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## Diana Elisabeta Aldea Mendes

### Professora Associada

BRU-Iscte - Business Research Unit

Department of Quantitative Methods (IBS)



### Contacts

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### Curriculum

Diana E. Aldea Mendes is an associate professor at Department of Quantitative Methods for Management and Economics, ISCTE-IUL Lisbon, Portugal. She is a mathematician and applied scientist with broad experience in nonlinear dynamics (stochastic and deterministic), time series analysis, data science, ML and deep learning, computational economics and finance, control and synchronization. She is a researcher at BRU-IUL (Business Research Unit - University Institute of Lisbon, Portugal) and has authored or co-authored more than 40 technical papers and reports.

### Research Interests

Data Science, Machine Learning and Deep Learning, Computational Finance and Economics, Healthcare Analytics, Nonlinear time series analysis and econometrics, Dynamical systems

### Academic Qualifications

University/Institution	Type	Degree	Period
Instituto Superior Técnico - UTL	PhD	Matemática	2005
ISCTE-Instituto Universitário de Lisboa	Other type of qualification	Provas de Aptidão Pedagógica e Capacidade Científica	1999
Universitatea Babes Bolyai Facultatea de Matematica si Informatica	Licenciate	Matemática	1993

## External Professional Activities

Period	Employer	Country	Description
2012 - 2016	COST Action IS1104 (European Commission) - The EU in the new complex geography of economic systems: models, tools and policy evaluation, (DE, EE, EL, ES, FR, HU, LU, NL, PT, SE, SK, UK)	Italy	Portugal Coordinator and researcher
2006 - 2011	Exploration of entropy on decision models. Nonlinear dependence, utility and socio-economics welfare analysis, (Fundação de Ciência e Tecnologia), PTDC/GES/70529/ 2006	--	Researcher
2006 - 2011	New frontiers in applied quantitative finance: nonlinear econometric models, fractional cointegration and econophysics, (Fundação de Ciência e Tecnologia), PTDC/GES/73418/ 2006	--	Researcher

## Other Professional Activities

Period	Activity Type	Activity Description	More Info URL
2021 - 2025	Participation in business professional associations, professional standard setting of policy-making bodies	Membro eleito conselho geral Iscte	<a href="#">View More</a>
2015 - 2022	Participation in business professional associations, professional standard setting of policy-making bodies	(co)Diretora Mestrado em Matemática Financeira	<a href="#">View More</a>
2021 - 2022	Consulting activities	Avaliação técnica dos procedimentos adotados pelo Instituto Nacional de Estatística na realização do Inquérito de Qualidade dos Censos 2021	--
2021	Documented continuing professional education experiences	Python for Finance: The Quantitative Developer Certificate (QDC)	<a href="#">View More</a>

2021	Documented continuing professional education experiences	Udemy courses	--
2021	Documented continuing professional education experiences	Saúde digital e medicina centrada no doente – O que devemos saber?	<a href="#">View More</a>
2021	Documented continuing professional education experiences	JuliaCon2021	<a href="#">View More</a>
2021	Documented continuing professional education experiences	Artificial Intelligence and the Future of Quantitative Finance	<a href="#">View More</a>
2021	Documented continuing professional education experiences	Machine Learning Models for Interest Rates and Credit	<a href="#">View More</a>
2020	Documented continuing professional education experiences	JuliaCon 2020	<a href="#">View More</a>
2020	Documented continuing professional education experiences	APPLIED AI    AN ODSC FREE VIRTUAL EVENT	<a href="#">View More</a>
2020	Documented continuing professional education experiences	DataScienceGO Virtual	<a href="#">View More</a>
2019	Documented continuing professional education experiences	Web Summit 2019	<a href="#">View More</a>
2017 - 2019	Expert participation in other institutions	Identifying linearity /non-linearity in landscape evolution by integrating satellite-based radar interferometry and ground-based monitoring data. Study area: Bucharest	<a href="#">View More</a>
2019	Documented continuing professional education experiences	JuliaCon 2019	<a href="#">View More</a>
2018	Documented continuing professional education experiences	I.A. Investigação. Administração Pública - INE	<a href="#">View More</a>
Since 2021	Participation in professional events (with communication)	Redefine Banking with wide-ranging Artificial Intelligence	<a href="#">View More</a>
Since 2021	Coordination of executive education programs	Professional Diploma in Big Data for Business Engineering	--
Since 2020	Consulting activities	AI Business Hub	--
Since 2020	Participation in business professional associations, professional standard setting of policy-making bodies	Membro do grupo de missão Iscte-Health	<a href="#">View More</a>
Since 2019	Participation in business professional associations, professional standard setting of policy-making bodies	(co) Diretora do Mestrado em Ciência de Dados	<a href="#">View More</a>

Since 2019	Participation in business professional associations, professional standard setting of policy-making bodies	Coordenadora do grupo de missão em Ciência de Dados	<a href="#">View More</a>
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## Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord.
2026/2027	2º	Applied Final Project in Data Science	Bachelor Degree in Data Science;	No
2026/2027	2º	Time Series Analysis and Forecasting	Master Degree in Data Science;	Yes
2026/2027	1º	Data Driven Strategy Optimization	Institutional Degree in ISCTE Business School;	Yes
2026/2027	1º	Longitudinal Models	Bachelor Degree in Data Science;	Yes
2025/2026	2º	Applied Final Project in Data Science	Bachelor Degree in Data Science;	No
2025/2026	2º	Time Series Analysis and Forecasting	Master Degree in Data Science;	Yes
2025/2026	2º	Machine Learning applied to companies	Other programme in Advanced Program in Applied Artificial Intelligence for Management;	Yes
2024/2025	1º	Data Science Methodologies and Technologies		No
2024/2025	1º	Data Driven Strategy Optimization		Yes
2024/2025	1º	Data Visualization, Data Wrangling and Feature Engineering		No
2024/2025	1º	Supervised Learning Part 1 - Regression		No
2024/2025	1º	Supervised Learning Part 2 - Classification and Time Series		No
2024/2025	1º	Supervised Learning: Advanced Learning Models		No
2024/2025	1º	Attention is all you need: Transformers and Generative AI		No
2024/2025	1º	Big Data		No
2024/2025	1º	Risk Analysis and Management		No
2024/2025	1º	Liquidity and Operational Risks		No

2024/2025	1º	SQL Fundamentals e Python Fundamentals		No
2024/2025	1º	Credit Risk		No
2024/2025	1º	Machine Learning applied to companies	Other programme in Advanced Program in Applied Artificial Intelligence for Management;	Yes
2024/2025	1º	Econometrics of Financial Markets		Yes
2023/2024	2º	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2023/2024	2º	Applied Project in Data Science I		Yes
2023/2024	2º	Introduction to Dynamic Models		Yes
2023/2024	2º	Time Series Analysis and Forecasting	Master Degree in Data Science;	Yes
2023/2024	2º	Dissertation in Data Science		Yes
2023/2024	2º	Master Project in Data Science		Yes
2023/2024	2º	Machine Learning applied to companies	Other programme in Advanced Program in Applied Artificial Intelligence for Management;	Yes
2023/2024	1º	Data Science Methodologies and Technologies		No
2023/2024	1º	Dissertation in Data Science		Yes
2023/2024	1º	Master Project in Data Science		Yes
2023/2024	1º	Data Driven Strategy Optimization		Yes
2023/2024	1º	Data Analytics for Business Managers	Other programme in Applied online Program Business Management;	Yes
2023/2024	1º	Econometrics of Financial Markets		Yes
2022/2023	2º	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2022/2023	2º	Applied Project in Data Science I		Yes
2022/2023	2º	Time Series Analysis and Forecasting	Post Graduation Program in Data Science; Master Degree in Data Science;	Yes
2022/2023	2º	Dissertation in Data Science		Yes
2022/2023	2º	Data Analytics for Business Managers		Yes

