



Relatório de progresso lacrado a 04-04-2023 às 22:55

Relatório de Progresso

Nota Informativa:

Os relatórios de progresso e final da atividade científica devem ser elaborados em língua inglesa ou portuguesa e lacrados pelo Investigador Responsável (IR) no prazo de 30 dias úteis após a conclusão das atividades de cada ano, e da data final do financiamento (incluindo prorrogação, caso aplicável). Depois de lacrado, o relatório final será apreciado por painéis de avaliação, especificamente constituídos para o efeito.

Os relatórios da atividade científica devem descrever de forma detalhada a execução dos trabalhos do financiamento discriminando as publicações (quando aplicável) e outros resultados decorrentes da respetiva execução, de acordo com a programação prevista, bem como a análise dos desvios verificados face ao programado, a fim de permitir a avaliação dos trabalhos de investigação desenvolvidos.

Qualquer alteração à equipa de investigação que não esteja considerada no presente relatório deverá contactar os serviços da FCT.

Formulário Relatório de Progresso - Componente Científica

1. Identificação do relatório

Relatório de Progresso nº : 3

Data de início : 01-01-2020 **Data de fim :** 31-12-2020

1.1 Identificação do projeto

Referência do projeto : UIDB/00006/2020

Designação : Centro de Estatística e Aplicações

Investigador Responsável : Marilia Cristina de Sousa Antunes

Instituição Proponente : FCIências.ID - Associação para a Investigação e Desenvolvimento de Ciências (FCiências.ID)

Entidade(s) copromotoras :

Data de início : 01-01-2020 **Data de fim :** 31-12-2023

Financiamento concedido : € 601.500,00

Financiamento FEDER concedido : € 0,00

Financiamento nacional concedido : € 601.500,00

Financiamento próprio :€ 0,00

2. Trabalhos desenvolvidos e desvios à proposta aprovada

2.1. Sumário (em inglês)

10.2 Summary in English for general dissemination purposes

The Centre of Statistics and its Applications (CEAUL) is a research and development (R&D) unit connected to the Department of Statistics and Operational Research at the Faculty of Sciences of the University of Lisbon.

Established in 1975 by Tiago de Oliveira, CEAUL plays a central role in Portugal as the only R&D unit dedicated exclusively to fundamental research in the areas of Probability, Statistics and Stochastic Processes. Besides fundamental research, CEAUL is also dedicated to interdisciplinary activities in domains as diverse as Life, Health, Natural and Environmental Sciences and Financial Risk. CEAUL's policy has been to develop strong links with other areas and scientific domains. In this sense, it organizes seminars, courses, meetings and participates in the dissemination of Statistics.

In a very general sense, Statistics may be viewed as the study of the uncertainty arising from any phenomena and situations where chance mechanisms have a key role. Such study aims at describing the characteristics of interest in each practical situation and providing guidance for the making of decisions in contexts of unpredictability. Given the unavoidable randomness inherent to the vast majority of real world phenomena, statistical thinking today infuses so many scientific fields that it plays a crucial backdrop to the advance of the Science in general.

Statistics, as a scientific discipline, is relatively young with its foundations and main developments dating back to the XX century. However, with the advances of technology and consequent capacity for acquisition and data warehouse, the paradigm of Statistics has been changing in a fast speed. Statistical support is more and more required to give adequate answers to problems posed in a great variety of research activities. Consequently the strategy of this research unit is to (1) keep pace with the recent advances in the scientific domain of Statistics, to continue fundamental research in its areas of excellence, developing new methodologies and tools with the goal of communicating and using the most up-to-date knowledge, while collaborating with researchers from other scientific areas; (2) participate in national and international projects of an interdisciplinary nature; (3) participate actively in Society by giving support to Industry, Commerce, Services and Business; (4) develop advanced training activities through the involvement in PhD programs of High Education Institutions and the organization of advanced courses in emerging areas of Statistics; (5) integrate and initiate scientifically young researchers.

To carry out the objectives set and to implement the proposed strategy, CEAUL has 54 integrated researchers (11 non-PhD), coming from a range of Universities and Polytechnic Institutes from continental Portugal, Madeira and Azores, and 38 collaborators who are integrated members in other research units from the area of Mathematics, Environmental and Health Sciences.

10.3 Summary in English for evaluation

The Centre of Statistics and its Applications (CEAUL) is a research and development (R&D) unit connected to the Department of Statistics and Operational Research (DEIO) at the Faculty of Sciences of the University of Lisbon (FCUL). FCUL provides physical facilities, general computing infrastructures and communications, needed for the prosecution of its activities. The Association for Research and Development of CIÊNCIAS (FCiências.ID), the main host institution, supplies administrative and financial R&D management.

Established in 1975 by Tiago de Oliveira, CEAUL plays a central role in Portugal as the only R&D unit dedicated exclusively to fundamental research in the areas of Probability, Statistics and Stochastic Processes. Besides fundamental research, CEAUL is also dedicated to interdisciplinary activities in domains as diverse as Life, Health, Natural and Environmental Sciences and Financial Risk.

CEAUL is a member of CNM-Adhering Organization and Committee for Mathematics/ International Mathematical Union and is an associated member of CIM-International Centre of Mathematics. It has close connections with the Portuguese National Institute of Statistics (INE), through the editorial support given by senior members of CEAUL to REVSTAT-Statistical Journal, an international journal in the area of Probability and Statistics, edited by INE and indexed by the ISI Web of Knowledge. At the international level CEAUL is connected to several prestigious universities through scientific collaboration and participation of its members in networks and research activities. CEAUL integrates BIOSTATNET, an interdisciplinary Biostatistics network, and PT-MATHS-IN, a member of the European Service Network of Mathematics for Industry and Innovation.

In a very general sense Statistics may be viewed as the study of the uncertainty present in phenomena and situations where chance mechanisms have a key action. Such study aims at describing the characteristics of interest in each practical situation and providing guidance for the making of decisions in contexts of unpredictability. Given the unavoidable randomness inherent to the vast majority of real world phenomena, statistical thinking today infuses so many scientific fields that it plays a crucial backdrop to the advance of the Science in general. Statistical theory and methodology cannot exist divorced from the needs of other sciences felt by the corresponding researchers and users.

Statistics, as a scientific discipline, is relatively young with its foundations and main developments dating back to the XX century. However, with the advances of technology and consequent capacity for data acquisition and storage, the paradigm of Statistics has been changing fast and statistical support is increasingly required to provide adequate solutions to problems posed in a great variety of research activities. Consequently the strategy of CEAUL is to keep up to speed with the recent advances in Statistics, to continue fundamental research in its areas of excellence, using the most up-to-date knowledge to develop and communicate new methodologies and tools, while collaborating with researchers from other scientific areas.

Therefore the strategic program of CEAUL for 2018-2022 has the following objectives:

1. Develop fundamental research on diverse domains of Statistics, aiming to extend the frontiers of statistical knowledge and provide statistical tools for experimental sciences, in close collaboration with researchers from other domains and scientific areas.
2. Participate in interdisciplinary national and international projects.

3. Participate actively in Society by giving support to Industry, Commerce, Services and Business in the form of consultancy or specialized courses.

4. Develop advanced training activities through the involvement in PhD programs of High Education Institutions and the organization of advanced courses in emerging areas of Statistics.

5. Encouraging young students into research, by involving them in the Centre's activities.

CEAUL organizes internally its members into two groups, according to the following lines of research: (1) Order Statistics, Extremes, Modelling and Simulation and (2) Statistical Models and Methods for Complex Systems.

Fundamental research will be carried out, in a diversified range of themes including but not restricted to, Statistics of Extremes, Computational Statistics and Simulation, Resampling Methodologies, Quality Control, Bayesian Statistics, Biostatistics, Environmental Statistics, Statistics in Genomics, Immunology and Epidemiology, Statistics in Medicine, Longitudinal Models and Survival Analysis, Time Series Analysis, Incomplete Data Analysis, Multivariate Analysis, Temporal and Spatial Statistics, Design of Experiments, History and Teaching of Statistics. Although the two groups work in different themes and areas of Statistics, they share similar interests in terms of areas of application. The main areas are Environmental and Ecological Statistics, Statistics in Life Sciences and Biostatistics, and Risk in Financial Extremes. The members working in these areas collaborate with researchers coming from other fields of science. This collaborative work is done either at an individual level, or through the participation in national and international projects. Knowledge transfer, in terms of consultancy work, participation in projects coming from the Industry, Services and Public Administration, is also a strategic objective of the areas of application.

To carry out the objectives set and to implement the proposed strategy, CEAUL counts with (i) 43 integrated PhD researchers, coming from a range of Universities and Polytechnic Institutes from North to South of Portugal, Madeira and Azores; (ii) 38 collaborators who are integrated members in other research units from the area of Mathematics, Environmental and Health Sciences, and 11 integrated non-PhD (seven of them are PhD students).

2.2. Resumo dos trabalhos

Descrição sucinta das atividades desenvolvidas no período em apreço e dos resultados alcançados. De referir, em concreto, as tarefas que tiveram execução no período a que se reporta o relatório.

New fundamental research on Extreme Value Theory (EVT) have been carried out during 2022. In particular we refer the estimation of crucial parameters in EVT under a non-regular framework, the use of Box-Cox transformations and bias reduction in EVT, and the development of new estimators. New computational studies were carried out to compare new estimators of the tail index. In a multivariate context we refer a study on spatial dependence and space-time trend in extreme events. In the area of applications, we refer the use of EVT methodology in these works: "Modelling Hydrometeorological Extremes Associated to the Moisture Transport Driven by the Great Plains Low-Level Jet" and "Species Accumulation Curves and Extreme Value Theory"

Regarding Environmental Statistics contributions, negative binomial generalized linear models were used to relate spatial patterns of events of different types to natural and anthropogenic landscape characteristics, evaluating how such characteristics may affect the risk of human-wildlife impact events

involving mammals in Southeastern Brazil. Continued collaborations with the University of St Andrews included work within the broad field of ecological statistics, including passive acoustic density estimation, through the comparison of the three available methods: plot Sampling, distance sampling and spatially explicit capture-recapture.

Early Biomarkers of Extracapsular Extension of Prostate Cancer using MRI-Derived Semantic Features; Temporal dynamics of intranasal oxytocin in human brain electrophysiology; Applications included a wide variety of areas, such as medicine, genetics, public health, ecology, environment, forensic and education, among others. Some key examples include: Diversity and Patterns of Marine Non-Native Species in the Archipelagos of Macaronesia; Longitudinal SARS-CoV-2 seroprevalence in Portugal and antibody maintenance 12 months after infection; A Role for Gene-Environment Interactions in Autism Spectrum Disorder Is Supported by Variants in Genes Regulating the Effects of Exposure to Xenobiotics; Transcriptomic and methylation analysis of susceptible and tolerant grapevine genotypes following Plasmopara viticola infection; Third molar maturity index (I3M) assessment according to different geographical zones: a large multi-ethnic study sample; Transversal competences and employability: the impacts of distance learning university according to graduates' follow-up;

Several members were strongly linked with entities such as IPMA (Instituto Português do Mar e da Atmosfera), GADES Solutions (training and consultancy) and Health Institutions. CEAUL's Societal contributions were strong in 2022, with specialized courses lectured by CEAUL members aimed at specific areas such as health and teaching at the high school level. The links developed in 2020 and 2021 with RTP, the main Portuguese television network, allowed the continuation of the weekly segment "Dados Contados", to use in their program "Europa Minha", which aimed to use numerical and statistical information to inform civil society on European issues. The last episode took place in March 2022. CEAUL and IPQ (Instituto Português da Qualidade, Portugal) started a joint collaboration in September 2022, with some members of CEAUL taking part in the Technical Committee for Standardization of Applications of Statistical Methods (CT 225).

The number of students following a PhD program in Statistics supervised by members of CEAUL was 25, an increase of 13.6% since 2021 and of 78.6% since 2020, which is a result of the efforts put in place to attract more PhD students. A post-doc Brazilian student is visiting CEAUL for one year. Activities to attract young researchers continued to be a priority. We organized and improved the 3rd edition of the program "Be a researcher for 3 weeks", with 11 topics and 15 students working closely with CEAUL researchers. The number of proposals increased compared to the edition of 2021 but the number of students decreased probably due to the fact of the program in 2022 taking place in July. Ten new MSc level scholarships, 3 more than in 2021, were put in place under different projects. Besides this, for the first time, CEAUL applied for the FCT Summer Fellowships "Verão com Ciência 2022" and got 4 grants of 1 month. Through a protocol with the Academy of Sciences of Lisbon (ACL), CEAUL continued developing several forensic studies, namely related to the Lisbon Earthquake of 1755. Several presentations on scientific events and publication of articles have resulted from this initiative. CEAUL was visited by 3 foreign researchers, two from Scotland and one from Colombia.

Publications (international/national): / edition of books; 6/1 chapter of books; 89/3 articles; 12/3 Proceedings. Communications: 8/ plenary talks, 22/6 invited talks, 29/8 international contributed talks/posters, 14/6 national contributed talks/posters, 20 seminars.

Members were involved in the editorial board of several national and international journals, including Associate Editors or Editorial Board Members in journals on different areas including Applied and Theoretical Statistics, Applied Mathematics and Machine Learning, Chaotic modelling, Extremes, Management and Tourism, Agricultural and Biological Sciences, among others. There is a strong involvement with REVSTAT, the international periodical edited by Instituto Nacional de Estatística, on the role of Editor in Chief, Co-Editor and associated Editors.

There were 30 master dissertations, 2 Ph.D. theses supervised by members of CEAUL, and 16 other advisory work, namely 10 in the program “Being a researcher for 3 weeks”. Members of CEAUL lectured 20 advanced or specialized courses and 9 of these courses were organized in partnership with the private company Gades Solutions; 3 other courses organized by CEAUL were given by foreign visitors; and 2 workshops were organized by the unit. We supported conference attendance and courses for several members, collaborators, and students.

Members were involved in the organization of several scientific events (e.g. seminars, and organizing and scientific committees) and were principal investigators of some of the projects where CEAUL participated: There were 26 seminars organized by CEAUL. Members of CEAUL participated in 36 scientific and organizing committees, organized 7 invited sessions and 7 other events. CEAUL and CEMAT members organized a two days workshop to create dynamic networking, to enhance the development of the centers, find new collaborations and debate ideas to promote the development of the centers.

