

# Bruno Santos

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<b>Date of Birth</b>	24 <sup>th</sup> July 1986	<b>Email</b>	brunodosantos@gmail.com
<b>Nationality</b>	Brazilian		

## Academic professional career

- December 2016 - January 2018  
Assistant Professor  
Department of Statistics, Federal University of Bahia (UFBA)
- February 2018 - September 2019  
Postdoctoral researcher  
Chair of Statistics, Georg-August-Universität Göttingen
- October 2019 - July 2021  
Assistant Professor  
Department of Statistics, Federal University of Espirito Santo (UFES)
- Since September 2021  
Lecturer in Statistics  
School of Mathematics, Statistics and Actuarial Science, University of Kent

## Education

- 2005-2008** BSc in Statistics - University of São Paulo
- 2010-2012** MSc in Statistics - University of São Paulo  
Supervisor: Silvia Nagib Elian  
Dissertation title: '*Quantile regression models*'
- 2012-2016** PhD in Statistics - University of São Paulo  
Supervisor: Heleno Bolfarine  
Thesis title: '*Extensions of Bayesian quantile regression models*'  
With one year period (aug-2013 to jul-2014) at Duke University, United States, under the supervision of Alan Gelfand and Surya Tokdar.

## Publications

### Peer-reviewed papers

- Gómez, Y., Santos, B., Gallardo, D., Venegas, O. and Gómez, H. (2022). Bias reduction of maximum likelihood estimates for an asymmetric class of power models with applications. *REVSTAT – Statistical Journal*.
- Santos, B. and Kneib, T. (2020). Noncrossing structured additive multiple-output Bayesian quantile regression models. *Statistics & Computing*, 30, 855–869.
- Santos, B. and Bolfarine, H. (2018). Bayesian quantile regression analysis for continuous data with a discrete component at zero. *Statistical Modelling*, 18, 73-93.
- Santos, B. and Bolfarine, H. (2015). Bayesian analysis for zero-or-one inflated proportion data using quantile regression. *Journal of Statistical Computation and Simulation*, 85, 3579-3593.

- Santos, B. and Elian, S. (2015). Influence measures in quantile regression models. *Communications in Statistics - Theory and Methods*, 44, 1842-1853.
- Alencar, A. and Santos, B. (2014). Association of pollution with quantiles and expectations of the hospitalization rate of elderly people by respiratory diseases in the city of São Paulo, Brazil. *Environmetrics*, 25, 165-171.

## Conference Proceedings

- Santos, B., Rodrigues, A. and Kneib, T. (2020). Growth curves for multiple-output response variables via Bayesian quantile regression models. *Proceedings of the 35th International Workshop on Statistical Modelling*, vol. 1, 194-199.
- Santos, B. and Kneib, T. (2018). Structured additive multiple-output noncrossing Bayesian quantile regression models. *Proceedings of the 33rd International Workshop on Statistical Modelling*, vol. 1, 253-258.
- Santos, B. and Bolfarine, H. (2015). Analysis of Brazil's presidential election via Bayesian spatial quantile regression. *Proceedings of the 30th International Workshop on Statistical Modelling (Herwig Friedl, Helga Wagner, editors)*, vol. 2, 239-242.
- Santos, B. and Bolfarine, H. (2013). A two-part model using quantile regression under a Bayesian perspective. *Proceedings of the 28th International Workshop on Statistical Modelling (Vito M.R. Muggeo, Vincenza Capursi, Giovanni Boscaino, Gianfranco Lovison, editors)*, vol. 1, 200-205.
- Santos, B. and Elian, S. (2012). Analysis of residuals in quantile regression: an application to income data in Brazil. *Proceedings of the 27th International Workshop on Statistical Modelling (Arnost Komarek, Stanislav Nagy, editors)*, vol. 2, 723-728.

## Submitted to publication

- Mussino, E., Santos, B., Monti, A., Matechou, E., Drefahl, S. (2023). A new approach for studying over-coverage in population registers.
- Santos, B. and Bolfarine, H. (2023). A note about Bayesian quantile regression models.
- Rodrigues, A., Borges, P. and Santos, B. (2023). A defective cure rate quantile regression model for male breast cancer data.
- Santos, B. (2023). Comparing dominance of tennis' big three via multiple-output Bayesian quantile regression models

## Working papers

- Santos, B., Rodrigues, A. and Kneib, T. (2023). Growth curves for multiple-output response variables via Bayesian quantile regression models.

## Talks and posters

### Invited talks

- SUDA Colloquium Series, University of Stockholm, 2022.  
``New approach to study the over-coverage in population registers''
- 14th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, United Kingdom, 2021.  
``Growth curves for multiple-output response variables via Bayesian quantile regression models''
- 3rd Meeting of the Graduate Program in Statistics, IME-USP, São Paulo, Brazil, 2019.  
``Noncrossing structured additive multiple-output Bayesian quantile regression models''
- VI Workshop on Probabilistic and Statistical Methods, São Carlos, Brazil, 2018.  
``On Bayesian Quantile Regression''.

