

Thiago de Paula Oliveira | CV

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



»»» General Information

- » Work Address: National University of Ireland, Galway, University Road, Galway, Ireland, H91 TK33
- » Tel: +353 83 3814459
- » E-mail Address: thiago.paula.oliveira@usp.br
- » Date of Birth: 01 February 1985, Tatuí, Brazil
- » Nationality: Brazilian
- » Marital Status: Married

»»» Summary

Dr. Thiago de Paula Oliveira holds his PhD in Statistics from University of São Paulo, Brazil, and has at least seven years experience in experimental statistics, statistical modeling, and concordance analysis. As PhD candidate, he was a visitor Scholar at National University of Ireland in 2016, working with statistical modeling for agricultural data. He was a lecturer in the Department of Exact Sciences at ESALQ/University of São Paulo, Piracicaba, São Paulo, Brazil from 2017 to 2019.

He was a Researcher Biostatistician at Insight Centre for Data Analytics working in partnership with Orreco and NUI Galway in the development of statistical methods applied to athlete performance. Thiago developed statistical methods in longitudinal concordance correlation, multilevel model (hierarchical model), generalized linear mixed-effects model, experimental design, longitudinal data.

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

Currently, he is working at the NUI Galway as Researcher on development of statistical methods in sports as well as COVID-19 predictive models. Furthermore, he was awarded a Marie Skłodowska-Curie Individual Fellowship to work at The Roslin Institute - University of Edinburgh (AlphaGenes group).

»»» Education

2014 – 2018 PhD in Statistics
(4 years)

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
	<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	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	NUIGalway
	<ul style="list-style-type: none"> » 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
	<ul style="list-style-type: none"> » Advisor: Prof. Dr. Clarice Garcia Borges Demétrio » Title: Estimation of the longitudinal concordance correlation function: The 1cc 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.; 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 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 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 *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>

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
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
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 Penicillium em laranja (Citrus cinensis): 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: 60ª 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 Agronômica , 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 Agronômica , 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. ; Briigliadori, 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

- 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

- 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.

Awards

- 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 course on Regression Models – Coursera, MOOC, USA (36h)
2015	Short course 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	34 th 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	30 th meeting of the International Workshop on Statistical Modelling (IWSM) – Linz, Vienna.
2015	60 th meeting of the Brazilian Region International Biometric Society (RBras) e 16° “Simpósio de Estatística Aplicada à Experimentação Agrônômica” – 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. 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

Github	https://github.com/Prof-ThiagoOliveira	Link
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Calculus	https://prof-thiagooliveira.github.io/calculus/	Link
lccApp	https://prof-thiagooliveira.shinyapps.io/lccApp/	Link
COVID-19 Forecast	https://prof-thiagooliveira.shinyapps.io/COVIDForecast/	Link

»»» Fellowship

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 	
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 	
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 	
2018-2019	Coordination of Improvement of Higher Education Personnel	CAPES
	<ul style="list-style-type: none"> » Postdoctoral Researcher / Coordinator: Prof^a. Clarice G. B. Demétrio » Project: Estimation of Longitudinal Concordance Correlation Function: The lcc package » Grants awarded: approximately £7,000 	
2019	Science Foundation Ireland	SFI
	<ul style="list-style-type: none"> » Postdoctoral Researcher in Biostatistics / Coordinator: Prof. John Newell » Project: Development of statistical model with application in athlete performance » Project Funding: €12,417,097 	
2020	Science Foundation Ireland	SFI
	<ul style="list-style-type: none"> » Postdoctoral Researcher in Biostatistics / Coordinator: Prof. John Newell » Project: Aspire Academy research collaboration project » Project Funding: €20,000 	
2020	Science Foundation Ireland	SFI
	<ul style="list-style-type: none"> » Postdoctoral Researcher in Biostatistics / Coordinator: Prof. Carl Scarrott » Project: Early Detection of Secondary Waves of Covid-19 Infections » Project Funding: €32,618 	

»»» References

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