2022/2023	1°	Introduction to Dynamic Models		Yes
2022/2023	1°	Data Science Methodologies and Technologies		No
2022/2023	1°	Dissertation in Data Science		Yes
2022/2023	1°	Econometrics of Financial Markets		Yes
2021/2022	2°	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2021/2022	2°	Applied Project in Data Science I		Yes
2021/2022	2°	Time Series Analysis and Forecasting	Master Degree in Data Science;	Yes
2021/2022	1°	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2021/2022	1°	Introduction to Dynamic Models		Yes
2021/2022	1°	Data Science Methodologies and Technologies		No
2021/2022	1°	Econometrics of Financial Markets		Yes
2020/2021	2°	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2020/2021	2°	Applied Project in Data Science I		Yes
2020/2021	2°	Time Series Analysis and Forecasting	Master Degree in Data Science;	Yes
2020/2021	1°	Advanced Topics in Macroeconomics II	Doctorate Degree (PhD) in Economics;	No
2020/2021	1°	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2020/2021	1°	Introduction to Dynamic Models		Yes
2020/2021	1°	Data Science Methodologies and Technologies		No
2020/2021	1°	Econometrics of Financial Markets		Yes
2019/2020	2°	Macro-Econometrics II	Master Degree in Monetary and Financial Economics;	Yes
2019/2020	2°	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2019/2020	1°	Data Analysis for Business Intelligence	Master Degree in Integrated Business Intelligence Systems;	Yes

2019/2020	1º	Introduction to Data Science	Institutional Degree in Escola de Tecnologias e Arquitetura;	No
2019/2020	1º	Econometrics of Financial Markets		Yes
2018/2019	2º	Advanced Econometrics II	Doctorate Degree (PhD) in Economics; Doctorate Degree (PhD) in Finance;	No
2018/2019	2º	Optimization		No
2018/2019	1º	Econometrics of Financial Markets		Yes
2017/2018	2º	Optimization		No
2017/2018	1º	Mathematics		No
2017/2018	1º	Econometrics of Financial Markets		Yes
2016/2017	2º	Optimization		No
2016/2017	1º	Mathematics		No
2014/2015	1º	Research Seminar in Economics		No
2014/2015	1º	Numerical Methods in Economics		Yes
2014/2015	1º	Mathematics I	Bachelor Degree in Economics;	No
2013/2014	2º	Calculus II		Yes
2013/2014	1º	Complexity II: Social and Human Sciences		No

## Supervisions

### • Ph.D. Thesis

#### - Ongoing

	Student Name	Title/Topic	Language	Status	Institution
1	Wang Ming	Management of medical insurance cost control based on big data mining model -a case study of Huzhou, Zhejiang, China	English	Developing	Iscte
2	Qiang Li	Strategic management of chain dental medical institution	English	Developing	Iscte
3	Paula Ciureano Moldovan	Essas on the relationships between political indicators, and real exchange rate and inflation	English	Delivered	Iscte

4	YANG Lvzhou	Financial Leasing Pricing Strategy and risk Management - based on new energy commercial vehicle industry	English	Developing	Iscte
5	Shi Jianmin	Environmental Risk Management System of Commercial Banks	English	Developing	Iscte
6	Pedro Fortes Ferreira	Estimação e seleção de cais determinístico em series temporais financeiras	Portuguese	Developing	Iscte
7	Fu Jiawei	Inquiry on Quantitative and Non-quantitative Analysis in Stock Analysis	English	Developing	Iscte
8	Guo Liang	Hardware configuration of township hospitals in Sichuan Province based on hierarchical medical system	English	Developing	Iscte
9	Li Qiang	Designing strategic management system of Chinese franchised dental medical group: Bybo-dental-group's case	English	Developing	Iscte
10	FU Jiawei	Analysis of the status quo and solutions of China's securities brokerage business	English	Developing	Iscte
11	Karina Gisela Paris da Conceição	Integrating Behavioral Economics into Business Cycle Models Using Machine Learning	English	Developing	Iscte
12	Thelma Resende	--	Portuguese	Developing	Iscte
13	Monica Isfan	--	English	Developing	Iscte

#### - Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Wang Ming	Management of medical insurance risk control based on big data mining model - a case study of HZ City, Zhejiang, China	English	Iscte	2023
2	Shi Jianmin	Environmental Risk Evaluation of Commercial Banks: Empirical Data from the Chinese Steel Industry	English	Iscte	2022
3	Yang Lvzhou	The Pricing Strategy and Risk Management of Financial Leasing - A Case Study of the New Energy Vehicle Business	English	Iscte	2022
4	Paula Cristina Ciurean Moldovan	Essays on the relationships between political indicators, and real exchange rate and inflation	English	Iscte	2022

5	Filipe Roberto de Jesus Ramos	Data Science na Modelação e Previsão de Séries Económico-financeiras: das Metodologias Clássicas ao Deep Learning	--	Iscte	2021
6	Filipe Ramos	Data Science; Deep Learning; Time Series; ARMA, ETS and DNN Models; Forecasting; Prediction Error	Portuguese	Iscte	2020
7	Zhong Hao	Management, Risk analysis, Medical equipment	English	Iscte	2015
8	Zhong Hao	The occurrence mechanism and avoidance of risk in medical equipment finance lease	--	Iscte	2015
9	Ana Maria Guedes	--	English	Iscte	2013
10	Pedro Ferreira	--	Portuguese	Iscte	2013
11	Ana Maria da Rocha de Sousa Guedes Alves	Is the Iberian electricity market chaotic? Characterization and prediction with nonlinear methods	English	Iscte	2013
12	Maria do Rosário Domingos Laureano	Sincronização de sistemas dinâmicos caóticos por ligação unidireccional e bidireccional	Portuguese	Iscte	2009

## • M.Sc. Dissertations

### - Ongoing

	Student Name	Title/Topic	Language	Status	Institution
1	Vítor Martins	--	English	Developing	Iscte
2	Bruna Alexandra Santos Maia Teixeira	Deteção e diagnóstico automático de falhas em sistemas AVAC com algoritmos de Machine Learning	--	Developing	Iscte
3	Filipe André de Oliveira Marques	Data Science Analysis of the Relationship between Macroeconomic Indicators, the Behaviour of Cryptocurrencies and Traditional Markets	--	Developing	Iscte
4	Tiago Miguel Dinis Pereira	Synthetic Data as a Tool for Robust Anomaly Detection	--	Developing	Iscte
5	Gonçalo Casaleiro Pereira Tomás Rosa	Pattern Detection in Energy Consumption	--	Developing	Iscte
6	Tatiana Eleuterio Abras	Correlation between Occupational Risk Indicators and Sectoral Economic Dynamics: A Time-Series Analysis	--	Developing	Iscte
7	Bernardo Bravo Fleming	Bayesian Learning in Financial Data	--	Developing	Iscte

8	Inês de Brito Gaspar Torres Lopes	Population ageing and the performance of health systems based on the Beveridge and Bismarck models	--	Developing	Iscte
9	Maria Guerreiro Gomes	Traffic Forecasting and Operational Simulation in Distribution Networks	--	Developing	Iscte
10	Miguel Maria Grossinho Caldeira Pais	Long-Term Forecasting in Time Series: A Comparative Approach Between Classical, LSTM, and Transformers Models	--	Developing	Iscte
11	Christoph Buermann	Optimization of Irrigation for various agricultural varieties using Artificial Intelligence	--	Developing	Iscte
12	Guilherme Alexandre da Costa Lima	Predicting Economic Recessions Using Machine Learning Models	--	Developing	Iscte
13	Duarte Luís Ferreira Vitorino Pedro	Modelos de Machine Learning para Análise de Crédito Pessoal	--	Developing	Iscte
14	Diogo Gonçalo Dias Alves	Análise de sentimento em vídeos.	--	Developing	Iscte
15	Duarte Soares Marques	IA para a previsão de geração de energia solar	--	Developing	Iscte
16	Daniele Fernandes Lyra	Deep Learning to Causality Detection in Financial Time Series	--	Developing	Iscte
17	José Pedro Lukoki	Advanced Analytics in Triathlon: Insights on Athlete Performance Based on Big Data	--	Developing	Iscte
18	Kevin Anderson Gomes Cabral	Previsão da Pobreza utilizando Algoritmos de Aprendizagem Automática	--	Developing	Iscte
19	Rafael José da Silva Lopes	Market Dynamics and Supply Chain Efficiency in the Soda Ash and Derivates Industry	--	Developing	Iscte
20	Carolina Martins Rosa	Modelos de Machine Learning para Previsão de Tráfego Aéreo: Uma Análise para Gestão e Planeamento Aeroportuário	--	Developing	Iscte
21	André da Paz Henriques Amado	Shielding Against Cyber Threats through Machine Learning Log Analysis	--	Developing	Iscte

