Biennial Report

2023
2024

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2024
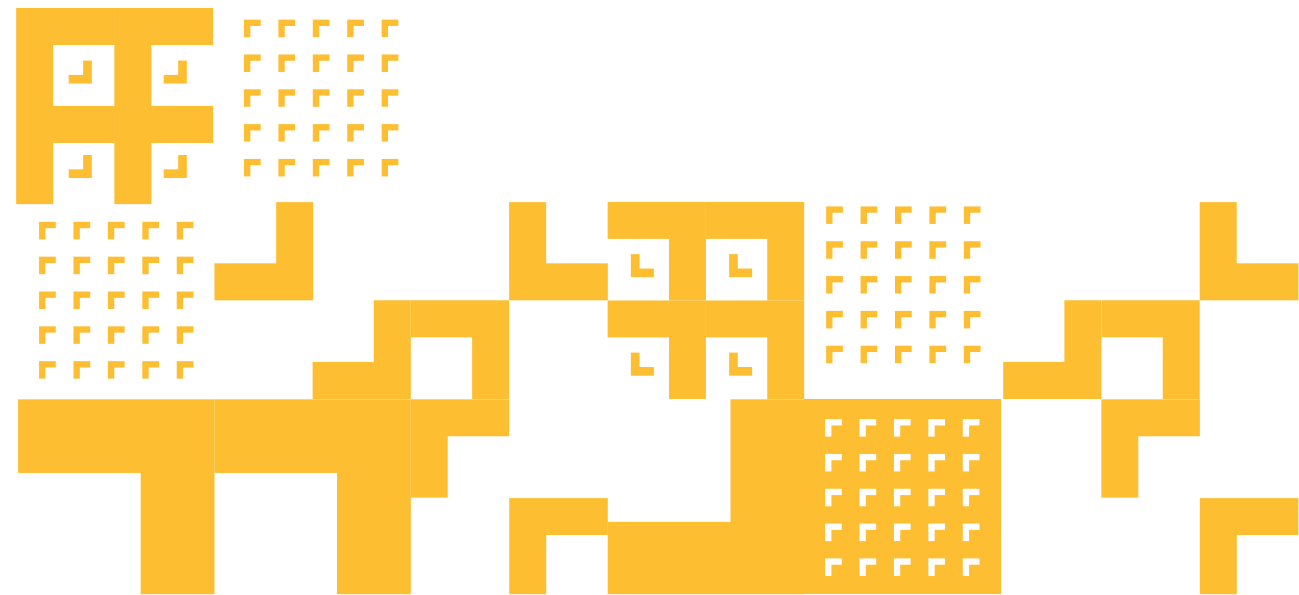
CEGIST

Centre for Management Studies
of Instituto Superior Técnico

Index

President's Foreword

Tânia Ramos

It has been a privilege to serve as President of CEGIST and to lead its vibrant and dedicated community over the past two years. CEGIST is a leading multidisciplinary research centre at the interface between management and engineering, hosted by Técnico, the largest and most renowned engineering school in Portugal. We are driven by real-world problems, linking management science and engineering approaches to deliver impactful research on global challenges such as climate change, digitalization, and sustainable development, in collaboration with industry and other stakeholders.

Higher education institutions and their research centres play a vital role in addressing complex societal and technological challenges. At CEGIST, we embrace this responsibility with a commitment to advancing scientific knowledge and developing innovative solutions to complex managerial and organizational issues. Establishing strong scientific leadership to drive the growth of a truly excellent research centre has been a key strategic priority over the years.

The last two years were marked by an intense period of preparation for the FCT Units Evaluation. While CEGIST was already operating at what we believed to be an Excellent level, our collective efforts during this time focused on ensuring that our achievements and impact were clearly visible - with the goal of elevating CEGIST's classification from Very Good to Excellent. This objective became a catalyst for critical reflection, strengthening our alignment with the highest standards of scientific rigour, societal relevance, and institutional development. A major highlight of this biennium was the in-person visit of our Scientific Advisory Board in April 2023. We were honoured to welcome Gregory Parnell (University of Arkansas), Roy Thurik (Erasmus University Rotterdam), and Elena Fernández (University of Cádiz), with Heriberto Cabezas (University of Miskolc) joining online. This two-day event was instrumental in shaping CEGIST's future: the first day focused on our strategic plan for 2024–2028, while the second day featured a PhD Pitch event and a round-table discussion on strategies to position CEGIST as a leading international research centre.

Our pursuit of research excellence is evident in the increasing number of scientific papers published in top-tier journals. Several of these works were distinguished with Best Paper awards from renowned scientific societies and journals. Close to half of our publications involved international co-authors, including

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collaborators from renowned institutions such as MIT, Carnegie Mellon University, Imperial College London, and LSE.

Our international standing is also reflected in individual accolades: three CEGIST researchers were ranked among the World Top 2% most-cited scientists (Stanford–Elsevier, 2023); one was appointed as the Portuguese representative to the European Commission's Circularity Working Group on critical raw materials; and one currently serves as President of the International Society on Multiple Criteria Decision Making. During 2023-2024, CEGIST coordinated several

national and international projects and led impactful industry partnerships. New projects such as CHARADE and Digitalisation in the Portuguese Labour Market, tackle pressing energy and employment challenges. Ongoing efforts like AGE and Future Pharma continue to reinforce our interdisciplinary reach, while completed projects such as the Circular Economy Action Plan for Portugal and the Partnership for Health System Sustainability and Resilience exemplify our ability to deliver research with impact on public policy. Our CEGIST Seminar Series has become a key platform for academic dialogue, featuring 18 international and 9 national speakers, strengthening our global and local connections.

We also reaffirmed our commitment to nurturing the next generation of researchers, as evidenced by the significant number of master's and PhD theses supervised. The launch of the Brown Bag Seminars - a student - led initiative - exemplifies the dynamism and autonomy we encourage within our research community.

Beyond research, we expanded our visibility and public engagement. The launch of our first public Biennial Report, covering 2021–2022, marked a significant step in our commitment to transparency and knowledge dissemination. Our outreach activities grew through media appearances, science communication events, and participation in initiatives like the European Researchers' Night and GIRLSTEAM. Our researchers actively contributed to public

dialogue through interviews, seminars, podcasts, blogs, and public science forums.

Internally, we strengthened our institutional culture through initiatives like CEGIST Away Day, fostering our sense of community and shared purpose. We invested in young researchers, expanded infrastructure – our new Laboratory for Research, Teaching and Societal Impact for Logistics and Operations, LOG. lab, was inaugurated in May 2024, reinforced our Pre-Award office with a full-time officer, and launched an internal European Research Council (ERC) program including round tables with evaluators and awardees, pitch sessions, individual mentoring and proposal development support. We promoted interdisciplinarity across our research areas, deepened ties with industry, and launched new strategies to promote internationalization and collaboration.

Looking ahead, we remain committed to advancing knowledge, fostering innovation, and addressing society's most urgent challenges. We are confident that our collective efforts - guided by scientific integrity, and academic freedom - will continue to grow in impact and relevance. I am deeply grateful to all researchers, staff, students, and partners whose dedication and excellence have made these achievements possible. Because excellence in research is not just about results – it is also about the people who make them happen!

Tânia Ramos

About CEGIST

Our Mission

We explore the links between management science and engineering approaches to stimulate creativity in problem-solving while actively collaborating with industry, public institutions and other stakeholders to transfer technology, add value to society, and support the development of public policies. Through our research, we aim to address pressing global challenges and contribute to sustainable development.

Our Vision

To be a leading international research centre at the interface between Management Science and Engineering and to be the first choice for partners looking to make a lasting impact on society via cutting-edge approaches operating in the interface between engineering, technology, and management science.

Organization and Governance

Executive Board

Tânia Ramos
President

Daniel Santos
Vice-President

Hugo Castro Silva
Board Member

Bill Williams
Board Member

Sofia Machaqueiro
Administrative Support

Principal Investigators Committee

Mónica Oliveira
DECISING

José Rui Figueira
MOSAIC

Ana Barbosa-Póvoa
OpLog

Rui Baptista
SEI

Ana Isabel Carvalho
SUSTAINS

External Advisory Board

CEGIST

Elena Fernández
University of Cádiz

Gregory Parnell
University of Arkansas

Heriberto Cabezas
University of Miskolc

Nilay Shah
Imperial College London

Roy Thurik
Erasmus University Rotterdam

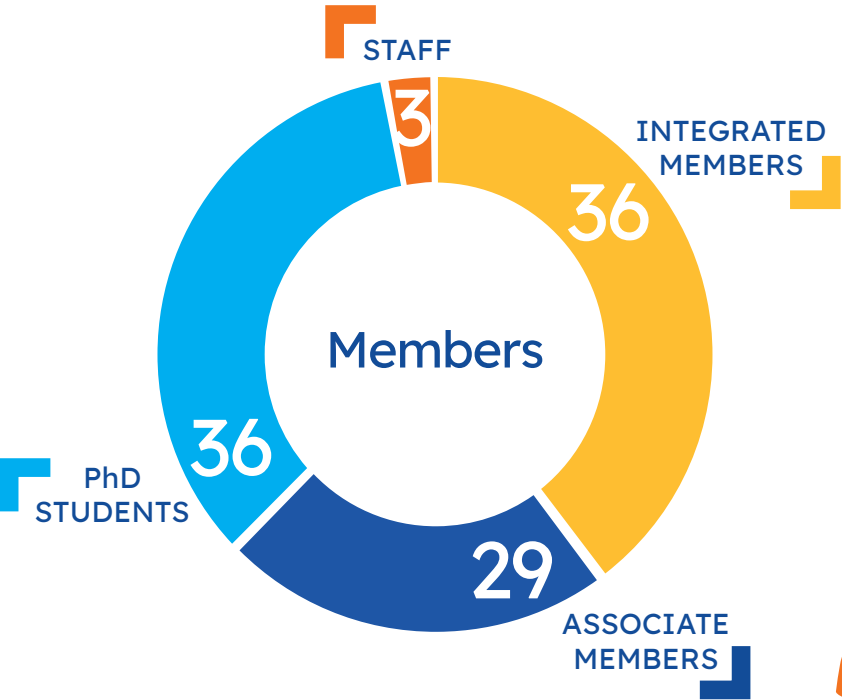Integrated members

Scientific Council

Pre-Award Office

Mariana Santa-Marta
Head

Mariana Batista Santos
Officer

IST-ID

IST

Universidade de Lisboa

Facts and Numbers

Members

- STAFF: 3
- INTEGRATED MEMBERS: 36
- ASSOCIATE MEMBERS: 29
- PhD STUDENTS: 36

54% FEMALE

46% MALE

Nationalities

15

Portugal	83	Cuba	1
Brazil	7	Germany	1
Spain	2	Iran	1
Angola	1	Ireland	1
Chile	1	Italy	1
Colombia	1	Japan	1
		Netherlands	1
		Pakistan	1
		Turkey	1

Note: Team members at 31.12.2024

Subject areas of publications (Scopus)

- Management of Technology and Innovation
- Strategy and Management
- Business and International Management
- Management, Monitoring, Policy and Law
- Management Science and Operations Research
- Economics and Econometrics
- Geography, Planning and Development
- Renewable Energy, Sustainability and the Environment
- Information Systems and Management
- Computer Science Applications

