

# Leonardo S Bastos

## PERSONAL DETAILS

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## ACADEMIC QUALIFICATIONS

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**Ph.D. in Statistics** 2006-2010  
*The University of Sheffield, UK*  
Supervisors: Professor Anthony O'Hagan and Professor Jeremy Oakley  
Thesis Title: Validating Gaussian Process Models in Computer Experiments

**M.Sc. in Statistics** 2002-2003  
*Federal University of Rio de Janeiro, Brazil*  
Supervisors: Professor Dani Gamerman

**B.Sc. in Statistics** 1998-2002  
*Federal University of Minas Gerais, Brazil*

## PROFESSIONAL EXPERIENCE

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**Public Health Researcher** Fundação Oswaldo Cruz (Fiocruz), Brazil  
2012-present

**Adjunct professor** Universidade Federal Fluminense, Brazil  
2010-2012

**Assistant professor** Universidade Federal do Paraná, Brazil  
2006-2006

**Research assistant** Instituto Brasileiro de Geografia e Estatística (IBGE), Brazil  
2005-2006

## PUBLICATIONS

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de Almeida Ribeiro, C. R., Amado, L. A., Tourinho, R. S., Pinto Lima, L. R., Melgaço, J. G., de Almeida, A. J., Bastos, L. S., Lewis-Ximenez, L. L., and de Paula, V. S. (2019). Accuracy of rapid test for diagnosis of hepatitis a with different infection rate settings and with predictive modeling. *Future microbiology*.

Coutinho, C., Bastos, L. S., da Mota, J. C., Toledo, L., Costa, K., Bertoni, N., and Bastos, F. I. (2019). The risks of hcv infection among brazilian crack cocaine users: incorporating diagnostic test uncertainty. *Scientific reports*, 9(1):443.

- Sperandei, S., Bastos, L. S., Ribeiro-Alves, M., and Bastos, F. I. (2018). Assessing respondent-driven sampling: A simulation study across different networks. *Social Networks*, 52:48–55.
- Juvanhol, L. L., Melo, E. C. P., Chor, D., Fonseca, M., Rotenberg, L., Bastos, L. S., Mill, J. G., and Griep, R. H. (2018). Association between demand–control model components and blood pressure in the elsa-brasil study: exploring heterogeneity using quantile regression analyses. *Scandinavian journal of work, environment & health*, 44(6):601–612.
- Faccion, R. S., Bernardo, P. S., de Lopes, G. P. F., Bastos, L. S., Teixeira, C. L., de Oliveira, J. A., Fernandes, P. V., Dubois, L. G., Chimelli, L., and Maia, R. C. (2018). p53 expression and subcellular survivin localization improve the diagnosis and prognosis of patients with diffuse astrocytic tumors. *Cellular Oncology*, 41(2):141–157.
- Cysne-Finkelstein, L., Silva-Almeida, M., Pereira, B. A. S., dos Santos Charret, K., Bertho, Á. L., Bastos, L. S., de Oliveira Pinto, L., de Oliveira, F. O. R., da Souza Pereira, M. C., and Alves, C. R. (2018). Evidence of subpopulations with distinct biological features within a leishmania (viannia) braziliensis strain. *Protist*, 169:107–121.
- Codeço, C., Coelho, F., Oliveira, S., Castro, T., and Bastos, L. (2018). Infodengue: A nowcasting system for the surveillance of arboviruses in brazil. *REVUE D EPIDEMIOLOGIE ET DE SANTE PUBLIQUE*, 66, p. S386:S386.
- Bastos, F. I., Bastos, L. S., Coutinho, C. F., Toledo, L., Mota, J. C., Velasco-de-Castro, C. A., Sperandei, S., Brignol, S. M., Travassos, T. S., Santos, C. M., Malta, M. S., and Divas Research Group (2018). HIV, HCV, HBV and Syphilis among transgender women from Brazil: Assessing different methods to adjust infection rates of a hard-to-reach, sparse population. *Medicine*, 97(1 Suppl):S16–S24.
- Villela, D., Bastos, L., De Carvalho, L., Cruz, O., Gomes, M., Durovni, B., Lemos, M., Saraceni, V., Coelho, F., and Codeço, C. (2017). Zika in rio de janeiro: Assessment of basic reproduction number and comparison with dengue outbreaks. *Epidemiology & Infection*, 145(8):1649–1657.
- Toledo, L., Cano, I., Bastos, L., Bertoni, N., and Bastos, F. I. (2017). Criminal justice involvement of crack cocaine users in the city of rio de janeiro and greater metropolitan area: Implications for public health and the public security agenda. *International Journal of Drug Policy*, 49:65–72.
- Rodrigues, N. C. P., Andrade, M. K. d. N., O’Dwyer, G., Flynn, M., Braga, J. U., Almeida, A. S. d., Bastos, L. S., and Lino, V. T. S. (2017). Distribution of pulmonary tuberculosis in rio de janeiro (Brazil): a spatial analysis. *Ciencia & saude coletiva*, 22:4125–4134.
- Rizzetto, F., Leal, V. d. O., Bastos, L. S., Fouque, D., and Mafra, D. (2017). Chronic kidney disease progression: a retrospective analysis of 3-year adherence to a low protein diet. *Renal failure*, 39(1):357–362.
- Lima-Neiva, V., Gonçalves, T. C., Bastos, L. S., Gumiel, M., Correia, N. C., Silva, C. C., Almeida, C. E., and Costa, J. (2017). Biology of triatoma sherlocki (hemiptera: Reduviidae) under laboratory conditions: Biological cycle and resistance to starvation. *Journal of medical entomology*, 54(4):831–836.
- Lima, J. B. P., Galardo, A. K. R., Bastos, L. S., da Silva Lima, A. W., and Rosa-Freitas, M. G. (2017). Mosqtent: An individual portable protective double-chamber mosquito trap for anthropophilic mosquitoes. *PLoS neglected tropical diseases*, 11(3):e0005245.
- MacCarthy, S., Reisner, S., Hoffmann, M., Perez-Brumer, A., Silva-Santisteban, A., Nunn, A., Bastos, L., Vasconcellos, M. T. L. d., Kerr, L., Bastos, F. I., and Dourado, I. (2016). Mind the gap: implementation challenges break the link between HIV/AIDS research and practice. *Cadernos de Saúde Pública*, 32(10):e00047715.
- Juvanhol, L. L., Lana, R. M., Cabrelli, R., Bastos, L. S., Nobre, A. A., Rotenberg, L., and Griep, R. H. (2016). Factors associated with overweight: are the conclusions influenced by choice of the regression method? *BMC public health*, 16(1):642.