Members were involved in 20 funded projects, 17 of them developed under national funds: 12 from FCT\Portugal2020, 5 from Academic funding, and one Horizon Health 2021. Two projects under European funds: COST and Swiss funds. Most projects are in the medical area, some in industry. Two members are principal investigators of FCT projects. During 2022, members of CEAUL were involved in 27 Consultancy activities at: Centro Hospitalar Universitário de Lisboa Central integrating 6 hospitals; Instituto Português do Mar e da Atmosfera where the main goal was the creation and validation of a generic tool analysis of resources/fisheries and formulation of scientific advice for its management; a member is the Portuguese delegate of the Forensic Odontology sub working group of DVI team of Interpol. The Portuguese Network of Mathematics for Industry also has one CEAUL member in the Direction. A member is the responsible for the management of PORDATA, the Database of Contemporary Portugal.

Several CEAUL members were in panels for evaluating international projects and acted as referees of international journals. CEAUL counts by the end of 2022 with 53 integrated PhD researchers, 35 collaborators and 34 non-PhD researchers (25 PhD students, 7 MSc students).

2.3. Desvios dos trabalhos face à proposta aprovada

No caso de se terem registado desvios face ao programa de trabalho aprovado, incluindo a sua calendarização, solicita-se a identificação e descrição dos referidos desvios, bem como uma breve justificação para os mesmos.

No caso de se terem observado dificuldades na execução do plano de trabalhos aprovado, solicita-se a identificação e descrição das referidas dificuldades, bem como a forma de as ultrapassar / como foram ultrapassadas.

1. Develop fundamental research on diverse domains of Statistics, aiming to extend the frontiers of statistical knowledge and provide statistical tools for experimental sciences, in close collaboration with researchers from other domains and scientific areas. This objective was well accomplished during 2022, although it is recognized that some members still showed limited activity during this period. This problem needs to continue going on being addressed in the future, despite a total of 104 papers (101 international) and 7 book chapters (6 international). Extreme theory fundamental research continues strengthened during 2022, and the collaboration with researchers of other domains and scientific areas was kept, namely in forensic dentistry, fuel related enterprises, health, and environment.
2. Participate in interdisciplinary national and international projects. The number of national and international projects during 2022 was 17 and 3, respectively, during 2022: CEAUL members were participating in 15 ongoing projects, and 4 new proposals were approved and started during this year. Clearly, this is still an area of future investment.
3. Participate actively in Society by giving support to Industry, Commerce, Services and Business in the form of consultancy or specialized courses. Because only a small number of CEAUL members continue available to accept doing consultancy work due to an overload of teaching time, in 2022 the consultancy activity was kept low. This decrease may still be due to the COVID-19 pandemic that limited this type of requests to our research centre. Still, during 2022 several integrated/collaborator members of CEAUL were involved in consultancy work for 8 different entities. However, the collaboration protocol established between FCUL and FMUL (Faculty of Medicine – Lisbon University) which aims to promote partnerships between CAML (Lisbon Academic Medical Center) and CEAUL researchers, will certainly improve this topic.
4. Develop advanced training activities through the involvement in PhD programs of High Education Institutions and the organization of advanced courses in emerging areas of Statistics. No violations to this point were found.
5. Encouraging young students into research, by involving them in the Centre's activities. No violations to this point were found.

2.4. Equipa de Investigação

Nome / Perfil : Marilia Cristina de Sousa Antunes

Nome / Perfil : Abdul Remane Sulemane Chafim
Nome / Perfil : Adelaide Maria Sousa Figueiredo
Nome / Perfil : Alexandra Sofia Ribeiro de Almeida
Nome / Perfil : Amílcar Manuel do Rosário Oliveira
Nome / Perfil : Ana Luisa Trigoso Papoila da Silva
Nome / Perfil : Ana Maria Duarte Pereira Cardoso Alves
Nome / Perfil : Ana Maria Santos Ferreira Gorjão Henriques
Nome / Perfil : ANA SOFIA MONTEIRO ARAÚJO SOARES
Nome / Perfil : André Filipe Afonso de Sousa Fonseca
Nome / Perfil : Antonio Furtado
Nome / Perfil : Carina Soares da Silva
Nome / Perfil : Carlos Daniel Mimoso Paulino
Nome / Perfil : Carlos do Carmo de Portugal e Castro da Camara
Nome / Perfil : Carlos Geraldes
Nome / Perfil : Carlota Ribeiro Teles
Nome / Perfil : Carolina Alexandre Festas Gomes Pestana
Nome / Perfil : Clara Maria Henrique Cordeiro
Nome / Perfil : Claudia Margarida Pedrosa Neves
Nome / Perfil : Cláudia Silvestre
Nome / Perfil : Conceição Ribeiro
Nome / Perfil : Cristiana Maria Palmela Pereira
Nome / Perfil : Cristina Maria Tristão Simões Rocha
Nome / Perfil : Délia Canha Gouveia Reis
Nome / Perfil : Dinis Duarte Ferreira Pestana
Nome / Perfil : Diogo Sousa
Nome / Perfil : Dora Prata Gomes
Nome / Perfil : Duarte Miguel Carvalho Bettencourt
Nome / Perfil : EDUARDO LUÍS VEIGA GUERREIRO DE OLIVEIRA
Nome / Perfil : Érica Sofia Cláudio Ribeiro
Nome / Perfil : Erick Barreiro Chatalov
Nome / Perfil : Eunice Isabel Ganhão Carrasquinha Trigueirão
Nome / Perfil : Farhat-Un-Nisa Bajwa
Nome / Perfil : Felipe Emanoel Barletta Mendes Felipe Barletta
Nome / Perfil : Fernanda Otília de Figueiredo
Nome / Perfil : Fernando SEQUEIRA
Nome / Perfil : Filipe Ramos
Nome / Perfil : FRANCISCO JOAO SALVADO E SILVA

Nome / Perfil : Frederico Caeiro
Nome / Perfil : Giovani Loiola da Silva
Nome / Perfil : Helena Penalva
Nome / Perfil : Hugo Anjos
Nome / Perfil : Inês Sousa
Nome / Perfil : Isabel Cristina Maciel Natário
Nome / Perfil : Iúri Correia
Nome / Perfil : Ivo Miguel Sousa Ferreira
Nome / Perfil : Ivone Rosa
Nome / Perfil : Jessica Silva Lomba
Nome / Perfil : João Albuquerque
Nome / Perfil : JOÃO JOSÉ FERREIRA GOMES
Nome / Perfil : JOÃO PAULO OLIVEIRA MARTINS
Nome / Perfil : João Telhada
Nome / Perfil : João Torrado Malato
Nome / Perfil : João Vasco Afonso
Nome / Perfil : Joaquim Eduardo Gonçalves Severino
Nome / Perfil : Joaquim Fernando Pinto da Costa
Nome / Perfil : Jorge Filipe Campinos Landerset Cadima
Nome / Perfil : José António Ferreira Lobo Pereira
Nome / Perfil : José António Seijas-Macias
Nome / Perfil : José Henrique Dias Gonçalves
Nome / Perfil : JOSÉ LEONEL LINHARES DA ROCHA
Nome / Perfil : José Miguel Oliveira Cardoso Pereira
Nome / Perfil : Kamil Feridun Turkman
Nome / Perfil : Iaila qadir musib MUSIB
Nome / Perfil : Laurens de Haan
Nome / Perfil : Lídia Serra
Nome / Perfil : Lígia Henriques Rodrigues
Nome / Perfil : Lígia Moriguchi Watanabe
Nome / Perfil : Liliana do Carmo Cerdeira Antunes
Nome / Perfil : Lisete Maria Ribeiro de Sousa
Nome / Perfil : Luís António Garcez Duarte da Costa Ferreira
Nome / Perfil : Luis Filipe Meira Machado
Nome / Perfil : LUÍS MIGUEL DOS SANTOS REIS SOARES DE ALMEIDA
Nome / Perfil : LUÍSA DA CONCEIÇÃO CANTO E CASTRO LOURA
Nome / Perfil : Lutete Lenda
Nome / Perfil : Luzia Augusta Pires Gonçalves
Nome / Perfil : Manuel Scotto

Nome / Perfil : Manuela Neves
Nome / Perfil : Marcos Roberto Machado
Nome / Perfil : Maria Antónia Amaral Turkman
Nome / Perfil : Maria Carolina Godinho Miranda Segurado Marques
Nome / Perfil : Maria Cristina Souto Miranda
Nome / Perfil : Maria da Conceição Dias Leal
Nome / Perfil : Maria da Graça Temido
Nome / Perfil : Maria de Fátima Almeida Brilhante
Nome / Perfil : Maria Do Rosário Ramos
Nome / Perfil : Maria Fernanda Nunes Diamantino
Nome / Perfil : MARIA HELENA MOURIÑO SILVA NUNES
Nome / Perfil : Maria Helena Neves de Queirós Gonçalves
Nome / Perfil : Maria Isabel Fraga Alves
Nome / Perfil : Maria Ivette Gomes
Nome / Perfil : Maria João Fernandes Pereira Polidoro
Nome / Perfil : Maria Lucília Carvalho
Nome / Perfil : Maria Salomé Esteves Cabral
Nome / Perfil : Maria Serralha do Nascimento Belchior Zacarias
Nome / Perfil : Marta Mega Rufino
Nome / Perfil : Marta Susana Ferreira Leitão Alves
Nome / Perfil : Marta Susana Ribeiro Ferreira
Nome / Perfil : Miguel Brás de Carvalho
Nome / Perfil : Miguel Martins Felgueiras
Nome / Perfil : Mónica Daniela Santos Fialho
Nome / Perfil : Neto Pascoal
Nome / Perfil : Nuno Sepulveda
Nome / Perfil : Patrícia Cortés de Zea Bermude
Nome / Perfil : Paula Cristina Martins dos Reis
Nome / Perfil : Paula Cristina Pires Simões
Nome / Perfil : Paula Cristina Sequeira Pereira
Nome / Perfil : Paulo José de Jesus Soares
Nome / Perfil : Paulo José Figueira Semblano
Nome / Perfil : Paulo José Figueira Semblano
Nome / Perfil : Pedro Pestana
Nome / Perfil : Raquel Batista Correia
Nome / Perfil : RAQUEL MENEZES DA MOTA LEITE
Nome / Perfil : Renato Ricardo de Paula
Nome / Perfil : Ricardo Galante
Nome / Perfil : Ricardo Miguel Vieira de São João
Nome / Perfil : Rui Filipe Vargas de Sousa Santos

Nome / Perfil : Rui Manuel da Costa Martins
Nome / Perfil : Saghir Bashir
Nome / Perfil : SANDRA CLÁUDIA MATIAS RODRIGUES
Nome / Perfil : Sandra Cristina de Faria Ramos
Nome / Perfil : SANDRA MARIA DA SILVA FIGUEIREDO ALEIXO
Nome / Perfil : Sandra Maria Freitas Mendonça
Nome / Perfil : Sara Maria Vaz Domingos
Nome / Perfil : Sílvia Maria Dias Pedro Rebouças
Nome / Perfil : Sílvio Filipe Velosa
Nome / Perfil : Sónia Carvalho
Nome / Perfil : Sónia Isabel Caldeira Romero
Nome / Perfil : Soraia Pereira
Nome / Perfil : Teresa Alpuim
Nome / Perfil : Teresa Paula Costa Azinheira Oliveira
Nome / Perfil : Tiago Marques
Nome / Perfil : Tiago Miguel Dias Domingues
Nome / Perfil : Valeska Andreozzi
Nome / Perfil : Vanda Calhau Fernandes Inácio de Carvalho
Nome / Perfil : Vera Pinto
Nome / Perfil : Vítor Manuel Fernandes Valente
Nome / Perfil : João Torrado Malato

2.5. Orçamento

Descrição sucinta do orçamento, incluindo os principais itens de investimento aprovados e investimento por entidade beneficiária. No caso de se terem registado desvios face ao orçamento aprovado, solicita-se a identificação e descrição dos referidos desvios, bem como uma breve justificação para os mesmos.

CEAUL's expenses for 2022 were:

Human Resources: 3 423,19 Eur (budget: 28 250,00 Eur)

Missions: 22 910,42 Eur (budget: 10 000,00 Eur)

Consulting: 0,00 Eur (budget: 10 950,00 Eur)

Acquisition of goods and services: 7 226,64 Eur (budget: 4 500,00 Eur)

Other expenses: 600,00 Eur (budget: 1 000,00 Eur)

Dissemination, Promotion and Publicity: 24 987,85 Eur (budget: 54 600,00 Eur)

Equipment: 15 855,60 Eur (budget: 11 000,00 Eur)

Overheads: 19 140,43 Eur (budget: 30 075,00 Eur)

TOTAL: 95 702,13 Eur (budget: 150 375,00 Eur)

There is a positive balance of 54 672,87 Euros concerning the total amount for 2022. This is still due to the restrictions caused by the COVID-19 pandemic, which have led to less participation in conferences and no hosting visiting researchers. However, there is already an increase in these numbers. The acquisition of tablets, iPads and computers still increased due to remote work. The negative balance in Missions is due to the Workshop “O Futuro da Estatística na ULisboa”, a joint organization of CEAUL and CEMAT, for all its members. In addition, CEAUL was invited to organize the 2nd edition of the IMS - International Conference on Statistics and Data Science, which will take place in Lisbon in December 2023, but there was a need for the 3 co-chairs to participate in the 1st edition in Florence in December 2022.

3. Indicadores

Indicar os valores do projeto até ao fim do período a que corresponde o presente relatório. Devem apenas ser indicadas concretizações efetivas. Não incluir publicações submetidas para publicação, nem teses que ainda não tenham sido discutidas.

3.1. Quadro de indicadores do projeto

Indicadores de realização física	Propostos	Realizado anterior	Realizados	Total realizado	% de execução
A - Publicações					
Livros	0	1	0	1	n.a.
Artigos em revistas internacionais	0	170	107	277	n.a.
Artigos em revistas nacionais	0	28	5	33	n.a.
B - Comunicações					
Comunicações em encontros científicos internacionais	0	104	75	179	n.a.
Comunicações em encontros científicos nacionais	0	80	23	103	n.a.
C - Relatórios					
	0	4	0	4	n.a.
D - Organização de seminários e conferências					
	0	78	35	113	n.a.
E - Formação avançada					
Teses de Doutoramento	0	5	2	7	n.a.
Teses de Mestrado	0	36	30	66	n.a.
Outras	0	15	41	56	n.a.
F - Modelos					
	0	0	0	0	n.a.
G - Aplicações computacionais					
	0	1	1	2	n.a.
H - Instalações piloto					
	0	0	0	0	n.a.
I - Protótipos laboratoriais					
	0	0	0	0	n.a.
J - Patentes					
	0	0	0	0	n.a.
K - Publicações científicas em domínios científicos enquadráveis na RIS3					
	0	0	0	0	n.a.
L - Patentes EPO					
	0	0	0	0	n.a.
M - Outros					
	0	0	0	0	n.a.
	0	0	0	0	n.a.
	0	0	0	0	n.a.

