Pedro Miguel Teles da Fonseca

Curriculum Vitæ

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EDUCATION

2017 –	**PhD in Applied Mathematics for Economics and Management** ISEG Lisbon School of Economics and Management Research center: CEMAPRE – Center for Applied Mathematics and Economics Research topic: Bayesian model selection and hypothesis testing
2016 – 2018	**Postgraduate Degree in Statistical Systems** NOVA Information Management School Specialization: Central Banks' Statistics Program fully taught in English
2014 – 2016	**Master's Degree in Applied Econometrics and Forecasting** ISEG Lisbon School of Economics and Management Thesis: Digit Analysis Using Benford's Law, a Bayesian Approach One course taught in English
2010 – 2014	**Bachelor's Degree in Economics** ISEG Lisbon School of Economics and Management Five courses taught in English

EXPERIENCE

2020 –	**ISEG Lisbon School of Economics and Management** **Visiting Assistant Professor, Department of Mathematics** Currently teaching the following undergraduate courses: - Statistics I (probability theory, random variables, probability distributions, sampling distributions) - Statistics II (estimation, hypothesis testing, non-parametric methods, linear regression)
2017 – 2020	**FCT - Foundation for Science and Technology** **Research Fellow** Conducted research as part of my PhD program. Research field: Bayesian model selection and hypothesis testing. Worked on applications that included fraud detection and bibliometrics.
2016 – 2017	**Bank of Portugal** **6 months traineeship, Department of Statistics** Compilation of official statistics from the securitization entities operating in Portugal and from the national financial accounts, for dissemination and reporting purposes. Automation of processes regarding the generation and update of the lists of entities from the Portuguese non-monetary financial sector to be considered in the production of official statistics, using VBA, SQL and SAS programming.
2015	**BANIF - Banco Internacional do Funchal** **6 months internship, Department of Transformation and Systems** Modelling and extraction of information from BANIF's Data Wharehouse, using SAS Enterprise Guide and SQL programming, and integration with information from other internal sources. Data analysis and data quality management. Exploratory analysis of data from BANIF's help desk. Participation in the AnaCredit project, which consists in the implementation of a detailed database of individual bank loans in the euro area, harmonized across all member states.

2013	**UECE - Research Unit on Complexity and Economics**
	Research fellow
	Project motivated by the 2012 Nobel prize in economics, awarded to Alvin Roth and Lloyd Shapley for their theory of stable allocation in two sided matching markets, also known as the stable marriage problem. I integrated a team which investigated the adequacy of the matching algorithms used in some Portuguese two sided matching markets, such as the ones used by governmental agencies to assign students to public schools.

Awards and Distinctions

2016	**Best master's degree final project**
	Highest grade in a final project in the Master's in Applied Econometrics and Forecasting since 2013
2014	**Best student in the statistics II course**
	Highest grade among 155 undergraduate students

Publications

Articles

2019	Carneiro, Inês, Rita Ramos, Pedro Fonseca, Teresa Martins, Filomena Pereira and Manuela Braga (2019). Time to diagnosis of pediatric oncologic disease: ten-year experience from level II hospital. *Nascer e Crescer - Birth and Growth Medical Journal* **28**(4), 179 – 184.
2019	Carneiro, Inês, Pedro Fonseca and Rosário Ferreira, (2019). Children's Sleep Habits Questionnaire in Two Subpopulations from Cape Verde and Mozambique: Exploratory and Regression Analysis. *Acta Médica Portuguesa* **32**(10), 628 – 634.

Conference Proceedings

2017	Carneiro, Inês, Pedro Fonseca, and Rosário Ferreira (2017). Sleep habits and sleep disturbances in a pediatric population of Cabo Verde. *Sleep Medicine* **40**(Suppl 1), e210 – e211.

Open-Source Software

2020	Fonseca, Pedro (2020). inspector: Validation of Arguments and Objects in User-Defined Functions. R package available for download on CRAN. Official website: ptfonseca.github.io/inspector.
2020	Fonseca, Pedro and Rui Paulo (2020). pcal: Calibration of P-values for Point Null Hypothesis Testing. R package available for download on CRAN. Official website: https://ptfonseca.github.io/pcal.

Communications

Workshops Lectured

2020	**Introduction to R Programming**
	12 hours of online workshops. Organization: YES - Young Economics Society
2020	**Intermediate R Programming**
	4 hours of online workshops. Organization: YES - Young Economics Society

Poster Presentations

2019	**Bayesian Digit Analysis**
	O'Bayes 2019 – Objective Bayes Methodology Conference
	University of Warwick, UK
2019	**Asthma, Allergic Rhinitis and Sleep Quality in a Pediatric Population from Mozambique**
	XXV Jornadas de Pediatria
	Santa Maria Hospital, Lisbon, Portugal
2017	**Sleep Habits and Sleep Disturbances in a Pediatric Population of Cape Verde**
	World Sleep Congress 2017
	Prague, Czech Republic

