Curriculum Vitae

Helton Saulo

Personal Information

Name: Helton Saulo Bezerra dos Santos (Helton Saulo)
Email: heltonsaulo@gmail.com
URL: https://heltonsaulo.github.io
Languages: Portuguese (native), English (fluent) and Spanish (intermediate)
Professional Address:
Department of Statistics
University of Brasilia
Brasilia, DF
Brazil 70910-900
Phone: +55 61 3107-3696

Education

- Ph.D. in Economics, Federal University of Rio Grande do Sul, Brazil, 2010-2013, under the supervision of Prof. Flavio A. Ziegelmann and Prof. Victor Leiva. The thesis is titled *Essays on Birnbaum-Saunders Models*.
- Visiting doctoral student at McMaster University, Canada, 2013, under the supervision of Prof. Narayanaswamy Balakrishnan.
- M.Sc. in Statistics, Federal University of Pernambuco, Brazil, 2008-2010.
- B.A. in Economics, Catholic University of Brasilia, Brazil, 2004-2007.
- Technician Diploma in Electrotechnics. Technical School of Brasilia, Brazil, 2002-2004.

Postdoc

- Post-doctoral Fellow. McMaster University, Hamilton, Canada, 2014-2015. Scholarship from: CAPES. Areas: Computational Statistics, Mathematical Statistics and Econometrics. Supervisor: Professor Narayanaswamy Balakrishnan.
- Post-doctoral Fellow. McMaster University, Hamilton, Canada, 2019-2020. Scholarship from: FAP/DF. Areas: Financial Econometrics, Computational Statistics and Statistical Modeling. Supervisor: Professor Narayanaswamy Balakrishnan.
- Post-doctoral Fellow. University of Texas at Arlington, Arlington, USA, 2023-current. Scholarship from: CNPq. Areas: Computational Statistics, Mathematical Statistics and Econometrics. Supervisor: Professor Suvra Pal.

Fellowships, Awards and Grants

- 3rd place, International Association for Statistical Computing (IASC) Data Analysis Competition 2023.
- Top Cited Article 2021-2022: "Log-symmetric quantile regression models", Statistica Neerlandica, Wiley.
- Top Cited Article 2021-2022: "Birnbaum-Saunders quantile regression and its diagnostics with application to economic data", Applied Stochastic Models in Business and Industry, Wiley.
- Top Cited Article 2021-2022: "A new BISARMA time series model for forecasting mortality using weather and particulate matter data", Journal of Forecasting, Wiley.
- Top Cited Article 2020-2021: "Log-symmetric quantile regression models", Statistica Neerlandica, Wiley.
- Top Cited Article 2020-2021: "Birnbaum-Saunders quantile regression and its diagnostics with application to economic data", Applied Stochastic Models in Business and Industry, Wiley.
- Top Cited Article 2020-2021: "A new BISARMA time series model for forecasting mortality using weather and particulate matter data", Journal of Forecasting, Wiley.
- Research productivity grant, level 2 - CNPq
- Top Cited Article 2019-2020: "Log-symmetric regression models: information criteria and application to movie business and industry data with economic implications", Applied Stochastic Models in Business and Industry, Wiley.
- Top Downloaded Paper 2018-2019: "Discussion of Birnbaum-Saunders distribution: A review of models, analysis, and applications by N. Balakrishnan and Debasis Kundu", Applied Stochastic Models in Business and Industry, Wiley.

- Top Downloaded Paper 2018-2019: "Log-symmetric regression models: information criteria and application to movie business and industry data with economic implications", Applied Stochastic Models in Business and Industry, Wiley.
- Recipient of postdoctoral scholarship, FAP/DF, Brazil, 2019–2020.
- Certificate of Outstanding Contribution in Reviewing, Computational Statistics & Data Analysis, 2015.
- Recipient of postdoctoral scholarship, Ministry of Education, Brazil, 2014–2015.
- Recipient of undergraduate scholarship for Optimal Monetary Policy studies, Ministry of Science and Technology, Brazil, 2005–2007.
- Recipient of graduate scholarship for Master's Program, Ministry of Science and Technology, Brazil, 2008–2010.
- Recipient of graduate scholarship for Doctoral Program, Ministry of Education, Brazil, 2010–2014.
- Travel Grant. Grant from UFRGS to present a paper at the XXXIV Brazilian Meeting of Econometrics in Porto de Galinhas (Brazil) in December 2012.
- Pre-doctoral Research Fellow for Studies Abroad, Ministry of Science and Technology, Brazil, 2013.