Publications

79 2023
- 71 ARTICLES
- 8 BOOK CHAPTERS

65 2024
- 57 ARTICLES
- 8 BOOK CHAPTERS

Theses

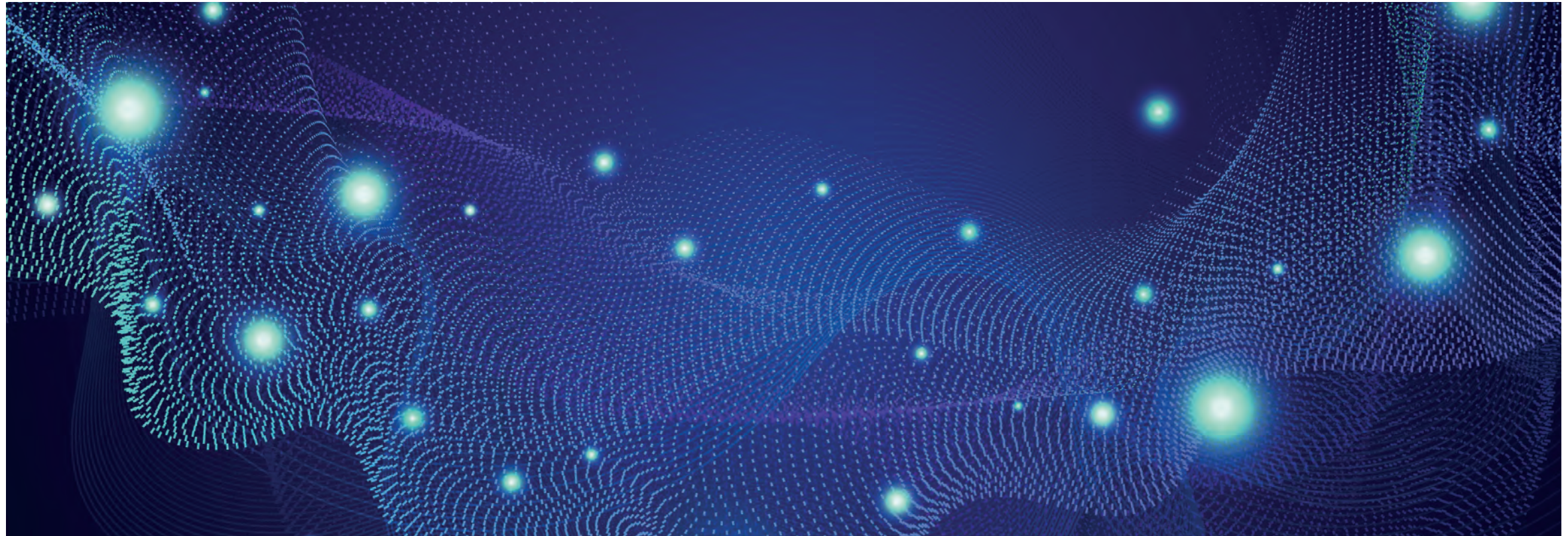**98** 2023
- 93 MSc
- 5 PhD

99 2024
- 96 MSc
- 3 PhD

Research Areas

CEGIST's core research is on the design and application of innovative models, methods, and tools in the engineering and management of systems and organizations, spread into five complementary research areas, developing research in:
- Decision Science and Management Engineering (DECISING): methods, models, and decision-support tools to assist engineering management practice in complex contexts involving diverse stakeholders, multiple objectives, and uncertainty sources.
- Systems Modelling and Methods of Operations Research and Analytics (MOSAIC): modelling and solving real-world complex problems through innovative mathematical programming methods and algorithms.
- Operations, Logistics and Supply Chain Management (OpLog): management challenges faced by industry and services organizations regarding their operations, logistics, and supply chains.
- Strategy, Entrepreneurship and Innovation (SEI): corporate strategy, economics, entrepreneurship and innovation, and their relationship with industry dynamics, labor markets, and economic development.
- Sustainable Solutions and Assessment for Circular Economy Systems (SUSTAINS): sustainability assessment tools and practices from a circular economy perspective.

DECISING
DECISion science and management engineerING

Mónica Oliveira

Mónica Oliveira is Full Professor in Decision Sciences at the Engineering and Management Department of IST and coordinates DECISING. She has enhanced and applied management science techniques in multiple organizations and lead national and international projects. Impact of her work has been recognized by the 2023 INFORMS/SDP Decision Practice award.

Driven by real world challenges on the frontiers of engineering and management, and grounded in the principles of decision-making and decision-aiding theory, the Decision Science and Management Engineering (DECISING) branch of CEGIST is a multimethodological area that develops methods, models, decision-support tools and knowledge to assist engineering management practice in complex contexts that involve diverse stakeholders, multiple objectives and several sources of uncertainty. At DECISING we follow a collaborative learning constructivist paradigm integrating socio-technical processes to design sustainable solutions to problems of performance appraisal and value measurement, evaluation and prioritization, resource allocation and budgeting, risk analysis, project management, policy design and strategic choice. Our mission is driven by industry innovation, multidisciplinary research and spin-off partnerships, and is currently focused on (although not limited to) health, energy, and environmental settings, always exploring cross-fertilization with the other areas of CEGIST and international collaborations.

Achievements

In the 2023–24 period, DECISING's main achievements included:
a) Leading the Partnership for Health Systems Sustainability and Resilience in Portugal—an initiative by the World Economic Forum, London School of Economics, and AstraZeneca—engaging 40 stakeholders in designing impactful, media-covered policy recommendations discussed throughout 2023.
b) Actively organizing national and international events, including the 5th International Conference on Health Care Systems Engineering (Lisbon) and the 8th Annual Conference "Developing Knowledge and Tools for Patient-Centric Care" of the Lisbon University Health Network.
c) Participating in governmental commissions on Portugal's genomic medicine strategy and on assessing national medical education needs.
d) Collaborating with European health technology agencies and Portuguese hospitals to develop pioneering methodologies for evaluating medical devices and assit real decision-makers, including tools to assess genomic panel contracting strategies (Afonso et al., 2023) and distinct medical devices (Freitas et al., 2023), and to build composite indices from qualitative judgments (Bana e Costa et al., 2023).

e) Providing consultancy services, such as designing consensus-building methods for managing type-2 inflammation patients (ISBE/SANOFI), resulting in a peer-reviewed publication (Costa et al., 2024).
f) Launching innovative pedagogical initiatives, notably the MOOC "Regulation of Health Technologies" (with the Pharmacy School, INFARMED, and industry partners), and contributing to HEI4FUTURE (EIT Urban Mobility) to design new education for health professionals.
g) Winning the 2023 INFORMS Decision Analysis Practice Award (Decision Analysis Society and Society of Decision Professionals) for work on participatory decision analysis and collaborative value modelling.
h) Receiving international recognition, including Carlos Bana e Costa's inclusion among the 2024 World's Top 2% Scientists for lifetime achievements.

Methods

MACBETH and other multicriteria modelling techniques and tools

Decision conferencing and Delphi participatory processes

Project and portfolio decision analysis

Foresight and risk modelling

Problem structuring methods and behavioral operational research

Highlights

DECISING research has been assisting real decision-makers with multimethodologies in several industries.

The DECISING collaborative value modelling framework has been adopted in international large-scale policy-making processes and has been a seed for policy, research, and educational partnerships.

Area applications include quality management, risk evaluation in the oil industry, health technology assessment, engineering education, policy evaluation and environmental sustainability.

Recent research includes behavioral operational research and foresight studies, developing virtual decision conferencing and Delphi processes, and tools to enhance the MACBETH approach.

MOSAIC
Systems modelling and Methods of Operations reSearch And analytICs

José Rui Figueira

José Rui Figueira is currently a Full Professor at Instituto Superior Técnico – University of Lisbon, with previous lecturing experiences at University of Évora, University of Coimbra and Nancy's School of Mines (where he obtained a Full Professor position).

The systems modelling and Methods of Operations reSearch And analytICs (MOSAIC) research area of CEGIST is devoted to modelling and solving real-world complex problems, mainly through the design of single and multi-objective mathematical programming innovative tools (methodologies, methods, algorithms, and software), enabling organizations to convert challenges into advantageous opportunities, helping to make better decisions in a vast range of areas of engineering and sciences. MOSAIC's mission is thus grounded in the principles of interdisciplinarity, integration and internationalization. Its main objectives are: to foster interdisciplinary activity on modeling and solving optimization problems covering the various areas; to provide a platform for integrating people and promote cross-fertilization mainly for the development of mathematical programming tools and their application in practice; and to promote the development of necessary theory to meet the needs of complex optimization problems by establishing international cooperation.

Achievements

The MOSAIC research area achieved significant milestones during 2023–2024. In 2024, José Rui Figueira was elected President of the International Society on Multiple Criteria Decision Making. He was internationally recognized in 2023 as one of the World's Top 2% Scientists (Stanford ranking). Miguel Alves Pereira received the APDIO IO2024 Award for the best PhD thesis in Operational Research defended between 2021 and 2023.
Over this period, MOSAIC published over 30 papers in leading peer-reviewed journals. Noteworthy contributions include the development of three new algorithms designed to address the complexity of presenting Pareto fronts in multi-objective optimization, focusing on cardinality, coverage, and uniformity. These algorithms demonstrated state-of-the-art performance in generating representative solution sets (Mesquita-Cunha et al., 2023). Another highlight was the introduction of a fast and effective greedy heuristic, augmented by a cooperative coevolutionary genetic programming-based hyper-heuristic, for job shop lot-sizing and scheduling, yielding near-optimal solutions in under one second

Methods

Design and implementation of methods for single and multi-objective optimization

Analytics, machine learning, simulation and optimization

Robustness and stochastic analysis

Data Envelopment Analysis

Meta-heuristics and hyper-heuristics for optimization

Combinatorial and mixed integer linear programming

Highlights

José Rui Figueira was elected President of the International Society on Multiple Criteria Decision Making in 2024.

Over 30 articles were published in top-tier peer reviewed journals, advancing methodologies in multi-objective optimization, scheduling, composite indicators, and healthcare analytics.

Miguel Alves Pereira won the APDIO IO2024 Award for the best PhD thesis in Operational Research.

Innovative algorithms and ultra-fast heuristics achieved state-of-the-art optimization across academic and industrial settings.

Impactful science outreach through major events like Técnico Open Day, promoting Operational Research with interactive activities.

(Zeiträg et al., 2024). Further advances include a multi-objective model and a two-stage solution method for thesis defense scheduling, which proved effective across diverse university scenarios (Almeida et al., 2024). A methodology for constructing composite indicators applicable across various domains marked a breakthrough in operations research and analytics (Figueira et al., 2023). Additional contributions involved a fuzzy BoD-based reassessment of the Healthcare Access and Quality Index and the development of a categorization framework for evaluating public hospitals using Electre Tri-nC with criteria interactions (Pereira et al., 2024a, 2024b).
MOSAIC has been actively involved in outreach activities. Over the past two years, it participated in Técnico Open Day's Science Fair, the XXth and XXIth Mathematics Fairs, APIST Summer Camp, with activities including "Come Build a Tangram," "To Cut or Not To Cut: That is the Question," and "Efficiency League: Choose the Champion Club!".

OpLog
Operations, Logistics and Supply Chain Management

Ana Barbosa-Póvoa

Ana Barbosa-Póvoa is a Full Professor in Operations and Logistics at the Engineering and Management Department of Instituto Superior Técnico (IST), University of Lisbon. Her research focuses on developing a deep and comprehensive understanding of complex problems in supply chains and operations management, supported by innovative engineering systems models and techniques. Her contributions have been recognized with numerous national and international awards. She serves in several editorial boards. She is a Vice President of EURO, the European Association of Operational Research Societies, and a founding member of the EURO Working Group on Sustainable Supply Chains.

OpLog research area at CEGIST conducts multidisciplinary research driven by the challenges faced by industry and service organizations in managing their operations, logistics, and supply chains. Our research is focused on advancing the integrated knowledge of these disciplines, ranging from strategic to operational decision-making, and is grounded in the conceptual and analytical foundations of Systems Engineering. We strengthen the theoretical foundations necessary for supporting sound decision making, which is further applied to improve industrial practice. Our research outcomes include developing decision-support products and processes that foster effectiveness, efficiency and sustainability. To broaden our reach, we engage in national and international collaborative research to develop innovative solutions to complex issues faced by various industries. Our applied research targets sectors such as (but not limited to) agri-food, health, manufacturing, process-based industries, energy, transportation, logistics, retail, waste management, and social services.

Achievements

In the 2023-24 period, OpLog's major achievements span from: 1) being leading partner and coordinator for research funding involving diverse projects developed in close collaboration with other research partners and industry, resulting in integrated modelling approaches/tools to assist organisations in their path towards effectiveness, efficiency, and sustainability excellence; 2) proven global academic leadership through an increased number of high-quality, peer-reviewed publications with a strong citation impact; Ana Póvoa (OpLog's PI) achieved international acclaim in 2023, ranking as the World's Top 2% Scientist for her career achievements and contributions; invited international plenary lectures; keynotes; participation in Ph.D. examination committees worldwide; participation in international evaluation panels worldwide (EU-ERC; Academy of Finland; FWO; NRG; NOW; ESF, etc.); leadership roles in national and international societies such as Portuguese Association of Operational Research (APDIO), European Association of Operational Research Societies (EURO), International Working Groups (EURO Working Group in Sustainable Supply Chains); awarded recognitions to three OpLog members as being within the 12 Best Young Women working in Operations Research (WISDOM Forum - EURO Society); awarded

Methods

Single and Multi-objective Optimization

Stochastic and Robust Optimization

Case-Study Analysis and Action Research

Data Analytics and Forecasting

Environmental Life Cycle Assessment

Highlights

Operational Research based tools to provide effective decision-support in operations and supply chain management.

Develop studies targeting sustainability in operations and supply chains.

Production of diversified, high-quality research with strong academic and societal relevance.

Active collaboration with international research institutions across multiple countries and domains.

Strong partnerships with industry, translating research into actionable solutions and innovation.

the "Best EJOR Paper 2023" in the category of Innovative Applications in Operational Research; and the "Best Process System Engineering Paper 2024" of the Portuguese Operations Research Portuguese Society; organization of the 5th international Health Care Systems Engineering conference in 2023 with over 40 participants and 15 healthcare practitioners; 3) being national service providers for industry, through research-driven projects funded by industry partners, resulting in novel, actionable insights for both research and practice - such as the Valorpneu App, which uses optimization models for network design to help Valorpneu, a non-profit organization managing used tire collection, assess current logistics mileage and identify optimal collection center locations to minimize travel distance and CO_2 emissions; 4) being very active in outreach activities(e.g. first time at the European Research Night 2023 with the hands-on activity "How to Manage the Chocolate Supply Chain"); 5) inauguration of the new Laboratory for Research, Teaching and Societal Impact for Logistics and Operations, LOG.lab, in direct collaboration with a Portuguese retailer company.