4. Publicações e outras ações públicas de disseminação dos resultados do projeto

4.1. Publicações (opcional)

Ano	Publicações
Abrantes P, Silva AP, Backstrom B, Neves C, Falé I, Jacquinet M, Ramos MR, Magano O and Henriques S. Transversal competences and employability: the impacts of distance learning university according to graduates' follow-up. Education Sciences 12(2), 65.	

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4.2. Websites gerados no contexto do projeto (opcional)

Enumerar as URL/endereços dos sites web criados no âmbito do projeto ou com informação sobre o mesmo, separados por vírgulas

<https://ceaul.org/dados-contados-rtp-europa-minha> - Webpage with information concerning weekly episodes of “Dados Contados” in the RTP’s tv show “Europa Minha”.

<https://fhidtool.shinyapps.io/dyslipid/> - a web based qpp developed under the PTDC/SAU-SER/29180/2017 project to be used to assist clinicians in the familial hypercholesterolemia diagnosis.

4.3. Outras ações públicas (opcional)

Identificação de outras ações públicas de disseminação de resultados do projeto, como sejam conferências, seminários, cursos, filmes, vídeos, programas em rádio e/ou televisão, newsletters, etc.

Descrição

RTP TV show “Europa Minha” presenting the rubric “Dados Contados” at RTP

https://www.rtp.pt/noticias/mundo/dados-contados_i1338599

Data início : / Data Fim :

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Data início : / Data Fim :

Newspaper Article "Made in Portugal: primeiro Dia Internacional da Mulher na Estatística e na Ciência de Dados", shorturl.at/hosTW

Data início : / Data Fim :

5. Ficheiros anexos (opcional)

Neste item poderão incluir-se, se necessário, ficheiros em formato PDF, que tenham sido referidos ao longo do presente relatório, como, por exemplo, gráficos, esquemas e/ou fotografias.

O conjunto dos ficheiros (em número máximo de cinco) ou o arquivo a submeter não poderão exceder 10MB.

Ficheiros

[Annex to CEAUL Report 2022.pdf](#)

Ponto do presente relatório a que respeita : Pontos 2.2, 2.3, 3.1, 4.1 e 4.2.

Descrição : Lista de atividades detalhada referente a 2022.

Annex to the 2022 Report

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CEAUL REPORT -

(Members of CEAUL in bold and underlined)

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Fraga Alves MI (2022). Editor-in-Chief da Revstat-Statistical Journal

URL: <https://revstat.ine.pt/index.php/REVSTAT/about/editorialTeam>

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Invited talks (International)

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Gomes MI (invitee), Figueiredo FO and Henriques-Rodrigues L (2022). “*The Role of Generalized Means in the Estimation of the Conditional Tail Expectation*”, Encontro Nacional da Sociedade Portuguesa de Matemática. Invited talk in a session on “Modelação de valores extremos e acontecimentos raros”, organized by Margarida Brito, Faculdade de Ciências, Universidade do Porto, Tomar, July 18-20, URL: <https://enspm2022.spm.pt/>, Abstract available at: https://enspm2022.spm.pt/wp-content/uploads/thwcfce_uploads/83a756fa8f50cc9a785cec08083bf87a/lvette_abstract.pdf.

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Henriques-Rodrigues L (invitee), Caeiro F and **Gomes MI** (2022). “*Lehmer's Mean-of-order-p in the Estimation of the Weibull Tail Coefficient*”, VIII Workshop Computational Data Analysis and Numerical Methods, Tomar (on-line), October 13-15, URL: <http://www.wcdanm.ipt.pt>, Abstract available at:

http://www.wcdanm.ipt.pt/download//2/2/BoA_VIII_WCDANM_Out2022.pdf#page=32.

Batista A (invitee), Esgalhado F, Russo S, Reis CR, Serrano F, **Mouriño H**, Ortigueira M (2022). “*Alvarez and Braxton-Hicks Waves in the Electrohysterogram: An Input for Pregnancy Monitoring*”, 4th Signal Processing and Monitoring (SPaM) in Labour Workshop, Munich, Germany, 7th - 9th July 2022, URL: <https://users.ox.ac.uk/~ndog0178/spam2022.htm>.

Neves M (invitee), **Cordeiro C** and Gomes D (2022). “*Extreme value theory in time series analysis to estimate risk measures*”, ICRA9 (9th International Conference on Risk Analysis), Perugia, May 25-27, URL: <http://icra9.unipg.it/program/scientific-program/>.

Neves M (invitee), **Cordeiro C** and Gomes D (2022). “*Extreme value theory in time series analysis to estimate risk measures*”, ICRA9 (9th International Conference on Risk Analysis), Perugia, May 25-27, URL: <http://icra9.unipg.it/program/scientific-program/>.

Rufino, MM (invitee), Carvalho, AN, Gaspar, MB, (2022). “*Are they fishing or not? Effect of time interval and method on estimated fishing effort in a bivalve dredge and octopus traps small scale fisheries in Portugal*”, International Statistics in Ecology Conference - ISEC 2022, Cape Town.

Sepúlveda N (invitee), and **Malato J** (2022). “*Introduction To Regression Models And Regularisation For Linear Models*”, NGSchool2022 Machine Learning in Computational Biology, Jabłonna Palace, Warsaw, 15/09/2022 to 23/09/2022, URL: <https://ngschool.eu/ngschool2022/>.

Invited talks (National)

(6)

Cristiana Palmela Pereira (2022). “*A relevância da metodologia DVI na casuística DVI recente portuguesa: Medicina Dentária Forense*”, 6º Curso de Formação em Disaster Victim Identification (DVI), INMCLF, Coimbra, 14-17 de setembro de 2022.

Gomes MI (invitee), Figueiredo FO and Henriques-Rodrigues L (2022). “*The Role of Generalized Means in the Estimation of the Conditional Tail Expectation*”, ENSPM 2022, Tomar, Julho 2022.

Gomes MI (2022). “*Extremos: Conversas à mesa*”, Mesas temáticas sobre os Temas: Amostragem e inquéritos, Extremos, Bioestatística, Estatística espacial, Aplicações, Ciência de dados. Workshop — O Futuro da Estatística na ULisboa, Costa de Caparica, October 15-16.

Rufino, MM (invitee), C Albouy and A Brind'Amour (2022). “*Which spatial interpolators I should use? A case study using marine species distributions modelling*”, Advanced Species Distribution Modeling, Guimarães.

Silva GL (2022). “*Bayesian Space-Time Statistical Modelling: A Key Issue in Disease Mapping*”, XIV Winter School Mathematics, Instituto Superior Técnico, 18-19/02/2022, URL: <https://sites.google.com/view/eimtecnico/>.

Silva Lomba J (invitee), Fraga Alves MI, Neves C (2022). “*Statistics For Extreme Rainfall Over Time And Space*”, Encontro Nacional da Sociedade Portuguesa de Matemática (ENSPM 2022), Tomar, Portugal, 18-20/07/2022, URL: <https://enspm2022.spm.pt/>.

Contributed talks (International)

(29)

Antunes M (presenter) and Sousa L (2022). “*Bayesian Classification and Non-Bayesian Label Estimation via EM Algorithm to Identify Differential Expression in Omics Data: a Comparative Study*”, 7th Conference of the International Federation of Classification Societies (IFCS2022), Porto, 19th-23rd July 2022, URL: <https://ifcs2022.fep.up.pt/>.

Brilhante MF (presenter) and Rocha ML (2022). “*Tourism accommodation and restaurant sectors in São Miguel (Azores) during the COVID-19 pandemic*”, IV International Congress, Planning and Governance of Ultra-Peripheral Territories and Low-Density Regions, Ponta Delgada, June, 23-25, URL: <https://www.icsd2022.uac.pt>.

Ferreira P (presenter), Canto e Castro L. and Silva C. (2022). “*Similarities and dissimilarities in student grades distributions, over time and by gender*”, 6th International Conference on

Advanced Research in Teaching and Education (ICATE), Vienna, Austria, 03 - 05 November,
URL: <https://www.conference2go.com/event/the-6th-international-conference-on-advanced-research-in-teaching-and-education/>.

de Carvalho M (presenter), de Zea Bermudez P. "An Extreme Value Bayesian Lasso for the Conditional Bulk and Tail," COMPSTAT 2022, 23-26 August 2022, Bologna, Italy. URL: <http://www.compstat2022.org/index.php> Abstract available at: <http://www.cmstatistics.org/RegistrationsV2/COMPSTAT2022/viewSubmission.php?in=383&token=6q55419q19ppq7ns7qqn6251778o3oo4>

Figueiredo AM (presenter) and Figueiredo FO (2022). "*Analyzing the Evolution of EU Countries and Indicators of Europe 2020 Agenda*", IFCS 2022, FEP, Porto, Julho 2022, URL: <https://ifcs2022.fep.up.pt/>

Galante R (presenter) and Alpuim T "Forecast of New Products in a Portuguese Brewery", "42nd INTERNATIONAL SYMPOSIUM ON FORECASTING, Oxford, Oxfordshire, United Kingdom, 10th-13th July 2022, URL: <https://forecasters.org/>

Gomes MI (presenter), Caeiro F, Figueiredo FO and Henriques-Rodrigues (2022). "*Accurate Ways to Measure Risks of Extreme Events*", CFE and CMStatistics 2022, London, UK, December 17-19, URL: <http://www.cmstatistics.org>, Abstract available at: <http://www.cmstatistics.org/CMStatistics2022/docs/BoACFECMStatistics2022.pdf?20221205001440#page=30>.

Gomes MI (presenter), Figueiredo FO and Henriques-Rodrigues L (2022). "*Alternative Reliable Ways to Manage Risks of Extreme Events*", ICRA9: 9th International Conference on Risk Analysis, Perugia, Italy, May 25-27, URL: <http://icra9.unipg.it/>, Abstract available at: http://icra9.unipg.it/wp-content/uploads/2020/02/BOA_ICRA9.pdf#page=229.

Malato J (presenter), Graça L and Sepúlveda N (2022). "*Impact Of Imperfect Diagnosis In ME/CFS Association Analyses*", Lisbon Young Mathematicians Conference, Faculty of Sciences, University of Lisbon, Lisbon, Portugal, 13/04/2022 to 14/04/2022, URL: <https://sites.google.com/campus.fct.unl.pt/lymc2022/home>.

Martins JP (presenter), Felgueiras M and Santos R (2022). "*Statistical Inference Using Low Size Samples Extracted from Skewed Populations*", International Conference Computational

and Mathematical Methods in Science and Engineering (CMMSE 2022), Rota, July 3-7,

URL: <https://cmmse.usal.es/cmmse2022/>.

Miranda C (presenter), Souto de Miranda M and Gomes MI (2022). “*A New Proposal for Robust Estimations of the Extremal Index*”, LinStat—International Conference on Trends and Perspectives in Linear Statistical Inference, Tomar, July 4-8,

URL: <http://www.linstat.ipt.pt/download/LinStat2022-BoA.pdf>.

Neves M (presenter) and Cordeiro C (2022). “*Time series prediction and extreme events*”, CFE-CMStatistics 2022 (15th International Conference of the ERCIM WG on Computational and Methodological Statistics and 16th International Conference on Computational and Financial Econometrics), King's College London, UK, December 17-19,

URL: <http://www.cmstatistics.org/CMStatistics2022/BoA.php..>

Oliveira A (2022). “*Learning Statistics with Jamovi*”, 14th International Workshop on Mathematical e-Learning (e-math 2022), Madrid, Spain, 24-25 November 2022,

URL: <https://sites.google.com/view/14emath2022madrid/program>.

Oliveira A (2022). “*Big Data Analytics in Control of Water*”, 8th Conference Economics of Natural Resources & the Environment, University of Thessaly, Greece, 2-3 December 2022,

URL: http://envecon.econ.uth.gr/main/eng/images/8th_conference/ENVECON_8_BOOK_of_Abstracts_FINAL.pdf.

Oliveira A (presenter), Oliveira TA, Seijas-Macias JA (2022). “*The extended Skew-Normal Distribution on the Product of two Normal Variables: computational simulations*”, 7th Stochastic Modeling Techniques and Data Analysis International Conference with Demographics2022 Workshop, Athens, Greece, 7-10 June 2022,

URL: http://www.smtda.net/images/!SMTDA2022_programme-final-1a.pdf.

Palmela Pereira C (2022). “*Portuguese DVI Update: Education and Standardization as tools for the global competitiveness of the Forensic Odontology*”, 31st INTERPOL Disaster Victim Identification Conference: Forensic Odontology Working Group, Lyon Interpol Building, 21-23 June 2022.

Palmela Pereira C (2022). “*European Grants and DVI*”, Reunião Plenária da Rede Europeia de Identificação Humana em Desastres de Massas - EUDVI Network, Sede da Polícia Judiciária,

Lisboa, 12 september 2022, URL: <https://www.policiajudiciaria.pt/reuniao-plenaria-da-rede-europeia-de-identificacao-humana-em-desastres-de-massas-eudvi-network/>.

Lacerda L (presenter), **Ramos FR**; Curto J (2022). “*Modelação e Previsão do ‘novo’ fluxo de Turismo em Portugal: perspectivar uma gestão estratégica*”, International Conference on Applied Business and Management (ICABM2022), Porto, 14 and 15 July 2022, URL: <https://icabm22.isag.pt/en/international-conference-on-applied-business-and-management-icabm2020/>.

Ramos FR (presenter), Lopes, DR, Pratas, T.E. (2022). “*Deep Neural Networks: A Hybrid Approach Using Box&Jenkins Methodology*”, International Conference on Innovation in Engineering 2022, Guimarães, June 28-30, 2022, URL: <https://icieng.eu/>.

Carolina E (speaker), **Ramos MR**, Matos JP (2022). "Projections of amputations in diabetics: an aid for the planning of sustainable Portuguese health", ICRA9 International Conference on Risk Analysis, University of Perugia (Italy), 25-27 May 2022, URL: <http://icra9.unipg.it/program/scientific-program/>

Martinez, L.M. (presenter), Pacheco, N., Bicho, M., & **Ramos FR** (2022). “*The role of customer mindfulness on post-purchase intentions after a double deviation*”, 28th Recent Advances in Retailing and Consumer Science (RARCS), Baveno, Italy, July 23 – 26, 2022.

Rufino MM (presenter), Carvalho, AN, Gaspar, MB, (2022). “*Are they fishing or not? Effect of time interval and method on estimated fishing effort in a bivalve dredge and octopus traps small scale fisheries in Portugal.*”, 4th World Small-Scale Fisheries Congress (4WSFC), Malta.

