Phd in Statistics · Edinburgh, Scotland · **thiago.oliveira@ed.ac.uk** · Phone: +44 7474 338884

Thiago de Paula Oliveira | CV

I'm an enthusiastic **biostatistician** with ten years of academic experience and a passion for data analysis to help people understand their data. I designed and conducted agricultural experiments, and I am an experienced professional in statistical modelling, working in different areas such as agriculture, sports, and genetics. I have produced peer-reviewed papers in those areas and written technical reports. In addition, I have exceptional analytical and communication skills to interact with clients and provide the desired output. I'm looking now for an exciting opportunity in the industry. For more information about me, please, visit my blog https://prof-thiagooliveira.netlify.app/.

Technical Skills

- Statistics: High statistical awareness, focusing on statistical modelling and data analysis. I've worked with generalized linear mixed models, splines, longitudinal data, concordance analysis, state-space approach, pedigree and genomic-based models, graphical models, and non-linear models. I have experience with **classical and Bayesian views**.
- Genetics: I have experience in simulating **animal and plant breeding programmes** to test and compare new schemes or evaluate how to improve genetic mean and variance. I also have experience in helping breeders with statistical analysis of real data using software/packages like `blupf90`, `BGLR`, `JAGS`, and `STAN`.
- Sports: Theory and application of statistical methods to evaluate **athlete performance and clinical trials**.
- Agriculture: **Planning experimental designs**, analysis of entomologic and vegetable production data
- R Packages: I am enthusiast in creating `R` packages or functions as a solution to standardize statistical analysis and delivery faster responses to clients. Some of public packages: `AlphaPart`, `AlphaSimR`, `lcc`.
- Dashboard: I have skills in creating shiny dashboards as a solution for interactive data visualization and analysis for clients. Example of public shiny app I developed: COVID-19 prediction, Experiment Design.
- GitHub: I am managing the Highlander Lab and AlphaGenes organizations. I handle repositories, actions, projects, teams, and pull requests.
- HPC Servers: I have experience working with **high-performance computers** at the University of Edinburgh to do statistical analysis.

Software and Language Skills

- Statistical computing: `R`, `Shiny`, `RStudio`, `Bash`, `Maple`, `SageMath`, `C++`, `blupf90`
- Computational programs: GitHub, LaTeX, Markdown, Office 365, Inkscape
- Operational systems: Unix|Linux, Mac, Windows
- Languages: Portuguese (native), English

Client Focus

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I worked together with partners from different companies and universities over the last few years. Some examples:

- ORRECO: I supported and delivered statistical models and dashboards to measure athlete performance.
- Aspire Academy: Long-term athlete's performance forecast on several Olympic sports. I also delivered a dashboard that shows descriptive statistics and statistical quantities of interest.
- Limagrain: development of maize breeding programmes and statistical modelling

With those interactions, I've developed some skills such as i) ability to lead meetings and communicate professionally and positively; and ii) how to listen and understand client needs.

Professional Experience

2020-Actual	Researcher Fellow	University of Edinburgh

- PI: Dr. Gregor Gorjanc
- Quantitative genetics and genomics of plant breeding
- The Roslin Institute

2019-2020 (14 months)	Postdoc in Biostatistics	NUIGalway

- PI: Prof. Dr. John Newell and Prof. Dr. Carl Scarrott
- Aspire Academy research collaboration project, Statistical modelling for optimizing athlete performance, and early detection of secondary waves of Covid-19 infections.
- School of Mathematics, Statistics & Applied Maths; and Insight Centre for Data Analytics

2017 – 2019 Assistant Professor at University of São Paulo – ESALQ/USP (18 months)

Education

2014 – 2018 (4 years)	PhD in Statistics	University of São Paulo – ESALQ/USP

- Title: Estimating the longitudinal concordance correlation through fixed effects and variance components of polynomial mixed-effects regression model
- Advisor: Dr. Silvio Sandoval Zocchi and Prof. John Hinde
- Department of Exact Sciences