- Universidade Federal de Campina Grande, Brazil, 2017.  
``*On Bayesian Quantile Regression*''.
- XV School of Regression Models, Goiânia, Brazil, 2017.  
``*Extensions of Bayesian quantile regression models*''.

## Contributed talks

- 24th International Conference on Computational Statistics, Bologna, Italy, 2022.  
``*Comparing dominance of tennis' big three via multiple-output Bayesian quantile regression models*''.
- DAGStat Conference 2019, Munich, Germany, 2019.  
``*Structured additive multiple-output noncrossing Bayesian quantile regression models*''.
- 33rd International Workshop on Statistical Modelling, Bristol, UK, 2018.  
``*Structured additive multiple-output noncrossing Bayesian quantile regression models*''.
- XIII Brazilian Meeting on Bayesian Statistics, Belo Horizonte, Brazil, 2016  
``*Bayesian quantile regression analysis for continuous data with a discrete component at zero*''.
- 60th World Statistics Congress - ISI2015 , Rio de Janeiro, Brazil, 2015  
``*Analysis of Brazil's presidential election via Bayesian spatial quantile regression*''.
- XIV School of Regression Models, Campinas, Brazil, 2015.  
``*Bayesian analysis for zero-or-one inflated proportion data using quantile regression*''.
- 28th International Workshop on Statistical Modelling, Palermo, Italy, 2013.  
``*A two-part model using quantile regression under a Bayesian perspective*''.
- I Portuguese Meeting of Biometrics, Braga, Portugal, 2013.  
``*Bayesian quantile regression for proportion data*''.
- 20th Brazilian National Symposium of Probability and Statistics, João Pessoa, Brazil, 2012.  
``*Influence measures in quantile regression models*''.

## Poster

- 23rd Brazilian National Symposium of Probability and Statistics, São Pedro, Brazil, 2018.  
``*Structured additive multiple-output noncrossing Bayesian quantile regression models*''.
- 30th International Workshop on Statistical Modelling, Linz, Austria, 2015.  
``*Analysis of Brazil's presidential election via Bayesian spatial quantile regression*''.
- 27th International Workshop on Statistical Modelling, Prague, Czech Republic, 2012.  
``*Analysis of residuals in quantile regression: an application to income data in Brazil*''.

## Grants and awards

- Collaborations with Developing Countries, Grant Scheme 5, £1,972.  
London Mathematical Society, 2022.
- 2nd place, Best poster award  
23rd Brazilian National Symposium of Probability and Statistics, 2018.
- Best Student Poster Toyota Corporation Award, \$500  
30th International Workshop on Statistical Modelling, 2015.
- Student Travel Grant, €800  
28th International Workshop on Statistical Modelling, 2013.

## Teaching

### University of Kent

- Academic Year 2021/2022
  - Statistics I
  - Probability and Classical Inference
- Academic Year 2022/2023
  - Advanced Statistical Modelling
  - Predictive Modelling

### Department of Statistics, UFES

- February 2021 - May 2021
  - Computational Statistics II
  - Statistics I
- September 2020 - December 2020
  - Analysis of Categorical Data
  - Probability and Statistics I
- October 2019 - December 2019
  - Statistics I
  - Statistics II

### Georg-August-Universität Göttingen

- Summer 2019
  - Generalized regression
- Winter 2018
  - Spatial Statistics

### Department of Statistics, UFBA

- Spring 2017
  - Statistical Methods
- Fall 2017
  - Bayesian Inference
  - Statistical Methods

### Short courses

- 3rd Paraibano Meeting of Statistics, 2021. *Regression models: new perspectives beyond the conditional mean. (in Portuguese: Modelos de regressão: novas perspectivas além da média condicional)*
- **[Postponed due to Covid-19]** 24rd Brazilian National Symposium of Probability and Statistics, 2020. *Visualization of spatial effects in regression models. (in Portuguese: Visualização de efeitos espaciais em modelos de regressão.)*
- XIII School of Regression Models, Maresias, Brazil, 2013. *“Regression models with truncated and censored responses” (in Portuguese: “Modelos de regressão com respostas limitadas e censuradas”).*
- Universidad de Antofagasta, Chile, 2017. *“Quantile regression: a classical and a Bayesian approach.”*

## Software

- **R package** `baquantreg`
  - Available at <https://github.com/brsantos/baquantreg>
- **R package** `ggcrqr`
  - Available at <https://github.com/brsantos/ggcrqr>

## Other projects

- Member of Research project "Migrating Trajectories", collaboration between the Department of Demography at University of Stockholm and the department of Statistics at University of Kent.
- Member of ``Local organizing committee'' - *Movement and migration in ecology workshop*, May/2022, University of Kent.
- Member of ``Local organizing committee'' - *1st Workshop on Data Science and Statistical Learning (WDSSL)*, November/2019, UFES.
- Leader of Extension project - *Observatory of Covid-19 in favelas of Espírito Santo* (in Portuguese, ``Observatório Capixaba da Covid-19 nas favelas (OCOFA)').
- Member of ``Program Committee'' - *useR! 2021 Conference*.
- Member of ``Program Committee'' - *useR! 2022 Conference*.