in the close supervision of many doctoral thesis. Three of them were finished - the last two when she was very ill - and several others were in progress at the time of her death. Her cancer relapsed in 2004 right after the ISBA meeting mentioned in Section 8. Below we list the three doctoral theses supervised by Pilar at PUC:

(1) Ignacio Vidal. "Bayesian model comparisons for skew-elliptical linear regression models", August 2003.
(2) María Paz Casanova. "Semiparametric Bayesian analysis of the calibration problem in elliptical regression models", July 2005 (in Spanish).
(3) Yasna Orellana. "Nonparametric Bayesian analysis using skew Dirichlet processes", September 2007 (in Spanish). (The thesis defence took place on January 29, 2007, about a month before her Pilar's death. Her health was very delicate at that time, and a complicated trip from the hospital to the university and back has to be arranged).

The thesis of Francisco Torres "Bayesian robust models with applications to small area estimation", July 2008, was initially supervised by Pilar, but it was completed under the supervision of Reinaldo Arellano-Valle (PUC) and Gloria Icaza (Universidad de Talca). There are also four unfinished doctoral theses which she was closely supervising at home or at the hospital, up to the very end of her life.

5.   The Chilean Statistical Society (SOCHE)

Formed in 1977, the Chilean Statistical Society (SOCHE) was one of the first of its kind in Latin America, at a time where statistical research in Chile was heavily underdeveloped. Its main activities have been the uninterrupted realization of yearly National Statistical Meetings (some of them involving statistical societies from Argentina and Uruguay) and the edition of the Journal of the Chilean Statistical Society since 1984. Some continuity problems of the latter have lead to its substitution by the new Chilean Journal of Statistics. Pilar was an enthusiastic participant of SOCHE meetings, presenting communications, giving conferences, participating in round tables and workshops, and giving short courses. She was also its president from March 1998 to March 2003. During this period she helped organizing the meetings of the society and made great efforts to attract university researchers, as well as undergraduate and graduate students. On the other hand, she strongly believed in developing links with mathematics, which translated in organizing statistical sections within both the COMCA and the Chilean Mathematical Society meetings. In 2003 she became vice-president of SOCHE and initiated the task of launching a new version of the society journal. The current president of the society, Manuel Galea, recalls their work together at the SOCHE directorship, in which, as many others have witnessed, she excelled the ability to work hard and to agglutinate people with different interests for the sake of statistical development in Chile.

Following the example of the American Statistical Association, SOCHE created sections to help attracting people from other fields, some of which had ties with international associations: the biostatistics section (associated with the International Biometric Society, IBS), the statistical education section (associated with the International Association for Statistical Education, IASE), and the Bayesian section (associated with the International Society for Bayesian Analysis), of which Pilar was the main organizer and the first president (see also Section 8).

6.   Contributions to Statistical Education

One of the first motivations of Pilar's involvement in statistical education was the inclusion of probability and statistics in elementary and secondary. SOCHE was invited to comment on them and its recommendations appear in del Pino et al. (1996). Below we briefly mention some of the main activities she developed in statistical education.

- Explora-Conicyt. The project "Randomness, Science and Society" was carried out in 1999 and 2000 involving about 200 students, with a direct contact limited to 22 hours. The students presented both proposals and final projects, with discussion from the instructors and from their classmates. In the year 2000 version a Probability Fair was organized, where students designed games with probabilistic contents. The results of this project were presented, e.g., in Iglesias and Salinas (2001).
- PENTA-UC. This is an ongoing educational program for gifted children from a low socioeconomic background, created in 2001. Courses are structured in 15 three hours sessions. Pilar participated in several versions of the courses "Randomness: games and sampling" and "Obtaining, exploring and squeezing data", both of which were offered with some adaptations to students from level 7 and 11 del Pino et al. (2006).
- Statistics and theatre. This initiative was originally developed in the context of PENTA by Pilar Iglesias and Lina Wistuba, a primary school mathematics teacher and actress. It was originally designed for level 7 students, who created collective plays addressing statistical concepts: exploratory data analysis, probability, and statistical inference. The dramatic part was in charge of Lina, while Pilar would check the statistical integrity.