SEI
Strategy, Entrepreneurship and Innovation

Rui Baptista

Rui Baptista is Full Professor in Entrepreneurship and Innovation at Instituto Superior Técnico (IST). Previous academic posts include Carnegie Mellon University, Indiana University, Brunel Business School, and the Max Planck Institute. He is Editor of Small Business Economics, Associate Editor of the Journal of Small Business Management, and member of the Editorial Board of Eurasian Business Review.

The Strategy, Entrepreneurship and Innovation (SEI) branch of CEGIST conducts applied research in topics related with entrepreneurship, corporate strategy, technology and innovation, market research, and their relationship with industry dynamics, labor markets, and economic development. Furthermore, we address firms' decisions and government policies on sustainable and competitive practices and technologies, with an emphasis on healthcare and the environment.

Our research programs use quantitative empirical methods to examine the impacts of technological change, human capital, firms' decisions, and government policies on issues such as entrepreneurial success, competitiveness and internationalization, productivity and wages, industry evolution, labor markets, and regional development. We aim to offer new insights into the roles played by technology, knowledge and human resources in promoting sustainability, employment, and the formation of innovative firms and competitive regions, contributing to the formulation and assessment of policies in industry, science, the environment, healthcare, and higher education.

Achievements

In the 2023-24 period, researchers in the SEI area published over two dozen articles in international peer reviewed journals indexed in Clarivate Web of Science and Scopus, many of them in the first quartile Impact Factor/ CiteScore and presented at multiple research conferences and seminars. Researchers in the area received, managed, and completed several projects awarded competitively in topics such as the impact of AI and digitalization on employment and productivity; the impact of ageing and firm demographics on entrepreneurship; and the socio-economic and equity impacts of the EU Emissions Trading System. SEI's research on these topics has received funding from both public and private sources, including FCT and Fundação Francisco Manuel dos Santos.

Methods

Advanced econometrics using micro and macro data

Game theory and experimental economics

Qualitative-comparative analysis using fuzzy sets

Qualitative methods and case studies

Highlights

Diversified high-quality research.

Public policy implications.

Advanced training and supervision of multiple research students.

Collaboration with a variety of international research partners.

Throughout this period, SEI researchers played important roles as editors and reviewers of international academic journals, as well as leadership roles in professional and academic associations – for instance, Eduardo Costa was president of the Portuguese Association of Health Economics (APES) in 2023-24. SEI researchers also played important expert roles in government policy and business strategy, including production of policy paper briefs on the impact of AI; digitalization, and routinization on occupations and employment; consultancy activity on firms' pro- and anti-competitive behaviors; and membership of the Health Technology Assessment Commission and the National Commission for Reference Centers in the NHS.

Outreach activities included numerous media appearances and newspaper articles communicating about the impact of AI and automation on employment and productivity; efficiency and sustainability of public health care spending; energy access, decarbonization, and eco-innovation; as well as contributions to institutional blogs, newsletters, and bulletins.

SUSTAINS
SUSTainable solutions and Assessment for cIrcular ecoNomy Systems

Ana Isabel Carvalho

Ana Isabel Carvalho is Associate Professor at Instituto Superior Técnico – University of Lisbon. Coordinator of the BSc and MSc of Environmental Engineering of University of Lisbon and University of Shanghai and Co-founder of Social Innovation Lab at Técnico.

SUSTAINS is a branch of CEGIST dedicated to research on sustainability practices in a circular economy perspective and sustainability assessment tools, conducting theoretical and practical research in three main topics: 1) Developing sustainable operations and supply chains solutions towards circular economy systems; 2) Economic, Environmental and Social evaluation through Life Cycle Assessment methodologies; and 3) Development of decision support tools for sustainability implementation and monitoring. We see our role in developing theory, models and tools, which help the diagnosis of current activities, propose more sustainable solutions in a long run and assess the sustainability improvements across time. We conduct participatory action research, and use qualitative and quantitative approaches, to promote the aforementioned research.

Achievements

In 2023-2024 the PI of SUSTAINS has been nominated as Portuguese representative on the Circularity Working Group that advises on EU policy regarding Critical Raw Materials. SUSTAINS started the coordination (in collaboration with CERENA) of the ISLANDS Atlantic implementation phase (2,2M$ financed by GEF and managed by United Nations Environment Programme: UNEP) being responsible to create circular economy systems in a sustainable life cycle management in Guinea Bissau, São Tomé and Príncipe and Cabo Verde for Waste of Electric and Electronic Equipment and end of life vehicles. SUSTAINS has participated in seven European Projects, being responsible for the Social Life Cycle Assessment (LCA) of the projects and support the Environmental LCA through a strong collaboration with ARDITEC, which is an association that targets sustainable development, protection & conservation of our cultural heritage, and social & societal responsibility (Examples of projects: Novum: Production of new cellulose based materials, Aquabioprofit: Circular economy systems for valorization of aquaculture waste and Lignicoat-Development of new bio-based coatings). SUSTAINS joined the FCT-funded BioCFiber project, being responsible for the sustainability assessment of the new bio-based carbon fibers developed in the project. SUSTAINS also coordinated a project with a coat painting

Methods

Circular Economy Business models

Case-Study Analysis and Action Research

Life Cycle Costing

Environmental Life Cycle Assessment

Social Life Cycle Assessment

Highlights

Ana Carvalho has been nominated as Portuguese representative on the Circularity Working Group that advises on EU policy regarding Critical Raw Materials.

Coordination of a 2,2M$ project on implementation of circularity systems for WEEE and ELV in Atlantic Islands (financed by GEF and implemented by UNEP).

Technological development of a recycling machine for community support in increasing recycling.

Participatory methodologies and Life Cycle Assessment methods have been applied has main methodologies in many European and Industrial projects.

Outreach activities about recycling with the creation of a recycling machine and activities in schools and open days.

company SIKA, where they have performed the LCA of new materials. During this period SUSTAINS has coordinated a project financed by the municipality of Oeiras to develop a recycling machine. The machine involves new technologies for the identification of residues and an interaction with an app with gamification to promote people living in Oeiras to increase recyclability. This project has involved students from Técnico, through the collaboration with Junitec, and alumni with a collaboration of a Spin-Off of Técnico called Trash4Goods. SUSTAINS is co-responsible for the Social Innovation Lab (SILAB@Tecnico) and did outreach activities about recycling in schools and open days and the "Sustainability Dilemmas" Game at the European Researchers' Night. Several publications in top journals have been published and participation in conferences have been performed, some presentations were invited keynotes. Also, SUSTAINS has participated in Ph.D. examination committees and in national and international evaluation panels worldwide.

Education

One of CEGIST's main vehicles for knowledge transfer to society is through higher education. Our researchers have substantial experience in advanced training and active coordination and participation, both in teaching and in supervising students, in several MSc and PhD Programs offered by IST. All programs are multidisciplinary in nature and focused on technology, and provide students with knowledge in a wide range of academic fields.

PhD Programs

PhD Program in Engineering and Management

The PhD Program in Engineering and Management equips students with the mastery of a variety of methods within the field of Management Science, across a broad range of themes. The approaches adopted are applicable to decision and analysis problems in the fields of business management, public policy, and wherever the interaction between technology, economy and society is required. Graduates combine technological knowledge, management scientific methods, and organizational factors, and play an increasingly important role in business development both in the industry and services, government, and produce independent scientific research with international impact.

PhD Program in Engineering and Public Policy

The PhD program in Engineering and Public Policy prepares students to develop research in public policy and management of technology by addressing real world issues where technology, business and legal aspects are equally important.
This program focuses on networked infrastructures and offers specializations in telecom policy and energy policy. It also provides strong preparation in decision analysis applied to real world problems.
The program trains public policy analysts able to tackle complex, ill-defined and unstructured, real world problems of large scale and to develop information and knowledge to effective manage such systems.

MSc Programs

Master's in Industrial Engineering and Management — MEGI

MEGI graduates are engineers with an interdisciplinary vision of business problems, with a solid background in the basic sciences, fundamental technologies, economics and management. The strong interdisciplinary component allows future masters to apply their knowledge to problem solving, even in new or unfamiliar situations, evidence of a professional systems approach integrating scientific, technological and management knowledge. The skills acquired in the MEGI allow engineers to collect, select and interpret relevant information to evaluate solutions as well as justify their proposed solutions. The graduates develop skills for a professional intervention in a wide scope of organizations, whether in the industry, the services or in research.

Master's in Biomedical Engineering — MEBIOM

Biomedical Engineering (EBM) is an engineering area where the theoretical and experimental tools of engineering are used to analyze and solve the complex problems of health, with emphasis on applications in medicine, biology, psychology and even social Sciences. The typical problems addressed in this course are as varied and comprehensive as cell movement, nervous system physiology and how its electrical and metabolic activity can be observed and measured, mechanisms of muscle contraction, biocompatibility of materials and how they can be used in implant design, genetic engineering and tissue regeneration, reconstruction of medical and biological imaging, paradigm design and data analysis in neurosciences and the manipulation of sensitive medical data in databases used in management of hospital units and in decision support problems.

Master's in Engineering and Management of Innovation and Entrepreneurship — MEGIE
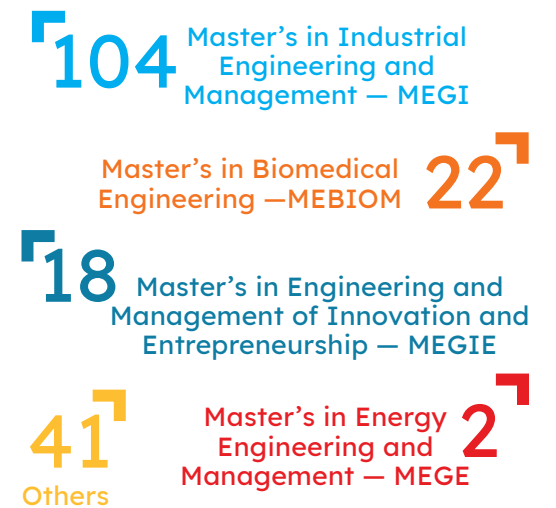
The Masters in Engineering and Management of Innovation and Entrepreneurship (MEGIE) main objective is to train qualified professionals and equip them with tools in innovation management, design thinking and development of new products and services, entrepreneurship and commercialization of technology, and multi-level technological and sectoral policies, contributing to the formulation and implementation of innovative business strategies and public policies, as well as the creation of new technology-based companies. MEGIE intends to train human resources that, positioned in industry and services, public institutions, universities, R&D units, organizations dedicated to the commercialization and transfer of technology, or in other areas of the Scientific and Technological System, can contribute to enhance the role played by Science and Technology in promoting business competitiveness and employment, as well as sustainable and socially responsible economic development.

Master's in Energy Engineering and Management — MEGE

The MSc in Energy Engineering and Management offers a cross-cutting program in the energy field, combining technical specialized knowledge, grounded on a solid scientific basis, with a broader perspective of the interactions with economics, environment and innovation in the energy area. The Master in Energy Engineering and Management aims at training the new generation of skilled professionals to be active in the energy sector. With this goal, the program offers cross training in the energy field, ensuring specialized technical knowledge, grounded on a solid scientific basis, complemented with a broad knowledge in the areas of economics, environment and innovation. The Master In Energy and Management combines the academic experience and the industry connections of the various departments at IST with the different international partnerships of prestigious European schools in which IST participates to offer a multidisciplinary program in the field of energy.

104 Master's in Industrial Engineering and Management — MEGI

Master's in Biomedical Engineering —MEBIOM **22**

18 Master's in Engineering and Management of Innovation and Entrepreneurship — MEGIE

41 Others

Master's in Energy Engineering and Management — MEGE **2**

Number of MSc Dissertations supervised by CEGIST's researchers in 2023 and 2024

Seminars

CEGIST regularly promotes the dissemination of scientific knowledge from its members and guests, in areas relevant to its research, through the initiative CEGIST Seminar Series. CEGIST also launched the Brown Bag Seminars initiative: meetings with doctoral students, organized by themselves, to discuss and develop ideas that can contribute to their research path and career development.

