

Thiago de Paula Oliveira | CV

- » Statistical computing: R, Shiny, Maple, SageMath
- » Computational programs: LaTeX, Markdown, Office, Gimp, Inkscape, GitHub
- » Operational systems: Linux, Mac, Windows
- » Languages: Portuguese (native), English
- » Research web pages: ORCID, Plubons, Personal Webpage



»»» General Information

- » Work Address: The University of Edinburgh, Easter Bush Campus, Midlothian EH25 9RG, Scotland
- » Tel: +353 83 3814459
- » E-mail Address: thiago.oliveira@ed.ac.uk
- » Date of Birth: 01 February 1985, Tatuí, Brazil
- » Nationality: Brazilian
- » Marital Status: Married

»»» Summary

I hold a PhD in Statistics from the University of São Paulo, Brazil, and have at least eight years of experience in experimental statistics, statistical modelling, and concordance analysis. As a PhD candidate, I was a visiting Scholar at the National University of Ireland in 2016, working with statistical modelling for agricultural data. Besides, I was a lecturer in the Department of Exact Sciences at ESALQ/University of São Paulo, Piracicaba, São Paulo, Brazil from 2017 to 2019.

I worked as a Researcher Biostatistician from 2019-2020 at Insight Centre for Data Analytics in partnership with Orreco, School of Mathematics, Statistics, and Applied Mathematics, and NUI Galway in the development of statistical methods applied to athlete performance, and predictive models for COVID-19. I developed statistical methods in longitudinal concordance correlation, multilevel model (hierarchical model), generalized linear mixed-effects model, state-space models, experimental design, longitudinal data.

As an enthusiast of the usage of dashboard apps to create an interactive data visualization, I believe that interactive applications are an easier way to create visual representations of large scale data sets, allowing the user explore the complex reality of the database, or even handle multiple sets of data in a single visualization.

Recently, I was awarded a Marie Skłodowska-Curie Individual Fellowship to work at The Roslin Institute - The University of Edinburgh, where I currently work on the development of statistical models applied to quantitative genetics and genomics of plant breeding in partnership with Limagrain.

»»» Education

2014 – 2018 PhD in Statistics
(4 years)

University of São Paulo –
ESALQ/USP

	<ul style="list-style-type: none"> » 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
	<ul style="list-style-type: none"> » 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
	<ul style="list-style-type: none"> » 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
	<ul style="list-style-type: none"> » Title: Calibration of scanner methodology to evaluate 'Golden' papaya peel color. » Advisor: Dr. Silvio Sandoval Zocchi » Department of Exact Sciences 	

»»» Professional experience

2020-Actual	Researcher Fellow	University of Edinburgh
	<ul style="list-style-type: none"> » PI: Dr. Gregor Gorjanc » Quantitative genetics and genomics of plant breeding » The Roslin Institute 	
2020 (3 months)	Postdoc in Biostatistics	NUIGalway
	<ul style="list-style-type: none"> » Supervisor: Prof. Dr. Carl Scarrott » Early Detection of Secondary Waves of Covid-19 Infections » School of Mathematics, Statistics & Applied Maths; and Insight Centre for Data Analytics 	
2020 (3 months)	Postdoc in Biostatistics	NUIGalway
	<ul style="list-style-type: none"> » Supervisor: Prof. Dr. John Newell » Aspire Academy research collaboration project » School of Mathematics, Statistics & Applied Maths; and Insight Centre for Data Analytics 	

2019
(8 months)

Postdoc in Biostatistics

NUI Galway

- » Supervisor: Prof. Dr. John Newell
- » Statistical modeling for optimizing athlete performance
- » School of Mathematics, Statistics & Applied Maths; Orreco; and Insight Centre for Data Analytics

2018-2019
(10 months)

Postdoc in Statistics

University of São Paulo –
ESALQ/USP

- » Advisor: Prof. Dr. Clarice Garcia Borges Demétrio
- » Title: Estimation of the longitudinal concordance correlation function: The lcc package
- » Department of Exact Sciences