**- Concluded**

	Student Name	Title/Topic	Language	Institution	Concluding Year
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1	Armando Filipe Milhais Mendonça Ferreira	Forecasting Patient Demand in Portuguese Hospital Emergency Departments	English	Iscte	2025
2	Inês Sofia Calmeirão Sabarigo	Photovoltaic Power Forecasting at national level using Ensemble Models	English	Iscte	2025
3	Felício Cabral Mendes	Application of Artificial Intelligence in Time Series Forecasting for Soybean Prices: An Integrated Approach Considering Climatic Factors and Historical Trends	Portuguese	Iscte	2025
4	Afonso Caseira da Cruz Calado Saraiva	Forecasting Clean-Energy Assets Returns – An introduction to Markov Regime Switching Models	English	Iscte	2025
5	Sérgio da Cunha Sobral	Study of Implied Volatility Surface with Machine Learning Techniques	English	Iscte	2025
6	Willian Felipe Santa Ana	Sentiment Analysis: The Influence of Social Media on the Financial Market	English	Iscte	2025
7	Filipa Alexandra Pereira Rodrigues	Machine Learning applied to Macroeconomics - Modeling and Forecasting Inflation in the Post-Covid Period	Portuguese	Iscte	2025
8	Caroline Dalcomuni de Moura	Personal Credit Risk Assessment with Machine Learning: Balancing Performance, Fairness, and Interpretability	English	Iscte	2025
9	João Periquito da Fonseca	Analysis of a monetary policy using a t-VAR model	Portuguese	Iscte	2025
10	Diego Júnior de Souza	The Impact of Hybrid Reinforcement and Supervised Learning Approaches in Trading	Portuguese	Iscte	2025
11	Beatriz Rodrigues Godinho	Explainable Artificial Intelligence for Parkinson's Disease Diagnosis Model	English	Iscte	2025
12	Joana Filipa Cunha Almeida	Classification of Skin Tumors using Deep Learning Models	Portuguese	Iscte	2025
13	Luís Miguel dos Santos Pereira	Unmasking Hidden Hate: Techniques for Detecting and Normalizing Obfuscated Offensive Language	English	Iscte	2025
14	Gonçalo de Sousa Silva Valério Rosado	Enhancing Financial Trading Strategies: A Study of Convolutional Neural Networks with Feature Selection and Other Machine Learning Techniques	English	Iscte	2025
15	Carlota Bravo Xarepe	Impact of interest rates on bank loans	Portuguese	Iscte	2025
16	Carlos Daniel Costa Faria	Data Augmentation with GANs applied to Healthcare	English	Iscte	2024

17	Gonçalo Assis da Costa Pereira	Exploring multivariate econometric models to analyze the dynamic interaction between different financial time series	English	Iscte	2024
18	Beatriz Maurício Arantes Tomé	Impact of Machine Learning on Credit Risk Assessment	Portuguese	Iscte	2024
19	António Luís Barros Mota	Optimization of Public Transport Networks Reinforcement Learning for Smart Mobility	English	Iscte	2024
20	Guilherme Afonso de Sousa Vale Mendonça	Freedom speech or hate speech/racism? A case study for European Football	Portuguese	Iscte	2024
21	Gonçalo Pinhão Almeida	On-trade sales in beverage retail: A real case study	English	Iscte	2024
22	João Francisco Teixeira Rodrigues	Through Customers' Thirsty - A Sales Forecasting of Spirit Drinks	English	Iscte	2024
23	Vasco Manuel dos Santos Pedrosa Gonçalves de Jesus	Transformer-based solution for the task of time series forecasting	English	Iscte	2024
24	João de Brito Brás de Oliveira	Decoding the numbers and language behind financial statement fraud	English	Iscte	2024
25	Diogo António Alexandre Cerqueira	NASDAQ 100 Index: The Impact of Different Types of Indicators on Trend Classification	Portuguese	Iscte	2024
26	António Muinga Francisco	APPLICATION OF MACHINE LEARNING MODELS FOR HOUSING PRICE PREDICTION IN SINGAPORE	Portuguese	Iscte	2024
27	Matilde Soares Saraiva	Deep learning-based identification of unmapped roads using remote sensing images	English	Iscte	2024
28	Inês Rodrigues Casimiro	Modernising Customer Service in Retail: A Worten Case Study on Automated Complaint Classification	English	Iscte	2023
29	Alexandre Costa Pereira	The use of Machine Learning and Text Mining in Stock Market Forecasting.	Portuguese	Iscte	2023
30	João Pedro Esteves de Oliveira Gonçalves	Data Mining applied to online reviews and study of dissatisfaction in Lisbon hotels	Portuguese	Iscte	2023
31	Clara Verdade Loureiro	Forecasting Bitcoin Volatility Using Exogenous Variables	English	Iscte	2023
32	Beatriz Alexandra Monteiro Barroso	The impact of inflation on S&P 500	Portuguese	Iscte	2023
33	Emine Ahmedova Karameshinova	Sensitivity analysis: Factors that influence the price of Cryptocurrencies	Portuguese	Iscte	2023

34	Nuno Rodrigo Basílio Soares	Hunting for Bubbles: A Predictive Model of New York City's Real EstateMarket	English	Iscte	2023
35	Ana Rita Ferreira Alão	Effective Federal Funds Rate Forecasting: Deep Learning Application	English	Iscte	2023
36	Marcia Pico Rodrigues	Anti-Russia or Anti-Ukraine: how do Twitter users feel about the ongoing conflict between August 2022 and February 2023? A Sentiment Analysis Approach	English	Iscte	2023
37	Rene Alexandre Porto da Franca Rocha Filho	Forecasting natural gas prices using a hybrid deep learning model and news	English	Iscte	2023
38	Michelle Steyaert	Bank Loans and Economic Uncertainty	English	Iscte	2023
39	Carolina Braz Francisco	Forecasting Exchange Rates with VAR Model	Portuguese	Iscte	2023
40	Marta Sofia Morgado das Neves	Trend Classification and price prediction of the S&P 500 Index: trading using deep learning and XGBoost	Portuguese	Iscte	2023
41	Tiago André Ramos Casimiro	Leveraging retail stores management through traffic forecasting with machine learning techniques.	Portuguese	Iscte	2023
42	Mailson Manuel Teixeira Varela	Predicting and explaining the S&P 500 with commodities: how does certain commodities affect the index's outcome	English	Iscte	2023
43	Joana Maria Carriço Marvanejo	Econometric Analysis Applied to ESG Rating Complexity	Portuguese	Iscte	2023
44	Afonso Vaz de Carvalho Cunha Fidanza	Opinion Study, via tweets, of damages caused on European infrastructure by climate change	Portuguese	Iscte	2023
45	Ana Sofia Lobato Sucena	Machine learning models to predict electricity consumption and the impacts of COVID-19 in Portugal	English	Iscte	2023
46	Rita Barley Paes De Sande E Castro	EMIR Anti-Procyclicality Margin Measures for Central Counterparties	English	Iscte	2023
47	Gilberto Joaquim Vamain	What is the Impact of Public Debt on the level of Economic Growth in the context of Political and Government Instability in Guinea-Bissau: 2000_2020?	Portuguese	Iscte	2022
48	Jana Luisa Teixeira Lage	Influencers, are they responsible for Bitcoin's volatility? Transfer Entropy and Granger causality in prol of an answer	English	Iscte	2022