The four plays are: (1) La herencia (The inheritance), (2) La lluvia y el reloj (The rain and the clock), (3) El granito de uranio (The granite of uranium, in which play she also participated as an actress, disguised as a man!), and, finally, there is the play (4) Ángeles (angels), developed by statistics majors at PUC. Several of these plays were later represented by the professional company La Comparsa. See Iglesias et al. (2006).

- PPF and EPES. The first was a national program of the Ministry of Education (Mineduc) for training teachers. In 2002 the mathematics courses concentrated in statistics and SOCHE had a significant participation. The success of the courses offered by Pilar Iglesias and Guido del Pino at PUC gave rise to a continuation, called EPES project. Its most important product was the textbook del Pino et al. (2003), written for an audience of high school mathematics teachers.

- Teaching Bayesian statistics. This field of enquiry lies at the intersection of two of Pilar's greatest interests. We refer the reader to Iglesias et al. (2000), Iglesias and Batanero (2006), and Iglesias et al. (2006).

- Conferences. Apart from those mentioned, Pilar presented invited educational papers and conferences in international meetings such as CLATSE IV, Mendoza, Argentina (1999), "Experiences and perspectives on teaching statistics - challenges for the XXI century", Florianópolis, Brazil, (1999). At the XXVII Jornadas Nacionales de Estadística, Valdivia, 2000, she included a plenary lecture in statistics education and took part in a round table on science education with the participation of several international speakers.

- International connections. The most influential persons were clearly Martha Aliaga (American Statistical Association) and Carmen Batanero (IASE). They both met Pilar in 1999, coinciding in the CLATSE at Mendoza, in 1999, and in the XXVII SOCHE meetings in Valdivia, 2000. Martha recalls being immediately impressed by Pilar's bubbly way of talking and laughing and by being so full of life and happiness. Along the years they would spend more time talking about "Statistical Education", and Martha mentions being intrigued by Pilar's innovative approach and inspirational teaching style.

7. Pilar Iglesias as a Teacher

Fabrizio Ruggeri (Istituto di Matematica Applicata e Tecnologie Informatiche, IMATI) states that one of best aspects of Pilar was her relationship with students. She gave enormous incentive and support to all her students, being a teacher at her best. One instance of this was ISBA 2004, which was exceptional in terms of students involvement, who worked intensely for the success of the conference and with an unprecedented enthusiasm due mostly to Pilar's charisma. Pilar strongly wanted this meeting to be held in Chile to allow for students from South America to get in touch with the Bayesian world, and she secured a lot of funds to finance this. She also brought many Bayesians to Chile with her students in mind. Ignacio Vidal, from Universidad de Talca, thinks that Pilar was one of the best teachers he has ever known. This was due to her charismatic personality and her mastery over the subjects she taught. When teaching a course repeatedly, many variations were made in the way the topics were introduced and in the choice of examples. Whenever possible she tried to use current issues of public interest to motivate the statistical ideas. She was also always available for answering questions. Pilar was devoted to her students: there was always one working with her in some problem; she provided financial support for their attending statistical meetings; she often collected money for incorporating them into social events; finally she motivated many students to follow doctoral programs in statistics. Francisco Torres recalls that at least eight graduate students worked with Pilar in the PENTA program. One striking characteristic of Pilar was always supportive of the work of her students (also of her colleagues). She truly believed that, no matter how small, everything was a contribution to the discipline and so encouraged everybody to keep working.

8. Bayesian Statistics

The development of Bayesian statistics in Chile is very recent, and everybody agrees that Pilar was the spiritual leader. From the very day of her arrival at PUC, Pilar started making contacts with faculty members from different universities. With the help of Victor Salinas (a former classmate at IME-USP) from U. of Santiago de Chile and other colleagues, she managed to start a series of Chilean Bayesian Workshops. The first one was hosted by U. of La Serena in 1996 and it was the first meeting in Chile fully devoted to Bayesian statistics. The next workshops were held in U. of Antofagasta (1997), U. Austral (1998), PUC (2000) and U. of Antofagasta (2001). Over the years the general attendance and the participation of international researchers in these workshops were steadily increasing. This series of workshops formed the ground for yet another bold move by Pilar, which was the organization of the ISBA conference in Chile, which took place in Viña del Mar, in May of 2004. Pilar had a pioneering role in the creation of the Chilean Chapter of ISBA in 1997, the second local chapter after India. She also helped the Brazilian Chapter (ISBRA), when recently created, to assume the organization of COBAL I (first latin American meeting in Bayesian statistics).