2017 – 2019

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

»»» Volunteer experience

2016 Class tutor in Calculus at University of São Paulo – ESALQ/USP (5 months)

2015 Class tutor in Statistics at University of São Paulo – ESALQ/USP (5 months)

»»» Research experience

Generalized linear mixed-effects models (Classical and Bayesian)

Concordance analysis (Agreement, precision, and accuracy measures)

Bootstrap methods for confidence intervals (Non-parametric and parametric)

Experimental Designs (Complete and Incomplete Blocks, Latin Square, Full factorial, Fractional Factorial, Split-Plot, Central Composite, Nested designs)

Longitudinal data and Observational Studies

State space models (ARMA, ARIMA and Random Walk models)

Digital Image Analysis, Agricultural Production, Post-Harvest Studies

Development of R packages, Dashboard Design, and Webpages (Github)

»»» Publications

Table 1: Publications summary

	Article	R Package	Abstract	Preprint
Number	6	1	11	1

Papers in Peer-Reviewed Journals

Article

Oliveira, T.P.; Moral, R. A.; Zocchi, S. S.; Demétrio, 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	Kleina, H. T.; Kudlawiec, K.; Esteves, M. B.; Daibó, M.; Oliveira, T.P. ; Maluta, N.; Lopes, J. S.; Mio, L. M. Association of leaf morphology, vector settling and feeding behavior with resistance of plum genotypes to leaf scald disease. Entomologia Experimentalis et Applicata . Accepted for publication in August of 2020. DOI: 10.1007/s10658-020-02104-8
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 <i>Xylella fastidiosa</i> subsp. <i>pauca</i> sequence types by sharpshooter vectors after <i>in vitro</i> 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
Article	Oliveira, T.P. ; Zocchi, S. S. ; Jacomino, A. P. Measuring color hue in 'Sunrise Solo' papaya using a flatbed scanner. Revista Brasileira de Fruticultura , v. 39, p. e-911, 2017. Link: http://dx.doi.org/10.1590/0100-29452017911

Software

R package	Oliveira, T.P. ; Moral, R. A.; Hinde, J.; Zocchi, S. S.; Demetrio, C. G. B. lcc: Longitudinal Concordance Correlation , R package version 1.0.2, 2018. See also https://github.com/Prof-ThiagoOliveira/lcc
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Preprint

Preprint	Oliveira, T.P. ; Moral, R.A. Global Short-Term Forecasting of Covid-19 Cases , arXiv:2006.00111v1 , 2020. Link: https://arxiv.org/pdf/2006.00111.pdf
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Proceedings

Extended abstract	Oliveira, T.P. ; Moral, R.A.; Hinde, J.; Zocchi, S.S.; Demétrio, C.G.B. The longitudinal concordance correlation. In: 34th International Workshop on Statistical Modelling , 2019, Guimarães. Proceedings of the 34 th International Workshop on Statistical Modelling, 2019. v. 2.
Abstract	Zocchi, S.S.; Oliveira, T.P. Propagação de <i>Penicillium</i> em laranja (<i>Citrus cinensis</i>): estimulando o aprendizado de cálculo. 1º Oficina para o desenvolvimento docente de 2017, "Novas abordagens de ensino - compartilhando experiências na ESALQ", 2017
Abstract	Oliveira, T.P. ; Hinde, J.; Zocchi, S.S. Longitudinal Concordance correlation function based on variance components: an application in fruit color analysis. NUIG Statistics MiniSymposium, 2016.
Extended abstract	Oliveira, T.P. ; Moral, R.A.; Hinde, J.; Demétrio, C.G.B.; Zocchi, S.S.; Zanardo, A.B.R.; Delalibera Jr., I. Generalized linear mixed models applied to overdispersed proportion data in a fungal occurrence study. In: 30th International Workshop on Statistical Modelling , 2015, Linz. Proceedings of the 30 th International Workshop on Statistical Modelling, 2015. v. 2. p. 203-206.
Abstract	Oliveira, T.P. ; Moral, R.A.; Hinde, J.; Demétrio, C.G.B.; Zocchi, S.S. Generalized linear mixed models: an application in fungal occurrence data. In: 60º Reunião Anual da Região Brasileira da Sociedade Internacional de Biometria e 16º Simpósio de Estatística Aplicada à Experimentação Agronômica , 2015, Presidente Prudente. Reunião Anual da Região Brasileira da Sociedade Internacional de Biometria, n. 60, Presidente Prudente, 2015. 172 p., 2015.