Editorial Boards

- Associate Editor of the Journal of Applied Statistics
- Associate Editor of the Journal of Statistical Theory and Practice
- Associate Editor of the Chilean Journal of Statistics
- Associate Editor of the NEXUS Mathematicæ

Teaching Experience

As an Assistant Professor in the Department of Statistics, University of Brasilia, Brazil, 2017-present:

- Computational Econometrics (graduate);
- Computational Modeling (graduate);
- Computational Statistics (undergraduate);
- Computational Techniques in Statistics (graduate);
- Research Methods in Statistics (graduate);
- Probability and Statistics (undergraduate);
- Statistical Computing 2 (undergraduate);
- Statistical Quality Control (undergraduate);
- Applied Statistics (undergraduate).

As an Assistant Professor in the Institute of Mathematics and Statistics, Federal University of Goias, Brazil, 2014-2017:

- Computational Statistics II (graduate);
- Computational Statistics II (undergraduate);
- Time Series (undergraduate);
- Introduction to Biostatistics with R (undergraduate).
- Econometrics (graduate);
- Topics in Statistics (undergraduate).
- Computational Statistics I (undergraduate).

Major Research Interests

- Financial Econometrics
- Machine Learning
- Computational Statistics

Research

Journal articles

1. *Equilibrium, adverse selection, and statistical distributions*. Jointly with J. Leao. **Economics Bulletin**, 31, 2066-2074, 2011.
2. *The Kumaraswamy Birnbaum Saunders distribution*. Jointly with J. Leao and M. Bourguignon. **Journal of Statistical Theory and Practice**, 1, 1-13, 2012.
3. *Generalized Birnbaum-Saunders kernel density estimators and an analysis of financial data*. Jointly with C. Marchant, K. Bertin, and V. Leiva. **Computational Statistics and Data Analysis**, 63, 1-15, 2013.
4. *A nonparametric method for estimating asymmetric densities based on skewed Birnbaum-Saunders distributions applied to environmental data*. Jointly with V. Leiva, C. Marchant, and F. Ziegelmann. **Stochastic Environmental Research and Risk Assessment**, 27, 1479-1491, 2013.
5. *Fiscal and monetary policy interactions: a game theory approach*. Jointly with L. Rego and J. Divino. **Annals of Operations Research**, 206, 341-366, 2013.
6. *On some properties of the beta Inverse Rayleigh distribution*. Jointly with J. Leao, M. Bourguignon, L. Rego, R. Cintra and G. Cordeiro. **Chilean Journal of Statistics**, 4, 113-133, 2013.

7. *Estimação por máxima verossimilhança dos parâmetros da distribuição Birnbaum-Saunders usando C, Ox e R*. Jointly with M. Santos-Neto, J. Leao and J. Vasconselos. **Revista Brasileira de Estatística**, 74, 7-19, 2013.
8. *Capability indices for Birnbaum-Saunders processes applied to electronic and food industries*. Jointly with V. Leiva, C. Marchant, M. Aslam and F. Rojas. **Journal of Applied Statistics**, 41, 1881-1902, 2014.
9. *A family of autoregressive conditional duration models applied to financial data*. Jointly with V. Leiva, J. Leao and C. Marchant. **Computational Statistics and Data Analysis**, 79, 175-191, 2014.
10. *A criterion for environmental assessment using Birnbaum-Saunders attribute control charts*. Jointly with V. Leiva, C. Marchant and F. Ruggeri. **Environmetrics**, 26, 463-476, 2015.
11. *A new Pareto-type distribution with applications in reliability and income data*. Jointly with M. Bourguignon and R. Fernandez. **Physica. A**, 457, 166-175, 2016.
12. *Constrained test in linear models with multivariate power exponential distribution*. Jointly with J. Leao, F. Cysneiros and N. Balakrishnan. **Computational Statistics**, 1, 1-24, 2016.
13. *A method for location recommendation via skyline query tolerant to noised georeferenced data*. Jointly with W. B. Oliveira, S. S.T. Oliveira, V. J. S. Rodrigues and K. V. Cardoso. **Brazilian Journal of Cartography**, 68, 1-10, 2016.
14. *A methodology based on the Birnbaum-Saunders distribution for reliability analysis applied to nano-materials*. Jointly with V. Leiva, F. Ruggeri and J. Vivanco. **Reliability Engineering and Systems Safety**, 157, 192-201, 2017.
15. *Birnbaum-Saunders frailty regression models: Diagnostics and application to medical data*. Jointly with J. Leao, V. Leiva and V. Tomazella. **Biometrical Journal**, 59, 251-314, 2017.
16. *On a new class of skewed Birnbaum-Saunders models*. Jointly with N. Balakrishnan and J. Leao. **Journal of Statistical Theory and Practice**, 11, 573-593, 2017.
17. *On moment-type estimators for a class of log-symmetric distributions*. Jointly with N. Balakrishnan, M. Bourguignon and X. Zhu. **Computational Statistics**, 32, 1339-1355, 2017.
18. *Estimation in generalized bivariate Birnbaum-Saunders models*. Jointly with N. Balakrishnan, X. Zhu, J. F.B. Gonzales and J. Leao. **Metrika**, 80, 427-453, 2017.
19. *On log-symmetric duration models applied to high frequency financial data*. Jointly with J. Leao. **Economics Bulletin**, 37, 1089-1097, 2017.
20. *Estimation for a family of skew scale-mixture distributions*. Jointly with J. Leao, N. Balakrishnan and V. Tomazella. **Chilean Journal of Statistics**, 8, 45-64, 2017.
21. *Estimating the optimal time for a road concession contract in Brazil*. Jointly with