2023

CEGIST Seminar Series

Speaker: Paulo Abreu (CEGIST), **Data-Driven Forecasting for Operational Planning of Emergency Medical Services**, January 26th

Speaker: Valentina Bonomi (University of Brescia, Italy), **Fairness in Healthcare: Investigating the Impact of Conflicting Stakeholder's Goals Through Multi-Objective Formulations**, February 10th

Speaker: Robin Buter (University of Twente), **Strategic Placement of Public-Access Defibrillators for Effective Response to Cardiac Arrests,** March 17th

Speaker: Sérgio Batista (New York University Abu Dhabi), **On the Modeling of Urban Congestion Using Aggregated Models Based on the Macroscopic Fundamental Diagram,** May 5th

Speaker: José Luis García Lapresta (PRESAD, Universidad de Valladolid), **Aggregating Linguistic Assessments in Multi-Criteria Decision-Making,** May 9th

Speaker: Alice Aubert (Zurich University of Applied Sciences), **Engaging Citizens in OR-Supported Decision-Making With Online Preference Elicitation Tools,** May 26th

Speaker: José Palma-Oliveira (Faculdade de Psicologia, Universidade de Lisboa), **The History of Limited Rationality of Waste Management in Portugal: or how the 'Italianization' (exporting) is near,** June 23rd

Speaker: Martin Murmann (BFH, Switzerland), **Retaining Employees when Startups Professionalize**, July 7th

Speaker: Marcos Estellita Lins (UFRJ, Brazil), **Structuring Complex Social Problems — Theory of Mind, Metacognitive Maps, and Decision Support Models**, July 24th

Speaker: Ana Lanham (DEB-IST and iBB), **Opportunities for Management and Engineering Cross-Links in Biological Wastewater Treatment and Resource Recovery Systems**, October 27th

Speaker: Diogo Gonçalves (CEGIST), **Behavioral Science and Nudging as a Tool for Organizational Effectiveness**, November 24th

2024

CEGIST Seminar Series

Speaker: Elisete Zagheni (Joinville School of Technology, UFSC, Brazil), **Distribution Logistics and the Last Mile**, January 22nd

Speaker: Nazanin Nami (Alliance Manchester Business School), **Circular Economy Application in Pharmaceutical Supply Chains in the UK: A Holistic Evolutionary Game Approach**, February 9th

Speaker: Cátia Cerqueira (NIPE/UMinho). **Digitalization: The Edge of First Movers**, February 23rd

Brown Bag Seminars

Career Opportunities in Academia and Industry, February 9th

CEGIST Research Groups | Brainstorming Session, April 27th

Session with Students from Università degli Studi di Firenze, May 29th

PhD Pitch Sessions, July 27th

Creation of a Welcome Guide for PhD students in CEGIST | Discussion and Brainstorming, November 15th

Speaker: Petr Ekel (PUC-MG, Brazil), **Multicriteria Decision Making Under Conditions of Uncertainty and Its Applications**, March 8th

Speaker: Celso Matos (CEGIST), **Marketing and Sustainability: Current Research and Opportunities**, April 5th

Speaker: Filippo Visintin (University of Florence), **Closing the Loop: Circular Business Models, Sustainable-Oriented Innovation, and Transformative Supply Chains in the Textile and Fashion Industry**, April 10th

Speaker: Eduardo Costa (CEGIST), **Beyond Branded vs. Generic: Exploring the role of pharmacies on Out-of-Pocket payments in Generic Drug Markets**, May 17th

Community and Outreach

2023

Speaker: Dirk Franco (UHasselt), **Energy Transition, a Holistic Approach: A Case Study of a New Type of Energy Efficiency Services**, May 20th

Speaker: Lea Franze (FernUniversität Hagen), **Optimal Design of Socially Sustainable Raw Material Supply Chains**, June 7th

Speaker: Fernando Viana (University of Fortaleza), **Transition to a Circular Economy: Paths for the European Plastic Industry Supply Chain, with Insights from Portugal**, June 20th

Speaker: Effie Kesidou (Leeds University Business School), **Are There Synergies or Trade-Offs Between the Net Zero and Digital Innovation Transitions? Evidence From UK SMEs**, June 28th

Speaker: Carina Gargalo (PROSYS), **LCA in Action at PROSYS: From Waste to Value**, July 2nd

Speaker: Srinivas Talluri (Michigan State University), **Meet the Editor of Decision Sciences Journal — Session with Prof. Srinivas Talluri**, July 12th

Speaker: Bartosz Sawik (AGH University of Krakow), **Optimization Approach for Assignment of Robots for Elderly Care**, September 13th

Speaker: Diana Jorge (CEGIST), **Optimizing Towards Sustainable Last-Mile Logistics**, October 11th

Speaker: Valentina Bonomi (CEGIST), **Reimagining Last-Mile Delivery: Solutions for Superior Customer Experience and Sustainability**, November 8th

Brown Bag Seminars

Discussing Academia and Industry Career Opportunities with Duarte Dinis and Miguel Vieira, March 22nd

Welcoming new PhD students | A tour of your PhD, October 8th

[Newsletter article] Bruno Gonçalves and Miguel Vieira, **O Desafio na Gestão Industrial**. Boletim APDIO n.º 67, Dec 2022/Jan 2023

[Newsletter article] Daniel Santos, Ana Barbosa-Póvoa, Mariana Oliveira, Maria Meneses, Paulo Abreu, Maria Lopes, **Contribuições para a melhoria dos sistemas de saúde explorando técnicas de Investigação Operacional**. Boletim APDIO n.º 67, Dec 2022/Jan 2023

[Workshop] Mariana Santa-Marta, **"How to approach the Section 3- Implementation of RIA/IAs Horizon Europe proposals?"**, Ciclo de Formação Horizonte Europa 1.º ed., IST, Lisbon, January 21

[Workshop] Mariana Santa-Marta, **"Career Perspectives for Public Health Physicians – Career development and Opportunities"**, INSPIRA, Associação Nacional dos Médicos de Saúde Pública (ANMSP), Porto, February 2

[Webinar] Ana Vieira | **"How can policymakers incorporate uncertainty (as modelled through foresight) into policy evaluation?"**, EUPHA Webinars, about Contemporary Public Health Challenges and the promotion of the field of Foresight within Public Health, February 22

[News | Expresso Newspaper] Mónica Oliveira | PHSSR Report, Feb 28 https://expresso.pt/iniciativaseprodutos/projetos-expresso/2023-02-24-Da-teoria-a-pratica-peritos-juntam-se-para-debater-o-futuro-da-saude-em-Portugal-0781cc82

[Blog article] Margarida Catalão-Lopes, **"E as elasticidades? Impactos (assimétricos) de alterações no IVA"**, Técnico+ February 23 https://blog.tecnicomais.pt/e-as-elasticidades-impactos-assim%C3%A9tricos-de-altera%C3%A7%C3%B5es-no-iva

[Activity] Participation in the event GIRLSTEAM at Taguspark, with the activity **"How to Manage the Chocolate Supply Chain"**. April 27

[Activity] Técnico Open Day | CEGIST participated with four activities: **"How to Manage the Chocolate Supply Chain"**, **"How to minimize waste when cutting wood"**, **"How to build a Tangram and use it to solve an Operations Research problem"** and **"How does the human mind work? Cognitive biases in our decisions"**. May 20

[Seminar] Mónica Oliveira, Invited Seminar: MSc in Pharmaceutical Sciences, Presentation: **Health based upon evidence: Decision support models and participatory approaches**, Faculdade de Farmácia da Universidade de Lisboa, May

[Seminar] Tânia Ramos, **A "engenharia" da Gestão de Projetos**, II Workshop de Gestão de Projetos Científicos em Saúde, Instituto de Medicina Preventiva e Saúde Pública, May 23

[Seminar] Mónica Oliveira, Course **"Health Outcomes Research"**, ENSP, Invited Seminar MULTIPLE-CRITERIA DECISION ANALYSIS (MCDA) AND POTENTIAL IMPACT IN HTA, June

[News | Expresso Newspaper] Mónica Oliveira | **PHSSR Report**, June 20 https://expresso.pt/iniciativaseprodutos/projetos-expresso/2023-06-20-Alvaro-Beleza-O-maior-problema-da-saude-em-Portugal-e-o-acesso-aos-cuidados-d478fb9a

[Newsletter article] Cátia Silva, **Integração de estratégias de monetização no projeto e planeamento de cadeias de abastecimento sustentáveis**. Boletim APDIO n.º 68, June 2023

[Workshop] Mariana Santa-Marta, **"How to approach the Section 3- Implementation of RIA/IAs Horizon Europe proposals?"**, Ciclo de Formação Horizonte Europa 2ª ed., IST, Lisbon, June 6

[Newspaper article] Miguel Alves Pereira, **"Números, para que vos quero?"**, Público, June 10 https://www.publico.pt/2023/06/10/p3/cronica/numeros-quero-2049013

[Activity] Participation in Verão ULisboa – Taguspark with the activity **"Beer Game – Supply Chain Management Game"**. Verão ULisboa is an initiative of the University of Lisbon targeting high-school students (10th to 12th grades). July 10 – 14

[Seminar] Ana Paula Barbosa Póvoa | **"Combining excellent teaching and research - virtuous synergies"**; Program Shaping the Future for new Faculty members at IST, Lisbon. September 4

[Seminar] Tânia Ramos | **"The impact of a sabbatical abroad"**; Program Shaping the Future for new Faculty members at IST, Lisbon. September 4

[Round table] Mónica Oliveira, participant in **"O Papel do Engenheiro Biomédico em Ambiente hospitalar"**, Associação Portuguesa para o Desenvolvimento Hospitalar (APDH), em parceria com a Associação Nacional de Estudantes de Engenharia Biomédica (ANEEB), September 19

[Round table] Mónica Oliveira, participant in **"Rethinking the Innovation Pathway"**, Global Health Forum, Cascais, September 29

[Activity] Participation in the European Researchers' Night, at the Museum of Natural History and Science, with the activities **"How to Manage the Chocolate Supply Chain"** and **"How does the human mind work? Cognitive biases in our decisions"**. September 29

[Seminar] Mariana Santa-Marta, Invited Speaker, Workshop on financing research projects, **"How to survive in the competitive research financing ecosystem"**, PMPIC - Promotion of Best Practices in Scientific Research, Cape Verde, October 2-7

[Workshop] Mariana Santa-Marta, Trainer at the Scientific Grant Writing Workshop, **1st Workshop on financing research projects**, PMPIC - Promotion of Best Practices in Scientific Research, Cape Verde, October 2-7

[Newspaper article] Cátia Silva, **"Doutoramento no Técnico: a ousadia de sonhar mais alto"**, ionline, October 17 https://ionline.sapo.pt/artigo/807452/doutoramento-no-tecnico-a-ousadia-de-sonhar-mais-alto?seccao=Opiniao_i

[Activity] Participation at the X Mathematics Fair with the activity **"How to minimize waste when cutting wood".** November 10

[Activity] 23rd anniversary of IST TagusPark Campus | Open Day, Oeiras. Participation with the activities **"How to minimize waste when cutting wood"** and **"How to build a Tangram and**

use it to solve an Operations Research problem"**, November 11

[Podcast] **"Bill Williams from IST Portugal on Research"** | Bill Williams participated in the European Engineering Educators Podcast #17, Season 3, Ep. 3, Series: European Engineering Educators, Host: European Society for Engineering Education (SEFI), November 20 https://shows.acast.com/european-engineering-educators/episodes/17-bill-williams-from-ips-portugal-on-research?sender_campaign=av72K0&sender_ctype=email&sender_customer=xrmR8P

[Newspaper article] Miguel Alves Pereira, **"Urgências, consultas, e cirurgias: o drama holístico da ineficiência hospitalar"**, Público, December 11 https://www.publico.pt/2023/12/11/p3/cronica/urgencias-consultas-cirurgias-drama-holistico-ineficiencia-hospitalar-2072869

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[Book] António Alvarenga (2024), **Como colocar as coisas no seu devido lugar errado**. Ed. Poets & Painters. ISBN: 978-989-33-6974-6

[Newspaper articles] Eduardo Costa, Coverage on the report on the **Sustainability of ADSE** at Expresso (january 3rd, 2024), Público (january 24th, 2024), Eco (january 24th, 2024), Jornal de Negócios (january 24th, 2024). Available at: https://expresso.pt/economia/administracao-publica/2024-01-03-Estudo-de-sustentabilidade-da-ADSE-ja-foi-entregue-ao-Governo-f6b5575d https://www.publico.pt/2024/01/24/economia/noticia/adse-nao-entrara-defice-inicio-proxima-decada-2077978 https://eco.sapo.pt/2024/01/24/adse-entra-em-defice-em-2030-e-almofada-so-da-para-mais-11-anos/ https://www.jornaldenegocios.pt/economia/saude/detalhe/estudo-da-intervalo-de-mais-de-20-anos-para-primeiro-defice-da-adse

[Others] Ana Barbosa-Póvoa, **Driving Supply Chain Sustainability: The Crucial Role of Engineering and Management to Achieve Sustainable Practices**, Master Talk, IST, Lisbon, Portugal. January 18 2024

[Newspaper articles] Eduardo Costa, **Estudo conclui que médicos valorizam mais autonomia e formação do que salário** (february 15th, 2024). Available at: https://expresso.pt/economia/trabalho/2024-02-15-Estudo-conclui-quemedicos-valorizam-mais-autonomia-eformacao-do-que-salario-463c26d3

[Newspaper articles] Eduardo Costa, **Dual practice in the Portuguese NHS**, (printed edition, february 22)

[TV interview] Eduardo Costa, Interview at "Fact Check" program from S+ TV Channel, **Health Topics** (10.30pm february 12th)

[TV interview] Eduardo Costa, Interview at Porto Canal, **Sustainability of Dialysis Financing Models**, (march 7th, Edição das 8h)

[TV interview] Eduardo Costa, Interview at "Checkup" program from S+ TV Channel, **Current Health Policy Topics** (11pm february 9th)

[Newspaper articles] Eduardo Costa, Opinion article at Saúde Online, **Sustainability of dialysis financing models.** (March 18th, 2024). Available at: https://www.sapo.pt/noticias/saude/faz-sentido-repensar-o-financiamentoda_65f81f41e1eaab4a84f651a6

[Others] Eduardo Costa, Round table. **The relation of the Public and Private sector in healthcare**. Economia Viva 2024 - Nova School of Business and Economics. Carcavelos, Portugal. 2024, April 3.