In recognition to her superb contributions to the statistical profession, including her services to ISBA, this organization has established a fund in Pilar's memory to provide travel grants for one or two graduate students or young researchers from a developing nation so that they can participate in Bayesian world meetings.

9. Scientific Contributions

The main scientific contributions of Pilar Iglesias are all in the area of Bayesian statistics. She worked with many researchers, mainly from Chile and Brazil. She coauthored 17 papers with Reinaldo Arellano-Valle (PUC), 9 with Heleno Bolfarine (USP), 13 with Rosangela Loschi (Universidade Federal de Minas Gerais, UFMG), and 4 with Manuel Galea (UV, PUC). The work of Pilar with Arellano-Valle and Galea was mainly developed in Chile. Apart from her many publications Pilar participated in many national research projects, as principal investigator or as coinvestigator. A remarkable aspect of her as a researcher, is that very soon after completing her thesis, she achieved the intellectual independence needed to search and formulate new problems. This was extremely helpful in the training of new doctors, particularly at USP.

The information below reflects the opinions of some statisticians, most of whom have been direct collaborators of Pilar: Reinaldo Arellano-Valle (PUC), Marcia Branco (USP), Fernando Quintana (PUC), Fabrizio Ruggeri (IMATI), Sergio Wechsler (USP), Rosangela Loschi (UFMG), Ignacio Vidal (U. de Talca).

9.1 Main areas of statistics to which Pilar contributed

Predictive Bayesian inference (predictivistic characterizations, de Finetti-type theorems for parametric models that are not in exponential families and for finite populations), linear models beyond normality assumptions, inference for elliptical linear models, Bayesian inference in models with errors in variables (e.g., detection of influential observations and in the comparisons with other models without measurement errors), Bayesian inference in skew-elliptical models, Bayesian calibration, and product partition models (change point and identification of clusters).

9.2   Key papers

We got the opinions of some of her close collaborators: Reinaldo Arellano-Valle, Heleno Bolfarine, Marcia Branco, Rosangela Loschi, Fernando Quintana, Ignacio Vidal and Sergio Wechsler. Arellano-Valle and Heleno Bolfarine like Arellano-Valle et al. (1994) the most. According to Bolfarine, this paper contains nice results on representation theorems for the Student t distribution. He states that the process of writing illustrated the great intuitive power of Pilar in an area that joined two of her main interests. It eventually led to the future thesis of her students Gasco and Loschi. Marcia Branco specifically pints out to Arellano-Valle et al. (2006), Vidal et al. (2006), Branco et al. (2000), which are closer to her area of expertise. Loschi mentions Arellano-Valle et al. (1994), Iglesias et al. (1998) and Quintana and Iglesias (2003). Quintana also mentions Arellano-Valle et al. (1994), as well as Arellano-Valle et al. (2003) and Vidal et al. (2006). Vidal points out the papers Arellano-Valle et al. (2003) and Vidal et al. (2005). Finally, Wechsler lists a number of papers: Esteves et al. (2004), Iglesias et al. (2004), Loschi et al. (2003), Esteves et al. (2003), and Iglesias et al. (2009) (apart from Arellano-Valle et al. (2003), already cited by Vidal).

10.   Final Words

Pilar was a very unique person with strong leadership abilities, which she applied to the service of statistics and its development in Chile. This included her many connections to the Brazilian community, her presidency of SOCHE and the directorship of the Department of Statistics at PUC, among many other initiatives. Perhaps her main contribution to the field was her extraordinary ability to motivate and lead all sorts of groups (students, colleagues, friends, etc.) into social and statistical activities such as research, outreach, and teaching. She was a very likable person, with a great sense of humor (her laughter could be heard everywhere) and a radiant personality, which shined on all people around her. Pilar was also a very generous person, who always had time for answering students' questions, to discuss some technical point with a colleague or simply have a cup of coffee and free conversation with anyone interested. It is also remarkable her great enthusiasm for doing joint scientific work with researchers from many institutions. Her tireless and fruitful contributions were so many! She always showed the highest levels of professionalism, scientific integrity and exceptional altruism.