49	Carlos Miguel Cruz Esteves	Forecasting financial time series: the EUR/CNY and EUR/USD exchange rates	Portuguese	Iscte	2022
50	José Luís Almeida Pereira	Cryptocurrency price prediction using LSTM neural networks	English	Iscte	2022
51	Tomás Tavares Borralho	Impact of macroeconomic factors on the price of gold	Portuguese	Iscte	2022
52	Afonso Amado dos Santos Pinto	Predicting stock price direction using machine learning models	English	Iscte	2022
53	Ana Rosa Almeida Pinto	Prediction of student success: a smart data-driven approach	English	Iscte	2022
54	Mariana Coelho Silvestre	Brent Crude Oil Price Prediction using Univariate Models	Portuguese	Iscte	2022
55	Weidmam Milagres Leles	Predicting Bicycle Arrivals in a Bicycle Sharing System Network: a Data Science Driven Approach Grounded in Zero-Inflated Regression	English	Iscte	2022
56	Guilherme Filipe Tomé Duarte	Determination of crop coefficient (kc) based on machine learning NDVI Time Series models	English	Iscte	2022
57	Patrícia Alexandra Guerreiro Costa	Machine Learning: Challenges and Opportunities on Credit Risk	English	Iscte	2022
58	Leonor Rosado Roussado	Relationship between GDP and Components of aggregate expenditure of GDP in Developed and Least Developed Countries	Portuguese	Iscte	2022
59	Samuel Vieira Garcia	The cryptocurrency impact on Eurozone economy: a study between the Bitcoin and the european stock indexes	Portuguese	Iscte	2022
60	Fábio Alexandre Afonso Maltéz	Deep Reinforcement Learning for Investing: A Quantamental Approach for Portfolio Management	English	Iscte	2022
61	André Raposo de Medeiros de Sousa Baptista	AMELIA - Mobile Memory Training Interface for Older People	English	Iscte	2022
62	Joel Vieira Santos	AAL-IoT - Ambient Assisted Living using Non-Intrusive Smart Sensing and IoT for Gait Rehabilitation	English	Iscte	2022
63	Miguel Pontes Calado	American Monetary Policy and speculative bubbles on S&P500	Portuguese	Iscte	2022
64	Fabiano Guimarães Loures	The impact of consumer credit on the economy.	Portuguese	Iscte	2022

65	Julio Cesar da Costa Vieira	The relationship between economic growth and the increase in tax revenue in Portugal in the period from 1999 to 2019.	Portuguese	Iscte	2022
66	Uryel Henrique Lumertz de Pinho	The Neo-Fisherian hypothesis: empirical implications and evidence in the Euro Zone?	Portuguese	Iscte	2022
67	Carolina Pereira	Time series, financial risk, Gdp-at-risk	Portuguese	Iscte	2021
68	Tiago Miguel Dias da Gama Lobo de Sousa Lopes	How to put together a hybrid model to forecast the S&P500 using a VECM model with a LSTM algorithm?	Portuguese	Iscte	2021
69	Pedro Miguel Pinhal Pereira	credit risk, machine learning	Portuguese	Iscte	2020
70	Diogo Miguel Teixeira Estevinho Pires	Reinforcement learning, data science, financial data	Portuguese	Iscte	2020
71	Carolina do Carmo Godinho	Financial trading, deep learning, CNN	Portuguese	Iscte	2020
72	Julia Pinheiro Rizzi	THE EFFECTS OF MARKETING-MIX VARIABLES ON THE NUMBER OF ACTIVE LISTERS IN AN ONLINE CLASSIFIED COMPANY	English	Iscte	2020
73	Lia de Souza Oliveira	Lean Thinking in Health Services: The Implementation Process in a Private Maternity in Rio de Janeiro	Portuguese	Iscte	2019
74	João Miguel Neves Colaço Henriques	Partições Geradas em Sistemas Dinâmicos de Duas Dimensões	Portuguese	Iscte	2017
75	João Henriques	--	Portuguese	Iscte	2016
76	José Florêncio Ferreira Pinto	Stress Testing and Asset Allocation for Pension Fund	English	Iscte	2016
77	Renato Rodrigues Marques de Freitas Ramos	Central Banks and Asset Bubbles - The United Kingdom case	English	Iscte	2016
78	Ana Filipa Ferreira	--	English	Iscte	2015
79	Carla Amaral	--	Portuguese	Iscte	2015
80	Paula Cristina Ciurean Moldovan	Forecasting the Euro Dollar Exchange Rate	English	Iscte	2015
81	Marta Oliveira	--	English	Iscte	2014
82	Telma Filipa Batista Gonçalves da Romana	Nonlinear Fiscal Multiplier: Evidence From Portugal	English	Iscte	2014
83	Aida Leal	--	English	Iscte	2013
84	Filipe Ramos	--	Portuguese	Iscte	2012
85	Bernardo Moreira	--	English	Iscte	2011

86	David Silva	--	Portuguese	Iscte	2011
87	Marcos André Pais Henriques	Árvores de decisão e redes neuronais: Aplicação a Web Mining.	Portuguese	Iscte	2010
88	Arnaldo Barros Feitosa	Excesso de confiança, optimismo e ancoragem em gestores da construção civil no Brasil: estudo de caso da Camargo Correia.	Portuguese	Iscte	2010
89	Rúben Gil Bernardo Pereira	2-D CNN FOR TIME SERIES TREND PREDICTION	English	Iscte	--

## • M.Sc. Final Projects

### - Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Carolina Ramos Estevam	rating, data science	Portuguese	FCUL	2021
2	Bruno André Pereira de Sousa	financial econometrics	Portuguese	Iscte	2020
3	Luís Miguel Oliveira Paulo Rodrigues Martins	Software Asset Management in an Organization	English	Iscte	2015

## Total Citations

Web of Science®	491
Scopus	484

## Publications

### • Scientific Journals

#### - Scientific journal paper

1	Moldovan, P., Lagoa, S. & Mendes, D. (2025). The impact of economic policy uncertainty on the real exchange rate: Evidence from the UK. <i>International Journal of Economics and Business Research</i> . 29 (1), 28-50 - Times Cited Scopus: 1 - Times Cited Google Scholar: 3
2	Rio, A., Brito e Abreu, F. & Mendes, D. (2024). Causal inference of server- and client-side code smells in web apps evolution. <i>Empirical Software Engineering</i> . 29 (5) - Times Cited Web of Science®: 2 - Times Cited Scopus: 3 - Times Cited Google Scholar: 4