D. Pivatto, R. Fernandez and A. Carraro. **International Journal of Economics and Finance**, 9, 44-53, 2017.

22. *A new model selection criterion for partial least squares regression*. Jointly with J. L. Martinez, H. B. Escobar and J. Leao. **Chemometrics and Intelligent Laboratory Systems**, 169, 64-78, 2017.
23. *Public-private partnership contractual design: a computational model of the moral hazard with lotteries*. Jointly with R. Fernandez, A. Carraro, F. Tourrucoo and R. Hillbrecht. **Public Organization Review**, 18, 39-51, 2018.
24. *On a new approach to estimate the shape parameter of the inverse Gaussian distribution*. Jointly with M. Bourguignon. **South Africa Statistical Journal**, 52, 15-27, 2018.
25. *On a tobit-Birnbaum-Saunders model with an application to medical data*. Jointly with M. DeSousa, V. Leiva and Paulo Scalco. **Journal of Applied Statistics**, 45, 932-955, 2018.
26. *A survival model with Birnbaum–Saunders frailty for uncensored and censored cancer data*. Jointly with J. Leao, V. Leiva and V. Tomazella. **Brazilian Journal of Probability and Statistics**, 32, 707-729, 2018.
27. *Incorporation of frailties into a cure rate regression model and its diagnostics and application to melanoma data*. Jointly with J. Leao, V. Leiva and V. Tomazella. **Statistics in Medicine**, 37, 4421-4440, 2018.
28. *A new estimator for the covariance of the PLS coefficients estimator with applications to chemical data*. Jointly with J. L. Martínez, V. Leiva, F. Ruggeri and G. C. Arteaga. **Journal of Chemometrics**, 32, e3069, 2018.
29. *Monitoramento da qualidade do ar usando cartas de controle por atributos baseadas na distribuição Birnbaum-Saunders*. Jointly with G. Pires. **Revista Brasileira de Estatística**, 77, 7-32, 2019.
30. *Discussion of Birnbaum-Saunders distribution: A review of models, analysis and applications*. Jointly with J. Leao and M. Santos-Neto. **Applied Stochastic Models in Business and Industry**, 35, 118-121, 2019.
31. *Theoretical results on the discrete Weibull distribution of Nakagawa & Osaki*. Jointly with R. Vila and E. Y. Nakano. **Statistics**, 53, 339-363, 2019.
32. *Some simple estimators for the two-parameter gamma distribution*. Jointly with M. Bourguignon, X. Zhu and N. Balakrishnan. **Communications in Statistics - Simulation and Computation**, 48, 2425-2437, 2019.
33. *Log-symmetric regression models: information criteria, application to movie business and industry data with economic implications*. Jointly with M. Ventura, V. Leiva and S. Monsueto. **Applied Stochastic Models in Business and Industry**, 35, 963-977, 2019.
34. *On the existence and uniqueness of the maximum likelihood estimates of parameters of Laplace Birnbaum-Saunders distribution based on Type-I, Type-II and hybrid censored samples*. Jointly with X. Zhu and N. Balakrishnan. **Metrika**, 82, 759-

778, 2019.

