

José Moniz Lopes Fernandes

General information:

Email: josefer75@yahoo.com.br/jose.fernandes@docente.unicv.edu.cv;

Nationality: Cape verdean;

Education:

Ph.D Statistic and Information Management. NOVA University of Lisbon, Lisbon, Portugal. 2012.

M.Sc Statistic and Information Management. Information Management School, NOVA University of Lisbon, Lisbon, Portugal. 2004.

B.A Mathematics. Higher Education of Institute, Praia, Cape Verde. 2000.

Fields of Interest:

Statistics, Actuarial Science, Applied Econometrics, Data Analytics and Bank Credit Risk.

Employment and Academic Positions:

1. Assistant Professor of Statistics, Mathematics and Econometrics at University of Cape Verde.
2. Coordinator of Statistics and Information Management at Bsc, Department of Science and Technology, University of Cape Verde. December 2012-August 2013.
3. Vice-Coordinator of master's in mathematics and applications, Department of Science and Technology, University of Cape Verde. November 2012-March 2014.
4. Assistant Teacher of Statistics and Maths at ISE and University of Cape Verde. March 2007- July 2012.
5. Coordinator of Mathematics Center at ISE March 2008-Setember 2008.
6. Statistician at Ministry of Agriculture, Praia, Cape Verde. May 2005 - May 2008.
7. High School Teaching Position. Tarrafal High School, Cape Verde. Maths Teacher. September 1997-July 2002.

Main Publications:

1. **Comparison of Commercial ELISA Kits to Confirm the Absence of Transmission in Malaria Elimination Settings**, with Lotus L. van den Hoogen et al., *Front. Public Health*, 09 September 2020 | <https://doi.org/10.3389/fpubh.2020.00480>).
2. **Open Markov Chain Scheme Models fed by Second Order Stationary and non Stationary Processes**, with Manuel L. Esquível and Gracinda R. Guerreiro, *Revstat - Statistical Journal* 15(2):277-297 (2017).
3. **Combined tools for Surgical Case Packages contents and cost optimization: a preliminary study**, with Ana Bela C. Alves, A. Manuela Gonçalves, Ismael Vaz, Senhoria Teixeira, Inês Sousa, Jorge Pereira e Sónia Nóbrega, *Procedia Computer Science* 100 (2016) 393 - 398.
4. **An open Markov chain scheme model for a credit consumption portfolio fed by ARIMA and SARMA processes**, with Manuel L. Esquível and Gracinda Guerreiro *AIP Conf. Proc.* 1738, 190003 (2016); <http://dx.doi.org/10.1063/1.4951970>. Conference date: 23-29 September 2015, Rhodes, Greece.
5. **On a Spread Model for Portfolio Credit Risk Modeling**, with Manuel L. Esquível, Gracinda R. Guerreiro, and Ana Filipa Silva. *AIP Conf. Proc.* 1648, 540004 (2015). DOI: 10.1063/1.4912750 Conference date: 22-28 September 2014, Rhodes, Greece.

6. **On the Evolution and Asymptotic Analysis of Open Markov Populations Subjected to Periodic Reclassifications**, with Manuel L. Esquível and Gracinda Guerreiro. *Stochastic Models*, 30(3), 365-389. DOI:10.1080/15326349.2014.912947.
7. **The Determinants of Poverty in Cape Verde: an Econometric Approach**, with Maria do Rosário Fraga Martins, *Bulletin of Statistics and Economics*, vol.2, Number A08, pp. 30-38.

Work in Progress

1. Forecasting New Clients Entrance in Cape Verdean Bank Using IMA Models.
2. **Index of multivariate satisfaction of the patients of the services of the consultation centre of Agostinho Neto Hospital through Factor Analysis**, with Lopes, I. F, Mendes, C. R. e Chantre, E.
3. Regression for count data: an application in consummation credit.
4. The model of focalization in Cape Verde: an application of Proxy Means Test

Scholarships:

- › Portuguese Institute for Development (IPAD), Portugal. PhD Scholarship to study aboard. 2008-2012.
- › Portuguese Institute for Development (IPAD), Portugal. Master Scholarship to study aboard. 2002-2004.
- › Government of Cape Verde. B.A Mathematics. 1994-1997.