Pilar was an extraordinary woman both from the scientific and human point of view. She was vital, optimistic, caring for other people, intelligent and sensible. She transmitted strength and happiness to all who had the privilege of meeting her. Her courage in coping with the illness also set an example for us. She was a remarkable statistician, mentor and friend. Her level of commitment allowed Pilar to be a mentor of a generation of students. Despite her disease, Pilar worked until the very end on research projects with her many students.

Acknowledgements

Pilar Iglesias Zuazola: list of scientific publications in chronological order

Iglesias, P., 1985. El problema de interacción con una observación por celda. Revista de la Sociedad Chilena de Estadística, 2, 89-104.

Guerra, L., Iglesias, P., Riff, M.C., 1988. Reconocimiento de patrones mediante árboles binarios de clasificación. Sistemas Expertos. Gestión Tecnológica. 19, 57-88.

Iglesias, P., Sandoval, M., Pereira, C., 1993. Predictive likelihood in finite populations. Brazilian Journal of Probability and Statistics, 7, 65-82.

Arellano-Valle, R.B., Bolfarine, H., Iglesias, P., 1994. A predictivistic interpretation to the multivariate t distribution. Test, 3, 221-236.

Bolfarine, H., Gasco, L., Iglesias, P., 1998. The operational Bayesian approach in finite populations. Resenhas, 3, 273-290.

Branco, M., Bolfarine, H., Iglesias, P., 1998. Bayesian calibration under a Student-t model. Computational Statistics, 13, 319-338.

Iglesias, P., Pereira, C.A.B., Tanaka, N.I., 1998. Characterizations of multivariate spherical distributions in L-infinity norm. Test, 7, 307-324.

Arellano-Valle, R., Iglesias, P., Galea, M., 1999. Medidas Bayesianas de diagnóstico en modelos de regresión elípticos. Actas del 6 Congreso de la Sociedad Portuguesa de Estadística.

Bolfarine, H., Gasco, L., Iglesias, P., 1999. Pearson type II measurement error models. Bayesian Statistics, 6, 713-722.

Iglesias, P., Quintana, F., 1999. Discussion on "old and recent results on the relationship between predictive inference and statistical modeling either in nonparametric or parametric form". In Bernardo, J.M., Berger, J.O., Dawid, A.P., Smith, A.F.M. (eds.). Bayesian Statistics 6. Oxford University Press, Oxford, pp. 11-12.

Loschi, R., Iglesias, P., Arellano-Valle, R., 1999. Bayesian detection of change points in the Chilean stock market. Proceedings of the section on Bayesian statistical science, American Statistical Association, 160-165.

Arellano, R., Galea, M., Iglesias, P., 2000. Bayesian analysis in elliptical linear regression models. Revista de la Sociedad Chilena de Estadística, 16-17, 59-104.

Arellano-Valle, R., Galea, M., Iglesias, P., 2000. Bayesian sensitivity analysis in elliptical linear regression models. Journal of Statistical Planning and Inference, 86, 175-199.

Branco, M., Bolfarine, H., Iglesias, P., Arellano-Valle, R., 2000. Bayesian analysis of the calibration problem under elliptical distributions. Journal of Statistical Planning and Inference, 90, 69-85.

Iglesias, P., Leite, J., Mendoza, M., Salinas, V.H., Varela H., 2000. Mesa redonda sobre la enseñanza de la estadística Bayesiana. Revista de la Sociedad Chilena de Estadística, 16-17, 105-120.

Loschi, R., Iglesias, P., Wechsler, S., 2000. Unpredictability and probability updating (with discussion). Revista de la Sociedad Chilena de Estadística, 16-17, 45-58.

Bolfarine, H., Gasco, L., Iglesias, P., 2002. Inference under representable priors for Pearson type II models in finite populations. Journal of Statistical Planning and Inference, 111, 23-36.