2016 (3 months)	Visiting scholar – internship	NUIGalway

- Supervisor: Prof. John Hinde
- School of Mathematics, Statistics and Applied Mathematics
- Development of new methodology in Concordance Analysis

2012 – 2014 (2 years)	MSc in Statistics	University of São Paulo – ESALQ/USP

- Title: Mixed-effects models applied to hue peel color of papaya cv. Sunrise Solo measured by an scanner and colorimeter over time
- Advisor: Dr. Silvio Sandoval Zocchi
- Department of Exact Sciences

2007 – 2012 (5 years) BSc in Agricultural Engineering — University of São Paulo – ESALQ/USP

- Title: Calibration of scanner methodology to evaluate 'Golden' papaya peel color.
- Advisor: Dr. Silvio Sandoval Zocchi
- Department of Exact Sciences

Teaching and Supervision

2017-2018 Teaching experience in **Experimental Statistics** and **Calculus** at the University of São Paulo. In addition, I worked with students from Agricultural Engineering, Forest Engineering, and Food Science programmes.

Supervision Experience in **supervising** under- and post-graduate students.

Awards

2020 Marie Skłodowska-Curie COFUND Fellowship under the project "Quantitative genetics and genomics of plant breeding"

2010 Honorable Mention at the 18^{th} USP International Symposium of Undergraduate Research, University of São Paulo.

Most relevant publications

Preprint **Oliveira, T.P.**; Obšteter, J.; Pocrnic, I.; Heslot, N.; Gorjanc, G. A method for partitioning trends in genetic mean and variance to understand breeding practices, **BioRxiv**, 2022. DOI: https://doi.org/10.1101/2022.01.10.475603

Article Lara, L.A.d.C.; Pocrnic, I.; **Oliveira, T.P.**; Gaynor, C.; Gorjanc, G. Temporal and genomic analysis of additive genetic variance in breeding programmes, **Heredity**, 2021. DOI: 10.1038/s41437-021-00485-y

Article **Oliveira, T.P.**; Buinvels, G; Pedlar, C.; Newell, J. Modelling menstrual cycle length in athletes using state-space models, **Scientific Reports**, 11, 2021. DOI: 10.1038/s41598-021-95960-1

Article **Oliveira, T.P.**; Moral, R. A.; Zocchi, S. S.; Demetrio, C. G. B; Hinde, J. Icc: an R package to estimate the concordance correlation, Pearson correlation, and accuracy over time. **PeerJ**. Accepted for publication in August of 2020. DOI: 10.7717/peerj.9850

Article Popin, G. V.; Santos, A. K. B.; **Oliveira, T.P.**; Camargo, P. B.; Cerri, C. E. P.; Siqueira-Neto; M. Sugarcane straw management for bioenergy: effects of global warming on greenhouse gas emissions and soil carbon storage. **Mitigation and Adaptation Strategies for Global Change**, 2019. Link: https://doi.org/10.1007/s11027-019-09880-7

Article Esteves, M. B.; Kleina, H. T.; Sales, T. M.; **Oliveira, T.P.**; Lara, I. A. R.; Almeida, R. P. P.; Coletta-Filho, H. D.; Lopes, J. R. S. Transmission efficiency of *Xylella fastidiosa* subsp. *pauca* sequence types by sharpshooter vectors after *in vitro* acquisition. **The American Phytopathological Society**, v. 109, no.2, 2019. Link: https://doi.org/10.1094/PHYTO-07-18-0254-FI

Article **Oliveira, T.P.**; Hinde, J.; Zocchi, S. S. Longitudinal Concordance Correlation Function Based on Variance Components: An Application in Fruit Color Analysis. **Journal of Agricultural, Biological, and Environmental Statistics**, v. 23, p. 233-254, 2018. Link: https://doi.org/10.1007/s13253-018-0321-1

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