35. *Birnbaum-Saunders autoregressive conditional duration models applied to high-frequency financial data*. Jointly with J. Leao, V. Leiva and R. G. Aykroyd. **Statistical Papers**, 60, 1605-1629, 2019.
36. *Rendimento e desigualdade nas regiões metropolitanas brasileiras*. Jointly with D. R. Cunha , L. A. Lavoratto and D. T. G. N. Maciel. **Brazilian Journal of Business Economics**, 19, 39-57, 2019.
37. *Spatial operations on uncertain positional data*. Jointly with W. B. Oliveira, S. S. T. Oliveira, V. J. S. Rodrigues and K. V. Cardoso . **Journal of Information and Data Management**, 10, 185-205, 2019.
38. *A general family of autoregressive conditional duration models applied to high-frequency financial data*. Jointly with D. R. Cunha, R. Vila and R. N. Fernandez. **Journal of Risk and Financial Management**, 13, 45, 2020.
39. *A bimodal gamma distribution: Properties, regression model and applications*. Jointly with R. Vila, L. Ferreira, F. Prataviera and E. M. M. Ortega. **Statistics**, 54, 469-493, 2020.
40. *On asymmetric regression models with allowance for temporal dependence*. Jointly with R. Vila, F. Vilca and J. L. Martínez. **Journal of Statistical Theory and Practice**, 14, 40, 2020.
41. *Birnbaum-Saunders quantile regression models with application to spatial data*. Jointly with L. Sanchez, V. Leiva and M. Galea. **Mathematics**, 8, 1000, 2020.
42. *Estimando o tempo ótimo de um contrato de concessão: Um estudo de caso para as rodovias gaúchas*. Jointly with R. N. Fernandez, D. Pivatto, E. Freitas and A. Carraro. **Revista do Serviço Público**, 71, 245-273, 2020.
43. *On a bimodal Birnbaum-Saunders distribution with applications to lifetime data*. Jointly with R. Vila, J. Leao, M. Naveed and M. Santos-Neto. **Brazilian Journal of Probability and Statistics**, 34, 495-518, 2020.
44. *Global and local diagnostic analytics for a geostatistical model based on a new approach to quantile regression*. Jointly with V. Leiva, L. Sanchez and M. Galea. **Stochastic Environmental Research and Risk Assessment**, 34, 1457-1471, 2020.
45. *Birnbaum-Saunders regression models: A comparative evaluation of three approaches*. Jointly with A. Dasilva, R. Dias, V. Leiva and C. Marchant. **Journal of Statistical Computation and Simulation**, 90, 2552-2570, 2020.
46. *On mean-based bivariate Birnbaum-Saunders distributions: Properties, inference and application*. Jointly with J. Leão, R. Vila, V. Leiva and V. Tomazella. **Communications in Statistics - Theory and Methods**, 49, 6032-6056, 2020.
47. *On a new mixture-based regression model: simulation and application to data with high censoring*. Jointly with M. Desousa, M. Santos-Neto and V. Leiva. **Journal of Statistical Computation and Simulation**, 90, 2861-2877, 2020.
48. *Catastrophic health expenditure and multimorbidity among older adults in Brazil*.

Jointly with G. M. Bernardes, R. N. Fernandez, M. F. Lima-Costa and F. B. Andrade. **Revista de Saúde Pública**, 54, 125, 2020.

49. *A class of asymmetric regression models for left-censored data*. Jointly with J. Leao, J. Nobre and N. Balakrishnan. **Brazilian Journal of Probability and Statistics**, 35, 62-84, 2021.
50. *A bivariate fatigue-life regression model and its application to fracture of metallic tools*. Jointly with J. Leao, V. Leiva, R. Vila and V. Tomazella. **Brazilian Journal of Probability and Statistics**, 35, 119-137, 2021.
51. *A new BISARMA time series model for forecasting mortality using weather and particulate matter data*. Jointly with V. Leiva, R. Souza, R. G. Aykroyd and R. Vila. **Journal of Forecasting**, 40, 346-364, 2021.
52. *Birnbaum-Saunders quantile regression and its diagnostics with application to economic data*. Jointly with L. Sanchez, V. Leiva and M. Galea. **Applied Stochastic Models in Business and Industry**, 37, 53-73, 2021.
53. *Survival model induced by discrete frailty for modeling of lifetime data with long-term survivors and change-point*. Jointly with V. Cancho, G. Barriga and J. Leao. **Communications in Statistics - Theory and Methods**, 50, 1161-1172, 2021.
54. *VES-13 role to identify limited life expectancy in older adults in primary care settings*. Jointly with D. L. Assis, V. O. Chagas, C. K. Suemoto, A. N. C. Santana. **Revista da Escola de Enfermagem da USP**, 55, e03743, 2021.
55. *The negative binomial beta prime regression model with cure rate: application with a melanoma dataset*. Jointly with J. Leão, M. Bourguignon and M. Santos-Neto. **Journal of Statistical Theory and Practice**, 15, 63, 2021.
56. *On a family of discrete log-symmetric distributions*. Jointly with R. Vila, L. Paiva, N. Balakrishnan and M. Bourguignon. **Journal of Statistical Theory and Practice**, 15, 67, 2021.
57. *Estimating the covariance matrix of the coefficient estimator in multivariate partial least squares regression with chemical applications*. Jointly with J. L. Martínez, V. Leiva and S. Liu. **Chemometrics and Intelligent Laboratory Systems**, 214, 104328, 2021.
58. *Bayesian inference for the Birnbaum-Saunders autoregressive conditional duration model with application to high-frequency financial data*. Jointly with F. Nascimento and J. Leao. **Communications in Statistics - Case Studies and Data Analysis**, 7, 215-228, 2021.
59. *Modeling mortality based on pollution and temperature using a new Birnbaum–Saunders autoregressive moving average structure with regressors and related-sensors data*. Jointly with R. Vila, R. Souza, V. Leiva and R. G. Aykroyd. **Sensors**, 21, 6518, 2021.
60. *Bayesian inference for the log-symmetric autoregressive conditional duration model*. Jointly with J. Leao, R. Paixão and T. Leao. **Annals of the Brazilian Academy of Sciences**, 93, e20190301, 2021.