Complementary Education

Summer School

2018	**Laboratory of Experimental Economics** ISEG Lisbon School of Economics and Management
2017	**Introduction to Python with applications to Artificial Intelligence** NOVA Information Management School
2016	**Computational Bayesian Statistics** Faculty of Sciences of the University of Lisbon
2014	**MATLAB** ISEG Lisbon School of Economics and Management
2013	**Banking & the Financial Crisis** Nyenrode Business University, Breukelen - Netherlands

Extracurricular Courses

2018	**Big Data** Course from the MSc in Applied Econometrics and Forecasting ISEG Lisbon School of Economics and Management
2016	**Computation** Course from the MSc in Quantitative Methods for Decision-making in Economics and Business ISEG Lisbon School of Economics and Management

Online Courses

2018	**Intro to SQL for Data Science** Datacamp
2018	**Introduction to Shell for Data Science** Datacamp
2017	**Querying with Transact-SQL** Microsoft course, attended through edX
2017	**Introduction to Python for Data Science** Microsoft course, attended through edX
2017	**Programming with R for Data Science** Microsoft course, attended through edX
2017	**Introduction to R for Data Science** Microsoft course, attended through edX
2013	**Markets with Frictions** University of Wisconsin-Madison Online, attended through Coursera
2013	**Introduction to Mathematical Thinking** Stanford University Online, attended through Coursera
2013	**Game Theory** Stanford University Online, attended through Coursera

Language Courses

2005	**First Certificate in English** British Council

Funding and Scholarships

2019	**O'Bayes 2019 travel grant** Travel grant to attend and present a poster at O'Bayes 2019 – Objective Bayes methodology conference (Warwick - UK) Funding institution: University of Warwick

2019	**O'Bayes 2019 funding** Financial support to attend and present a poster at O'Bayes 2019 – Objective Bayes methodology conference (Warwick - UK) Funding institution: CEMAPRE - Center for Applied Mathematics and Economics
2017	**PhD scholarship** Full tuition funding + monthly stipend and supplementary support. Duration: Up to 4 years Funding institution: Foundation for Science and Technology
2016	**Funding for postgraduate degree in Statistical Systems** Full tuition + fees Funding institution: Bank of Portugal
2012	**Research fellowship** Monthly stipend. Duration: Six months UTL/Santander Totta Scientific Awards Scientific field: Game Theory. Topic: Two-sided matching markets in Portugal Technical University of Lisbon Host Institution: UECE - Research Unit on Complexity and Economics

WORKSHOPS

Organized

2018	**LaTeX Typesetting Language, an Introductory Tutorial**, ISEG Lisbon School of Economics and Management
2018	**MATLAB, an Introductory Tutorial**, ISEG Lisbon School of Economics and Management

Attended

2020	**Intro to Machine Learning with Tidymodels**, 4 hours of workshop, R/Medicine 2020 pre-conference workshop lectured by Alison Hill (Rstudio)
2018	**Tidyverse & Shiny: From data manipulation to the interactive presentation of results in interactive apps**, 10 hours of workshop, Alambra Consulting

CONFERENCES ATTENDED

2020	**DSPA Insights Week 2020**, Virtual conference hosted by DSPA
2020	**R/Medicine**, Virtual conference hosted by the R consortium
2019	**O'Bayes 2019 - Objective Bayes Methodology Conference**, University of Warwick, UK
2018	**Data Science for Hospitality and Tourism**, Rectorate of the Nova University of Lisbon
2018	**Insights 2018 – Data Science and Artificial Intelligence Conference**, Rectorate of the Nova University of Lisbon

SEMINARS ATTENDED

2018	**Writing for Publication in Top Journals: Tips and Insights**, NOVA Information Management School
2018	**Road to Success: a guide for doctoral students and junior faculty members in the behavioral and social sciences**, NOVA Information Management School
2016	**The Future of Official Statistics: Potentials and Challenges**, Rectorate of the Nova University of Lisbon

COMMUNITY INVOLVEMENT

Peer-Reviewer

Since 2019	**Acta Médica Portuguesa**, the scientific journal of the Portuguese Medical Association (*Ordem dos Médicos*)

Non-Profit Associations

Since 2018	**Data-Hub** Co-Founder and Instructor Data Hub is a Data Science club founded by PhD and MSc students with the mission of raising awareness to the importance of Data Science amongst economics and business students and promoting knowledge and expertise sharing through meetings and workshops in order to provide students with the tools they need to turn data into knowledge and succeed in analytics-oriented tasks.
2010 – 2011	**AEISEG - ISEG Student's Union** Department of Marketing

Computer Skills

Programming	R, SQL, Bash, SAS, VBA, Wolfram, JAGS, Stan, Python, Git and GitHub
Markup	Markdown, R Markdown, LaTeX, Beamer, HTML and CSS
Software	R Studio, Excel, Word, Power Point, Teams, Zoom, Math Type, Solver, Eviews, Stata, MATLAB, Base SAS, SAS Enterprise Guide, SAS Enterprise Miner, SAS Studio, SQL Server, Wolfram Mathematica, VirtualBox and Visual Studio Code
Operating Systems	MacOS, Ubuntu and Windows