- Coelho, F. C., Durovni, B., Saraceni, V., Lemos, C., Codeço, C. T., Camargo, S., De Carvalho, L. M., Bastos, L., Arduini, D., Villela, D. A., et al. (2016). Higher incidence of zika in adult women than adult men in rio de janeiro suggests a significant contribution of sexual transmission from men to women. *International Journal of Infectious Diseases*, 51:128–132.
- Codeço, C., Villela, D., Gomes, M. F., Bastos, L., Cruz, O., Struchiner, C., Carvalho, L. M., and Coelho, F. (2016). Zika is not a reason for missing the olympic games in rio de janeiro: response to the open letter of dr attaran and colleagues to dr margaret chan, director-general, who, on the zika threat to the olympic and paralympic games. *Memórias do Instituto Oswaldo Cruz*, 111(6):414–415.
- de Carvalho, L. M., Villela, D. A. M., Coelho, F. C., and Bastos, L. S. (2015). Choosing the weights for the logarithmic pooling of probability distributions. Technical Report arXiv:1502.04206, arXiv preprint.
- Carvalho, L. M., Struchiner, C. J., and Bastos, L. S. (2015). Bayesian Inference of Deterministic Population Growth Models. In *Interdisciplinary Bayesian Statistics*, pages 217–228. Springer.
- Bittencourt, S. D. d. A., Gurgel, R. Q., Menezes, M. A. d. S., Bastos, L. S., and Leal, M. d. C. (2015). Neonatal care in Brazil: hospital structure and adequacy according to newborn obstetric risk. *Paediatrics and International Child Health*, 35(3):206–212.
- Bastos, L. S., Oliveira, R. d. V. C. d., and Velasque, L. d. S. (2015). Obtaining adjusted prevalence ratios from logistic regression models in cross-sectional studies. *Cadernos de Saúde Pública*, 31(3):487–495.
- Zapata-Vázquez, R. E., O’Hagan, A., and Bastos, L. S. (2014). Eliciting expert judgements about a set of proportions. *Journal of Applied Statistics*, 41(9):1919–1933.
- Griep, R., Bastos, L. S., Fonseca, M. d. J., Silva-Costa, A., Portela, L., Toivanen, S., and Rotenberg, L. (2014). Years worked at night and body mass index among registered nurses from eighteen public hospitals in Rio de Janeiro, Brazil. *BMC Health Services Research*, 14(1):603.
- De Boni, R. B., Bertoni, N., Bastos, L. S., and Bastos, F. I. (2014). Unrecorded alcohol in Rio de Janeiro: Assessing its misusers through Respondent Driven Sampling. *Drug and Alcohol Dependence*, 139:169–173.
- Bazin, G. R., Gaspar, M. C. S., da Silva, N. C. X. M., Mendes, C. d. C., de Oliveira, C. P., Bastos, L. S., and Cardoso, C. A. A. (2014). Terapia antirretroviral em crianças e adolescentes infectados pelo HIV: o que sabemos após 30 anos de epidemia. *Cadernos de Saúde Pública*, 30(4):687–702.
- Bastos, L. S. and da Rosa, J. M. C. (2013). Predicting probabilities for the 2010 FIFA World Cup games using a Poisson-Gamma model. *Journal of Applied Statistics*, 40(7):1533–1544.
- Paiva, N. S. and Bastos, L. S. (2012). Análise do risco de mortalidade e de morbidade hospitalar do SUS por doenças respiratórias usando modelo de regressão Poisson com efeitos aleatórios. *Revista Brasileira de Estatística*, 2(237):93–115.
- Bastos, L. S., Pinho, A. A., Codeço, C., and Bastos, F. I. (2012). Binary regression analysis with network structure of respondent-driven sampling data. Technical report, ArXiv e-prints.
- Bastos, L. S. (2010). *Validating Gaussian Process Models in Computer Experiments*. PhD thesis, University of Sheffield.
- Bastos, L. S. and OHagan, A. (2009). Diagnostics for Gaussian Process Emulators. *Technometrics*, 51(4):425–438.
- Bastos, L. S. and Gamerman, D. (2006). Dynamic survival models with spatial frailty. *Lifetime Data Analysis*, 12(4):441–460.
- Loschi, R. H., Bastos, L. S., and Iglesias, P. L. (2005). Identifying Volatility Clusters Using the PPM: A Sensitivity Analysis. *Computational Economics*, 24(4):305–319.