Research Visit:

- › Universidade Federal de Bahia, Salvador, Brasil. November 2018.
- › ICMC, Universidade de São Paulo, São Carlos, São Paulo, Brasil. July 2017.
- › AIMS Senegal. Mbour-Thies, Senegal. November 2015.
- › FCT, NOVA University of Lisbon. Lisbon, Portugal. July 2015.
- › FCT, NOVA University of Lisbon. Lisbon, Portugal. February 2015.
- › European Parliament and NATO. Brussels, Belgium. June 2015.

Consultancies:

1. Caixa Económica de Cabo Verde, Desenvolvimento de Visualizações e Dashboards para a prevenção de crédito. Praia, May 2018- .
2. BCN, Desenvolvimento de uma Ferramenta de Cálculo de Imparidade de Crédito no contexto da IFRS 9, utilizando Rstudio. Praia, Cabo Verde. September 2018-November 2018.
3. CCSSIDA, Estudo bio comportamental da vulnerabilidade das pessoas com deficiência face ao VIH/sida em Cabo Verde. Praia, Cape Verde. May 2018-December 2018.
4. Ministério da Família e Inclusão Social. The model of focalization in Cape Verde: un application of Proxy Means Test, with Yadira DIAZ. May 2018 - September 2018.
5. Ministério da Família e Inclusão Social. Index of the vulnerability through Factorial Analysis. Praia, Cape Verde. November 2017- May 2018.
6. London School of Hygiene & Tropical Medicine, London, United Kingdom and Instituto Nacional de Saúde Pública (INSP). The statistics aspects of using serological data to assess malaria transmission intensity, its putative changes over time, and certification of malaria elimination with Nuno Sepulveda, Joana Alves and Júlio Rodrigues. Praia, Cape Verde. January-December 2017.
7. Lux DEV Cape Verde. Statistical training for Administration technicians using IBMSPSS. Praia and Mindelo, Cape Verde. December 2017.

8. Banco de Cabo Verde. Calculation of the Pure Prize for the Compulsory Cape Verdean Maritime Liability Insurance. Praia, Cape Verde. April-July 2017.
9. Direção Geral de Imigração. Elaboration of the database and statistical analysis of data using R, Eviews and IBMSPSS for the study of Compilation and Systematization of data and statistical information for the 1st Report on Foreign and Immigrant Population in Cape Verde (REPEI) 2000/2014. Praia, Cape Verde. September 2015- September 2016.
10. Instituto Nacional de Estatística. Statistical training for National Statistical Institute technicians using IBMSPSS (two sections of 40 hours each). Praia, Cape Verde. May-June 2016.
11. Laboratórios Inpharma - Industria Farmacêutica S.A. Preparation of market research for the launch of new cosmetic products. Elaboration of the methodology (Plan and budget survey), design and application of a questionnaire, program design data entry (using CPro), data analysis and final report. SPSS and SAS. Type of business or sector Private of Enterprise activity. Praia, Cape Verde. January-May 2009.
12. Centro de Estudos e Desenvolvimento. Technical Consultant in the study on the situation of youth in conflict with the law in Cape Verde. Design of the methodology (Plan and budget survey), design and application of a questionnaire, program design data entry (using CPro), data analysis and final report. SPSS and SAS. The study was developed for the Ministry of Justice. Type of business or Private Sector Enterprise activity. Praia, Cape Verde. January-May 2008.
13. CESE Consulting. Technical Consultant in the study for the preparation of EROT's Islands of Fogo, Santiago and Santo Antão. Data Collection and statistical analysis. IBMSPSS, Excel and SAS. Type of business or Private Sector Enterprise activity. Praia, Cape Verde. June-August 2006.
14. Plataforma das ONG's de Cabo Verde. Elaboration of Cape Verdean and Foreign NGOs Guide in Cape Verde. Elaboration of the methodology (Plan and budget survey), design and application of a questionnaire, program design data entry (using CPro), data analysis and final report. IBMSPSS and SAS. Type of business or sector of activity Non-Governmental Organization. Praia, Cape Verde. May-November 2006.

Projects:

1. Center for Mathematics and Applications (currently), FCT NOVA University of Lisbon, Lisbon, Portugal. Open Populations subject to Periodical Reclassifications with Gracinda R. Guerreiro, Manuel Esquivel, João Tiago Mexia, and Maria de Fátima Minguens.
2. Centro de Matemática e Aplicações (currently), Universidade de Cabo Verde. Modelização de Risco de Crédito em Cabo Verde.
3. Centro de Estudos sobre a África, Ásia e América Latina (CEsA). Decentralized Cooperation: The Non-State Actors in the Dynamics of Change in African Countries - The Case of Guinea-Bissau and Cape Verde, 2000-2004, funded by Science Foundation, Lisbon, Portugal. January 2005-December 2009.