61. *Effect of education and multimorbidity on mortality among older adults: findings from the health, well-being and ageing cohort study (SABE)*. Jointly with G. M. Bernardes, J. L. F. Santos, D. D. Da Cruz Teixeira, Y. A. De Oliveira Duarte, and F. B. Andrade. **Publich Health**, 201, 69-74, 2021.
62. *A new quantile regression model and its diagnostic analytics for a Weibull distributed response with applications*. Jointly with L. Sanchez, V. Leiva, C. Marchant and J. M. Sarabia. **Mathematics**, 9, 2768, 2021.
63. *On some properties of the bimodal normal distribution and its bivariate version*. Jointly with R. Vila and J. Roldan. **Chilean Journal of Statistics**, 12, 125-144, 2021.
64. *Desenho contratual de parcerias público-privadas para hospitais: algumas notas teóricas*. Jointly with R. N. Fernandez and A. Carraro. **Economic Analysis of Law Review**, 12, 200-2018, 2021.
65. *Catastrophic health expenditures: analysis of the association with socioeconomic conditions in Minas Gerais, Brazil*. Jointly with J. B. Macedo, A. C. Boing, J. M. Andrade, R. N. Fernandez and F. B. Andrade. **Ciencia & Saude Coletiva**, 27, 325-334, 2022.
66. *Log-symmetric quantile regression models*. Jointly with A. Dasilva, V. Leiva, L. Sánchez and H. L. Fuente-Mella. **Statistica Neerlandica**, 76, 124-163, 2022.
67. *On a log-symmetric quantile tobit model applied to female labor supply data*. Jointly with D. R. Cunha and J. A. Divino. **Journal of Applied Statistics**, 49, 4225-4253, 2022.
68. *On a quantile autoregressive conditional duration model*. Jointly with N. Balakrishnan and R. Vila. **Mathematics and Computers in Simulation**, 203, 425-448, 2023.
69. *Bivariate symmetric Heckman models and their characterization*. Jointly with R. Vila, S. S. Cordeiro and V. Leiva. **Journal of Multivariate Analysis**, 105097, 2023.
70. *Modeling income data via new parametric quantile regressions: formulation, computational statistics, and application*. Jointly with R. Vila, G. V. Borges, M. Bourguignon, V. Leiva and C. Marchant. **Mathematics**, 11, 448, 2023.
71. *Bootstrap control charts for quantiles based on log-symmetric distributions with applications to monitoring of reliability data*. Jointly with V. Leiva, R. A. Santos, C. Marchant and Y. Lio. **Quality and Reliability Engineering International**, 39, 1-24, 2013.
72. *On a new extreme value distribution: characterization, parametric quantile regression, and application to extreme air pollution events*. Jointly with R. Vila, V. L. Bittencourt, V. Leiva and G. Christakos. **Stochastic Environmental Research and Risk Assessment**, 37, 1119–1136, 2023.
73. *On a length-biased Birnbaum-Saunders regression model applied to meteorological data*. Jointly with K. L. P. Oliveira, B. S. Castro and R. Vila. To appear in

Communications in Statistics - Theory and Methods.