## TEACHING

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**Lecturer** Graduate program of Epidemiology at Brazilian School of Public Health (Fiocruz)  
*PhD and MSc supervisor*  
*Generalized linear models; Multilevel modelling; Statistics for Epidemiologists; Statistical models I; Applied Bayesian Modelling*  
2013-

**Adjunct Professor** Fluminense Federal University  
*Undergraduate dissertation Advisor*  
*Probability; Dynamic Linear Models; Survival Analysis; Bayesian inference*  
2010-2012

**Assistant professor** Paraná Federal University  
*Undergraduate dissertation advisor*  
*Sampling techniques; Design of Experiments*  
2006

## AWARDS AND GRANTS

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**PhD Studentship** Natural Environment Research Council via The University of Sheffield  
*£ 14,000 per annum stipend and consumables*  
2006-2010

**Installing assistant grant** Fundação de Amparo a Pesquisa do Estado do Rio de Janeiro (FAPERJ)  
*≈ \$2000*  
2014-2015

**Universal CNPq grant** Brazilian Research Council (CNPq)  
*≈ \$3,000*  
2014-2015

**ABE M.Sc Prize** Brazilian Statistical Association (ABE)  
*The 3rd. Best M.Sc in Statistics*  
2003

## CODING AND HIGH PERFORMANCE COMPUTING

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<b>R</b>	Advanced
<b>BUGS, JAGS, Stan</b>	Advanced
<b>Bash</b>	Proficient
<b>C/C++</b>	Proficient

## REFERENCES

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**Dr. Francisco I Bastos**  
*Public Health Researcher*  
*Fundação Oswaldo Cruz*  
*Rio de Janeiro, Brazil*  
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**Professor Trevor Bailey**  
*Emeritus Professor of Applied Statistics*  
*College of Engineering, Mathematics and Physical Sciences*  
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**Professor Anthony O'Hagan**  
*Emeritus Professor of Statistics*  
*School of Mathematics and Statistics*  
*The University of Sheffield*  
*Sheffield, UK*  
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