[Activity | Fair] Bruna Mota, Mariana Cunha, Vânia Veloso, **Chocolate Tablet Supply Chain Management.** Técnico Open Day, Science Fair. (2024, April 20)

[Activity | Fair] Miguel Alves Pereira, **Efficiency league**. Técnico Open Day, Science Fair. (2024, April 20)

Rafael Miranda, Edgar Mascarenhas, Ana Flávia Santos, **Cognitive Biases**. Técnico Open Day, Science Fair. (2024, April 20)

[Activity | Fair] Bruna Mota, **Chocolate Tablet Supply Chain Management.** GIRLSTEAM, Oeiras. (2024, April 24)

[Newspaper articles] Eduardo Costa, Interview at Antena 1, **Recent crisis in the NHS** Executive Board (Noticiário Nacional 11h, april 24th)

[Newspaper articles] Eduardo Costa, Analysis at Jornal de Notícias, **The evolution of the health sector 50 years after democracy in Portugal** (printed edition, april 25th)

[Others] Mónica Oliveira and Carlos Bana e Costa, **Fostering participation and knowledge construction processes in real settings through decision analysis and collaborative value modeling**, plan APP presentation, Lisbon, May 2024

[Newspaper articles] Eduardo Costa, Analysis at Público, **The impact of No Shows in NHS hospital appointments** (printed edition, May 13th)

[Newsletter] Miguel Alves Pereira, **Multi-criteria decision-aiding for public hospitals: The role of interactions among pairs of access and quality criteria**. EWG-MCDA Newsletter, page 17. (2024, Spring).

[Podcast] "90 Seconds of Science/90 Segundos de Ciência" Hugo Castro Silva **"Which Jobs are most vulnerable to the technological revolution"** (June 28 2024) https://www.90segundosdeciencia.pt/episodes/ep-1820-hugo-silva/

[Newspaper articles] Eduardo Costa, Coverage at Health News, **Participation of "Innovation Talks" from Plataforma Saúde em Diálogo** (June 20th)

[Bulletin] Miguel Alves Pereira, **Driving the efficient future of the SNS**. APDIO Bulletin, pages 13-14. (2024, July)

[Activity] Tânia Ramos, **Beer Game – The Supply Chain Management Game**. ULisboa Summer Camp – Taguspark (1st – 5th July, 2024).

[Newsletter] Inês Carrilho-Nunes, (2024). **Can Energy Accessibility Reduce Inequality and Foster Innovation?** International Association for Energy Economics (IAEE) Newsletter, Energy Forum, 3rd/4th Quarter 2024, 10-12. ISSN 1944-3188. Available at: https://www.iaee.org/newsletter/issue/118

[Activity] Susana Relvas and Tânia Ramos, **Warehouse Management@LOG.lab**. ULisboa Summer Camp – Taguspark (8th – 12th July, 2024).

[Newspaper articles] Eduardo Costa, Analysis at Público, **Private health insurance and out-of-pocket expenditures** (printed edition, July 8th)

[TV interview] Eduardo Costa, Interview at RTP1, **Private health insurance and out-ofpocket expenditures** (Telejornal 8pm July 8th)

[TV interview] Eduardo Costa, Interview at RTP3, **Population ageing and health expenditures** (18/20 news july 12th)

[TV interview] Eduardo Costa, Interview at "Checkup" program from S+ TV Channel, **Current health policy topics** (11pm july 12th)

[TV interview] Eduardo Costa, Interview at NOW with Rui Rio and Pedro Escada, **The challenges faced by the NHS** (10pm July 24th)

[Activity] Miguel Alves Pereira, **Efficiency league**. APIST Summer Camp. (2024, September 6th)

[Activity] Erika Celestino and Joana Simões, **Separate to recycle**. APIST Summer Camp. (2024, September 6th)

[Activity] Daniel Santos, **How to Build a Tangram**. APIST Summer Camp. (2024, September 6th)

[Others] Eduardo Costa, Round table at APIFARMA Conference (Lisbon, Portugal): "**Financing models for pharmaceutical drugs in the NHS**" (September 25th)

[Activity | Fair] Celso Matos, Participation in the European Researchers' Night, at the Museum of Natural History and Science, with the activity "**The Dilemmas of Sustainability/Os Dilemas da Sustentabilidade**" September 27 2024, Lisbon, Portugal

[Newspaper articles] Eduardo Costa, Analysis at Observador, **Prevention strategies for cardiovascular diseases** (october 31st)

[Activity] João Almeida, Participation at the VALSAMAT 24 (Mathematics Fair at Colégio Valsassina) with the activity "**How to minimize waste when cutting wood**". November 7 2024

[Opinion Article] Ana Barbosa-Póvoa, **Sustainable Supply Chains in Retail: Driving the Future of the Industry**, 2050. BRIEFING

[Others] Mónica Oliveira, Grupo de Trabalho para a Avaliação das Necessidades Formativas em Medicina (2024) **Relatório Avaliação das Necessidades Formativas em Medicina**, Março 2024 https://wwwcdn.dges.gov.pt/sites/default/files/relatorio_do_grupo_de_trabalho_para_a_avaliacao_das_necessidades_formativas_em_medicina.pdf Ministério da Saúde, e Ministério da Ciência, Tecnologia e Ensino Superior

[Others] Mónica Oliveira, et al. (2024) **Estratégia Nacional para a Medicina Genómica PT_MedGen**, Novembro 2024, Relatório, Responsável pelo Grupo de Trabalho Economia da Saúde.

External Competitive Funding

A Period of Firsts and Strategic Expansion

2023–2024 marked a transformational period in CEGIST's journey toward strengthening its position in international competitive funding. Through strategic partnerships, internal capacity building, and a growing culture of ambition, this period introduced several "firsts" that set the stage for long-term growth.

Emerging Culture of High-Impact Individual Applications

For the first time, CEGIST researchers submitted proposals to some of the most competitive European funding schemes:

Three ERC Starting Grant proposals were submitted — a milestone that signals growing institutional alignment with frontier research agendas.

One out of two MSCA Postdoctoral Fellowship proposals, submitted under the 2024 call, was successfully funded and will start in 2025, establishing a foundation for future MSCA participation.
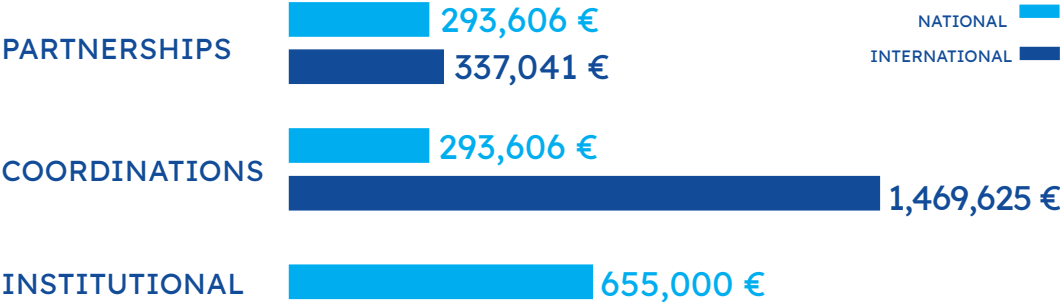
New Leadership Roles in Collaborative Projects

2023–2024 also saw CEGIST step into new leadership roles within international collaborations:

First Horizon Europe Cluster 2 project coordinated by CERENA in partnership with CEGIST successfully secured and set to begin in 2025, marking a significant step in reinforcing our contribution to social sciences and humanities research.

A major coordination funded by UNEP was secured, enhancing global visibility and thematic reach.

CEGIST also submitted its first EIC Pathfinder Open and COST Action as coordinator. Both received excellent evaluations, underscoring the potential for future success in these schemes.

CEGIST research is supported by a growing range of national and international competitive funding sources, as well as industry and public contracts that, while not competitive, align with our mission and goals. During 2023–2024, CEGIST secured and implemented 17 competitively funded projects, including 2 institutional Core Support, 7 coordinated by CEGIST researchers, and 8 partnerships. In addition, 6 industry and public contracts were signed in the same period. The 7 coordinated projects reflecting our expanding leadership in research across various fields are highlighted below.

PARTNERSHIPS 293,606 € (NATIONAL) / 337,041 € (INTERNATIONAL)

COORDINATIONS 293,606 € (NATIONAL) / 1,469,625 € (INTERNATIONAL)

INSTITUTIONAL 655,000 €

Total secured funding of active projects

2 INSTITUTIONAL | 8 PARTNERSHIPS | 7 COORDINATIONS

European Commission (EC)

Sustainable Intelligent Management of Indoor Air Quality for the Culture and Creative Industries (SIMIACCI)
SIMIACCI supports the climate transition of Cultural and Creative Industries by developing energy-efficient indoor air quality (IAQ) solutions for galleries, libraries, archives, and museums (GLAMs). It integrates advanced technologies—like MOFs and predictive modelling—to cut energy use by up to 50% and extend artifact conservation. Life Cycle Assessment (LCA) will evaluate the environmental sustainability of the solutions. Twenty prototypes will be demonstrated in 6 GLAMs, and a dedicated SIMIACCI label will support broader sectoral adoption.
HORIZON; CL2; GA:101178095
PI: Moisés Pinto (CERENA) & Ana Carvalho (CEGIST)
Coordinator

Biomimicry and carbon adsorbent ecomaterials for a climate-neutral economy (CSTONE)
The CSTO2NE project harnesses natural processes to extract carbon dioxide, developing materials that absorb atmospheric carbon for recycling with a net-positive impact. It fosters interdisciplinary scientific collaboration, a shared culture of innovation, and the co-creation of ideas and entrepreneurial ventures to advance ecological technologies and materials for sustainable cities.
HORIZON; MSCA-SE; GA:101086302
PI: Dina Pereira (CEGIST)
Coordinator

United Nations Environment Programme (UNEP)

ISLANDS - Atlantic Regional Project
ISLANDS strengthens the capacity of government bodies and stakeholders to manage hazardous chemicals and waste. It promotes green public procurement and conducts Life Cycle Assessments in key sectors like electronics, vehicles, agriculture, and tourism. It also designs and implements circular economy logistics for safer waste treatment and resource recovery.
GEF 10848
PI: Ana Carvalho (CEGIST)
Coordinator

Fundação Francisco Manuel dos Santos

Digitalisation in the Portuguese Labour Market: Potential Transformative and Destructive Effects
This project studies how digitalisation—especially computerisation and AI—is transforming jobs, occupations, and industries in Portugal, a country with an aging, low-skilled, and low-wage workforce. It aims to understand the specific impacts of these technologies on the labour market and economy.
PI: Rui Baptista (CEGIST)
Coordinator

Fundação para a Ciência e Tecnologia (FCT)

Towards a Smart Waste Collection Route Planning System (WSmart Route+)
WSmart Route+ project studies a new paradigm on smart waste management where it explores an Engineering Systems approach, that combines data analytics methods with Operational Research techniques to build a tool that can support decision-making in waste management systems. The aim is to improve waste collection operations by supporting the implementation of a smart waste collection based on dynamic routes, as opposed to traditional blind collection based on static routes.
PI: Tânia Ramos (CEGIST)
2022.04180.PTDC

Challenges for energy access in a decarbonized economy (CHARADE)
CHARADE aims to provide answers and find solutions to the problems associated with energy accessibility, energy poverty, and income inequality by applying econometrics and employing models with a myriad of economic and energy variables. In our models we will consider different panels of countries and regions, to provide a global view of our results, as well as individual countries as case studies to explore local viewpoint of energy accessibility and poverty
PI: Margarida Catalão (CEGIST) & Co-PI: Inês Nunes (CEGIST)
2022.08870.PTDC

Entrepreneurship, Demographics and Ageing (Age)
Age will conduct research to provide new evidence and clearer insights about the mechanisms through which population ageing affects aggregate entrepreneurship.
PI: Rui Baptista (CEGIST)
EXPL/EGE-ECO/1179/2021

External Competitive Funding

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Industry & Public Contracts

CEGIST researchers actively collaborate with several industries and public institutions. These partnerships resulted in 6 active contracts.

■ Agência Portuguesa Do Ambiente (APA)
Circular Economy Action Plan for Portugal
Development of the new Action Plan for Circular Economy. This new Action Plan for Circular Economy aims to create a chain in which everything is transformed, and nothing or little is wasted, maximising the economic value of materials, products and services, thus avoiding the consumption of new raw materials and eliminating waste.
A maximising concept, Circular Economy is based on several «R», such as Reduction, Reuse, Recovery, Recycling... and Social Responsibility.
PI: Ana Carvalho

■ Instituto de Saúde Baseado na Evidência/SANOFI
Consenso sobre Inflamação do Tipo 2 e Gestão de Doentes – Contexto Português (INFLAT2-PT)
Methodological design approach to the project "Consensus on Type 2 Inflammation and Patient Management – Portuguese Context (INFLAT2-PT)".
PI: Mónica Oliveira

■ Association ARDITEC
Environmental and Social Life Cycle Assessment
The objective of this project is to provide supervision of SLCA work, and advisory to Arditec In LCA in general. The support was and will be given to the European project Novum, Aquabioprofit and Lignicoat.
PI: Ana Carvalho

■ LisbonEconomics
Competition Economics and Industrial Economics
Study in Competition Economics and Industrial Economics for calculating damages in the Portuguese market of several anti-competitive practices.
PI: Margarida Catalão

■ Câmara Municipal de Oeiras
Máquina de reciclar
This project introduces a smart recycling machine using advanced residue identification and an app with gamification to boost recycling in Oeiras. Developed with students from Técnico via Junitec and alumni through the spin-off Trash4Goods, it combines technology and community engagement to increase recyclability and environmental a wareness.
PI: Ana Carvalho

■ SIKA
Análise de Ciclo de Vida de novo revestimento desenvolvido no projeto IPaintS
Model the paint system proposed in the IPaints project from a life cycle analysis perspective and analyze the results of applying the model from two perspectives: i) diagnostic phase, identifying critical processes in environmental terms and proposing recommendations for improvement.
PI: Ana Carvalho

Awards and Distinctions

2023

■ Ana Paula Barbosa-Póvoa listed in the Stanford University's **top 2% scientists** Research Career.