3	<p>Laureano, R. D., Mendes, D. A., Grácio, C. &amp; Laureano, F. (2020). Searching for complexity in the human pupillary light reflex. <i>Mathematics</i>. 8 (3)</p> <p>- Times Cited Web of Science®: 3</p> <p>- Times Cited Scopus: 3</p> <p>- Times Cited Google Scholar: 5</p>
4	<p>Armas, I., Mendes, D. A., Popa, R. G., Gheorghe, M. &amp; Popovici, D. (2017). Long-term ground deformation patterns of Bucharest using multi-temporal InSAR and multivariate dynamic analyses: a possible transpressional system?. <i>Scientific Reports</i>. 7</p> <p>- Times Cited Web of Science®: 27</p> <p>- Times Cited Scopus: 32</p> <p>- Times Cited Google Scholar: 44</p>
5	<p>Dan, M. B., Mendes, D. A. &amp; Panagopoulos, T. (2013). Assessing the costs of hazards mitigation in the urban structure. <i>Journal of Biourbanism</i>. 1-2, 51-68</p> <p>- Times Cited Google Scholar: 1</p>
6	<p>Laureano, M., Mendes, D. A. &amp; Ferreira, M. A. M. (2013). Dislocated Negative Feedback Control with Partial Replacemrnt between Chaotic Lorenz Systems. <i>Mathematica Aeterna</i>. 3 (5), 337-348</p>
7	<p>Laureano, M., Mendes, D. A. &amp; Ferreira, M. A. M. (2011). Synchronization of chaotic dynamical systems: a brief review. <i>International Journal of Academic Research</i>. 3 (3 ), 402-408</p> <p>- Times Cited Google Scholar: 2</p>
8	<p>Laureano, M., Mendes, D. A. &amp; Ferreira, M. A. M. (2010). Efficient synchronization of one-dimensional chaotic quadratic maps by different couling terms. <i>Journal of Mathematics and Technology</i>. 1 (1), 5-12</p> <p>- Times Cited Google Scholar: 5</p>
9	<p>Isfan, M., Menezes, R. &amp; Mendes, D. A. (2010). Forecasting the Portuguese stock market time series by using artificial neural networks. <i>Journal of Physics: Conference Series (JPCS)</i>. 221 (1), 1-13</p> <p>- Times Cited Scopus: 6</p> <p>- Times Cited Google Scholar: 15</p>
10	<p>Januário, C., Grácio, C, Mendes, D. A. &amp; Duarte, J. (2009). Measuring and controlling the chaotic motion of profits. <i>International Journal of Bifurcation and Chaos</i>. 19 (11), 3593-3604</p> <p>- Times Cited Web of Science®: 3</p> <p>- Times Cited Scopus: 2</p> <p>- Times Cited Google Scholar: 2</p>
11	<p>Bentes, S. R., Menezes, R. &amp; Mendes, D. A. (2008). Long memory and volatility clustering: is the empirical evidence consistent across stock markets?. <i>Physica A</i>. 387 (15), 3826-3830</p> <p>- Times Cited Web of Science®: 80</p> <p>- Times Cited Scopus: 81</p> <p>- Times Cited Google Scholar: 143</p>
12	<p>Mendes, D. A. &amp; Mendes, V. (2008). Stability analysis of an implicitly defined labor market model. <i>Physica A</i>. 387 (15), 3921-3930</p> <p>- Times Cited Web of Science®: 1</p> <p>- Times Cited Scopus: 1</p> <p>- Times Cited Google Scholar: 3</p>
13	<p>Gomes, O., Mendes, D. A. &amp; Mendes, V. (2008). Bounded rational expectations and the stability of interest rate policy. <i>Physica A</i>. 387 (15), 3882-3890</p> <p>- Times Cited Web of Science®: 2</p> <p>- Times Cited Scopus: 4</p> <p>- Times Cited Google Scholar: 4</p>

14	<p>Ferreira, N. B., Menezes, R. &amp; Mendes, D. A. (2007). Asymmetric conditional volatility in international stock markets. <i>Physica A</i>. 382 (1), 73-80</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 16</li> <li>- Times Cited Scopus: 10</li> <li>- Times Cited Google Scholar: 30</li> </ul>
15	<p>Dionísio, A., Menezes, R., Mendes, D. &amp; Vidigal da Silva, J. (2007). Nonlinear dynamics within macroeconomic factors and stock market in Portugal 1993-2003. <i>Applied Econometrics and International Development</i>. 7 (2), 57-71</p> <ul style="list-style-type: none"> <li>- Times Cited Google Scholar: 3</li> </ul>
16	<p>Dionísio, A. , Menezes, R. &amp; Mendes, D. A. (2007). On the integrated behaviour of non-stationary volatility in stock markets. <i>Physica A</i>. 382 (1), 58-65</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 22</li> <li>- Times Cited Scopus: 15</li> <li>- Times Cited Google Scholar: 31</li> </ul>
17	<p>Gomes, O., Mendes, V., Mendes, D. A. &amp; Sousa Ramos, J. (2007). Chaotic dynamics in optimal monetary policy. <i>European Physical Journal B</i>. 57 (2), 195-199</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 2</li> <li>- Times Cited Scopus: 4</li> <li>- Times Cited Google Scholar: 6</li> </ul>
18	<p>Dionísio, A., Menezes, R. &amp; Mendes, D. A. (2006). An econophysics approach to analyse uncertainty in financial markets: an application to the Portuguese stock market. <i>European Physical Journal B</i>. 50 (1-2), 161-164</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 63</li> <li>- Times Cited Scopus: 55</li> <li>- Times Cited Google Scholar: 109</li> </ul>
19	<p>Menezes, R., Ferreira, N.B. &amp; Mendes, D.A. (2006). Co-movements and asymmetric volatility in the Portuguese and U.S. stock markets. <i>Nonlinear Dynamics</i>. 44 (1-4), 359-366</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 13</li> <li>- Times Cited Scopus: 10</li> <li>- Times Cited Google Scholar: 19</li> </ul>
20	<p>Dionísio, A. , Menezes, R. &amp; Mendes, D.A. (2006). Entropy-based independence test. <i>Nonlinear Dynamics</i>. 44 (1-4), 351-357</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 51</li> <li>- Times Cited Scopus: 44</li> <li>- Times Cited Google Scholar: 83</li> </ul>
21	<p>Mendes, D. A. &amp; Mendes, V. (2005). Control of chaotic dynamics in an OLG economic model. <i>Journal of Physics: Conference Series (JPCS)</i>. 23 (1), 158-181</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 10</li> <li>- Times Cited Scopus: 11</li> <li>- Times Cited Google Scholar: 23</li> </ul>
22	<p>Dionisio, A., Mendes, D.A., Menezes, R. &amp; Silva, J.V. (2005). Linear and nonlinear dependence models of stock market returns. <i>Social Science Research Network</i>.</p> <ul style="list-style-type: none"> <li>- Times Cited Google Scholar: 1</li> </ul>
23	<p>Dionísio, A., Menezes, R. &amp; Mendes, D. A. (2004). Mutual information: a measure of dependency for nonlinear time series. <i>Physica A</i>. 344 (1-2), 326-329</p> <ul style="list-style-type: none"> <li>- Times Cited Web of Science®: 190</li> <li>- Times Cited Scopus: 178</li> <li>- Times Cited Google Scholar: 290</li> </ul>

24	<p>Menezes, R., Dionísio, A. &amp; Mendes, D.A. (2004). Asymmetric price transmission within the Portuguese stock market. <i>Physica A</i>. 344 (1-2), 312-316</p> <p>- Times Cited Web of Science®: 6</p> <p>- Times Cited Scopus: 6</p> <p>- Times Cited Google Scholar: 12</p>
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## • Books and Book Chapters

### - Book editor

1	Salgueiro, M.F., Mendes, D. A. & Martins, L. (2009). <i>Temas em Métodos Quantitativos</i> . Lisboa, Portugal. Sílabo.
2	Mendes, D. A., Gomes, O. & Menezes, R. (2008). <i>Applications of Physics in Financial Analysis</i> . Amsterdam. Elsevier.

### - Book chapter

1	Bostenaru, M. & Mendes, D. A. (2017). Economics and retrofit. In Maria Bostenaru Dan, Mirela Adriana Anghelache (Ed.), <i>Natural and man-made hazard impact on urban areas - Impactul hazardurilor naturale ?i antropice asupra arilor urbane</i> . (pp. 15-18): "Ion Mincu" University Press.
2	Mendes, D. A. & Mendes, V. (2014). Parametric Models in Spatial Econometrics: A Survey. In Pasquale Commendatore, Saime Kayam, Ingrid Kubin (Ed.), <i>Complexity &amp; Geographical Economics: Topics and Tools</i> . (pp. 3-18). Berlin, Germany: Springer. - Times Cited Scopus: 3 - Times Cited Google Scholar: 3
3	Bostenaru, M. & Mendes, D. A. (2013). Contemporary installations with timber from disaster reconstructions. In Mariana Correia , Gilberto Carlos and Sandra Rocha (Ed.), <i>Vernacular Heritage and Earthen Architecture</i> . London, UK: Taylor and Francis. - Times Cited Scopus: 1 - Times Cited Google Scholar: 2
4	C. Januário, C. Grácio, Mendes, D. A. & J. Duarte (2011). Isentropic dynamics and control in an economic model for capital accumulation. In Peixoto, Mauricio Matos; Pinto, Alberto Adrego; Rand, David A. (Ed.), <i>Dynamics, Games and Science I</i> . (pp. 0-0): Springer.
5	Mendes, V. & Mendes, D. A. (2011). Adaptive Learning and Central Bank Inattentiveness in Optimal Monetary Policy. In Peixoto, Mauricio Matos; Pinto, Alberto Adrego; Rand, David A. (Ed.), <i>Dynamics, Games and Science I, II</i> . (pp. 0-0): Springer .
6	Mendes, D. A., Mendes, V., Sousa Ramos, J. & Gomes, O. (2009). Computing Topological Entropy in Asymmetric Cournot Duopoly Games with Homogeneous Expectations. In Saber Elaydi (Trinity University), Kazuo Nishimura (Kyoto University), Mitsuhiro Shishikura (Kyoto University), Nobuyuki Tose (Keio University) (Ed.), <i>Advances In Discrete Dynamical Systems</i> . (pp. 169-178). Kyoto, Japão: World Scientific.
7	Bentes, S.R., Menezes, R. & Mendes, D.A. (2009). Entropic measures in nonlinear dynamics. In Salgueiro, M.F., D.A. Mendes, e L.F. Martins (Ed.), <i>Temas em métodos quantitativos</i> . (pp. 235-250). Lisboa: Sílabo.
8	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2009). Sincronização de sistemas dinâmicos contínuos e caóticos. In Maria de Fátima Salgueiro; Diana A. Mendes; Luís F. Martins (Ed.), <i>Temas em Métodos Quantitativos 6</i> . (pp. 251-371). Lisboa: Edições Sílabo.