Santos R (2022). “*Noções Sobre Cálculo das Probabilidades, Teoria dos Erros e Método dos Mínimos Quadrados de Rodolfo Guimarães (1904)*”, 9.^º Encontro Luso-Brasileiro de História da Matemática, Setúbal, October 2022, URL: <https://sites.google.com/view/9lusobrasileiro-hist-mat>.

Santos R (presenter), **Martins JP** and **Felqueiras M** (2022). “*Accuracy Measures for Binary Classification Based on Quantitative Group Tests*”, 17th Conference of the International Federation of Classification Societies (IFCS 2022), Porto, july 2022, URL: <https://ifcs2022.fep.up.pt/>.

São João R (presenter) and Galinha S (2022). “*Mensuração da satisfação pessoal no âmbito da economia social : estudo preliminar*”, II SIMPÓSIO DE ECONOMIA E GESTÃO DA LUSOFONIA - 2022, Mindelo - Cabo Verde (via Zoom), 25/05/2022,
URL: <https://www.ipsantarem.pt/wp-content/uploads/2022/04/Cronograma-Simposio-de-economia-e-gesta%CC%83o.pdf>.

Pereira A (presenter), Ferreira LS and **São João R** (2022). “*Ativos intangíveis e valor acrescentado bruto—análise do subsetor fabricação de têxteis*”, XX Encuentro Internacional AECA - Industry 5.0:Rethinking Paradigm, Porto - Portugal, September 22,
URL: <https://www.iscap.pt/aeca/programa/>.

Galinha S (presenter) and **São João R** (2022). “*Levels of assertiveness and cooperation in the student population during the pandemic period : data from higher education*”, General Assembly – Global Public Health Session ESMED, (online) Madrid - Spain, 4-6 August,
URL: <https://esmed.org/conferences/2022assembly/>,
https://repositorio.ipsantarem.pt/bitstream/10400.15/4089/1/RicardoSaoJoao_ESMED_2022.pdf

Seijas-Macias JA (presenter), Oliveira A, Oliveira TA (2022). “*Computing the distribution of two uncorrelated normally distributed variables*”, ICRA9-9th International Conference on Risk Analysis, Perugia, Italy, 25-27 May 2022, URL: http://icra9.unipg.it/wp-content/uploads/2020/02/BOA_ICRA9.pdf.

Souto de Miranda M (presenter), Miranda C, Gomes MI (2022). “*On Runs Estimator of the Extremal Index: Dealing with Clusters of Exceedances with Atypical Dimensions*”, CFE and CMStatistics 2022, London, UK, December 17-19,
URL: <http://www.cmstatistics.org/CMStatistics2022/docs/BoACFECMStatistics2022.pdf?20221205001440#page=127>.

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(10)

Brilhante MF (presenter), **Pestana D**, Pestana P, Rocha ML, **Sequeira F**, Santana M (2022). “*Medição do Risco de Exploração de Vulnerabilidades*”, 8º Encontro Nacional da Sociedade de

Metrologia: A Metrologia e a Transição Digital, Lisbon, 15 November,

URL: <http://www.spmet.pt/encontro8.html>.

André LM and **de Zea Bermudez P** (presenter) (2022). “*Modelação da dependência entre velocidade de vento observada e simulada usando copulas*”, Encontro Ciéncia '22, Centro de Congressos de Lisboa, 16-18 May,

URL: <https://www.encontrociencia.pt/2022/?accao=sessoestematicas&dia=16>.

Figueiredo FO (presenter) and **Figueiredo AM** (2022). “*Digital Development and Internet Use in the European Union Countries*”, IFCS 2022, FEP, Porto, July 2022.

Ramos MR (speaker), Carolino E, Matos JP (2022). "Projections of amputations in diabetics in Portugal with count regression model", VIII Workshop on Computational Data Analysis and Numerical Methods (VIIIWCDANM), IPL, Tomar, Online, (13-15) October 2022, URL: http://www.wcdanm.ipt.pt/2022/program/book_of_abstracts/

Santos R (2022). “*Probabilidade Geométrica em Diogo Pacheco d'Amorim (1914)*”, Encontro Nacional da Sociedade Portuguesa de Matemática 2022 (ENSPM 2022), Tomar, July 2022, URL: <https://enspm2022.spm.pt>.

Nogueira P (presenter), Rodrigues C, Poças IM, Grilo AM, **Silva C**, Homem AP (2022). “*Ensino presencial versus ensino a distância: percepção da comunidade académica da ESTeSL*”, Jornadas Científicas de Ortóptica e Ciências da Visão 2022, ESTeSL, Parque das Nações, Lisboa, Portugal, 26th-28th May, URL: <https://www.estesl.ipl.pt/agenda/jornadas-cientificas-de-ortoptica-e-ciencias-da-visao-2022>.

Martins S (presenter), Poças IM, Besidovska A, **Silva C**, Rocha M, Valimamade N (2022). “*Dificuldades de escrita e visão funcional em crianças do ensino básico: a disortografia e a visão*”, Jornadas Científicas de Ortóptica e Ciências da Visão 2022,, ESTeSL, Parque das Nações, Lisboa, Portugal, 26th-28th May, URL: <https://www.estesl.ipl.pt/agenda/jornadas-cientificas-de-ortoptica-e-ciencias-da-visao-2022>.

Lino P (presenter), Cunha JP, Poças IM, Camacho P, **Silva C**, Ribeiro E, Brito M, Mendonça P (2022). “*Alterações na retina, coróide e nervo ótico secundárias a SARS-COVs-2*”, Jornadas Científicas de Ortóptica e Ciências da Visão 2022, ESTeSL, Parque das Nações, Lisboa, Portugal, 26th-28th May, URL: <https://www.estesl.ipl.pt/agenda/jornadas-cientificas-de-ortoptica-e-ciencias-da-visao-2022>.

Silva GL (2022). "Joint Spatio-Temporal Analysis of Forest Fire Multiple Outcomes", National Meeting of the Portuguese Mathematical Society, Tomar, 18-29/07/2022,
URL: <https://enspm2022.spm.pt/>.

Saraiva J (presenter), Valentim-Coelho C, Vaz F, **Antunes M**, Neves S, Ricardo P, Andrade O, Miranda A, Vicente A, Melo A, Roque C, Guiomar R, Vantaggiato L, Mohammad H, Soares N, Penque D (2022). "COVID-19 Vaccination: A study on red blood cells and their impact in the immune system by omics-based approaches.", 8th International Caparica Conference on analytical Proteomics 2022, Caparica, 18th -21st July 2022,
URL: <https://icap2022.bioscopegroup.org/awards-specialissue/index.html>

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Saraiva J (presenter), Valentim-Coelho C, Vaz F, **Antunes M**, Neves S, Ricardo P, Andrade O, Miranda A, Melo A, Roque C, Guiomar R, Mohammad H, Soares N, Penque D (2022). "Investigating the impact of COVID-19 vaccines on the red blood cell immune function by omics-based approaches", 2nd Joint Meeting of Spanish, French and Portuguese Proteomics Societies (Proteo), Vilamoura, 11th-13th May 2022,
URL: <https://proteo-vilamoura.sci-meet.net/>

Molina C (presenter), Dias MJ, **Domingues TD**, Leal R (2022). "Prognostic factors for in-hospital mortality in dogs with clinical leishmaniosis -a retrospective study", ECVIM-CA Congress, Sweden, 1-3 September 2022, URL: <https://www.vin.com/ecvim>.

Tedim S (presenter), Afreixo V, **Felgueiras M**, Leitão, M., Pinheiro, S., Silva, C (2022). "Fitting Covid-19 data with bootstrap methodology", 22th CMMSE, Cádiz, Spain, july 2022,
URL: <https://cmmse.usal.es/cmmse2023/>.

Chatalov E (presenter), **Figueiredo I**, **Sousa L** and Pereira B (2022). "Assessing the Status of Two Data-Limited Skates Landed in Portuguese Ports Using an Empirical Catch Rule", 7th Conference of the International Federation of Classification Societies (IFCS2022), Porto, 19th-23rd July 2022, URL: <https://ifcs2022.fep.up.pt/>.

Machado M (presenter), **Diamantino F** and **Canto e Castro L** (2022). "How to compare two multilevel models that have dependent variables at different Scales?", 13th International Multilevel Conference, Utrecht University, 12th-13rd April 2022, URL: <https://multilevel.fss.uu.nl/>.

Malato J (presenter), Biecek P, Graça L and **Sepúlveda N** (2022). "*Cellular Compartments In Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Associated To Disease Trigger*", XLVII Annual Meeting of the Portuguese Society for Immunology, Reitoria da Universidade Nova de Lisboa, Lisbon, Portugal, 20/04/2022 to 22/04/2022,

URL: <https://www.spimunologia.org/news/spi-2022/>.

Martins R (presenter), **Sousa L**, **Correia I**, Farias I, **Figueiredo I** (2022). "*Modelling the population dynamics of the Blackspot Seabream (Pagellus Bogaraveo) on the Portuguese coast*", 36th International Workshop on Statistical Modelling,, Trieste, Italy, 18-22 July 2022,

URL: <https://www.iwsm2022.com/>.

Palmela Pereira C. (presenter), Gonçalves, C., **Brilhante FM.**, Santos, A., Rodrigues, A., Augusto, D., Salvado, F., and **Santos R.** (2022). "*Analysis of the pattern of Oral and Maxillofacial Trauma in the world: A Systematic Review and Meta-Analysis*", 4th Statistics on Health Decision Making, Aveiro, 20-21 July 2022,

URL: <https://www.ua.pt/pt/estatisticamedica/4th-shdm>,

<https://www.ua.pt/pt/estatisticamedica/lista-dos-posters>.

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URL: <https://www.ua.pt/pt/estatisticamedica/4th-shdm>,

<https://www.ua.pt/pt/estatisticamedica/lista-dos-posters>.

Sequeiros, J.A. (presenter), **Ramos, F.R.**; Pereira, M.T.; Oliveira, M.J. (2022). "*Exploring the potential of Deep Learning to forecast purchases in the Portuguese National Health Service*", XXII Congresso da APDIO, Évora, 6 a 8 de novembro de 2022,

URL: <http://apdio.pt/web/io2022/home>.

São João R (presenter), Cardoso H, Sanz D and Ângelo, DF (2022). "*Fonseca anamnestic index for screening temporomandibular disorders : reliability to discriminate muscular from intra-*

articular disorders", 4th Statistics on Health Decision Making : real world, University of Aveiro, Portugal, July 20, URL: <https://www.ua.pt/pt/estatisticamedica/4th-shdm>, https://repositorio.ipsantarem.pt/bitstream/10400.15/4087/1/RicardoSaoJoao_Poster_EstatisticaMedica_Aveiro_2022.pdf.

Dolan A. (presenter) Poças IM, **Silva C** and Mendenha, L. (2022). "Procedures for measuring the Near Point of Convergence and the Point of Asthenopia in individuals with Postural Deficiency Syndrome", International Orthoptics Congress 2022, Online, 9th-11th June, URL: <https://az659834.vo.msecnd.net/eventsairwesteuprod/production-delegatereg-public/fd48d35a0b7a4f6bbe9eda7086a6dfee>.

Poças IM (presenter), Cunha JP, Camacho P, **Silva C**, Ribeiro E, Brito M, Mendonça P, Ribeiro E and Brito M (2022). "Ocular repercussions in COVID-19 patients: structural changes of the retina and choroid", IOA Congress Virtual 2022 – XIVth International Orthoptic Association Congress, online, 9th-11th June, URL: <https://az659834.vo.msecnd.net/eventsairwesteuprod/production-delegatereg-public/fd48d35a0b7a4f6bbe9eda7086a6dfee>.

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Serrano S (presenter), Araújo C, Marques J, Zueva M, Teles C, Almeida A, **Sousa L**, Rebouças S, Alves S, Bessa R, Nascimento F, Crespo M and Semedo-Lemsaddek T (2022). "Multi-OMIC Insights Towards the Characterization of Portuguese Traditional PDO Cheeses", CIISA 2022, "Innovation in Animal, Veterinary and Biomedical Research", Lisbon, 11-12th November, 2022, URL: <https://congressociisa.fmv.ulisboa.pt>.

Sousa-Ferreira I (presenter) Abreu AM and **Rocha C** (2022). "A parametric multiplicative rate model for recurrent gap time data with shared frailty", The 43rd Annual Conference of the International Society for Clinical Biostatistics, Newcastle, United Kingdom, 21-25 August, URL: <https://www.iscb2022.info/>.

Contributed Poster (National)

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Malato J (presenter), Biecek P, Graça L and Sepúlveda N (2022). “*Cellular Compartments In Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Associated To Disease Trigger*”, XV CAML · V NeuroULisboa PhD Students Meeting from Instituto de Medicina Molecular João Lobo Antunes, Instituto de Medicina Molecular João Lobo Antunes, Faculty of Medicine, University of Lisbon, Lisbon, Portugal, 04/05/2022 to 06/05/2022.

Palma S (presenter), Presado H, Ayres-de-Campos D, Godinho B, Mira AR and São João R (2022). “*O impacto da pandemia na saúde sexual e reprodutiva das mulheres:realidade do Hospital Garcia de Orta, EPE*”, XXIII Congresso Nacional e VII Internacional da Associação Portuguesa de Enfermeiros Obstetras (APEO), Fundação Cupertino Miranda, Porto-Portugal, May 5, URL: <http://www.apeo.pt/Congresso/>,
https://repositorio.ipsantarem.pt/bitstream/10400.15/4086/1/RicardoSaoJoao_Poster_Congresso_Internacional_APEO_2022.pdf.

Navega G (presenter) and São João, R (2022). “*Satisfação dos pais com o papel do enfermeiro de referência na promoção da qualidade de vida da criança com hemofilia*”, XII Congresso Nacional da Associação Portuguesa de Imuno-hemoterapia (APIH), Hotel Eurostars Oásis Plaza, Figueira da Foz-Portugal, 14-15 October, URL: <https://skyros-congressos.pt/apih2022/>,
https://repositorio.ipsantarem.pt/bitstream/10400.15/4239/1/RicardoSaoJoao_XII_Congresso_APIH_2022.pdf.

Camacho P (presenter), Cunha JP, Poças IM, Silva C, Brito M, Mendonça P, Ribeiro, E. and Brito M (2022). “*Alterações na coroide, retina e nervo ótico subsequentes a COVID-19.*”, XXII Congresso Nacional de Ortopistas, VIP Executive Entrecampos , Lisboa, Portugal, 13th-15th May.