Memberships:

Center for Mathematics and Applications, Nova University of Lisbon. Lisbon, Portugal.

Talks and Conferences Presentations:

1. An Open Markov Chain Scheme Model for a Credit Consumption Portfolio fed by ARIMA and SARMA Processes, with Manuel L. Esquivel and Gracinda R. Guerreiro. AIP Conference Proceedings of ICNAAM 23th-29th September 2015, Rhodes, Greece.
2. On a Spread Model for Portfolio Credit Risk Modeling; AIP Conference Proceedings of ICNAAM 22th-28th September 2014, Rhodes, Greece.
3. Analysis of open Markov populations - Application to Consumption Credit Portfolio; Invite Sessions, 8th Workshop on Statistics, Mathematics and Computation, 12th-15th March 2014, Praia, Cape Verde.
4. Spread model for portfolio of consumer credit: A new approach of Cape verdean bank; Contributed Abstracts, EURO Mini-conference on Optimization in the Natural Sciences, Aveiro, 5th-9th February 2014.
5. Estimação do Spread de Crédito ao Consumo de um Banco de Cabo Verde; Invite Sessions, I Workshop Internacional de Países Lusófonos em Atuariado, Estatística e Gestão de Risco, Cidade da Praia, Cabo Verde, 19 e 20 de setembro 2012.
6. Estimation of Default Probability on a Consumption Credit Portfolio of a Cabo Verde Bank by means of a Logistic Regression; Invite Sessions,

- Joint Meeting of y-BIS and jSPE, Lisbon, Portugal 23-26 July 2012.
7. An open model for population evolution: application to consumption credit portfolio; Invite Sessions, Joint Meeting of y-BIS and jSPE, Lisbon, Portugal 23-26 July 2012.
 8. On a actuarial-financial model for a consumption credit portfolio of Cabo Verde: preliminary statistical analysis. Proceedings of the 15th International Congress on Insurance: Mathematics and Economics, Trieste, Italy 14-17 June 2011.
 9. Pobreza em Cabo Verde: um contributo multidimensional; Statistical Modelling Seminar, Praia, Cabo Verde. May 2005.

Conference/workshop/Summer Schools/fórum participations:

1. First Conference on Statistics and Data Science, Universidade Federal de Bahia, Salvador, Bahia, 12th to 14th, November 2018.
2. First LARS-IASC School on Computational Statistics and Data Science, Universidade Federal de Bahia, Salvador, Bahia, 15th to 17th, November 2018.
3. III Workshop de Soluções Matemáticas para Problemas Industriais, July 10th to July 14th, 2017, ICMC, São Carlos, USP, Brasil.
4. Cape Verde Days on International Mathematics 2017 (CVIM'2017), Praia 08-11 May 2017.
5. The 109th European Study Group with Industry, May 11th to May 15th, 2015, ICMC, at the Department of Production and Systems of the School of Engineering, University of Minho, Portugal.
6. Cape Verde Days on International Mathematics 2013 (CVIM'2013), Praia 22-25 April 2013.
7. Seminar "Princípios da Gestão do Risco" 4 a 7 de dezembro de 2012, Banco de Cabo Verde, Praia.
8. SAS. SAS fórum Lisbon in 2012, held on March 20, 2012 at the Congress Centre in Lisbon. Table discussions and presentations of various topics of risk management and other areas with SAS software applications. SAS forum, Lisbon 2012 Lisbon Congress Center. <http://www.sas.com/reg/offer/pt/sfp2012>.
9. SAS. SAS fórum Lisboa 2011, held on March 11, 2011 at the Congress Centre in Lisbon. Table discussions and presentations of various topics of risk management and other areas with SAS software applications. SAS forum, Lisbon 2011 Lisbon Congress Center. <http://www.sas.com/reg/offer/pt/sfp2011>.
10. 56th Congress of the International Statistical Institute-ISI, Lisbon 22 to 29 August 2007.

Other professional experience:

11. Training of Trainer: EC cooperation PALOPs, Program PIR-PALOP II, Praia (Cape Verde). Trainer PALOPs EC Cooperation, Program PALOPs RIP-II, Project Consolidation and Public Administration Capacity Building - Technical Censuses and Surveys.



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