PhD in Statistics · Edinburgh, Scotland · **thiago.oliveira@ed.ac.uk**

Thiago de Paula Oliveira | CV

Enthusiastic **biostatistician** with ten years of academic experience and a passion for applied statistics to help people understand their data. Experienced professional in **statistical modelling** and **experimental design**, working in different areas such as **agriculture, sports, and genetics**. I have science production covering those areas with peer-reviewed papers and technical reports. In addition, exceptional analytical and communication skills were developed as a result of interaction with clients. 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:
Simulating **animal and plant breeding programmes** to test and compare new schemes or evaluate how to improve genetic mean and variance. 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:
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:
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:
Managing the Highlander Lab and AlphaGenes organizations. I handle repositories, actions, projects, teams, and pull requests.

❯ HPC Servers:
Ability to work 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

❯ Operational systems:
Unix|Linux, Mac, Windows

❯ Other programmes:
Inkscape, Slack, Evernote, ClikUp, Zoom, Teams

❯ Languages:
Portuguese (native), English

»»» Client Focus

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 athletes' 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	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	PhD in Statistics	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

2016	Visiting scholar − internship	NUI Galway

- ❱ Supervisor: Prof. John Hinde
- ❱ Development of new methodology in Concordance Analysis

2012 − 2014	MSc in Statistics	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

2007 − 2012	BSc in Agricultural Engineering	ESALQ/USP

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

❯❯❯ Teaching and Supervision

2017-2018	Teaching experience in **Experimental Statistics** (160h) and **Calculus** (480h) 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 2 under-graduate students** and **1 PhD candidate**.

❯❯❯ Awards

2020	Marie Skłodowska-Curie COFUND Fellowship under the project "Quantitative genetics and genomics of plant breeding"
2010	Honorable Mention at the 18th 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. lcc: 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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