■ Ana Paula Barbosa-Póvoa listed in the Stanford University's **top 2% scientists** Researchers 2022.

■ Ana Paula Barbosa-Póvoa distinguished with the Outstanding Professor in **Operations Management Award** at the 2023 IEOM Lisbon Awards, 6th European International Conference on Industrial Engineering and Operations Management, Lisbon, July 17-20

■ Ana Paula Barbosa-Póvoa received the Award University of Lisbon/Caixa Geral de Depositos, for **Best Researcher in Management**

■ Ana Vieira recognized with an **Honorable Mention** at the 7th edition of the Rui Osório de Castro/Millennium bcp Prize, with the project "All4wish: Participatory Design Of A Video Game To Measure The Impact Of Experiences Of Wishing Realization In Children With Cancer" project.

■ Bill Williams received the 2023 **IOEM Global Engineering Education Award** at the 6th European Conference on Industrial Engineering and Operations Management 19 July 2023, Lisbon.

■ Bill Williams recognized with the title of **Professor Emeritus** from the Polytechnic Institute of Setubal (IPS) at the Annual IPS Da , Setúbal, 9 October, 2023

■ Carlos A. Bana e Costa, Mónica Duarte Oliveira and Ana Vieira, awarded with the 2023 **Decision Analysis Practice Award**, by the Decision Analysis Society and the Society of Decision Professionals, for the research "Fostering participation and knowledge construction processes in real settings through decision analysis and collaborative value modelling"

■ Carlos Bana e Costa listed in the Stanford University's **top 2% scientists** Research Career.

■ Dina Pereira and Ana Cristóvão received the **Re-Unita Innovation Prize**, Unita Alliance of Universities

■ Dina Pereira and Ana Cristóvão received the **EIC Women Tech EU**, HORIZON-EIE-2022-SCALEUP-02

Douglas Alem, Hector F. Bonilla-London, Ana Paula Barbosa-Póvoa, Susana Relvas, Deisemara Ferreira and Alfredo Moreno awarded with the **"EURO award for the best EJOR paper for Innovative Applications"** for the paper "Building disaster preparedness and response capacity in humanitarian supply chains using the Social Vulnerability Index European", European Journal of Operational Research, 292, 1,250-275, https://doi.org/10.1016/j.ejor.2020.10.016

João Leitão awarded with the **Emerald Award 2023 Literati Outstanding Reviewer** of the Social Responsibility Journal;

2024

Ana Paula Barbosa-Póvoa listed in the Stanford University's **top 2% scientists** Research Career for the exceptional impact of her long-standing scientific career.

Ana Paula Barbosa-Póvoa listed in the Stanford University's **top 2% scientists** Researchers for the year 2024.

Carlos Bana e Costa listed in the Stanford University's **top 2% scientists** Research Career for the exceptional impact of his long-standing scientific career.

Carlos Bana e Costa listed in the Stanford University's **top 2% scientists** Researchers for the year 2024.

Inês Marques awarded with the OMEGA **Best Reviewer Award** 2024.

José Rui Figueira listed in the Stanford

João Leitão awarded with the **Award Estímulo e Reconhecimento da Internacionalização em Ciências Sociais** (Prémio ERICS) - edição 2023, Instituto de Ciências Sociais, Universidade de Lisboa.

José Rui Figueira listed in the Stanford University's **top 2% scientists** Researchers 2022.

Miguel Alves Pereira awarded with the **Emerald Award 2023 Literati Outstanding Reviewer** of the Journal of Humanities and Applied Social Science.

University's **top 2% scientists** Researchers for the year 2024.

Miguel Alves Pereira received the **Best PhD Thesis APDIO IO2024 Award** (best PhD research in the area of Operational Research) for the work "Efficiency and public policy of the Portuguese healthcare sector: A look at the pressing issues", supervised by José Rui Figueira and Rui Cunha Marques.

Miguel Vieira, Tania Pinto Varela and Ana Paula Póvoa awarded with The Augusto Queiróz Novais Award at APDIO IO2024 for **"Process Systems Engineering"**, to the work "A two-level optimisation-simulation method for production planning and scheduling: the industrial case of a human–robot collaborative assembly line" (co-authors Samuel Moniz, Pedro Neto and Bruno S. Gonçalves) International Journal of Production Research, 60(9), 2942–2962. https://doi.org/10.1080/00207543.2021.1906461

Rafael Pires Miranda received the ULisboa - redeSAÚDE 2024 prize for **Best Doctoral Work** in the field of Health Systems / Entrepreneurship / Digital Transition

Team

Integrated Members

Ana Vieira
Foresight
Group Decision-Making
Behavioral Operational Research

Ana Isabel Carvalho
Sustainability Management and Assessment
Circular Economy
Life Cycle Assessment

Ana Barbosa-Póvoa
Supply Chain Management
Operations Research
Sustainability

Ana Sara Costa
Multiple Criteria Decision Aiding
Decision Support Systems
Classification Problems

Andreia Santos
Sustainable supply chain management
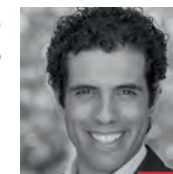Sustainability assessment
Life cycle assessment

António Alvarenga
Foresight
Scenarios
Strategy

António Quintino
Risk Analysis
Decision Support Systems
Operational Research

António Sérgio Ribeiro
Entrepreneurship
Labour economics
Sports economics

Bill Williams
Scientometrics
Inclusion, diversity and equity
Engineering value creation

Bruna Mota
Supply chain
Sustainability
Optimization

Note: Team members at 31.12.2024

Carlos Bana e Costa
Strategic Decision Support
Process consultation
Multicriteria Value
Measurement

Cátia da Silva
Supply chain
Sustainability
Risk management

Isabel João
Sustainable Product Design
Decision Aiding
Quality Engineering

João Lourenço
Multi-criteria decision analysis
Portfolio decision analysis
Decision support systems

Celso Matos
Management
Marketing
Sustainable Consumption

Daniel Santos
Integer Programming
Combinatorial Optimization
Stochastic Optimization

José Figueiredo
Project Management
Socio-technical Approaches to
Systems Design
Engineering Education Ethics

José Rui Figueira
Multi-Objective Optimization
Multiple Criteria Decision
Support
Decision Support Systems

Diana Jorge
Operations Research
Metaheuristics
Logistics

Dina Batista Pereira
Entrepreneurship
Innovation
Entrepreneurial Ecosystems

Margarida Catalão
Competition
Strategy
Sustainability

Maria Isabel Pedro
Management
Accounting
Finance

Diogo Cunha Ferreira
Performance assessment
Hospitals
Satisfaction analysis

Eduardo Costa
Health economics
Applied economics
Health policy

Miguel Alves Pereira
Management science
Efficiency measurement
Decision analysis

Mónica Oliveira
Decision Sciences
Health Care Management Science
Health Technology Assessment

Francisco Lima
Applied econometrics
Policy evaluation
Innovation

Hugo Castro Silva
Automation
Employment
Entrepreneurship

Paulo Caldas
Sustainability
Government
Strategy

Rui Baptista
Entrepreneurship
and Innovation
Strategic Human Capital
Technology and Labour Markets

Inês Carrilho Nunes
Technological change
Environmental policy
Energy poverty

Inês Marques
Operations research
Health care management
Planning and scheduling

Susana Relvas
Logistics
Retail
OR & Management Science

Tânia Ramos
Vehicle Routing Problems
Reverse Logistics
Waste Management

Tânia Pinto Varela
Manufacturing
Supply chain: pharmaceutical
Hydrogen

Valentina Bonomi
Operations research
Vehicle Routing Problems
Optimization Algorithms

Gilberto Montibeller

Helena Paulo
Supply Chain Design
Biomass
Optimization

Associate Members

Acácio Porta Nova

João Pires Ribeiro
Resilience
Supply Chain
Management

João Leitão
Entrepreneurship
Innovation
Sustainable Development

Ana Cristina Amaro
Supply Chain Management
Sustainability
Logistics

Ana Sofia Parente da Costa

João Pedro Fernandes Thomaz

Joaquim Jorge Vicente
Operations Research
Sustainable Logistics
Supply Chain Management

Augusto Eusébio

Carlos Monteiro
User-centered product design
Perceptual mapping
Multivariate statistics

Klára Dimitrovová

Lúcia Piedade
Aeronautical Management
Airport Management
Emergency and Contingency
Plans

Carlos Lucas de Freitas

Carolina Soares de Morais
Smart waste collection
Vehicle routing problem
Optimization

Marc Scholten
Decision making
Intertemporal choice
Choice under risk and uncertainty

Margarida Barata Monteiro
Strategic and Sustainability
Assessment
Governance
Transitions to Sustainability

Diogo Gonçalves
Behavioral Decision Research
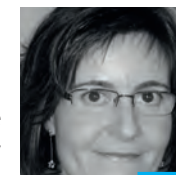User Experience
Innovation

Duarte Dinis
Business analytics
Project management
Forecasting

Maria Isabel dos Santos
Simulation
Metamodel
Regression

María del Carmen Carnero Moya
Multicriteria Decision Making
Maintenance
Sustainability

Marisol de Brito Correia
Business Intelligence
eTourism
Evolutionary Computation

Miguel Vieira
Production planning
Optimization
Decision support

Beatriz Cassuriaga
S-LCA
Social Sustainability
Circular Economy

Catarina Mansilha
Green Hydrogen
Supply Chain
Optimization

Murat Karaoz
Entrepreneurship
Industrial and firm Dynamics
Applied Econometrics

Paulo Abreu
Data-driven decision making
Optimization
Operations management

Daniel Dongo
Oil & Gas Industry
Energy Transition
Oil-producing countries

Edgar Mascarenhas
Behavioural
Operational Research
Group Decision-making
Facilitated
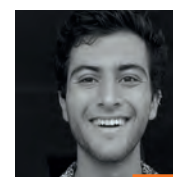Collaborative Modelling

Ricardo Mateus

Teresa Rodrigues

Erika Maccari
Household organic waste
Circular economy
Recycling behaviour

Francisco Viterbo
Operations Research
Hospital Management
Sustainable Procurement

PhD Students

Yoichi Kumagai
Sustainability
Wellbeing
Space

Guilherme Vara
Benchmarking
Optimization
Performance and efficiency
assessment

Héctor Bonilla Londoño
Vehicle Routing Optimization
Smart Waste Collection
Stochastic Programming &
Simulation

Alicia Soto
Sustainability Transitions
Institutionalization
Spatial Planning

Raquel de Aguiar
Vehicle Routing Problems
Mathematical
Programming
Home Care

Inês Ralheta Duarte
Pharmaceutical Sup-
ply Chains
Optimization
Sustainability

Inês Risques Saavedra
Artificial intelligence
Augmentation
Skills

Ana Flávia Santos
Behavioural Operational
Research
Multi-Criteria Decision
Analysis
Decision Sciences

Ana Bernardo Torrado
Optimization
Sustainability
Blood Supply Chain

Joana Simões
Household food waste
Prevention interventions
Drivers and barriers

João Carvalho Almeida
Academic scheduling
Multi-objective optimisation
Meta-heuristics

Lia Pereira
Electric Vehicles
Self-Sustainability
Decarbonization

Liliana Freitas
Behavioural Operational
Research
Multicriteria Decision Analysis
Health Technology Assessment

Linda Canales
Sustainable Supply Chain
Operations Research
Energy transition

Mafalda Ivo de Carvalho
Sustainability
Supply chain management
Performance assessment
and measurement

Maria Odete Meneses
Supply chain management
Operational Research
Optimization

Maria Lopes Martins
OR in healthcare
Facility location
Location-allocation models

Mariana Mesquita da Cunha
Multi-objective optimization
Mixed integer linear
programming
Large scale applications

Mariana Oliveira
Operations Research
Optimization
Health services

Maria Eugénia Leitão
Entrepreneursip
SDG
Social Development

Marco Vargas
Circular Economy
Sustainability Assessment
Mineral Processes

Marta Brazão
e-waste
Material flow
Africa

Miguel Pina Falcão

Muhammad Tanveer Ul Islam
Operations Research
Sustainable Energy
Machine Learning

Rafael Pires Miranda
Health technology assessment
Multicriteria value
measurement
Facilitated decision analysis

Rui Dias

Rui Agostinho
Entrepreneurship
Demographics
Firm-creation

Salomé Azevedo
Complex Adaptive Systems
Critical Systems Thinking
Design Science Research

Sanaz Azarnoosh
Product design
Decision support models
Portfolio analysis

Vânia Veloso
Circular Economy
Industrial symbiosis
Sustainable supply chains

Yannik Zeiträg
Multi-objective optimization
Scheduling
Machine learning

Staff

Mariana Santa-Marta
Pre-Award
Strategy
Funding

Mariana Batista Santos
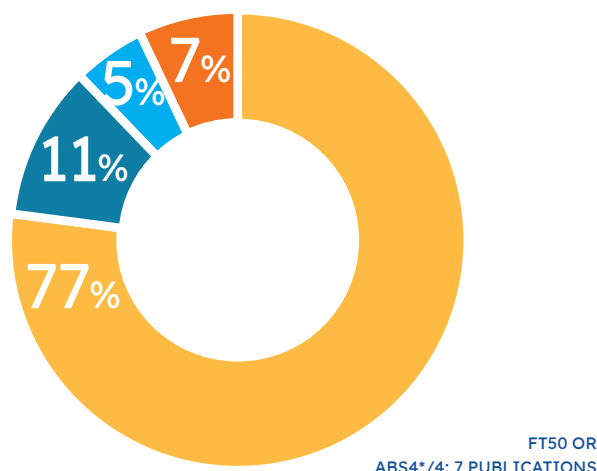Pre-Award
Funding
Communication

Sofia Machaqueiro
Communication
Teamwork
Interpersonal Skills

appendix

Publications 2023

Abreu, P., Santos, D., & Barbosa-Póvoa, A. Data-driven forecasting for operational planning of emergency medical services. Socio-Economic Planning Sciences, 86, 101492.