- Abstract** **Oliveira, T.P.;** Zocchi, S.S. ; Ferreira, I. E.P. Mixed models for analysis of hue peel colour of papaya (*Carica papaya* L.) cv. Sunrise Solo, measured along time by means of a scanner and a colorimeter. In: XXVII International Biometric Conference, 2014, Florence, Italy. Proceedings of XXVII International Biometric Conference, 2014. v. 1.
- Abstract** **Oliveira, T.P.;** Zocchi, S.S. Mixed models for analysis of hue peel color of papaya (*Carica papaya* L.) cv. 'Sunrise Solo', measured along time by means of a scanner and a colorimeter. I Workshop on Experimental Statistics e IV Encontro dos Alunos do PPG em Agronomia (Estatística e experimentação agrônômica), 2014.
- Extended abstract** **Oliveira, T.P.;** Zocchi, S. S. . Análise de dados circulares com aplicação em tonalidade da cor de casca de mamão 'Sunrise Solo'. In: **58ª Reunião Anual da Região Brasileira da Sociedade Internacional de Biometria e 15º Simpósio de Estatística Aplicada à Experimentação Agrônômica**, 2013, Campina Grande. Anais..., 2013. p. 202.
- Extended abstract** **Oliveira, T.P.;** Zocchi, S. S. Análise de dados circulares com aplicação em tonalidade da cor de casca de mamão 'Sunrise Solo'. In: **58ª Reunião Anual da Região Brasileira da Sociedade Internacional de Biometria e 15º Simpósio de Estatística Aplicada à Experimentação Agrônômica**, 2013, Campina Grande. Anais..., 2013. p. 202.
- Abstract** **Oliveira, T.P.;** Zocchi, S. S. Modelos lineares de efeitos mistos: um estudo de caso. Encontro dos Alunos do Programa de Pós-Graduação em Estatística e e Experimentação Agrônômica, 2013
- Abstract** Camara, G. M. S.; **Oliveira, T.P.;** Navarro, B. L. ; Brigliadori, L. D. Crescimento e produtividade de soja em três arranjos espaciais. In: **VI Congresso Brasileiro de Soja**, 2012, Cuiabá-MT. Anais. Londrina-PR : Embrapa Soja, 2012. v. 1. p. 151-153.

Thesis

- Thesis** **Oliveira, T.P.** Estimating the longitudinal concordance correlation through fixed effects and variance components of polynomial mixed-effects regression model. University of São Paulo, 2018
- Thesis** **Oliveira, T.P.** Mixed-effects models applied to hue peel color of papaya cv. Sunrise Solo measured by an scanner and colorimeter over time. University of São Paulo, 2014

Reviewer

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|------|---|----------------------|
| 2019 | Biocontrol Science and Technology, Taylor & Francis | Link |
| | » Number of papers reviewed: 1 | |
| 2020 | PeerJ - Life and Environment | Link |
| | » Number of papers reviewed: 2 | |

Masters and PhD Examiners

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| 2019 | Nascimento, C.O.; Lara, I.A.R. Analysis of color peel of the papaya cv. Sunrise Solo through of the mixed linear regression model. Thesis (Master's Degree in Statistics) – University of São Paulo, Piracicaba, Brazil. |
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Awards

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| 2020 | Runner-up Poster on Young-ISA Twitter Poster Conference promoted by the Irish Statistical Association. Poster Title: Global short-term forecasting of Covid-19 cases. Authors: Oliveira, T.P.; Moral, R.A., July, 2020 |
| 2020 | Marie Skłodowska-Curie Actions Fellowship for her project "Development and optimisation of statistical models for global crop breeding programs" |

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

»»» Extracurricular courses (last 5 years)