Loschi, R.H., Iglesias, P., Arellano-Valle, R.B., 2002. Conditioning on uncertain event: extensions to Bayesian inference. Test, 11, 365-383.

Loschi, R.H., Iglesias, P., Arellano-Valle, R.B., 2002. Forecasting returns in the Chilean stock market using the Jeffrey's rule. Test, 3, 221-236.

Loschi, R.H., Iglesias, P., Moreira, G.G., 2002. A change point analysis of BOVESPA and BOVMESB indexes using the Bayesian approach. Economia, 3, 239-269.

Arellano-Valle, R.B., Iglesias, P., 2003. Discussion on "Identifying mixtures of regression equations by the SAR procedure" by D. Peña, J. Rodríguez and G.C. Tiao. In Bernardo, J.M., Bayarri, M.J., Berger, J.O., Dawid, A.P., Heckerman, D., Smith, A.F.M., West, M. (eds.). Bayesian Statistics 7. University Press, Oxford, pp. 327-347.

Arellano-Valle, R.B., Iglesias, P., Vidal, I., 2003. Bayesian inference for elliptical linear models: conjugate analysis and model comparison. Invited paper (with discussion). In Bernardo, J.M., Bayarri, M.J., Berger, J.O., Dawid, A.P., Heckerman, D., Smith, A.F.M., West,M. (eds.). Bayesian Statistics 7. University Press, Oxford. pp. 3-24.

Branco, M., Bolfarine, H., Iglesias, P., Arellano-Valle, R.B., 2003. Bayesian and classical solutions for citogenetic dosimetry problems. Journal of Data Science, 1, 65-82.

Esteves, L.G., Weschler, S., Iglesias, P. 2003. A variant version of the Polya-Eggenberger urn model. In Bernardo, J.M., Bayarri, M.J., Berger, J.O., Dawid, A.P., Heckerman, D., Smith, A.F.M., West, M. (eds.). Bayesian Statistics 7. University Press, Oxford, pp. 511-518.

Loschi, R., Cruz, F.R.B., Iglesias, P., Arellano-Valle, R., 2003. A Gibbs sampling scheme to the product partition model: an application to change-point problems. Computer and Operations Research, 30, 443-462.

Loschi, R., Iglesias, P., Arellano-Valle, R.B., 2003. Predictivistic characterizations of multivariate Student-t models. Journal of Multivariate Analysis, 85, 10-23.

Quintana, F., Iglesias, P., 2003. Bayesian clustering and product partition models. Journal of The Royal Statistical Society Series B – Statistical Methodology, 65, 557-574.

Esteves, L., Weschler, S., Iglesias, P., 2004. Some characterizations of uniform models. Statistical and Probability Letters, 69, 397-404.

Iglesias, P., Matus, F., Pereira, C., Tanaka, N., 2004. On finite sequences conditionally uniforme given minima and maxima. Sankhya, 66, 428-439.

Loschi, R., Bastos, L.S., Iglesias, P., 2004. Identifying volatility clusters using the PPM: a sensitivity analysis. Computational Economics, 24, 305-319.

Loschi, R., Iglesias, P., 2005. Jeffrey's rule: an alternative procedure to model uncertainty. Estadstica, 57, 11-26.

Loschi, R., Moura, C.R., Iglesias, P., 2005. Bayesian analysis for change points in the volatility of Latin American emerging markets. Journal of Data Science, 3, 101-122.

Quintana, F., Iglesias, P., Bolfarine, H., 2005. Bayesian identification of outliers and change points in measurement error models. Advances in Complex Systems, 8, 433-449.

Quintana, F., Iglesias, P., Galea, M., 2005. Bayesian robust estimation of systematic risk using product partition models. Applied Financial Economic Letters, 1, 313-320.

Vidal, I., Iglesias, P., Branco, M., 2005. Bayesian sensitivity analysis in skew-elliptical models, In Dey, D.K., Rao, C.R. (eds.). Handbook of Statistics: Volume 25, Supplement 1, Bayesian Thinking – Modeling and Computation, Elsevier, pp. 689-711.