Figueiredo J (presenter), Santos RB, Guerra-Guimarães L, Leclercq CC, Renaut J, Sousa L, Figueiredo A (2022). “*The Secret Beneath Vitis vinifera and Plasmopara viticola Apoplastic Communication at 6h After Contact*”, Encontro Ciência 2022, Lisbon, 16-18 May, URL: <https://www.encontrociencia.pt/2022/>.

Pinto V, Correia IJF, Marques CS (presenters), Marques TA and Sousa L (2022). “*The Role of Statistics in Science and Society: CEAUL’s Contributions*”, Ciências Research Day 2022, Faculdade de Ciências - Universidade de Lisboa, 26 October,
URL: <https://ciencias.ulisboa.pt/pt/evento/ciencias-research-day-2022#1>.

Sousa-Ferreira I (presenter), Rocha C and Abreu AM (2022). “*A flexible parametric rate model for recurrent gap time data with shared inverse Gaussian frailty*”, Encontro Ciência 2022, Lisbon, 16-18 May, URL: <https://www.encontrociencia.pt/2022/>.

Seminar by Invitation

(21)

Amaral-Turkman MA e Canto e Castro L (2022). “*Comparação de distribuições: um novo olhar ao tesouro escondido nas notas dos estudantes do ensino secundário*”, Mundus Mathematica, III Ciclo de Palestras, ISEL, Online event, 30 Junho, URL: <https://dmtalks.isel.pt/>.

Carrasquinha E, Veríssimo A, Lopes MB and Vinga S (2022). “*Network-based regularization: an application to skin cancer*”, Seminar of Probability and Statistics, University of Aveiro, Zoom, June 2022.

Carrasquinha E, Veríssimo A, Lopes MB and Vinga S (2022). “*Biomarker selection in melanoma survival data via network- based regularization*”, Seminar about Mathematics and Applications, Center of Mathematics and Applications, Nova School of Science and Technology, Zoom, February 2022.

de Haan L (2022). “*Non-stationarity In Extreme Value Analysis*”, Seminar series "One World Extremes", worldwide, October 13.

de Zea Bermudez P (application joint work with Mendes Z) (2022). “*Extreme Value Theory Applied to Medical Sciences*”, Doctoral Programme in Health Data Science (HEADS) , Faculty of Medicine, University of Porto, By Zoom, 31 May 2022, Seminar (60-90 min) presented as part of the curricular unit "Tópicos Avançados em Análise Inteligente de Dados".

Gonçalves MH, Gasparinho C, Chissaque A, **Silva GL**, Fortes F and **Gonçalves L** (2022).

“Modelos longitudinais para dados binários: aplicação num estudo sobre desnutrição aguda e crónica em crianças em Angola”, CIDMA Probability and Statistics Group Seminars of the University of Aveiro, Aveiro - Portugal, 13 abril 2022, Zoom Seminar.

Malato J, Graça L, **Sepúlveda N** (2022). “*Impact Of Imperfect Diagnosis In ME/CFS Association Analyses*”, MI2 Data Lab Seminar, Faculty of Mathematics and Information Science, Warsaw University of Technology, Warsaw, 27/01/2022.

Martins JP and Nascimento AP (2022). “Revisão Sistemática e Meta-Análise em Saúde”, 3.^º Ciclo de Seminários em Bioestatística e Bioinformática Aplicadas à Saúde, Porto, October 28, URL: <https://www.ess.ipp.pt/noticias/seminario-em-revisao-sistematica-e-meta-analise-em-saude>.

Martins JP (2022). “Validação de Questionários”, Seminário Validação de Questionários, Matosinhos, May 16, URL: <https://www.iscap.ipp.pt/destaques-1/noticias/validacao-de-questionarios>.

Martins JP (2022). “Meta-Analysis: When The Whole Is Greater Than The Sum Of The Parts”, Meeting on Statistics and Applied Probability, Guimarães, October 20-21, URL: <https://w3.math.uminho.pt/~web/msap/>.

Palmela Pereira C (2022). “Workshop: Identificação Humana em Odontologia Legal: Formulário Post Mortem Interpol - da teoria à prática”, 15^º Congresso Brasileiro de Odontologia Legal, Ribeirão Preto, Universidade São Paulo, 2 de novembro 2022, URL: <https://www.cbol-online.com.br/grade-hor%C3%A1ria-quarta-feira>, 14:00-17:00.

Palmela Pereira C (2022). “Relatórios em medicina dentária no âmbito da avaliação do dano corporal”, Centro de Formação Contínua da Ordem dos Médicos Dentistas, OMD, 22 September 2022, URL: <https://www.omd.pt/2022/08/cursos-formacao-regresso/>.

Pereira S, Moreira G, Menezes R, Angélico MM, **Marques TA** (2022). “Geostatistical analysis of sardine eggs data: dealing with zero-inflated data and extreme values”, Center for Research and Development in Mathematics and Applications (CIDMA) Seminar, Aveiro, March 16, URL: https://cidma.ua.pt/files/events/group_seminars/PSG/02Cartaz16032022SoraiaPereira.pdf

Ramos MR (speaker), Cordeiro C. (2022). "Contributions to the study of time series with trend and breaks", Seminário CIDMA, Grupo de Probabilidades e Estatística Universidade de Aveiro, February 16

2022 URL: https://cidma.ua.pt/agenda/list?year=2022&order_dir=asc&tag=seminars&site=0&page=1

Ramos FR (2022). "Explorando as potencialidades das metodologias de Deep Learning na definição de estratégias de Marketing", IPAM Lab, Lisboa, 30/11/2022.

Rocha JL and Taha A-K (2022). "Generalized Lambert Functions in Homographic gamma-Ricker Maps", Seminário no Département Génie Electrique et Informatique, INSA - Toulouse, Institut National des Sciences Appliquées de Toulouse, Université Fédérale Toulouse Midi-Pyrénées, 27 de Outubro de 2022, URL: <https://gei.insa-toulouse.fr/fr/index.html>.

Santos R (2022). "Análises Clínicas e Probabilidade Condicionada", Escola Secundária de Pombal, May 2022.

Santos R (2022). "Estatística Aplicada à Enfermagem", Escola Superior de Enfermagem de Vila Real, Universidade de Trás-os-Montes e Alto Douro, January 2022.

Santos R (2022). "Análise e Tratamento de Dados", Escola Superior de Tecnologia e Gestão do Politécnico de Leiria, November 2022.

Silva C (2022). "As Mulheres e a Estatística no Politécnico", Dia Internacional da Mulher na Estatística e nas Ciências de Dados, Escola Superior de Comunicação Social - IPL, 10th October, URL: <https://www.escs.ipl.pt/agenda-e-eventos/as-mulheres-e-a-estatistica-no-politecnico-de-lisboa>.

Silva GL (2022). "Joint Longitudinal Count and Severity Analysis and Other Case-Studies", Bayesian Statistics Group of the Department of Statistics and Data Science, University of Texas at Austin, 6/06/2022, URL: <https://stat.utexas.edu/>.

SUPERVISION

Ph.D. Theses

(2)

Ramos. M. and Nunes CS (supervisors): Francisco Andias Paula got the Ph.D. degree in Applied Mathematics and Modelling, Universidade Aberta, Lisbon, (discussed in October 2022). Thesis Title: "Análise Estocástica de Séries Temporais".

Marques TA, 2016-2022 **co-orientador**, *Doutoramento*, Miriam Romagosa, Universidade dos Açores. Noise exposure and vocal behaviour of baleen whales off the Azores.

Master Dissertations

(30)

Antunes M (Supervisor): Aunaty Pinheiro. " Modelos de crescimento populacional – teoria e aplicação a dados demográficos de São Tomé e Príncipe". Master's degree in Statistics and operations Research, FCUL, March 2022, URL: <https://repositorio.ul.pt/handle/10451/53694>

Antunes M (Supervisor): Hugo Anjos. "The effectiveness of Two-Risk Levels containment measures applied during Portuguese COVID-19 second wave: an interrupted time series study". Master's degree in Biostatistics, FCUL, May 2022, URL: <https://repositorio.ul.pt/handle/10451/54248>

Antunes M and Alves AC (Supervisors): Carolina Santos. "Health inequalities in cerebro and cardiovascular health: an analysis of the e_COR study". Master's degree in Biostatistics, FCUL, March 2022, URL: <https://repositorio.ul.pt/handle/10451/53633>

Antunes M and **Pereira S** (Supervisors): Jéssica Marques. "Spatio-temporal analysis of hospitalisations due to cerebro-cardiovascular diseases in Portugal - a disease mapping approach". Master's degree in Biostatistics, FCUL, May 2022, URL: <https://repositorio.ul.pt/handle/10451/53714>

Antunes M and Rodrigues AM (Supervisors): Vanessa Lopes. "Self-reported Diabetes in Portugal and its association with health-related quality of life and medical resources consumption using a nationwide prospective cohort". Master's degree in Biostatistics, FCUL, July 2022, URL: <https://repositorio.ul.pt/handle/10451/54226>

Cordeiro C (Co-supervisor): Endalkachew Yeshewas Muche. "Exploring Chlorophyll-a satellite derived data to characterise the coastal waters of the south of Portugal", Erasmus Mundus Master on Water and Coastal Management (WACOMA), University of Algarve, July 2022.

de Zea Bermudez P and Cortés P (Supervisors): Ricardo Ascenção Abreu. "Big Data em contexto real de negócio". Master's degree in Mathematics Applied to Economics and Management, FCUL, 2022. URL: <http://hdl.handle.net/10451/54457>

Diamantino F (Supervisor): Joana Cruz. "Hábitos de sono dos estudantes da FCUL". Master's degree in Statistics and Operational Research, FCUL, July 2022.
URL: <http://hdl.handle.net/10451/54249>

Marques TA (Supervisor): Diana Marques. "Echolocation click rates in narwhals (Monodon monoceros) as a conservation stepping-stone". Master's degree in Conservation Biology, FCUL, 2022.

Marques TA (Supervisor): Pedro Brandão. "Portuguese estuarine systems and their essential ecological role for some fish species: trends and predictions in face of global changes" Master's degree in Marine Ecology, FCUL, 2022.

Mouriño H (Supervisor): Liliana Anacleto Parreira. "Statistical Analysis of Prostate Functional Magnetic Resonance Imaging Data", Master's degree in Biostatistics, Faculdade de Ciências, Universidade de Lisboa, 2022, URL: <https://repositorio.ul.pt/handle/10451/53809>

Mouriño H (Supervisor): Martim Manuel Oliveira e Silva Ferreira de Almeida. "Uterine Contractions Features: Evolution Throughout Pregnancy Using Electrohysterography", Master's degree in Biostatistics, FCUL, 2022, URL: <https://repositorio.ul.pt/handle/10451/53853>

Oliveira A (Supervisor): Maria Luisa Costa Coutinho. "Métodos estatísticos na avaliação do gradiente de pressão sistólica, da hipertensão e da medicação após implantação de stent por coartação da aorta". Master's degree in Biostatistics and Biometrics, Universidade Aberta, November 2022.

Ramos FR, Curto JJD (Supervisors): Maria Luísa Pinto Basto Pereira de Lacerda. "Previsão do fluxo de turismo para uma gestão estratégica em Portugal: Explorando metodologias de machine learning", Master's degree in Business Management, ISCTE, November 2022. URL: <https://repositorio.iscte-iul.pt/handle/10071/26427>

Ramos FR, Martinez L (Supervisors): Ana Clara Martins Amaro. "An overstimulated consumer in a highly visual world: the moderating effect of the highly sensitive person (hsp) trait on the attitude towards the ad", Master's degree in Marketing Management, ISCTE, November 2022.

URL: <https://comum.rcaap.pt/handle/10400.26/42366>

Ramos FR, Martinez L (Supervisors): Beatriz Gomes de Albuquerque Constantino. "O peso da confiança e custo da mudança na fidelização do cliente bancário: a influência do User eXperience mobile", Master's degree in Marketing Management, ISCTE, November 2022. URL: <https://comum.rcaap.pt/handle/10400.26/42408>

Ramos FR, Martinez L (Supervisors): Carolina Maria Henriques Bernardes Arizmendi Filipe. "O impacto que o packaging e a cor têm na percepção do consumidor: produtos orgânicos", Master's degree in Marketing Management, ISCTE, November 2022.

URL: <https://comum.rcaap.pt/handle/10400.26/42397>

Ramos FR, Martinez L (Supervisors): Catarina Gama. "O Word of Mouth e a presença do Marketing de Influência enquanto estratégias de comunicação no processo de escolha de um serviço ou instituição de apoio a idosos", Master's degree in Marketing Management, ISCTE, November 2022. URL: <https://comum.rcaap.pt/handle/10400.26/42417>

Ramos FR, Martinez L (Supervisors): Mónica Silvestre de Almeida Andrade . "O papel dos Green Influencers nos hábitos de vida sustentável da Geração Z", Master's degree in Marketing Management, ISCTE, June 2022. URL: <https://comum.rcaap.pt/handle/10400.26/41914>

Ramos FR, Rodrigues D (Supervisors): Tiago Emanuel Teixeira Pratas. "Forecasting bitcoin's volatility: Exploring the potential of deep-learning", Master's degree in Economics, ISCTE, December 2022. URL: <https://repositorio.iscte-iul.pt/handle/10071/26641>

Ramos MR and Pinto da Costa MJ (Supervisors): Fernando Luís Correia. "Estatístico comparativo de acidentes de trabalho nos Tribunais de Trabalho da Comarca de Braga dependentes do Gabinete Médico-Legal do Cávado (Barcelos, Braga e V. N. de Famalicão)". Master's degree in Legal Medicine, ICBAS, Universidade do Porto, December 2022.

Ramos SF (Supervisor): Ana Filipa Vasconcelos Paiva Almeida. "Análise de Contratos de Assistência a camiões Volvo", Master's degree in Engineering Mathematics, Faculty of Sciences - University of Porto, Decembre 2022, URL: <https://repositorio-aberto.up.pt/handle/10216/147059>

Ramos SF (Supervisor): Ruben Pinto Martins. Master dissertation "Ferramenta automática para avaliação da fiabilidade e disponibilidade de sistemas reparáveis", Master in Mechanical Engineering, ISEP - Porto School of Engineering, 2022.

Ramos SF: (Supervisor): Pedro Miguel Gonçalves, Master dissertation "Análise de fiabilidade de um sistema óleo-hidráulico e os seus subsistemas numa central hidroelétrica", Master in Mechanical Engineering, ISEP - Porto School of Engineering, 2022.

Rocha C (Supervisor): Margarida Ribeiro. "A COVID-19 na população portuguesa: uma análise de riscos competitivos". Master's degree in Biostatistics, FCUL, April 2022.