2020 Programming Fundamentals, Coursera, Duke University, USA. (32h)

2019 Survival Analysis in R. DataCamp, USA. (4h)

2019 Building Web Applications in R with Shiny: Case Studies Course. DataCamp, USA. (4h)

2019 Building Dashboards with shinydashboard. DataCamp, USA. (4h)

2019 Building Web Applications in R with Shiny. DataCamp, USA. (4h)

2019 Introduction to Python. DataCamp, USA. (4h)

2019 Statistical Modeling in R (Part 1). DataCamp, USA. (4h)

2019 Intermediate R. DataCamp, USA. (6h)

2019 Introduction to R. DataCamp, USA. (4h)

2018 Machine Learning Toolbox. DataCamp, USA. (4h)

2016 Longitudinal and Incomplete Data – USP (30h)

2015 Short curse on Regression Models – Coursera, MOOC, USA (36h)

2015 Short curse on Dimensionality Reduction – USP

2015 Additive Generalized Models with P-splines – RBras

2015 Exploring interactive graphical interfaces in R – RBras

2015 Exploring the Flexibility of Linear Mixed Models – RBras

2015 Special Topics in Multivariate Analysis – RBras

»»» Event participation (last 5 years)

2019 The Inaugural Young-ISA Meeting – Maynooth, Co. Kildare, Ireland

2019 34th meeting of the International Workshop on Statistical Modelling (IWSM) – Guimarães, Portugal.

2016 NUIG Statistics MiniSymposium. Longitudinal Concordance correlation function based on variance components: an application in fruit color analysis.

2015 30th meeting of the International Workshop on Statistical Modelling (IWSM) – Linz, Vienna.

2015 60th meeting of the Brazilian Region International Biometric Society (RBras) e 16° “Simpósio de Estatística Aplicada à Experimentação Agronômica” – Presidente Prudente, SP, Brazil

2015	How to Write for and Get Published in Scientific Journals – Piracicaba, SP, Brazil
2014	II Workshop on Longitudinal and Incomplete Data – Piracicaba, SP, Brazil
2014	I Workshop on Experimental Statistics e IV “Encontro dos Alunos do PPG em Agronomia” – Piracicaba, SP, Brazil

»» Teaching Experience

Taught Modules

2018	LCE0602 Experimental Statistics, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , August-December.
2018	LCE0220 Calculus II, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , August - December.
2018	LCE0120 Calculus I, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , August - December.
2018	LCE0120 Calculus I, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , February - June.
2018	LCE0220 Calculus II, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , February - June.
2018	LCE0130 Differential and Integral Calculus, University of São Paulo, Piracicaba, Brazil, <i>Food Science programme</i> , February - June.
2017	LCE0602 Experimental Statistics, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , August - December.
2017	LCE0120 Calculus II, University of São Paulo, Piracicaba, Brazil, <i>Agricultural Engineering programme</i> , August - December.

Taught Short Courses

2018	I Workshop on Introduction to Experimental Design, University of São Paulo, Piracicaba, Brazil
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Teaching Assistance

2016	LCE0120 - Calculus I, University of São Paulo, Piracicaba, Brazil, taught by Dr. Silvio Sandoval Zocchi for undergraduate students of the Agricultural Engineering programme, 120h
2015	LLCE0220 Calculus II, University of São Paulo, Piracicaba, Brazil, taught by Prof. Idemauro Antonio Rodrigues de Lara for undergraduate students of the Agricultural Engineering programme, August-December, 120h
2015	LLCE0211 Statistics, University of São Paulo, Piracicaba, Brazil, taught by Dr. Silvio Sandoval Zocchi for undergraduate students of the Agricultural Engineering programme, February-June, 120h
2013	LLCE0220 Calculus II, University of São Paulo, Piracicaba, Brazil, taught by Prof. Idemauro Antonio Rodrigues de Lara for undergraduate students of the Agricultural Engineering programme, August-December, 120h
2013	LLCE0166 Calculus and Mathematics Applied to Food Sciences, University of São Paulo, Piracicaba, Brazil, taught by Dr. Silvio Sandoval Zocchi for undergraduate students of the Food Sciences programme, February-June, 120h