Afonso, G. P., Ferreira, D. C., & Figueira, J. R. A Network-DEA model to evaluate the impact of quality and access on hospital performance. Annals of Operations Research. https://doi.org/10.1007/s10479-023-05362-x

Afonso, S., Vieira, A. C., Pereira, C., & Oliveira, M. D. Advancing hospital-based health technology assessment: Evaluating genomic panel contracting strategies for blood tumors through a multimethodology. International Journal of Technology Assessment in Health Care, 39 (1), e76.

Alventosa, A., Pinho, J., Ferreira Jorge, S., & Catalão-Lopes, M. Vertical product differentiation in the lab: impact of consumers' preferences. Applied Economics Letters.

Alventosa, A., Pires, C. P., Jorge, S. F., Pinho, J., & Catalão-Lopes, M. How does firms' cost structure affect their quality–price mix? an experimental analysis. Journal of Behavioral and Experimental Economics, 107, 102109.

Bana e Costa, C. A., Oliveira, M. D., Rodrigues, T. C., & Vieira, A. C. Desirability–doability group judgment framework for the collaborative multicriteria evaluation of public policies. International Transactions in Operational Research, 30 (6), 3654–3686.

Barbati, M., Figueira, J., Greco, S., Ishizaka, A., & Panaro, S. A multiple criteria methodology for priority based portfolio selection. Socio-Economic Planning Sciences, 88, 101595.

Barbosa, C., Malarranha, C., Azevedo, A., Carvalho, A., & Barbosa-Póvoa, A. A hybrid simulation approach applied in sustainability performance assessment in make-to-order supply chains: The case of a commercial aircraft manufacturer. Journal of Simulation, 17 (1), 32–57.

Barbosa-Póvoa, A. P., & Pinto, J. M. Resilient supply chains – robustness and dynamics in the context of industrial gas supply chains. Computers & Chemical Engineering, 179, 108435.

Barracosa, B., Felício, J., Carvalho, A., Moreira, L. M., Mendes, F., Verde, S. C., & Pinto-Varela, T. Decision support tool to define the optimal pool testing strategy for SARS-CoV-2. Decision Support Systems, 175, 114046.

Belchior, R. F., & Castro-Silva, H. The virtuous cycle of entrepreneurial identity and experience – a longitudinal analysis. International Entrepreneurship and Management Journal, 19 (4), 1739–1770. https://doi.org/10.1007/s11365-023-00898-7

Brito, D., & Catalão-Lopes, M. Cournot–Bertrand endogenous behavior in a differentiated oligopoly with entry deterrence. Theory and Decision, 95 (1), 55–78. https://doi.org/10.1007/s11238-022-09909-5

Brito, D., & Catalão-Lopes, M. Profit raising entry under mixed behavior. Journal of Economics, 138 (1), 51–72. https://doi.org/10.1007/s00712-022-00797-5

Brouwer, Y., Barbosa-Póvoa, A. P., Antunes, A. P., & Rodrigues Pereira Ramos, T. Comparison of different waste bin monitoring approaches: An exploratory study. Waste Management & Research, 41 (10), 1570–1583.

Caetano, J., Carriço, N., Figueira, J. R., & Covas, D. A novel methodology for pipe grouping and rehabilitation interventions scheduling in water distribution networks. Urban Water Journal, 20 (7), 769–781.

Caldas, P., & Varela, M. The Portuguese Public Hospitals Performance Evolution before and during the SARS-CoV-2 Pandemic (2017–2022). Sustainability, 15 (15), 11572.

Carvalho, A., Leitão, J., & Alves, H. Digital transformation, state Hei performance and the moderating role of leadership. International Journal of Leadership in Education.

Carvalho, R. C. L. C., Roselli, L. R. P., & Figueira, J. R. Assigning priorities for raw material of a large pet food producer in the context of supply disruption. Pesquisa Operacional, 43, e263605.

Castro-Silva, H., & Lima, F. The struggle of small firms to retain high-skill workers: job duration and the importance of knowledge intensity. Small Business Economics, 60 (2), 537–572. https://doi.org/10.1007/s11187-022-00602-z

Catalão-Lopes, M., Pina, J. P., & Costa, A. S. Pretending to be socially responsible? The role of consumers' rewarding behavior. Scientific Annals of Economics and Business, 70 (2), 163–183.

Costa, C., & Baptista, R. Knowledge inheritance and performance of spinouts. Eurasian Business Review, 13 (1), 29–55. https://doi.org/10.1007/s40821-022-00235-y

da Silva, C., Barbosa-Póvoa, A., & Carvalho, A. Assessing social performance in supply chain design and planning through a monetization approach. International Transactions in Operational Research.

de Aguiar, A. R. P., Ramos, T. R. P., & Gomes, M. I. Home care routing and scheduling problem with teams' synchronization. Socio-Economic Planning Sciences, 86, 101503.

de Matos Pedro, E., Leitão, J., & Alves, H. (2023). Can Higher Education Institutions' Stakeholders Drive Regional Sustainable Development? Yes, They Can?! IEEE Transactions on Engineering Management, 70 (10), 3421–3433. https://doi.org/10.1109/TEM.2021.3103285

de Morais, C. S., Ramos Jorge, D. R., Aguiar, A. R., Barbosa-Póvoa, A. P., Antunes, A. P., & Ramos, T. R. P. A solution methodology for a Smart Waste Collection Routing Problem with workload concerns: computational and managerial insights from a real case study. International Journal of Systems Science: Operations & Logistics, 10 (1), 2086717.

Díaz, R., Fernández, E., Figueira, J.-R., Navarro, J., & Solares, E. A new hierarchical multiple criteria ordered clustering approach as a complementary tool for sorting and ranking problems. Omega, 117, 102820.

Dinis, D. C., Figueira, J. R., & Teixeira, A. P. A multiple criteria approach for ship risk classification: An alternative to the Paris MoU Ship Risk Profile. Socio-Economic Planning Sciences, 90, 101718.

Bana e Costa, C. A. B., Oliveira, M. D., Vieira, A. C., Freitas, L., Rodrigues, T. C., e Costa, J. B., Freitas, A., & Santana, P. Collaborative development of composite indices from qualitative value judgements: The EURO-HEALTHY Population Health Index model. European Journal of Operational Research, 305 (1), 475–492.

Fernández, E., Figueira, J. R., & Navarro, J. A theoretical look at ordinal classification methods based on comparing actions with limiting boundaries between adjacent classes. Annals of Operations Research, 325 (2), 819–843. https://doi.org/10.1007/s10479-022-04554-1

Fernández, E., Figueira, J. R., Navarro, J., & Solares, E. A generalized approach to ordinal classification based on the comparison of actions with either limiting or characteristic profiles. European Journal of Operational Research, 305 (3), 1309–1322.

Ferreira, D. C., Caldas, P., Varela, M., & Marques, R. C. A geometric aggregation of performance indicators considering regulatory constraints: An application to the urban solid waste management. Expert Systems with Applications, 218, 119540.

Ferreira, D. C., Figueira, J. R., Greco, S., & Marques, R. C. Data Envelopment Analysis models with imperfect knowledge of input and output values: An application to Portuguese public hospitals. Expert Systems with Applications, 120543.

Ferreira, D. C., Soares, R., Pedro, M. I., & Marques, R. C. Customer satisfaction in the presence of imperfect knowledge of data. International Transactions in Operational Research, 30 (3), 1505–1536.

Ferreira, D. C., Vieira, I., Pedro, M. I., Caldas, P., & Varela, M. Patient Satisfaction with Healthcare Services and the Techniques Used for its Assessment: A Systematic Literature Review and a Bibliometric Analysis. Healthcare, 11 (5), 639.

Figueira, J. R., Oliveira, H. M., Serro, A. P., Colaço, R., Froes, F., Cordeiro, C. R., Diniz, A., & Guimarães, M. A multiple criteria approach for building a pandemic impact assessment composite indicator: The case of COVID-19 in Portugal. European Journal of Operational Research, 309 (2), 795–818.

Freitas, L., Vieira, A. C., Oliveira, M. D., Monteiro, H., & Bana e Costa, C. A. Which value aspects are relevant for the evaluation of medical devices? Exploring stakeholders' views through a Web-Delphi process. BMC Health Services Research, 23, 593. https://doi.org/10.1186/s12913-023-09550-0

Guerreiro, A., Cortes, J., Vanderpooten, D., Bazgan, C., Lynce, I., Manquinho, V., & Figueira, J. Exact and approximate determination of the Pareto front using Minimal Correction Subsets. Computers & Operations Research, 153, 106153.

Jorges, E. E. M., Quintino, A., & Santos, D. M. Economic analysis of lithium-ion battery recycling. AIMS Energy, 11 (5), 960–973. https://doi.org/10.3934/energy.2023045

Leitão, J., Ferreira, J., & Santibanez-González, E. Green finance sources in Iberian listed firms: A socially responsible investment approach. Journal of Cleaner Production, 427, 139259.

Leitão, J., Pereira, D., Gonçalves, A., & Oliveira, T. Digitalizing the pillars of Hybrid Civic Universities: A bibliometric analysis and new taxonomy proposal. Journal of Open Innovation: Technology, Market, and Complexity, 9 (1), 100026.

Lima, C., Batista, M., Relvas, S., & Barbosa-Póvoa, A. Optimizing the Design and Planning of a Sugar-Bioethanol Supply Chain under Uncertain Market Conditions. Industrial & Engineering Chemistry Research, 62 (15), 6224–6240.

Lopes, M., & Ramos, T. R. Efficient sensor placement and online scheduling of bin collection. Computers & Operations Research, 151, 106113.

Marques, I. C. P., Leitao, J., Ferreira, J., & Cavalcanti, A. The socioemotional wealth of leaders in family firm succession and corporate governance processes: A systematic literature review. International Journal of Entrepreneurial Behavior & Research, 29 (1), 268–295.

Martins, H., Henriques, C., Figueira, J., Silva, C., & Costa, A. Assessing policy interventions to stimulate the transition of electric vehicle technology in the European Union. Socio-Economic Planning Sciences, 87, 101505.

Melo Mateus, M., Catalão-Lopes, M., & Portugal, R. Survival analysis of cancer patients in Portugal following the reference centre model implementation. The European Journal of Health Economics, 24 (2), 157–168. https://doi.org/10.1007/s10198-022-01461-x

SJR 2023

- Q1
- Q2
- Q3
- Q4

77%
11%
5%
7%

FT50 OR ABS4*/4: 7 PUBLICATIONS

Meneses, M., Marques, I., & Barbosa-Póvoa, A. Blood inventory management: Ordering policies for hospital blood banks under uncertainty. International Transactions in Operational Research, 30 (1), 273–301.

Meneses, M., Santos, D., & Barbosa-Póvoa, A. Modelling the Blood Supply Chain. European Journal of Operational Research, 307 (2), 499–518.

Mesquita-Cunha, M., Figueira, J. R., & Barbosa-Póvoa, A. P. New ℕ–constraint methods for multi-objective integer linear programming: A Pareto front representation approach. European Journal of Operational Research, 306 (1), 286–307.

Miranda, R., Oliveira, M. D., Baptista, F. M., & Albuquerque, I. (2023). Tele-monitoring in Portugal: where do we stand and which way forward? Health Policy, 131, 104761.