Rocha C and Soares P (Supervisors): Ana Lúcia Castanheira. "Modelação do tempo até ao diagnóstico da tuberculose em Portugal". Master's degree in Biostatistics, FCUL, May 2022.

Sepúlveda N and **Antunes M** (Supervisors): Frederico Moreira. "Longitudinal analysis of viral shedding in astronauts before, during, and after a mission to the International Space Station". Master's degree in Biostatistics, FCUL, June 2022, URL: <https://repositorio.ul.pt/handle/10451/54733>

Silva C (Co-advisor): Alda Regina Zacarias de Jesus. "Metabolomics and new clinical biomarkers of type 2 diabetes: Systematic review and meta-analysis. Master's degree in Molecular Technologies in Health, Higher School of Health Technology in Lisbon May 23, 2022.

Silva C (Co-advisor): Hugo José Moreira Ferreira. "Evaluation of a wearable device as an option to study sleep in adults in their natural environment". Master degree in Management and Evaluation of Technologies in Health, ESTeSL and University of Algarve, November 2022.

Silva C (Co-advisor): Tânia Isabel Soares Duarte. "The importance of reference values in the interpretation of spirometry in individuals of African descent". Master degree in Management and Evaluation of Technologies in Health, ESTeSL and University of Algarve, June 2022.

Other Advisory Work

(21)

Aleixo SM: Supervision of the curricular internship in Mathematics Applied to Technology and to the Enterprise, concluded on July 22, 2022, by Inês Albino, together with the guidance of Professor Iola Maria Silvério Pinto (DM/ISEL/IPL) and Engineers Paulo Miguel Ferreira e Carlos Mota (ATQP/GALP). Internship developed at GALP, Department of Technical Assistance and Product Quality, entitled "Empirical statistical modeling of equipment accompanied by service lubricants for proactive maintenance".

Aleixo SM: Supervision of the curricular internship in Mathematics Applied to Technology and to the Enterprise, concluded on July 25, 2022, by Mónica Silva, together with the guidance of Professor Iola Pinto (DM/ISEL/IPL) and Engineer Cristina Lourenço (Delta). Internship developed at Delta, entitled "Study of correlation and regression between two systems that measure the dimension of particles".

Aleixo SM: Supervision of the curricular internship in Mathematics Applied to Technology and to the Enterprise, concluded on March 11, 2022, by Adriana Ventura, together with the guidance of Professor Ana Prior (DM/ISEL/IPL) and Engineer Daniel Carixas (Delta). Internship developed at Delta, entitled "Forecast for intermittent demand and implementation of the Kanban methodology".

Aleixo SM: Supervision of the curricular internship in Mathematics Applied to Technology and to the Enterprise, concluded on March 4, 2022, by Catarina Pereira, together with the guidance of Professor Ana Prior (DM/ISEL/IPL) and Engineer Rui Pereira (Delta). Internship developed at Delta, entitled "Predictive methods for sales of the most brands".

Cordeiro C, Diamantino F, Martins JP, Martins R, Palmela Pereira C, Pereira S, Rocha JL, Silva C, Simões P: Supervisors of students participating in the Program: "Sê Investigador por três semanas", edition 2022, July. URL: <http://ceaul.org/se-investigador-por-tres-semanas-edicao-2022/>

Rocha JL: Supervisor of the project "Network Analysis: the players that influenced the victory of the French team", student João Dinis Figueiredo, LMATE curricular project, ISEL, September 2022.

Rocha JL: Supervision of the internship "PRINTbigTOOLPATH - Computational Tool for Generating Extrusion Deposition Trajectories for Large Size Printing of Functional Components", student Cristian Robu, curricular internship of LMATE developed in CDRSP - Center for Rapid and Sustainable Product Development, Politécnico de Leiria, ISEL, July 2022.

Rocha JL: Supervision of the internship "Localização Ótima de Lockers", student Beatriz Godinho, curricular LMATE internship developed at CTT - Correios de Portugal S.A., ISEL, July 2022.

Felgueiras M: Advisor - Research Fellowship for Master Student (CIDMA) Work - Analysis of morbidity data, using diagnostic data from ICPC - International Classification in Primary Care. These data allow the temporal analysis between 2014 and 2021, making it possible to work with information from daily diagnoses, adjusted to different potential socio-demographic moderators.

Rufino MM: 1/09/2022-30/01/2023. Supervision of first degree in 'Ingénieur agronome, M1 Spécialisation halieutique et aquacole" internship of Lucie Chauvel, from the 'Institut Agro Rennes-Angers'. The project lasted 5 monthes. Title: "What are the best indicators to inform managers about fishing effort intensity in small-scale fisheries?".

Rufino MM: 01/04/2022- 30/06/2023. Supervision of the master student grant (IPMA-2022-015-BII) holder João Samarrão, from the master in Analysis and Engineering of Big Data - Nova School of Science and Technology. Work on the applications of ML algorithms to the quantification of the fishing effort in small scale fisheries. Project "PESCAPANHA: Contributo para a Gestão Sustentada da Pequena Pesca Costeira e Apanha", MAR2020.

Rufino MM: 2022. Co-supervision of the first degree project of João Samarrão, from the degree in Mathematics Applied to Technology and Enterprise (LMATE), from Instituto Superior de Engenharia de Lisboa (ISEL). Work on the development of ML algorythms to estimate fishing effort in small scale fisheries. Mark: 19 ou of 20..

Cordeiro C, Pereira S and Cristina S: Statistical activity in the assessment of water quality. Summer with Science Special Support 2022. Research grants CEAUL. Students: Farhat Bajwa and Rita Rodrigues. Date: September 2022.

Marques TA: How to work with other researchers in a research project? Summer with Science Special Support 2022. Research grants CEAUL. Students: Miriam Rodrigues e Nuno Fialho. Date: September 2022.

Palmela Pereira C: Supervisor of the Specialization Course on Forensic Odontology, University of Lisbon and University of Zagreb., URL: <https://www.medicina.ulisboa.pt/curso-especializacao-medicina-dentaria-forense>

Cordeiro C: Project advising " Aplicação De Métodos Estatísticos Na Avaliação Da Qualidade Das Águas Costeiras" by Farhat-Un-Nisa Bajwa- FCT-CEAUL Research Fellowship for R&D Initiation, February 1 – July 31, 2022, URL: <http://ceaul.org/bolseiros/>

Canto e Castro L and **Silva C:** Project advising " Métodos De Comparaçāo De Duas Distribuições Empíricas Em Amostras De Grandes Dimensões" by Pedro Ferreira – FCT-CEAUL Research Fellowship, February 1 – July 31, 2022, URL: <http://ceaul.org/bolseiros/>

Silva GL: Project advising "Bayesian Analysis of Spatiotemporal Models for Rates or Proportions: An Application to Wildfire Data in Portugal" by Vasco Afonso - FCT-CEAUL Research Fellowship for R&D Initiation, February 1 – July 31, 2022, URL: <http://ceaul.org/bolseiros/>

Sousa L: Project advising "Discrimination Of Traditional Portuguese Cheeses Based On MetagenOMICs Data" by Carlota Teles – FCT-CEAUL Research Fellowship, February 1 – July 31, 2022, URL: <http://ceaul.org/bolseiros/>

Marques TA, 2022 **co-supervisor**, BSc, Katherine Apushkin, School of Mathematics and Statistics, University of St Andrews. Teaching Statistics to Undergraduate Ecologists

Marques TA, 2022 **Supervisor**, *Summer project*, Bronte Stones, School of Mathematics and Statistics, University of St Andrews. Analysing the detection probabilities of wrens and chaffinches using the BirdNET app

PROJECTS RUNNING IN 2022

(20)

Antunes M, Silva G (CEAUL team members). CINDERELLA - Clinical Validation of and AI-based approach to improve the shared decision-making process and outcomes in Breast Cancer Patients proposed for Locoregional treatment. Project financed by Horizon Health 2021. IP: Maria João Cardoso – Fundação Champalimaud. (1/6/2022 – 31/5/2026).

Antunes M (CEAUL team member). PARKSIA - Imunoensaio de espectrometria de massa - nova plataforma de translação de biomarcadores proteicos para o diagnóstico da doença de Parkinson. Project financed by European Structural and Investment Funds (national management) IP: Vukosava Milic Torres - CQB (1/10/2018 – 30/9/2022).

Antunes M (CEAUL team member). MacFertiQual - Novos métodos de diagnóstico nutricional em macieiras 'Gala' visando a sustentabilidade e qualidade. Project financed by European Structural and Investment Funds (national management) IP: Cristina Oliveira – ISA (1/7/2017 – 31/12/2022)

Antunes M (CEAUL team member). OPTIMAL – Otimização maçã de Alcobaça. Project financed by European Structural and Investment Funds (national management) IP: Miguel Leitão – INIAV, Alcobaça (1/7/2017 – 31/3/2023)

Antunes M (CEAUL team member). Goji – Gojiberries. Project financed by European Structural and Investment Funds (national management) IP: Anabela Bernardes da Silva – BioISI (1/10/2018 – 30/9/2022)

Aleixo SM, Brás-Geraldes C. DSAIPA/DS/0117/2020 - *Predictive Models of COVID-19 Outcomes for Higher Risk Patients Towards a Precision Medicine*. Financed By: FCT. Participating institutions: ISEL, Centro Hospitalar Universitário Lisboa Central, Instituto Superior Técnico, Instituto Português do Sangue e da Transplantação. Project Ref: DSAIPA/DS/0117/2020. Principal investigator: Bento L - Centro Hospitalar Universitário Lisboa Central.

Antunes M, Albuquerque J (CEAUL team members). DYSLIPIDidTOOL - Dyslipidaemia Stratification: New Screening Tools for a Cost-Effective Approach. Project Ref: PTDC/SALSER/29180/2017. Project financed by Fundação para a Ciência e Tecnologia (FCT).

Participating institutions: FCiências.ID. Principal investigator: Antunes M - FCiências.ID. URL: https://www.fct.pt/apoios/projectos/consulta/vglobal_projecto?idProjecto=150373&idElemConcurso=11918

de Carvalho M, de Zea Bermudez P, Pereira S, Pereira P, Turkman KF, Turkman MA.

FillGapsInMaps - *Data Fusion and Calibration Methods for Spatial Risk Analysis*.

Financed By: FCT. Participating institutions: CEAUL. Project Ref: PTDC/MAT-STA/28649/2017.

Principal investigator: de Carvalho M - School of Mathematics, University of Edinburgh.

URL: <https://www.maths.ed.ac.uk/~mdecarv/dfus/index.html>

Gomes MI. HiTEc - *Text, Functional and other High-dimensional Data in Econometrics: New models, Methods, Applications*. Financed By: European Cooperation in Science and Technology (COST). Participating institutions: FCiências.ID, COST and many other institutions from European countries. Project Ref: COST ACTION CA21163. Principal investigator: Colubi A - Frederick University, Nicossia, Cyprus. URL: <http://www.hitecation.org/>

Martins, R. S3 - *Shining Spectroscopic Smile*. Financed By: CiiEM - Centro de Investigação Interdisciplinar Egas Moniz. Principal investigator: Jorge Caldeira - Egas Moniz, Cooperativa de Ensino Superior. URL: https://ciiem.egasmoniz.edu.pt/media/111636/Tabela-CiiEM-Investiga-2019_approved-projects.pdf

Martins, R. MegaPredator - *A giant on the water: from predation pressure to population control of the European catfish (Silurus glanis)*'. Financed By: FCT. Participating institutions: FCiências.ID. Project Ref: PTDC/ASP-PES/4181/2021. Principal investigator: Filipe Ribeiro - Centro de Ciências do Mar e do Ambiente, Portugal.

URL: <https://www.cienciavitae.pt/F91F-2065-A41C>

Rufino MM. ICW3P - *Impact of climate warming in the coastal upwelling system and primary production off Portugal: a study linking classical and emergent proxies*. Financed By: FCT. Participating institutions: Centro de Ciências do Mar (CCMar), GEOLOGICAL SURVEY OF DENMARK AND GREENLAND (GEUS), Instituto Português do Mar e da Atmosfera, I. P. (IPMA),. Project Ref: PTDC/CTA-CLI/2884/2021. Principal investigator: Fatima Abrantes - CCMar.

Silva C. OCROP - *Optimisation of Conventional Radiography Examinations Performed on Obese Patients: a Pilot Study*. Financed By: Commission Scientifique Du Domaine Santé/HES-

SO - Suisse. Participating institutions: Haute École de Santé Vaud – Lausanne Switzerland; Curtin University, Lisbon School of Health Technology, CHUV, CURML.. Project Ref: 07-O19. Principal investigator: Reis C - Haute École de Santé Vaud - HESAV.

Silva C. MONICED - *Monitoring and Evaluation Methodologies*. Financed By: Portugal 2020. Participating institutions: ESTeSL-IPL and HTRC. Project Ref: POAT-01-6177-FEDER-000047. Principal investigator: Teresa Ribeiro , R - Escola Superior de Tecnologia da Saúde de Lisboa.

Silva C. ESCRI-VER - *Difficulties in writing and functional vision in elementary school children - dysorthography and vision*. Financed By: Instituto Politécnico de Lisboa. Participating institutions: ESTeSL-IPL and HTRC. Project Ref: IPL/2021-2022/ESCRi-VER/ESTeSL. Principal investigator: Poças I - Escola Superior de Tecnologia da Saúde de Lisboa.

Silva C. DiffMeDiMe - *Differential DNA methylation in persistent Diabetic Macular Edema associated inflammatory genes: new therapeutic approaches*. Financed By: Instituto Politécnico de Lisboa. Participating institutions: ESTeSL-IPL and HTRC. Project Ref: IPL/2021-2022/DiffMeDiMe /ESTeSL. Principal investigator: Camacho P - Escola Superior de Tecnologia da Saúde de Lisboa.

Silva C. ParasitesSCD - *Detecting gut microbial pathogens in Angolan children with sickle cell disease*. Financed By: Instituto Politécnico de Lisboa. Participating institutions: ESTeSL-IPL and HTRC. Project Ref: IPL72022-2023/ MetAllAMD/ESTeSL. Principal investigator: Brito M - Escola Superior de Tecnologia da Saúde de Lisboa.

Silva C. HeCyGame - *Gamification Applied to Cybersecurity Education for Health Professionals*. Financed By: Instituto Politécnico de Lisboa. Participating institutions: ESTeSL-IPL and HTRC. Project Ref: IPL/2022/HeCyGame _ESTeSL. Principal investigator: Silva C - Escola Superior de Tecnologia da Saúde de Lisboa.