74. *A bivariate approach to the Mincerian earnings equation*. Jointly with D. R. Cunha, S. Monsueto and J. A. Divino. To appear in **Revista Brasileira de Economia**.
75. *Theoretical results and modeling under the discrete Birnbaum-Saunders distribution*. Jointly with F. Vilca, R. Vila, J Leão and L. Sánchez. To appear in **Communications in Statistics - Theory and Methods**.
76. *Parametric and partially linear regressions for agricultural economy data*. Jointly with J. C. S. Vasconcelos, G. M. Cordeiro and E. M. M. Ortega. To appear in **Communications in Statistics - Theory and Methods**.
77. *The social functioning related to substance use disorder before and after treatment in a CAPS-AD in Brazil: a longitudinal study with Occupational Therapy contributions*. Jointly with S. Moreira; E. Nakano, K. Oliveira, K. Miranda, R. Fonseca and A. Gallassi. To appear in **Brazilian Journal Of Occupational Therapy**.
78. *Regressão quantílica na análise da letalidade da COVID-19 nos municípios do estado de São Paulo*. Jointly with G. T. Alves, R. Fernandez, L. Correia and J. Fiorucci. To appear in **Revista Brasileira de Estatística**.
79. *Bivariate distributions on the unit square: Theoretical properties and applications*. Jointly with R. Vila, N. Balakrishnan and P. Zörnig. To appear in **Journal of Applied Statistics**.
80. *Parametric quantile autoregressive moving average models with exogenous terms*. Jointly with A. Dasilva, R. Vila, J. A. Fiorucci and S. Pal. To appear in **Statistical Papers**.
81. *The zero-adjusted log-symmetric quantile regression model applied to extramarital affairs data*. Jointly with D. R. Cunha and J. A. Divino. To appear in **Computational Economics**.

Working Papers

82. *Scale-mixture Birnbaum-Saunders quantile regression models applied to personal accident insurance data*. Jointly with A. Dasilva, R. Vila and S. Pal.
83. *A parametric quantile beta regression for modeling case fatality rates of COVID-19*. Jointly with M. Bourguignon and D. I. Gallardo.
84. *Unit-log-symmetric models: Characterization, statistical properties and its use in analyzing internet access data*. Jointly with R. Vila, N. Balakrishnan and P. Zörnig.
85. *Bivariate log-symmetric models: distributional properties, parameter estimation and an application to fatigue data analysis*. Jointly with R. Vila, N. Balakrishnan and A. Protazio.

86. *An upper bound and a characterization for Gini's mean difference based on correlated random variables*. Jointly with R. Vila and N. Balakrishnan.
87. *Evaluation of the fear of covid-19 among students from an undergraduate nursing course during the epidemiological situation of 2022*. Jointly with A. Santana and C. C. Reis.
88. *A semiparametric accelerated failure time based mixture cure tree*. Jointly with W. Aselisewine and S. Pal.
89. *Fatores associados à evasão da Universidade Federal de Goiás: Uma análise por meio de técnicas de sobrevivência*. Jointly with N. Damasceno, M. Piscoya, R. Fernandez and A. Vasconcelos.
90. *An empirical analysis for Public-Private Partnership projects in the transport sector*. Jointly with V. Rebelo, R. Fernandez and C. Shikida.
91. *Avaliação da vulnerabilidade em saúde e cognição em idosos da Atenção Primária à Saúde*. Jointly with H. S. Cruz, V. Z. M. Silva, A. Santana.
92. *Generalized extended skew-elliptical Heckman models and their characterization*. Jointly with R. Vila, C. Marchant and V. Leiva.
93. *Bivariate autoregressive conditional models: A new method for jointly modeling duration and number of transactions of irregularly spaced financial data*. Jointly with S. Pal and R. Vila.
94. *A multivariate Birnbaum-Saunders lifetime regression model*. Jointly with F. Vilca and R. C. Zeller.
95. *Family of multivariate distributions for modeling data with positive support: Properties, regression and applications*. Jointly with J. Monterios, R. Vila and F Quintino.
96. *Multivariate asymmetric distributions on the unit hypercube: Properties, regression and applications*. Jointly with L. Santos, R. Vila and F Quintino.