Arellano-Valle, R.B., del Pino, G., Iglesias, P., 2006. Bayesian inference in spherical linear models: robustness and conjugate analysis. Journal of Multivariate Analysis, 97, 179-197.

Iglesias, P., Jorquera, H., Palma, W., 2006. Data analysis using regression models with missing observations and long-memory: an application study. Computational Statistics and Data Analysis, 50, 2028-2043.

Vidal, I., Iglesias, P., Branco, M.D., Arellano-Valle, R.B., 2006. Bayesian sensitivity analysis and model comparison for skew elliptical models. Journal of Statistical Planning and Inference, 136, 3435-3457.

Loschi, R.H., Iglesias, P., Arellano-Valle, R., Cruz, F.R.B., 2007. Full predistivistic modeling of stock market data: Application to change point problems. European Journal of Operational Research, 180, 282-291.

Vidal, I., Iglesias, P., Galea, M., 2007. Influential observations in the functional measurement error model. Journal of Applied Statistics, 34, 1165-1183.

Loschi, R., Cruz, F.R.B., Takahashi, R.H.C., Iglesias, P., Arellano-Valle, R.B., Smith J.M., 2008. A note on Bayesian identification of change points in data sequences. Computer and Operations Research, 35, 156-170.

Vidal, I., Iglesias, P., 2008. Comparison between a measurement error model and a linear model without measurement error. Computational Statistics and Data Analysis, 53, 92-102.

Iglesias, P., Loschi, R., Pereira, C., Wechsler, S., 2009. A note on extendibility and predictivistic inference in finite populations. Brazilian Journal of Probability and Statistics, 23, 216-226.

Iglesias, P., Orellana, Y., Quintana, F., 2009. Nonparametric Bayesian modelling using skewed Dirichlet processes. Journal of Statistical Planning and Inference, 139, 1203-1214.

Casanova, M.P., Iglesias, P., Bolfarine, H., Salinas, V.H., Peña, A., 2010. Semiparametric Bayesian measurement error modeling. Journal of Multivariate Analysis, 101, 512-524.

Casanova, M.P., Iglesias, P., Bolfarine, H., 2010. A Bayesian semiparametric approach for solving the discrete calibration problem. Communications in Statistics – Simulation and Computation, 39, 347-360.

Selected other publications in chronological order

Iglesias, P., 1993. Formas finitas do teorema de De Finetti: uma visão preditivista da inferência em populaçoes finitas. Anais da Academia Brasileira de Cincias, 65, 454.

del Pino, G., Aravena, R., Allende, O., Iglesias I., Marshall, G., 1996. Comentarios sobre propuesta curricular para estadística y probabilidad en la educación media. Revista de la Sociedad Chilena de Estadística, 13, 57-72.

Iglesias, P., Salinas, V.H., 2001. An overview on Bayesian statistics in Chile. Bulletin of The International Society for Bayesian Analysis, 8, 18-19.

Iglesias, P., Icaza, G., 2001. Leadership research in teaching and learning statistics in Chile. Session "Women's Contributions to Leadership in Statistics Education". Bulleting of the International Statistical Institute. 53rd session proceedings, tome LIX book 1, pp. 153-156, Seoul, Korea.

Iglesias, P., Palma, W., Salinas, V.H., 2002. The role of exchangeability in elementary statistical courses. Proceedings of The 6th International Conference on The Teaching of Statistics, Cape Town, South Africa.

del Pino, G., Aravena, R., Iglesias, P., 2003. Statistical analisis: interpreting daily life problems (in Spanish). Ministerio de Educación, Santiago, Chile.

Iglesias, P., Wistuba, L., Coba, A., del Pino, G., 2006. Teaching statistics with theater: some experiences with primary school and university students. VII International Conference on the Teaching of Statistics. Poster P14. Salvador, Brazil.

del Pino, G., Iglesias, P., Ortega, C., 2006. Teaching probability to primary and secondary school academically gifted students VII International Conference on the Teaching of Statistics. Poster P14. Salvador, Brazil.

Iglesias, P., Batanero, C., 2006. Teaching Bayesian Statistics. VII International Conference on the Teaching of Statistics. ICOTS 7, Session 3I. Salvador, Brazil.