Sousa L. GEnvIA - *Gene-Environment Interaction in Autism Spectrum Disorder*. Financed By: FCT. Participating institutions: FCiências.ID. Project Ref: PTDC/MED-OUT/28937/2017. Principal investigator: Vicente A - FCiências.ID.
URL: https://www.fct.pt/apoios/projectos/consulta/vglobal_projeto.phtml.en?idProjeto=150144&idElemConcurso=12066

Sousa L, Pedro S. EMOTION - *authEntic cheesoMics: from big data, through labOratory, towards the fuTure of protected deslgnation of OrigiN*. Financed By: FCT. Participating

institutions: 'FCiências.ID, Instituto de Biologia Experimental e Tecnológica (IBET), Instituto Superior de Agronomia (ISA/ULisboa). Project Ref: PTDC/OCE-ETA/1785/2020. Principal investigator: Semedo T - FMV-ULisboa.

URL: https://www.fct.pt/apoios/projectos/consulta/vglobal_projeto.phtml.en?idProjeto=159741&idElemConcurso=14550

ORGANIZATION OF CONFERENCES, SEMINARS AND INVITED SESSIONS

CEAUL Seminars

Martins, R: Responsible for the organization of the thematic seminars at CEAUL

URL: <http://ceaul.org/eventos/seminarios/>, URL: <http://ceaul.org/eventos/seminarios/>

Silva Lomba J and **Henriques A:** UL Extremes Webinar Portugal - a series of monthly online seminars, jointly organized by CEAUL & CEMAT-IST, focused on Extreme Value Theory and Applications, showcasing national and international speakers, including theme sessions and R workshops., URL: <https://extremes.research.ulisboa.pt/>

Título	Orador/Instituição	Local	Data
Trustworthiness: Data And Statistics	Saghir Bashir ilustat & CEAUL	FCUL 2.2.21 – 17:00	14-DEZ-2022
Extreme Value Inference For General Heterogeneous Data	John Einmahl Tilburg University, The Netherlands	ZOOM – 14:00	14-DEZ-2022
A Method For Partitioning Trends In Genetic Mean And Variance To Understand Breeding Practices	Thiago de Paula Oliveira The Roslin Institute	ZOOM – 14:00	07-DEZ-2022
Eficácia De Medidas De Contenção Aplicadas Em Dois Níveis De Risco Durante A Segunda Vaga De COVID-19 Em Portugal: Um Estudo De Séries Temporais Interrompidas	Hugo Anjos	8.2.11 – 15:30	30-NOV-2022
Otimização Em Problemas De Engenharia: Desenho De Parques Eólicos E Gestão De Fontes De Energia Renováveis Em Smart Grids	Adelaide Cerveira UTAD	ZOOM- 14:00	23-NOV-2022

Título	Orador/Instituição	Local	Data
<u>Análise Espaço Temporal Das Hospitalizações Devido Às Doenças Cérebro-Cardiovasculares Em Portugal – Uma Abordagem De Mapeamento De Doenças</u>	Jéssica Marques FCUL	ZOOM- 14:00	16-NOV-2022
<u>Cancro E Tabagismo: Um Estudo Ecológico Em Portugal Continental</u>	Sara Duarte Unidade Local de Saúde do Baixo Alentejo	8.2.11 – 15:30	09-NOV-2022
<u>Models Trustworthiness: Data And Statistics</u>	Saghir Bashir ilustat & CEAUL	8.2.11 – 15:30	02-NOV-2022
<u>Dynamic soaring in the winds of change. The effects of wind and oceanography on the population and spatial ecology of seabirds</u>	Francesco Ventura-Universidade de Lisboa	1.2.26 – 14:00	18-OUT-2022
<u>Approximate Inference With Bayesian P-Splines In Epidemic Models</u>	Oswaldo Gressani I-BioStat, Hasselt University	ZOOM – 14:30	12-OUT-2022
<u>Sequential Monitoring of High Dimensional Time Series</u>	Wolfgang Schmid, European University Viadrina, Germany	Room P3.10, Mathematics Building — Online – 11:00	11-OUT-2022
<u>Implementing non-stationary non-separable spacetime models</u>	Elias Krainski KAUST	ZOOM – 14:30	30-MAI-2022
<u>Tail Inference Using Extreme U-Statistics</u>	Jochem Oorschot	ZOOM – 17:00	25-MAI-2022
<u>The covariate-adjusted ROC curve: the concept and its importance and a new Bayesian estimator</u>	Vanda Inácio	ZOOM – 14:30	18-MAI-2022
<u>Spatial Modelling And Mapping Of Urban Fire Occurrence In Portugal</u>	Regina Bispo	ZOOM – 15:00	27-ABR-2022
<u>Adaptive Tail Inference Using Probability Weighted Moments</u>	Frederico Caeiro	ZOOM – 17:00	20-ABR-2022
<u>Data Science Com R</u>	Ricardo São João	Cisco Webex – 10h30	09-ABR-2022
<u>Introduction To Extremes With R</u>	Soraia Pereira and Lídia André Faculty of Sciences, University of Lisbon and Lancaster University	ZOOM – 14:00	23-MAR-2022
<u>Nonparametric Regression Estimation For Circular Response</u>	Andrea Meilan Vila- Department of Statistics at the Carlos III University of Madrid	ZOOM – 14:30	23-FEV-2022
<u>Statistical Challenges And Solutions For Informing Pandemic Response</u>	Ben Swallow -University of Glasgow, UK	ZOOM – 14:00	16-FEV-2022
<u>Conex-Connect: Learning Patterns In Extremal Brain Connectivity From Multi-Channel EEG Data</u>	Matheus B. Guerrero - King Abdullah University of Science and Technology	ZOOM – 17:00	09-FEV-2022
<u>Efficient Bayesian Parameter Inference For High-Dimensional, Non-Linear Stochastic Biological Systems Using An Approximation</u>	Ben Swallow -University of Glasgow, UK	ZOOM – 14:30	09-FEV-2022
<u>Spatiotemporal Modeling Of Extreme-Wildfire Risk</u>	Thomas Opitz -INRAE – Biostatistique et Processus Spatiaux	ZOOM – 17:00	26-JAN-2022
<u>On integer valued GARCH modeling</u>	Abdelhakim Aknouche-Qassim University, Saudi Arabia	ZOOM – 14:00	20-JAN-2022
<u>Zipf Extensions And Their Applications For Modeling The Degree Sequences Of Real Networks</u>	Ariel Duarte-López - Technical University of Catalonia	ZOOM – 14:00	13-JAN-2022
<u>Latent Association Graph Inference For Binary Transaction Data</u>	Luís carvalho – Boston University, Massachusetts	ZOOM – 14:30	12-JAN-2022

Other events Organized directly by members of CEAUL

(9)

Antunes M, Figueiredo FO, Gomes MI, Gonçalves L, Canto e Castro L, Pereira S and

Marques TA: Chairs of 7 thematic round-tables in the event 'The future of Statistics in Portugal' (joint organization by CEAUL and CEMAT). Costa da Caparica, 15–16 October 2022.

<https://workshop-o-futuro-da-estatistica-na-ul.webador.com/>

Carrasquinha E: Workshop Organizer: Machine Learning in Science

The aim of this online workshop was to bring together researchers from different areas of science, where they present their recent achievements in machine learning (ML). The workshop is an online event organised by Centro de Estatística e Aplicações (CEAUL), June 23-24, 2022.

URL: <https://workshopmachinelearning.weebly.com/>

Marques TA, Silva C and Sousa L: CEAUL Organizers of the event 'The future of Statistics in Portugal' (joint organization by CEAUL and CEMAT). Costa da Caparica, 15–16 October 2022.

<https://workshop-o-futuro-da-estatistica-na-ul.webador.com/>

Martins, R (Organizer): International workshop in nimble - R package for Bayesian Statistics, Lisbon 1st–3rd June., URL: <https://nimbleworkshop.weebly.com/>

Pereira S: Member of the organizing committee of the short course 'A new avenue in Bayesian modelling using INLA'. , 26–27 May 2022.., URL: <http://ceaul.org/a-new-avenue-in-bayesian-modeling-using-inla/>

Rocha JL and Brás-Geraldes C: Coordinator and co-organizer of the Lectures in the Mathematics Department of ISEL: DM Talks - "Mundus Mathematica", since January 2021., URL: <https://admtalks.isel.pt/>

Rocha JL: Coordinator of the Seminars in the Mathematics Department of ISEL: "Mathematica Seminaria", since April 2022., URL: <https://dmseminars.isel.pt/>

Rufino MM: 2022. Coordination (along with Alexandra Silva) of the cycle of talks from DIV-RP/IPMA, every 15 days in hybrid format.

2022. Coordination (along with MG Pennino) of the cycle of talks from IRSE, every month in hybrid format.

2022. Organization and coordination of the Iberian Statistics in Ecology group IRSE, along with Maria Grazia Pennino (IEO), David Conesa (U. Valencia) and Tiago Marques (CEAUL-St. Andrews).

Silva, C: Organizer of the online course: "Introdução ao SQL para Data Science"

Total 12h - online, 2 ECTS. Escola Superior de Tecnologia da Saúde de Lisboa.

Invited Sessions Organized Directly by CEAUL

(8)

Rocha J: Organizer of the parallel session "Mathematical Modelling in Life Sciences and Technology", Encontro Nacional da Sociedade Portuguesa de Matemática, ENSPM 2022, Tomar, Portugal, 18-20 July 2022., URL: <https://enspm2022.spm.pt/>

Oliveira A: Event: 8th ENVENCON

Title of Organized Session: Environmental statistical challenges and applications. Volos, Greece, 2-3 December 2022. Department of Economics, University of Thessaly., URL: <http://envecon.econ.uth.gr/main/eng/index.php/8th-envecon>

Oliveira A: Special session SCS20: Statistical Modelling and Data Analysis, Event: 7th Stochastic Modeling Techniques and Data Analysis International Conference and Demographics 2022 Workshop. Athens, 7-10 June 2022., URL: <http://www.smtda.net/smtda2022.html>

Oliveira A: Organized Session: Statistical Modelling and Risk Analysis, Event: 9th International Conference on Risk Analysis. University of Perugia, Italy, 25-27 May 2022. URL: <http://icra9.unipg.it/>

Figueiredo FO: Organizer of the thematic session "Statistical Methods and Applications" at the international conference VIII WCDANM 2022 (online conference).

Figueiredo FO: Organizer (jointly with the board members of PT_MATHS-IN) of the thematic session "Mathematics for Urban and Forest Fires - Part I and Part II (6 comunicações) ", at ENSPM 2022 - Encontro Nacional da Sociedade Portuguesa de Matemática, July 2022.

Figueiredo FO: Organizer (jointly with the board members of PT_MATHS-IN) of the thematic session "Mathematics and the Ocean (3 comunicações)", at ENSPM 2022 - Encontro Nacional da Sociedade Portuguesa de Matemática, July 2022..

Silva, C: Organizing Committee. International Conference Measuring value in healthcare from a patients' perspective. 1st April, Online Organized by ESTeSL-IPL and Universidade Lusíada.

Scientific and Organizing Committees

(36)

Gomes MI: Member of the Scientific Committee, '8º Encontro Nacional da SPMET—A Metrologia e a Transição Digital'. November 15, 2022, RELACRE, Lisboa., URL: <http://www.spmet.pt/encontro8.html>

Gomes MI: Member of the International Scientific Committee, 15th CHAOS 2022, June 14-17, Athens, Greece., URL: <http://www.cmsim.org/chaos2022.html>

Gomes MI: Member of the Scientific Committee, SMTDA 2022: The 7th Stochastic Modeling Techniques and Data Analysis International Conference, June 7-10, Athens, Greece., URL: <http://www.smtda.net/committeesplenarytalks.html>

Gomes MI: Member of the Scientific Committee, ICRA9, 9th International Conference on Risk Analysis, May 25-27, Perugia, Italy., URL: <https://icra9.unipg.it/commitees/>

Gomes MI: Program Committee Member and Reviewer of the Congress 'XXV Coongress of the Portuguese Statistical Society (SPE 2021)', 2021/2022.

Malato J: Took part in the Organising Committee responsible for Workshops for the community at the Instituto de Medicina Molecular João Lobo Antunes.

Aleixo SM (President) and **Brás-Geraldes C**: Organizing committee of the ESGI 161 European Study Group with Industry meeting, held at ISEL between September 5 and 9, 2022., URL: <https://esgi.isel.pt/>

Aleixo SM: President and member of the organizing committee of the LMATE-2022 workshop, at ISEL in Lisbon, on May 5th and 6th, 2022., URL: <https://www.isel.pt/eventos/lmate22-networking-workshop>

São João R: Member of Scientific Committee of II Congresso Internacional de Educação Empreendedora e Cidadania (CiEECi) , 7-9 July 2022, Vila Nova de Gaia - Portugal, [https://cieeci.com/wp-content/uploads/2022/07/Programa-CiEECi-2022.pdf.](https://cieeci.com/wp-content/uploads/2022/07/Programa-CiEECi-2022.pdf), URL: <https://cieeci.com/>

São João R: Member of Scientific and Organizing Committee of III Simpósio da Economia e Gestão da Lusofonia: por uma economia circular, a bem do desenvolvimento social e ambiental , 15-17 November 2022, IPSantarém, Santarém-Portugal., URL: <https://www.ipasantarem.pt/iii-simposio-de-economia-e-gestao-da-lusofonia-2022>

São João R: Member of Scientific Committee of II Simpósio da Economia e Gestão da Lusofonia: fazer da economia e gestão uma força motriz no processo de desenvolvimento , 24-26 May 2022,Universidade do Mindelo, São Vicente- Cabo Verde., URL: <https://um.edu.cv/evento/ii-simposio-anual-de-economia-e-gestao-da-lusofonia/>

Felgueiras M: member of the Scientific Committee - CENTERIS 2022 - International Conference on ENTERprise Information Systems., URL: <http://centeris.scika.org/>

Felgueiras M: member of the Scientific Committee - HCist 2022 - International Conference on Health and Social Care Information Systems and Technologies., URL: <http://hcist.scika.org/>

Felgueiras M: member of the Scientific Committee - ProjMAN 2022 - International Conference on Project MANagement., URL: <http://projman.scika.org/>

São João R: Member of the Scientific Committee of the "22^a Conferência da Associação Portuguesa de Sistemas de Informação",University of Santiago, Cape Verde, 3-5 November 2022., URL: <http://capsi2022.apsi.pt/index.php/pt/>

São João R: Member of the Scientific and Organizing Committee of the "III Simpósio da Economia e Gestão da Lusofonia: por uma economia circular, a bem do desenvolvimento social e ambiental",Polytechnic Institute of Santarém, Santarém-Portugal, 15-17 November 2022., URL: <https://www.ipasantarem.pt/iii-simposio-de-economia-e-gestao-da-lusofonia-2022>