Book Chapters

97. *Monitoring environmental risk by a methodology based on control charts*. Jointly with V. Leiva and F. Ruggeri. In **Risk Assessment Challenges: Theory and Practice** (Eds. C. Kitsos, T.A. Oliveira, S. Gulati and S. Rigas), Springer, 2015.
98. *Environmental applications based on Birnbaum-Saunders models*. Jointly with V. Leiva. In **Mathematical and Statistical Applications in Life Sciences and Engineering** (Eds. M. R. Adhikari, Y. P. Chaubey, and A. Adhikari), Springer, 2017.
99. *Statistical quality control and reliability analysis using the Birnbaum-Saunders distribution with industrial applications*. Jointly with V. Leiva, C. Marchant, F. Ruggeri, H. Saulo. In **Statistical Quality Technologies: Theory and Practice** (Eds. Y. Lio, H. Keung, T. Ng, T-R. Tsai and D-G. Chen), Springer, 2019.

100. *Multivariate methods to monitor the risk of critical episodes of environmental contamination using an asymmetric distribution with data of Santiago, Chile*. Jointly with C. Marchant, V. Leiva and R. Vila. In **Risk, Reliability and Sustainable Remediation in the Field of Civil and Environmental Engineering** (Eds. T. Roshni, P. Samui, D. T. Bui, D. Kim, R. Khatibi), Elsevier, 2022.

Professional Presentations

1. XXXIV Brazilian Meeting of Econometrics, Brazil, December 2012 ("Fiscal and monetary policy interactions: a game theoretical approach").
2. Department of Statistics, Federal University of Piaui, Brazil, January 2013 ("Nonparametric kernel density estimation").
3. Department of Mathematics and Statistics, McMaster University, Canada, March 2013 ("A nonparametric method for estimating asymmetric densities based on skewed Birnbaum-Saunders distributions").
4. Department of Mathematics and Statistics, McMaster University, Canada, November 2014 ("A family of autoregressive conditional duration models applied to financial data").
5. Inter-institutional program of Graduate Studies in Statistics, UFSCar-USP, Brazil, November 2015 ("On Birnbaum-Saunders autoregressive conditional duration models applied to high frequency financial data'').
6. II International Workshop on Statistical Models for Business, Engineering and Sciences, Universidad Adolfo Ibanes, Chile, October 2015 ("Influence diagnostics in Birnbaum-Saunders autoregressive conditional duration models with a financial application'').
7. Department of Statistics, University of Brasilia, Brazil, May 2016 ("On mean/median-based Birnbaum-Saunders autoregressive conditional duration models and their diagnostics and application'').
8. 15th Brazilian School of Regression Models, Brazil, March 2017 ("A Birnbaum-Saunders regression model for censored data'').
9. Institute of Mathematics and Statistics, Federal University of Goias, Brazil, June 2017 ("Asymmetric autoregressive conditional duration models applied to high-frequency financial data'').
10. 5th Workshop on Survival Analysis and Applications, Brazil, February 2018 ("Log-symmetric regression models for left-censored data'').
11. 3rd Goias Meeting on Probability and Statistics, Brazil, March 2018 ("Monte Carlo methods in inference and resampling'').
12. 16th Brazilian School of Regression Models, Brazil, March 2019 ("Log-symmetric regression models with allowance for correlated errors applied to mortality data'').

13. Primer Webinar Ciencias Básicas Aplicadas, Colombia, August 2020 ("On a quantile autoregressive conditional duration model applied to high-frequency financial data'').
14. Joint Statistical Meetings, USA, August 2021 ("On a quantile autoregressive conditional duration model applied to high-frequency financial data'').
15. Department of Economics, Federal University of Pelotas, Brazil, November 2021 ("On a quantile autoregressive conditional duration model applied to high-frequency financial data'').
16. Department of Statistics, Federal University of Rio de Janeiro, Brazil, November 2021 ("Quantile autoregressive conditional duration models'').
17. Department of Statistics, Federal University of Minas Gerais, Brazil, December 2021 ("Quantile autoregressive conditional duration models'').
18. XLVI Jornadas Nacionales de Estadística, Chile, October 2022 ("On a quantile duration model applied to high-frequency financial data'').

Journal Refereeing

1. Computational Statistics & Data Analysis
2. Stochastic Environmental Research and Risk Assessment
3. Chilean Journal of Statistics
4. Economics Bulletin
5. Ciência e Natura
6. Revstat Statistical Journal
7. Journal of Applied Statistics
8. Revista Brasileira de Biometria
9. Emerging Markets Finance and Trade
10. Communications in Statistics. Simulation and Computation
11. Communications in Statistics. Theory and Methods
12. Brazilian Journal of Business Economics
13. Pakistan Journal of Statistics and Operation Research
14. Applied Stochastic Models in Business and Industry
15. Statistics,Optimization & Information Computing
16. Mathematics and Computers in Simulation
17. International Journal of Management Science and Engineering Management
18. Applied Mathematical Modelling
19. Annals of the Brazilian Academy of Sciences
20. IEEE Transactions on Reliability
21. São Paulo Journal of Mathematical Sciences
22. Medical Hypotheses
23. American Journal of Mathematical and Management Sciences