9	Mendes, D.A., Menezes, R. & Dionísio, A. (2009). A hipótese de eficiência dos mercados revisitada: abordagem da dependência não-linear. In Salgueiro, M.F., D.A. Mendes, e L.F. Martins (Ed.), Temas em Métodos Quantitativos. (pp. 29-47). Lisboa: Sílabo.
10	Dionísio, A. , Menezes, R. & Mendes, D.A. (2006). O princípio da entropia máxima. In Salgueiro, M.F., Lopes, M.J., Teixeira, A. (Ed.), Temas em Métodos Quantitativos. (pp. 31-39). Lisboa: Sílabo. - Times Cited Google Scholar: 2
11	Ferreira, N.B., Menezes, R. & Mendes, D.A. (2004). O teste de raízes unitárias. In Ferreira, M.A., Menezes, R., Catanas, F. (Ed.), Temas em Métodos Quantitativos. (pp. 87-98).: Sílabo.
12	Dionísio, A. , Menezes, R. & Mendes, D.A. (2004). Informação mútua: uma medida de dependência não-linear. In Ferreira, M.A., Menezes, R., Catanas, F. (Ed.), Temas em Métodos Quantitativos. (pp. 61-86). Lisboa: Sílabo.
13	Dionísio, A. , Menezes, R. & Mendes, D.A. (2003). A entropia como medida de informação na modelação económica. In Reis, E., Hill, M.M. (Ed.), Temas em Métodos Quantitativos. (pp. 193-212).: Sílabo. - Times Cited Google Scholar: 3

## • Conferences/Workshops and Talks

### - Publication in conference proceedings

1	Ferreira, N. B., Mendes, D. & Mendes, V. (2024). Can higher data frequency lead to more accurate stock market predictions: Nasdaq 100 and DAX cases. In Ana Colubi, Erricos J. Kontoghiorghes and Manfred Deistler (Ed.), Programme and Abstracts: CFE-CMStatistics 2024. Londres: Ecosta Econometrics and Statistics.
2	Mendes, D. A., Ferreira, N. B. & Mendes, V. (2023). Data frequency and forecast performance for stock markets: A deep learning approach for DAX index. In Rocío Martínez-Torres, Sergio Toral (Ed.), Proceedings of the 5th International Conference on Advanced Research Methods and Analytics (CARMA2023). (pp. 39-39). Sevilha: Editorial Universitat Politècnica de València.
3	Moldovan, P., Lagoa, S. & Mendes, D. (2022). Does economic policy uncertainty impact inflation?. In Cebeci, K., Marangos, J., and Ribeiro, S. (Ed.), MIRDEC 18th International Academic Conference Economics, Business and Contemporary Discussions in Social Science: Conference Proceedings. (pp. 37-58). Lisboa: MIRDEC.
4	Batista, A., Postolache, O., Mendes, D., Reis, E. & Nogueira, D. (2022). Memory training interface for elderly based on mobile app. In Gavrilas, M., and Neagu, B.-C. (Ed.), 2022 International Conference and Exposition on Electrical And Power Engineering (EPE). (pp. 708-713). Iasi, Romania: IEEE. - Times Cited Scopus: 1 - Times Cited Google Scholar: 5
5	Santos, J., Postolache, O. & Mendes, D. (2022). Ambient assisted living using non-intrusive smart sensing and IoT for gait rehabilitation. In 2022 IEEE International Conference on Metrology for Extended Reality, Artificial Intelligence and Neural Engineering (MetroXRINE). (pp. 489-494). Rome: IEEE. - Times Cited Scopus: 5 - Times Cited Google Scholar: 4
6	Armas, I., Mendes, D. A., Gheorghe, M., Popa, R. G. & Popovici, D. (2017). Identifying ground displacement trends in Bucharest using InSAR. In Mihai Niculi?, Mihai Ciprian M?rg?rint (Ed.), Proceedings of the 33rd Romanian Geomorphology Symposium. (pp. 20-23). Iasi: Alexandru Ioan Cuza University of Ia?i Press.

7	<p>Armas, I., Necsoiu, M., Mendes, D., Gheorghe, M. &amp; Gheorghe, D. (2015). Ground displacement trends in an urban environment using multi-temporal InSAR analysis and two decades of multi-sensor satellite-based SAR imagery. In L. Ouwehand (Ed.), Proceedings of FRINGE'15: Advances in the Science and Applications of SAR Interferometry and Sentinel-1 InSAR Workshop. Frascati: ESA Publication.</p> <p>- Times Cited Scopus: 3 - Times Cited Google Scholar: 8</p>
8	<p>Mendes, D. A., Mendes, V., Ferreira, N. B. &amp; Menezes, R. (2010). Symbolic shadowing and the computation of entropy for observed time series. In Misako Takayasu, Tsutomu Watanabe, Hideki Takayasu (Ed.), Econophysics Approaches to Large-Scale Business Data and Financial Crisis. (pp. 227-246). Tokyo: Springer Japan.</p> <p>- Times Cited Google Scholar: 1</p>
9	<p>Mendes, V., Gomes, O. &amp; Mendes, D. A. (2009). Optimal Monetary Policy with Partially Rational Agents. In Martin Bohner and Memet Unal (Ed.), Proceedings of the 14th International Conference on Difference Equations and Applications - ICDEA 14. (pp. 187-194). Istanbul: Bahcesehir University Publishing Company.</p>
10	<p>Laureano, R., Mendes, D. A. &amp; Ferreira, M. A. M. (2007). Efficient synchronization with chaotic quadratic maps. In Kovacova, M. (Ed.), 6th International Conference APLIMAT 2007. (pp. 215-224). Bratislava, Slovakia: Slovak University of Technology in Bratislava.</p>

#### - Talk

1	<p>Ferreira, N. B., Mendes, D. A. &amp; Mendes, V. (2024). Does data frequency mean better stock market forecasting performance? The German and US case study. 1st Artificial Intelligence in Finance Conference (AIIFC) .</p>
2	<p>Ferreira, N. B., Mendes, D. A. &amp; Mendes, V. (2024). Can higher data frequency lead to more accurate stock market predictions: NASDAQ 100 and DAX cases. 18th International Conference on Computational and Financial Econometrics (CFE 2024).</p>
3	<p>Mendes, D. A., Mendes, V. &amp; Ferreira, N. B. (2023). Multivariate forecast for financial stock prices: A hybrid VAR-LSTM deep learning model. COMPSTAT 2023.</p>
4	<p>Mendes, D. A. &amp; Mendes, V. (2023). Nonlinear factor analysis for large sets of macroeconomic time series. COMPSTAT 2023.</p>
5	<p>Mendes, D. A., Ferreira, N. B. &amp; Mendes, V. (2023). Could data frequency imply better forecast performance for stock markets? A case study for G7 economies. 9th International conference on Time Series and Forecasting.</p>
6	<p>Mendes, D. A., Ferreira, N. B. &amp; Mendes, V. (2023). Could data frequency imply better forecast performance for stock markets? A case study for DAX index Stock Market. CARMA23.</p>
7	<p>Batista, André, Postolache, O., Mendes, D. A., Reis, E. &amp; undefined (2022). Memory Training Interface for Elderly based on Mobile APP. 2022 International Conference and Exposition on Electrical And Power Engineering (EPE).</p>
8	<p>Moldovan, P., Lagoa, S. &amp; Mendes, D. A. (2022). Does economic policy uncertainty impact inflation?“. Mirdec-18th International Academic conference.</p>
9	<p>Moldovan, P., Lagoa, S. &amp; Mendes, D. A. (2022). Does economic policy uncertainty impact inflation?. 24th INFER Annual Conference.</p>