São João R: Member of the Scientific Committee of the "II Simpósio da Economia e Gestão da Lusofonia: fazer da economia e gestão uma força motriz no processo de desenvolvimento", University of Mindelo, São Vicente-Cape Verde, 24-26 May 2022., URL: <https://um.edu.cv/evento/ii-simposio-anual-de-economia-e-gestao-da-lusofonia/>

São João R: Member of the Scientific Committee of the "II Congresso Internacional de Educação Empreendedora e Cidadania (CiEECI)", 7-9 July 2022, Vila Nova de Gaia – Portugal., URL: <https://cieeci.com/>

Santos R: Member of the Scientific Committee of the 9th Luso-Brazilian Meeting on the History of Mathematics., URL: <https://sites.google.com/view/9lusobrasileiro-hist-mat>

Oliveira A: Event: 5th International Conference on Mathematics and Statistics (ICoMS 2022) Local e Dates: Paris, 17-19 June 2022 Member of Scientific Committee., URL: <http://www.icoms.org/index.html>

Oliveira A: 9th International Conference on Risk Analysis (ICRA9) Perugia, Italy, 25-27 May 2022 Member of Scientific Committee., URL: <http://icra9.unipg.it/>

Oliveira A: Event: 7th Stochastic Modeling Techniques and Data Analysis International Conference Athens, Greece. 7-10 June 2022 Member of Scientific Committee., URL: <http://www.smtda.net/smtda2022.html>

Oliveira A: Event: Economics of Natural Resources and the Environment - 8th Conference Volos, Greece, 2-3 December 2022 Member of Scientific Committee., URL: <http://envecon.econ.uth.gr/main/eng/index.php/8th-envecon>

Oliveira A: Event: 14th International Workshop on Mathematical e-Learning (e-math 2022) Madrid, Spain, 24-25 November 2022 Member of Scientific Committee., URL: <https://sites.google.com/view/14emath2022madrid/home>

Palmela Pereira C: Member of the Scientific Committee for the International Session of IOFOS for Oral presentations awards. This session was in the 15^o Congresso Brasileiro de Odontologia

Legal, Ribeirão Preto, 4 of november 2022, from 9 am to 5 pm.., URL: <https://www.cbol-online.com.br/grade-hor%C3%A1ria-sexta-feira>

Palmela Pereira C: Member of the Scientific Committee of the 31º Congresso OMD, Lisboa.., URL: <https://www.omd.pt/congresso/2022/en/program/#>

Palmela Pereira C: Member of the Scientific Committee of the Portuguese Dental Association (OMD).., URL: <https://www.omd.pt/info/comissao-cientifica/>

Sousa L: Member of the Scientific Committee of the CAS 2022 - Workshop at 22th International Conference on Computational Science and Its Applications (ICCSA 2022).., URL: <http://www.iccsa.org/>

Figueiredo FO: Member of the local organizing committee of the international conference IFCS 2022, FEP, Porto 2022.

Figueiredo FO: Member of the scientific committee of the international conference VIII WCDANM 2022 (online conference).

Figueiredo FO: Chair of the course "Statistical Quality Control" at the international conference VIII WCDANM 202 (online).

Silva, C: Organization and Scientific Committees,
Conference Digital Transformation in Health, 11th February, 2022
Escola Superior de Tecnologia da Saúde de Lisboa-IPL
Online conference.

Silva, C: Scientific Committee of:
HCist 2022 - International Conference on Health and Social Care Information Systems and Technologies, November 9-11, 2022, Lisbon, Portugal., URL: <http://projman.scika.org/>

Silva C, Sousa L, Marques TA: Scientific Committee:
Workshop – O Futuro da Estatística na ULisboa
15th-16th October
TRYP Lisboa Caparica Mar Hotel, Costa da Caparica, Portugal., URL: <https://workshop-o-futuro-da-estatistica-na-ul.webador.com/>

Ramos MR: Member of the Scientific Committee of The 14th International Workshop in Mathematics e-Learning (e-math 2022), Organized by UAb, UNED and UOC, 24-25 november, Madrid. URL: <https://sites.google.com/view/14emath2022madrid/home>

Ramos MR: Member of the Scientific Committee of VIII Workshop on Computational Data Analysis and Numerical Methods (VIIWCDANM), IPL, Tomar, Online, (13-15) october 2022, URL: <http://www.wcdanm.ipt.pt/2022/>

ADVANCED TRAINING

(20)

Bashir S: Workshop R in Real Life. Training course for the students participating in “Programa Sê Investigador por 3 Semanas”. 18h, 6-13 July, 2022.

Ramos MR: Workshop “Topics in Sampling and Research”, Universidade do Algarve, under the Doctoral Program Clinical Research and Translational Medicine. Two sessions, May, June 2022.

São João R: Statistics and Data Analysis in Health with SPSS. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (16 hours). November 2022., URL: <http://ceaul.org/estatistica-e-analise-de-dados-em-saude-com-spss-4/>

São João R: Data Science with R: Introduction to Graphing. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (3 hours). July 2022, URL: <http://ceaul.org/data-science-com-r-introducao-a-construcao-de-graficos-com-r/>

São João R: Data Science with R: Bivariate Analysis, Association/Correlation Measures & Linear Regression. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (6 hours). June 2022, URL: <http://ceaul.org/data-science-com-r-analise-bivariada-medidas-de-associacao-correlacao-regressao-linear-com-r/>

São João R: Data Science with R: Analysis of Variance (ANOVA), Multiple Comparisons Tests (post hoc tests) & Kruskal-Wallis Test. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (4 hours). June 2022.,

URL: <http://ceaul.org/data-science-com-r-analise-de-variancia-anova-testes-de-comparacoes-multiplas-post-hoc-testes-teste-de-kruskal-wallis-com-r/>

São João R: Data Science with R: Hypothesis Tests and Confidence Intervals. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (6 hours). May 2022., URL: <http://ceaul.org/data-science-com-r-testes-de-hipoteses-e-intervalos-de-confianca-em-r/>

São João R: Data Science with R: Introduction and Exploratory Data Analysis. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (6 hours). May 2022., URL: <http://ceaul.org/data-science-com-r-introducao-e-analise-de-dados-exploratorios-com-r/>

São João R: São João R: Statistics and Data Analysis in Health with SPSS. Training carried out online in partnership with GADES Solutions, in real time, through the Cisco Webex platform (16 hours). May 2022., URL: <http://ceaul.org/estatistica-e-analise-de-dados-em-saude-com-spss-4/>

São João R: Course " Art as a tool for inclusion and the use of instruments to measure self-esteem, assertiveness and cooperation in students" (8 hours), integrated in the Erasmus Mobility -Florida Universitària Mobility (Valencia-Spain), 22-25 February 2022.

Rufino MM: 2022. Workshop 'visualization and manipulation of spatial data using R'. Teachers: Rufino, MM and Pereira, S. Target: general public. Organization GADES and CEAUL. 8h online. <https://gades-solutions.com/visualizacao-e-manipulacao-de-dados-espaciais-com-r/>.

Oliveira A: Activity: Teaching course at the Portuguese Mathematical Society / Applications of R - Module 1 Introduction to Statistical Modeling (CCPFC/ACC 112750/21), for primary and secondary school teachers, april 29 to may 26, 2022, 30 hours..

Pereira S and Rufino MM: Visualizing Spatial Data in R. Number of hours: 8. Local: Online, Cisco Webex. Institutions: CEAUL, Gades Solutions.., URL: <https://gades-solutions.com/visualizacao-e-manipulacao-de-dados-espaciais-com-r/>

Pereira S: and **Marques TA:** Data Scientist with R. Number of hours: 16 Local: Online, Cisco Webex. Institutions: CEAUL, Gades Solutions. Date: February 2022., URL: <https://gades-solutions.com/data-scientist-com-r/>

Pereira S and André L: Introduction to Extremes with R. Number of hours: 2.5. Local: Online.

Institutions: CEAUL, Centre for Computational and Stochastic Mathematics (CEMAT).

Date: March 2022..., URL: <http://ceaul.org/introduction-to-extremes-with-r/>

Palmela Pereira C: 6º Formation Course on Disaster Victim Identification (DVI), Coimbra, INMLCF 14 until 17 september 2022. This is a training course for Medico-Legal Doctors, Criminal Police and Forensic Odontologists.

Palmela Pereira C: As member of EML-DVI RR participated in the Refreshing Session organized by INMCLF which took place in Coimbra, on September 19, 2022. The session was attended by collaboration of the British trainer Howard Way and aimed to test the DVI procedures of the phases 1 and 2.

Palmela Pereira C: Participate at the Investigators Training Course (CFI) of the Military Judiciary Police (PJM) aims to enable training them to exercise functions of criminal investigator of the PJM, providing them, among others, with extensive knowledge in the field of Criminalistics and Judicial Inspection.

Duration of three (3) hours and must take place on March 30, 2022, from 2 pm to 5 pm. Porto..

Silva, C: Organizer and trainer of the course: Introdução à Estatística para Data Science, Total 10h, online, 25,26 and 28 November. Escola Superior de Tecnologia da Saúde de Lisboa-IPL.

Neves M: The postgraduate course in "Applied Statistics using the R software" was created as part of an initiative by the Calouste Gulbenkian Foundation entitled "Apoio a uma educação de melhor qualidade em Matemática nos PALOP" ("Support to a better quality education in Mathematics in the PALOP"). This program, financed by the Calouste Gulbenkian Foundation, was established between the Faculdade de Economia da Universidade Lúrio (UniLúrio Business School - UBS) and the Instituto Superior de Agronomia (ISA) da Universidade de Lisboa. Manuela Neves is responsible for the collaboration component at ISA. Classes started on the 10th of October and a colleague (Rita Neres) and I taught part of a module in the first week of November 2022.

PRIZES AND AWARDS

(1)

Saraiva J: Saraiva J, Valentim-Coelho C, Vaz F, Antunes M, Neves S, Ricardo P, Andrade O, Miranda A, Vicente A, Melo A, Roque C, Guiomar R, Vantaggiato L, Mohammad H, Soares N, Penque D (2022). “COVID-19 Vaccination: A study on red blood cells and their impact in the immune system by omics-based approaches.”, 8th International Caparica Conference on analytical Proteomics 2022, Caparica, 18th - 21st July 2022. Excellent Shotgun Communication Prize

CONSULTANCY

(9)

Sousa L, Marques TA, Silva C, Pereira S, Turkman KF, Figueiredo I, Brás-Geraldes C, Martins R, Correia IJF, Ribeiro E and Pestana C (2020). Institution: Instituto Português do Mar e da Atmosfera – IPMA Project title: Pequena Pesca na Costa Ocidental Portuguesa Main Goal: Creation and validation of a generic tool analysis of resources / fisheries and production of outputs necessary for the formulation of scientific advice for its management.

Aleixo S (Project Leader) (2020). GALP / ENACOL project, which aims to develop a decision support tool.

Ramos MR: Standardization Technical Committee, Of Portuguese Institute for Quality on Statistical Methods. (Alternate member). Starting October 2022.

São João R: Statistical consultancy jointly with Domingues TD in the field of sleep disorders, Hospital da Luz-Setúbal.

São João R: Statistical consultancy jointly with Domingues TD in oral pavimento celular carcinoma, Centro Hospitalar Universitário Lisboa Norte, EPE..

São João R: Statistical consultancy in the field of temporomandibular disorders, IPFACE..

São João R: São João R: São João R: Statistical consultancy in the field of mental health, Santarém District Hospital.

Ramos FR. and **Severino E:** Consulting work provided to Sumol+Compal.

Description: elaboration/validation and analysis of the results of a sensorial analysis survey in the comparison of two different formulas for the production of Sumol.

Silva, C: Statistical Consultor of Associação Portuguesa para o Desenvolvimento Hospitalar.

OTHER

(16)

Gomes MI: Interview with Prof. Ivette Gomes, by Vanda Lourenço (CWS Country Rep for Portugal): Caucus for Women in Statistics., URL: <https://cwstat.org/publications/talk-the-walk/interview-with-ivette-gomes/>

Gomes MI: Scientific Council Member, CIM, 2020-2023, upon invitation of the current CIM Director, Isabel Narra Figueiredo, University of Coimbra., URL: <http://www.cim.pt/council>

Gomes MI: ISI Committee on Women Statistics, Member of the Supporting Network Country Representatives, since 2017.

Current Chair: Ksenija Dumicic., URL: <https://cw-isি.org/committee/>

Gomes MI: Evaluator of research projects, South Africa's National Research Foundation (NRF), RISA (Research and Innovation Support and Advancement), October 2022.

Palmela Pereira C: Portuguese Delegate from the subworking group Forensic Odontology from DVI Working group of INTERPOL..

Palmela Pereira C: International OSAC GUESTS from the Organization of Scientific Area Committees (OSAC) for Forensic Science subcommitte Forensic Odontology (FO).
The Meeting scheduled May 23-27, 2022, in Orlando, FL. As member inherited from Universisty of Lisbon at the OSAC on the FO subcommittee participate actively on the decisions.,, URL: <https://www.nist.gov/organization-scientific-area-committees-forensic-science/forensic-odontontology-subcommittee>

Palmela Pereira C: IPQ delegated from Portugal on ISO TC 272 - Forensic Sciences and on ISO TC106 - Dentistry, SC3 WG1, WG2 and WG5..,
URL: <https://www.iso.org/member/2054.html>

Palmela C: Forensic Odontologist expertise for the Courts.

Ramos MR: Collaboration in Design the Survey on Universidade Aberta PhD and Masters Graduates' Work and Life Pathways as team member of the Observatory of Graduates' Work and Life Pathways of Universidade Aberta.

Ramos, SF: National Data Manager in the Programme for the International Assessment of Adult Competencies (PIAAC).

URL: <https://www.piaac.pt>

Figueiredo FO and **Ramos S:** Representative of CEAUL at PT-MATHS-IN.

Rocha C: Member of the Scientific Council of "Instituto de Avaliação Educativa (IAVE)" on behalf of the Portuguese Statistical Society (SPE).

Figueiredo FO, Rocha C: Member of committee CEE - Comissão Especializada de Educação, at Sociedade Portuguesa de Estatística.

Figueiredo FO: Auditor of the Mathematics National Examinations , for IAVE - Instituto de Avaliação Educativa , I.P. entidade parceira do Ministério da Educação.

Figueiredo FO and **Silva C:** Effective members of "Comissão técnica de normalização de aplicações de métodos estatísticos IPQ/CT 225", representing CEAUL

Palmela Pereira C and **Sousa L:** Effective members of "Comissão de Ética de Ciências" (CEC) – Faculdade de Ciências da Universidade de Lisboa.