24. Communications for Statistical Applications and Methods
25. Statistics in Transition New Series
26. Sankhya B
27. Stats
28. Entropy
29. International Journal of Environmental Research and Public Health
30. STATISTICA
31. BMC Medical Research Methodology
32. Colombian Journal of Statistics
33. The American Statistician
34. Applied Economics
35. Journal of Contemporary Administration
36. Journal of Statistical Theory and Applications
37. Statistica Neerlandica
38. Stat
39. Environmetrics
40. PLOS ONE
41. Mathematical Methods In the Applied Sciences
42. Statistical Methods in Medical Research
43. Australian & New Zealand Journal of Statistics
44. Journal of Computational and Applied Mathematics
45. Computational Economics
46. Ecological Informatics
47. Empirical Economics

Graduate Supervision

1. **Mário Fernando de Sousa**. M.Sc. in Economics (2016). Title: Two essays on Birnbaum-Saunders regression models for censored data. Institution: Federal University of Goias.
2. **Leandro Valerio Silva**. M.Sc. in Economics (2017). Title: Control charts for monitoring tax renenue. Institution: Federal University of Goias.
3. **Douglas Pivato** (co-supervisor). M.Sc. in Economics (2017). Title: Estimating the optimal time of a concession contract: analysis of the projects of the third stage of the federal highway concession program. Institution: Federal University of Pelotas.
4. **Danúbia Rodrigues da Cunha** (co-supervisor). M.Sc. in Economics (2018). Title: Bivariate regression models: an application to Mincerian earnings equations. Institution: Federal University of Goias.

5. **Marcelo dos Santos Ventura**. M.Sc. in Economics (2018). Title: Monte Carlo simulation studies in log-symmetric regression models. Institution: Federal University of Goias.
6. **Rubens Batista de Souza**. M.Sc. in Statistics (2018). Title: Birnbaum-Saunders time series models. Institution: University of Brasilia.
7. **Regina dos Santos Resende Fortes**. M.Sc. in Statistics (2020). Title: Birnbaum-Saunders survival model with spatial frailty. Institution: University of Brasilia.
8. **Leonardo de Sousa Paiva**. M.Sc. in Statistics (2020). Title: On a new family of discrete distributions. Institution: University of Brasilia.
9. **Alan da Silva**. M.Sc. in Statistics (2020). Title: Quantile regression with asymmetric distributions. Institution: University of Brasilia.
10. **Ana Lívia Protázio Sá** (co-supervisor). M.Sc. in Statistics (2022). Title: Bivariate log-symmetric models: Theoretical properties and parameter estimation. Institution: University of Brasilia.
11. **Shayane dos Santos Cordeiro**. M.Sc. in Statistics (2022). Title: Symmetric generalized Heckman models. Institution: University of Brasilia.
12. **Giovanna Valadares Borges**. M.Sc. in Statistics (2022). Title: Parametric quantile regression for income data. Institution: University of Brasilia.
13. **Verônica Lelis Bittencourt**. M.Sc. in Statistics (2022). Title: Parametric quantile regression for extreme events. Institution: University of Brasilia.
14. **João Victor Monteiros de Andrade** (co-supervisor). M.Sc. in Statistics (current). Title: Family of multivariate distributions for modeling data with positive support: Properties, regression and applications. Institution: University of Brasilia.
15. **Leonardo Santos** (co-supervisor). M.Sc. in Statistics (current). Title: Multivariate asymmetric distributions on the unit hypercube: Properties, regression and applications. Institution: University of Brasilia.

Conference Organizing Committees

- 16th Brazilian School of Regression Models, 2019.
- Workshop on Statistics and Probability, Satellite meeting - ICM, 2018
- 15th Brazilian School of Regression Models, 2017.
- 1st Workshop on Business Statistics with Applications, 2016.
- 1st Seminar on Applied Statistics, 2016.
- 2nd Goias Meeting of Probability and Statistics, 2015.

Conference Scientific Committees

- 17th Brazilian School of Regression Models, 2021.

Computational Skills

- Statistical/Mathematical/Programing Languages: C, Ox, R, Python
- Typesetting: LaTeX, R Markdown, Quarto
- Operating System: Debian-based Linux distributions.