»»» Lectured workshops and invited talks

2020	Global Short-Term Forecasting of Covid-19 Cases. Webinar Series of the Young-ISA, Ireland
2020	Global Short-Term Forecasting of Covid-19 Cases. Workshop on Applied Statistics: Prediction models for COVID-19, Artificial Intelligence and Postgraduate Research during pandemic time. University of São Paulo, Brazil
2020	Estimating NBA athlete performance using hierarchical models, National University of Ireland Galway, Ireland, 21 April 2020
2019	Modelling athletes menstrual cycle length using state space models. NUI Galway, Ireland
2019	Modelling menstrual cycle length using state space models. The Inaugural Young-ISA Meeting – Maynooth, Ireland
2016	Longitudinal concordance correlation function based on variance components: an application in fruit color – NUI Galway

»»» Professional Websites and Apps

Blog	https://prof-thiagooliveira.netlify.app	Link
Github	https://github.com/Prof-ThiagoOliveira	Link
Calculus	https://prof-thiagooliveira.github.io/calculus	Link
lccApp	https://prof-thiagooliveira.shinyapps.io/lccApp	Link

»»» Fellowship

2020	Science Foundation Ireland	SFI
	» Postdoctoral Researcher in Biostatistics / Coordinator: Prof. Carl Scarrott » Project: Early Detection of Secondary Waves of Covid-19 Infections » Project Funding: €32,618	
2020	Science Foundation Ireland	SFI
	» Postdoctoral Researcher in Biostatistics / Coordinator: Prof. John Newell » Project: Aspire Academy research collaboration project » Project Funding: €20,000	
2019	Science Foundation Ireland	SFI
	» Postdoctoral Researcher in Biostatistics / Coordinator: Prof. John Newell » Project: Development of statistical model with application in athlete performance » Project Funding: €12,417,097	
2018-2019	Coordination of Improvement of Higher Education Personnel	CAPES
	» Postdoctoral Researcher / Coordinator: Prof ^a . Clarice G. B. Demétrio » Project: Estimation of Longitudinal Concordance Correlation Function: The lcc package » Grants awarded: approximately £7,000	

2014-2017	National Council for Scientific and Technological Development	CNPq
	<ul style="list-style-type: none"> » PhD / Advisor: Prof. Silvio Sandoval Zocchi » Project: Estimating the longitudinal concordance correlation through fixed effects and variance components of polynomial mixed-effects regression model » Grants awarded: approximately £26,543 	
2012-2013	Coordination of Improvement of Higher Education Personnel	CAPES
	<ul style="list-style-type: none"> » Master / Advisor: Prof. Silvio Sandoval Zocchi » Project: Mixed effects models applied to hue peel color of papaya (<i>Carica papaya</i> L.) cv. "Sunrise Solo" measured over time using a scanner and a colorimeter » Grants awarded: approximately £15,082 	
2011	São Paulo Research Foundation	FAPESP
	<ul style="list-style-type: none"> » Scientific initiation / Advisor: Prof. Silvio Sandoval Zocchi » Process number: 2010/16955-1 » Grants awarded: approximately £3,000 	

»»» References

Dr. Gregor Gorjanc	University of Edinburgh
<ul style="list-style-type: none"> » Phone: » Email: gregor.gorjanc@roslin.ed.ac.uk 	
Prof. Dr. Carl Scarrott	NUI Galway
<ul style="list-style-type: none"> » Phone: +64 3 3642587 » Email: carl.scarrott@canterbury.ac.nz 	
Prof. John Newell	NUI Galway
<ul style="list-style-type: none"> » Phone: +353 (0) 91 524411 » Email: john.newell@nuigalway.ie 	
Prof. John Hinde	NUI Galway
<ul style="list-style-type: none"> » Phone: +353 (0) 91 492043 » Email: john.hinde@nuigalway.ie 	
Dr. Rafael de Andrade Moral	Maynooth University
<ul style="list-style-type: none"> » Phone: +353 (1) 708 6645 » Email: rafael.deandrademoral@mu.ie 	

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