10	Mendes, D. A. (2022). A ciência de dados ao serviço da sustentabilidade. CIÊNCIA e CULTURA – 50 ANOS depois da Conferência de Estocolmo.
11	Mendes, V. & Mendes, D. A. (2021). Learning to Play Nash Equilibrium in Chaotic Dynamics. CCS2021-SATELLITE ON ECONOPHYSICS 2021.
12	Mendes, D. A., Mendes, V., Lopes, T. & Ferreira, N. B. (2021). Multivariate forecast for the G7 stock markets: a hybrid VECM-LSTM deep learning model. CCS2021-SATELLITE ON ECONOPHYSICS 2021.
13	Mendes, V. & Mendes, D. A. (2021). Learning to Play Nash Equilibrium in Chaotic Dynamics. ICDEA 2021.
14	Mendes, D. A. & Mendes, V. (2021). Occasionally Binding Constraints in the New Keynesian Model. ICDEA 2021.
15	Lopes, D.R., Ramos, F.R., Mendes, D. A. & Costa, A. (2021). Forecasting models for time-series: a comparative study between classical methodologies and Deep Learning. XXV Congresso da Sociedade Portuguesa de Estatística. - Times Cited Google Scholar: 8
16	Ramos, F.R., Lopes, D.R., Costa, A. & Mendes, D. A. (2021). Explorando o poder da memória das redes neuronais LSTM na modelação e previsão do PSI 20. XXV Congresso da Sociedade Portuguesa de Estatística. - Times Cited Google Scholar: 6
17	Moldovan, P., Lagoa, S. & Mendes, D. A. (2021). The impact of Economic Policy Uncertainty on the real exchange rate: Evidence from the UK. 23rd INFER Annual Conference.
18	Moldovan, P., Lagoa, S. & Mendes, D. A. (2021). Equilibrium exchange rate and its determinants: the role of political stability in the UK using a BEER/PEER approach. 4th Annual Meeting of the Portuguese Association of Political Economy.
19	Mendes, D. A., Ferreira, N. B. & Mendes, V. (2020). A comparative time series analysis to improve US Stock Market forecast performance by using univariate and multivariate deep learning algorithms . CARMA20.
20	Mendes, V. & Mendes, D. A. (2019). Occasionally Binding Constraints in the New Keynesian Model: Solution by Time Iteration. JuliaCon2019.
21	Mendes, D. A. & Mendes, V. (2019). A NONLINEAR FACTOR ANALYSIS FOR LARGE SETS OF MACROECONOMIC TIME SERIES. JuliaCon2019.
22	Mendes, D. A., Ferreira, N. B. & Mendes, V. (2019). Could the supply of a chain big data analytics market register a better forecast performance for the Stock Markets? – A comparative software analysis. ITISE 2019.
23	Laureano, M. & Mendes, D. A. (2018). Human Pupillary Light Reflex Model: research of dynamic in a Delay Differential Equation. Dynamics Days Europe.
24	Iuliana Armas, Mendes, D. A. & Mihaela Gheorghe (2018). Displacement Patterns in Bucharest (Romania) using PS and SBAS Approaches. European Geosciences Union General Assembly 2018.
25	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2018). Generalized synchronization with continuous chaotic dynamical systems. Conference on Complex Systems 2018-CCS 2018.
26	Iuliana Armas, Mendes, D. A., Popa, R.G., Popovici, D. & Diana Gheorghe (2017). Identifying ground displacement trends in Bucharest using InSAR. The 33rd ROMANIAN GEOMORPHOLOGY SYMPOSIUM.

27	Iuliana Armas, Mendes, D. A., Popa, R.G. & Mihaela Gheorghe (2017). Identifying non-linear ground deformation trends in Bucharest based on InSAR. 9th INTERNATIONAL CONFERENCE ON GEOMORPHOLOGY (9th ICG).
28	Laureano, R. D. & Mendes, D. A. (2016). Research of complexity in the human pupillary light reflex. Summer Solstice 2016 8th International Conference on Discrete Models of Complex Systems.
29	Laureano, R. D. & Mendes, D. A. (2016). Searching for complexity in the HUMAN PUPILLARY LIGHT REFLEX. Portuguese Meeting in Biomathematics 2016.
30	Mendes, D. A., Iuliana Armas, Marius Necsoiu, Mihaela Gheorghe & Diana Gheorghe (2015). Ground Displacement Trends in an Urban Environment Using Multi-Temporal InSAR Analysis and Two Decades of Multi-Sensor Satellite-Based SAR Imagery. 9th International Workshop Fringe 2015 Advances in the Science and Applications of SAR Interferometry and Sentinel-1 InSAR Workshop.
31	Mendes, D. A. & Mendes, V. (2014). Forecasting the Iberian Electricity Market Demand by using Nonlinear Time Series Tools. International Interdisciplinary Business-Economics Advancement Conference (IIBA 2014).
32	Mendes, V. & Mendes, D. A. (2014). Revisiting Chaotic Interest Rate Rules. International Interdisciplinary Business-Economics Advancement Conference (IIBA 2014).
33	Ana Guedes & Mendes, D. A. (2014). Is the Iberian Electricity Market Chaotic? Characterization and Prediction with Nonlinear Methods. 3rd International Conference on Dynamics, Games and Science.
34	Pedro Ferreira & Mendes, D. A. (2014). A New Mixed Method to Select Non-Linear Complex Time Series. 3rd International Conference on Dynamics, Games and Science.
35	Gonçalves, T., Mendes, V. & Mendes, D. A. (2014). Nonlinear Fiscal Multiplier: Evidence From Portugal. 3rd International Conference on Dynamics, Games and Science.
36	Mendes, D. A. & Mendes, V. (2014). Volatility and Risk Estimation with Nonlinear Methods. 3rd International Conference on Dynamics, Games and Science.
37	Mendes, D. A. & Mendes, V. (2013). Empirical methods applied to regional economics . COST Action IS1104 – The EU in the new economic complex geography, Lisbon Meeting.
38	Mendes, D. A. & Mendes, V. (2013). Stability in Nonlinear Macroeconomics and the Role of Policy. CFE'2013, Computational Financial Econometrics.
39	Mendes, D. A. & Mendes, V. (2013). Classifying nonlinearities in financial time series. CFE'2013, Computational Financial Econometrics.
40	Mendes, D. A. & Bostenaru, M. (2013). Economics of the earthquake risk mitigation in the urban and constructive structure. NED'2013 - Nonlinear Economic Dynamics.
41	Mendes, D. A. & Mendes, V. (2013). Learning to play Nash in deterministic uncoupled dynamics. NED'2013 - Nonlinear Economic Dynamics.
42	Mendes, D. A. & Mendes, V. (2013). Nonlinear dynamics and social networks: some examples and applications in economics. COST Action IS1104 – The EU in the new economic complex geography, Madrid Meeting.
43	Mendes, D. A. & Mendes, V. (2012). Cournot duopoly games with heterogeneous players. ICDEA 2012.

44	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2012). Dislocated negative feedback control with partial replacement between chaotic Lorentz systems. International Conference on Differential Equations, Difference Equations and Special Functions-In Memory of Professor Panayiotis D. Siafarikas.
45	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2012). Efficient synchronization of one-dimensional chaotic quadratic maps coupled with symmetry. ICDEA 2012-18th International Conference on Difference Equations and Applications.
46	Mendes, V., Mendes, D. A. & A. Guedes (2011). Characterization and prediction of the electricity demand in the Iberian peninsula by using nonlinear time series analysis. 5th CSDA International Conference on Computational and Financial Econometrics (CFE11).
47	Mendes, D. A. & Mendes, V. (2011). A nonlinear factor analysis for large sets of macroeconomic time series. CFE11.
48	Mendes, D. A. & Mendes, V. (2011). Applications of dynamical systems in economy and biology. International Collquium Poincaré, Problems and Perspectives.
49	Mendes, D. A. & Mendes, V. (2011). New results about triangular maps. NOMA11 - Nonlinear Maps and Applications .
50	Ferreira, N. B., Menezes, R. & Mendes, D. A. (2011). Regime-Switching Modelling of Globalization Analysis in the Context of Stock Markets under Sovereign Debt Crisis. Finance and Economics Conference.
51	Mendes, V. & Mendes, D. A. (2011). Learning to Play Nash in Uncoupled Deterministic Dynamics. International Workshop on Nonlinear Maps and their Applications -- NOMA 11.
52	Menezes, R., Dionísio, A. & Mendes, D. A. (2010). An essay on mutual information and stock market globalization: evidence from the G7 countries. 1st Franco-Mongolian Workshop on Material Science: Theoretical and Experimental Aspects.
53	Ferreira, N. B., Menezes, R. & Mendes, D. A. (2009). Regime-Switching modelling of globalization analysis in International stock markets. Finance and Economics Conference.
54	Mendes, V., Mendes, D. A. & Orlando Manuel da Costa Gomes (2009). Are There Simple Adaptive Heuristics that Secure Nash Equilibria?. International Conference on Difference Equations and Applications.
55	Mendes, V., Mendes, D. A. & Orlando Manuel da Costa Gomes (2008). Learning to be Stable in Bayesian Cournot Games. International Conference on "Progress on Difference Equations" in Honor of Prof. Saber Elaydi.
56	Mendes, V., Mendes, D. A. & Orlando Manuel da Costa Gomes (2008). Learning to Play Nash Equilibrium in Deterministic Uncoupled Dynamics. International Conference on Difference Equations and Applications.
57	Mendes, V., Mendes, D. A. & Orlando Manuel da Costa Gomes (2008). Learning to Play Nash Equilibrium in Deterministic Uncoupled Dynamics. International Conference on "Dynamics & Applications", in Honor of Mauricio Peixoto and David Rand.
58	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2007). Efficient synchronization with chaotic quadratic maps. 6th International Conference-APLIMAT 2007.

## • Other Publications

### - Working Papers

1	Mendes, D. A., de Almeida, A. & Leles (2023). Predicting Bicycle Arrivals in a Bicycle Sharing System Network: a Data Science Driven Approach Grounded in Zero-Inflated Regression. Predicting Bicycle Arrivals in a Bicycle Sharing System Network: a Data Science Driven Approach Grounded in Zero-Inflated Regression.
2	Rio, J., Brito e Abreu, F. & Mendes, D. A. (2023). Causal inference of server- and client-side code smells in web apps evolution. Causal inference of server- and client-side code smells in web apps evolution.
3	Mendes, D. A. & Maltez, F. (2023). Deep Reinforcement Learning for Investing: A Quantamental Approach for Portfolio Management. Deep Reinforcement Learning for Investing: A Quantamental Approach for Portfolio Management.
4	Moldovan, P., Lagoa, S. & Mendes, D. A. (2021). The impact of Economic Policy Uncertainty on the real exchange rate: Evidence from the UK. DINÂMIA'CET-IUL Working Paper n.º 2021/06. - Times Cited Google Scholar: 1

### - Non-peer-reviewed papers

1	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2025). Chaos synchronization: a review. arXiv:2412.20649v1. - Times Cited Scopus: 5 - Times Cited Google Scholar: 4
2	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2025). Globally Stable Synchronization Conditions in Total Diffusive Linear Bidirectional Coupling Between Continuous Dynamical Systems and Partial Replacement (Rössler and Lorenz). EasyChair Preprint N° 9873.
3	Laureano, M., Mendes, D. A. & Ferreira, M. A. M. (2025). Efficient Synchronization Between Chaotic Lorenz Systems in Unidirectional Coupling. EasyChair Preprint N° 9872.
4	Mendes, D. A., Menezes, R. & Gomes, O. (2008). Editorial. Physica A: Statistical Mechanics and its Applications. 387 (15), V
5	Mendes, D. A. & Sousa Ramos, J. (2004). Computing the topological entropy of triangular maps of the plane. Grazer Mathematics Ber. 346, 283-297
6	Mendes, D. A. & Sousa Ramos, J. (2004). Kneading theory for triangular maps. International Journal Pure And Application Mathematics. 10 (4), 421-450 - Times Cited Google Scholar: 11
7	Dionísio, A. , Menezes, R. & Mendes, D. A. (2004). Asymmetric price transmission within the portuguese stock market. Physica A - Statistical and Theoretical Physics. 344, 312-316
8	Dionísio, A. , Menezes, R. & Mendes, D. A. (2004). Mutual information: a measure of dependency for nonlinear time series. Physica A - Statistical and Theoretical Physics. 344, 326-329

## Research Projects

Project Title	Role in Project	Partners	Period
Master's Degree of Managing Digital Transformation in the Health Sector	Researcher	Iscte - Leader, LAUREA - (Finland), AUTH - (Greece), UNI EIFFEL - (France), IT-IUL - (Portugal), Clinipower - (Finland), Whymob - (Portugal), MundiConsulting - (Portugal)	2023 - 2026
Avaliação da Metodologia do Inquérito de Qualidade dos Censos 2021	Researcher	BRU-Iscte (Data Analytics) - Leader, INE - (Portugal)	2021 - 2022

## Academic Management Positions

Director (2023)  
Unit/Area: Master Degree in Data Science

Membro (Docente) (2022 - 2024)  
Unit/Area: Comissão Científica

Director (2022)  
Unit/Area: Bachelor Degree in Digital Technologies and Health

Director (2022 - 2024)  
Unit/Area: Post Graduation Program in Data Science

Director (2021 - 2023)  
Unit/Area: Master Degree in Data Science

Membro (Docente) (2021 - 2025)  
Unit/Area: Conselho Geral

Director (2019 - 2021)  
Unit/Area: Master Degree in Data Science

Membro (Docente) (2017 - 2019)  
Unit/Area: Comissão Permanente do Conselho Científico

Membro (Docente) (2017 - 2019)  
Unit/Area: Plenário do Conselho Científico

Membro (Docente) (2015 - 2017)  
Unit/Area: Plenário do Conselho Científico

Membro (Docente) (2015 - 2017)  
Unit/Area: Comissão Permanente do Conselho Científico

Director (2010 - 2011)  
Unit/Area: Master Degree in Financial Mathematics (ISCTE/FCUL)

Membro (Docente) (2010 - 2013)  
Unit/Area: Plenário da Comissão Científica

Membro (2010 - 2014)  
Unit/Area: Comissão Científica

## Awards

Research price (2018)
Best professor of IBS (first price) (2014)
Best professor of IBS (first price) (2013)

## Professional Associations

ISDE (Since 2010)

## Organization/Coordination of Events

Type of Organization/Coordination	Event Title	Organizer	Year
Coordination of non-scientific event	Data science at Iscte. technologu and society with Manuela Veloso	Iscte	2020
Member of non-scientific event's organizing committee	Open event in Data Science	Iscte	2019
Coordination of scientific event (with scientific committee) outside of ISCTE-IUL	COST Action IS1104 ? The EU in the new economic complex geography, Lisbon Meeting	ISCTE-IUL	2013
Member of scientific event's organizing committee	NOMA'11 - International Workshop on Nonlinear Maps and their Applications NOMA'11, Évora, Portugal	University of Évora	2011

## Scientific Editing/Reviewing Activities

Type of Activity	Journal Title	ISSN/Quartile	Period	Language
Member of scientific journal editing staff	Frontiers in Artificial Intelligence	2624-8212	Since 2019	English