Miranda, R., Oliveira, M. D., Nicola, P., Baptista, F. M., & Albuquerque, I. Towards a framework for implementing remote patient monitoring from an integrated care perspective: A scoping review. International Journal of Health Policy and Management, 12 (1), 1–13. https://doi.org/

Oliveira, M., Bélanger, V., Ruiz, A., & Santos, D. A systematic literature review on the utilization of extended operating room hours to reduce surgical backlogs. Frontiers in Public Health, 11, 1118072.

Ozkan, S., Gonçalves, D., Paulo, I., Queirós, C. S., Carvalho, A., Puna, J., Gomes, J., Bordado, J., & Galhano dos Santos, R. Modelling of Burnt Pine Heartwood Acid-Catalysed Liquefaction. Resources, 12 (1), 11.

Partidário, M., Monteiro, M. B., & Martins, R. Novel perspectives for multi-actor collaboration in strategic environmental assessment using ST4S. Environmental Impact Assessment Review, 99, 107023.

Pederneiras, Y. M., Pereira, M. A., & Figueira, J. R. Are the Portuguese public hospitals sustainable? A triple bottom line hybrid data envelopment analysis approach. International Transactions in Operational Research, 30 (1), 453–475.

Pedro, E., Alves, H., & Leitão, J. Sustainable development practices in public higher education: A new conceptual framework for nurturing student satisfaction and reinforcing attractiveness to international students. Sustainable Development.

Pedro, E. d. M., Leitão, J., & Alves, H. Students' satisfaction and empowerment of a sustainable university campus. Environment, Development and Sustainability.

Pereira, A. A., & Pereira, M. A. Energy storage strategy analysis based on the Choquet multi-criteria preference aggregation model: The Portuguese case. Socio-Economic Planning Sciences, 85, 101437.

Pereira, D., Leitão, J., Gaspar, P. D., Fael, C., Falorca, I., Khairy, W., Wahid, N., El Yousfi, H., Bouazzama, B., Siering, J., Hansmann, H., & Zascerinska, J. Exploring irrigation and water supply technologies for smallholder farmers in the mediterranean region. Sustainability, 15 (8), 6875.

Pereira, D., Leitão, J., Oliveira, T., & Peirone, D. Proposing a holistic research framework for university strategic alliances in sustainable entrepreneurship. Heliyon, 9 (5), e16087.

Pereira, M. A., & Camanho, A. S. The 'Healthcare Access and Quality Index' revisited: A fuzzy data envelopment analysis approach. Expert Systems with Applications, 123057.

Pereira, M. A., Vilarinho, H., D'Inverno, G., & Camanho, A. S. A regulatory robust conditional approach to measuring the efficiency of whole-sale water supply and wastewater treatment services. Utilities Policy, 83, 101594.

Pinho, M., Costa, A. S., Meneses, M., & Manso, J. A multiple criteria sorting method for supporting the maintenance management of medical ventilators: The case of Hospital da Luz Lisboa. Socio-Economic Planning Sciences, 86, 101458.

Plank, P. A., Gomes, L. F., Caldas, P., Varela, M., & Ferreira, D. C. Assessing the Traveling Risks Perceived by South African Travelers during Pandemic Outbreaks: The Case of COVID-19. Sustainability, 15 (12), 9267.

Portela Neves de Almeida, T., & Catalão-Lopes, M. Innovation and mergers in generalized asymmetric oligopolies. Managerial and Decision Economics.

Ramos, T. R. P., & Vigo, D. A new hybrid distribution paradigm: Integrating drones in medicines delivery. Expert Systems with Applications, 234, 120992.

Ribeiro, J. P., & Barbosa-Póvoa, A. P. F. A responsiveness metric for the design and planning of resilient supply chains. Annals of Operations Research, 324 (1-2), 1129–1181. https://doi.org/10.1007/s10479-022-04521-w

Santos, M. J., Jorge, D., Ramos, T., & Barbosa-Póvoa, A. Green reverse logistics: Exploring the vehicle routing problem with deliveries and pickups. Omega, 118, 102864.

Sardinha, M., Fátima Vaz, M., Ramos, T. R., & Reis, L. Design, properties, and applications of non-pneumatic tires: A review. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 237 (11), 2677–2697.

Scholten, M., Correia, M. F., Esteves, T., & Gonçalves, S. P. No Place for Pointless Jobs: How Social Responsibility Impacts Job Performance. Sustainability, 14 (19), 12031.

Simões, J., Pinto-Varela, T., de Matos, M. G., & Carvalho, A. What influences consumer food waste in urban households? Guidelines for communication strategies in Portugal. Journal of Cleaner Production, 429, 139577.

Valentine, A., & Williams, B. Scientometric analysis of the publishing behaviour of EU + UK authors in engineering education and further afield. European Journal of Engineering Education. https://doi.org/10.1080/03043797.2023.2287126

Vicente, J. J., Relvas, S., & Barbosa-Póvoa, A. P. Distribution and inventory planning in multi-echelon supply chains under demand uncertainty. International Journal of Operational Research, 46 (1), 93–117.

Vieira, A. A., Figueira, J. R., & Fragoso, R. A multi-objective simulation-based decision support tool for wine supply chain design and risk management under sustainability goals. Expert Systems with Applications, 232, 120757.

Vieira, I., Ferreira, D., & Pedro, M. I. The satisfaction of healthcare consumers: Analysis and comparison of different methodologies. International Transactions in Operational Research, 30 (1), 545–571.

Zanatto, C., Catalão-Lopes, M., Pina, J. P., & Carrilho-Nunes, I. (2023). The impact of ESG news on the volatility of the Portuguese stock market—does it change during recessions? Business Strategy and the Environment, 32 (8), 5821–5832.

Zeiträg, Y., & Figueira, J. R. Automatically evolving preference-based dispatching rules for multi-objective job shop scheduling. Journal of Scheduling, 26 (3), 289–314.

National Peer-Reviewed Journal articles

Santos, A., & João, I. M. Lean num projeto vitivinícola inclusivo numa instituição particular de solidariedade social. Revista TMQ, Techniques, Methodologies and Quality, 14, 74–90.

Conference Papers

Figueiredo, J. Ethic Paths in Engineering Education. Procedia Computer Science, 219, 1830–1837. https://doi.org/10.1016/j.procs.2023.01.480

João, I. M., Pereira, R., Borges, C., & Ferreira, E. P. (2023). Network of Good Practices to Reduce Gender Gap in Engineering Courses. 2023 5th International Conference of the Portuguese Society for Engineering Education (CISPEE), Guimarães, Portugal, 2023, pp. 1-8. https://doi.org/10.1109/CISPEE58593.2023.10227648

João, I. M., & Silva, J. M. (2023). An analysis of the students' academic performance in a master engineering course. 2023 5th International Conference of the Portuguese Society for Engineering Education (CISPEE), Guimarães, Portugal, 2023, pp. 1-7. https://doi.org/10.1109/CISPEE58593.2023.10227616

Monteiro Pires, S., Fieis de Melo, J., Vieira, A. C. L., Gomez Redondo, H., Assunção, R., Cozzi, E., Biasini, B., Menozzi, D. Health and sustainability impacts of scenarios of replacement of beef by pulses in two EU countries. European Journal of Public Health, Volume 33, Issue Supplement_2,

October 2023, ckad160.347. https://doi.org/10.1093/eurpub/ckad160.347

Paulo, H., Vieira, M., Gonçalves, B.S., Pinto-Varela, T., Barbosa-Póvoa, A.P. An Approach to the Design of Resilient Biomass Supply Chain Using Discrete Event Simulation. In: Gonçalves dos Reis, J.C., Mendonça Freires, F.G., Vieira Junior, M. (eds) Industrial Engineering and Operations Management. IJCIEOM 2023. Springer Proceedings in Mathematics & Statistics, vol 431. Springer, Cham.

Torrado, A., & Barbosa-Póvoa, A.P. Towards an Optimized and Socio-Economic Blood Supply Chain Network. In: Almeida, J.P., Geraldes, C.S., Lopes, I.C., Moniz, S., Oliveira, J.F., Pinto, A.A. (eds) Operational Research. IO 2021. Springer Proceedings in Mathematics & Statistics, vol 411. Springer, Cham.

Valentine, A., & Williams, B. (2023). Identifying career pathways to engineering education research in Australia. 2023 5th International Conference of the Portuguese Society for Engineering Education (CISPEE), Guimarães, Portugal, 2023, pp. 1–5. https://doi.org/10.1109/CISPEE58593.2023.10227653

Valentine, A., Wint, N., & Williams, B. Who Funds Engineering Education Research? Content Analysis Of Funding Sources Described In Three Top-Tier Engineering Education Research Journals. European Society for Engineering Education (SEFI). https://doi.org/10.21427/QH6Z-4183

Wint, N., Valentine, A., Williams, B., & Murphy, M. Mapping The Engineering Education Research Landscape Across Europe. European Society for Engineering Education (SEFI). https://doi.org/10.21427/QSWJ-3616

Book Chapters

Aguiar, A.R., Ramos, T., & Gomes, M.I. A Biased Random-Key Genetic Algorithm for the Home Care Routing and Scheduling Problem: Exploring the Algorithm's Configuration Process. In: Almeida, J.P., Geraldes, C.S., Lopes, I.C., Moniz, S., Oliveira, J.F., Pinto, A.A. (eds) Operational Research. IO 2021. Springer Proceedings in Mathematics & Statistics, vol 411. Springer, Cham. https://doi.org/10.1007/978-3-031-20788-4_1.

Batista, M., Ribeiro, J.P., & Barbosa-Póvoa, A. Supply Chain Resilience: Tactical-Operational Models, a Literature Review. In: Almeida, J.P., Alvelos, F.P.e., Cerdeira, J.O., Moniz, S., Requejo, C. (eds) Operational Research. APDIO 2022. Springer Proceedings in Mathematics & Statistics, vol 437. Springer, Cham. https://doi.org/10.1007/978-3-031-46439-3_12.

da Silva, C., Barbosa-Póvoa, A. P., & Carvalho, A. Integrating economic, environmental, and social concerns into the design and planning of supply chains using monetization strategies. In Computer Aided Chemical Engineering (Vol. 52, pp. 3351–3356). Elsevier.

Duarte, I., Mota, B., Pinto-Varela, T., Amaro, A., & Barbosa-Póvoa, A. P. Modelling availability and affordability concerns in the design and planning of pharmaceutical supply chains. In Computer Aided Chemical Engineering (Vol. 52, pp. 3369–3374). Elsevier.

Paulo, H., Vieira, M., Gonçalves, B. S., Relvas, S., Pinto-Varela, T., & Barbosa- Póvoa, A. P. A discrete-event simulation approach to the design and planning of biomass supply chains considering technological learning. In Computer Aided Chemical Engineering (Vol. 52, pp. 1285–1291). Elsevier.

Pereira, M.A., Nunes, A.M., Ferreira, D.C. Do the Resilience and Adaptive Capacity to Climate-Related Disasters Help Explain Human Health and Well-Being?. In: Leal Filho, W., Vidal, D.G., Dinis, M.A.P. (eds) Climate Change and Health Hazards. Climate Change Management. Springer, Cham.

Editorial

Saura, J. R., Palacios-Marques, D., Correia, M. B., & Barbosa, B. Innovative behavior in entrepreneurship: Analyzing new perspectives and challenges. Frontiers in Psychology, 14, 1123236.

Williams, B., Struck Jannini, A. V., Main, J. B., & Knight, D. JEE in the 21st century: A brief history of the journal and retrospective of three past editors. Journal of Engineering Education, 112 (4), 848–851.

Publications 2024

Afonso, G. P., Ferreira, D. C., & Figueira, J. R. A Network-DEA model to evaluate the impact of quality and access on hospital performance. Annals of Operations Research, 1-31. https://doi.org/10.1007/s10479-023-05362-x

Almeida, J., Santos, D., Figueira, J. R., & Francisco, A. P. A multi-objective mixed integer linear programming model for thesis defence scheduling. European Journal of Operational Research, 312(1), 92-116. https://doi.org/10.1016/j.ejor.2023.06.031

Alventosa, A., Pinho, J., Ferreira Jorge, S., & Catalão-Lopes, M. Vertical product differentiation in the lab: Impact of consumers' preferences. Applied Economics Letters, 31(16), 1488-1493. https://doi.org/10.1080/13504851.2023.2198189

Baptista, G., Vieira, M., & Pinto, T. An Exact Approach to the Multi-Compartment Vehicle Routing Problem: The Case of a Fuel Distribution Company. Mathematics, 12(4), 527. https://doi.org/10.3390/math12040527

Baptista, R., Ribeiro, A. S., Batool, S. N., Cheng, C. F., & Kraus, S. Entrepreneurial team diversity and start-up growth in consulting and hospitality. The Service Industries Journal, 44(13-14), 1038-1060. https://doi.org/10.1080/02642069.2022.2138357

Caldas, P., Pedro, M. I., & Marques, R. C. An Assessment of Container Seaport Efficiency Determinants. Sustainability, 16(11), 4427. https://doi.org/10.3390/su16114427

Carrilho-Nunes, I., & Catalão-Lopes, M. Producing Green or Brown? A Game of Green Innovation in an Asymmetric Oligopoly. Journal of Environmental Assessment Policy and Management, 26(02), 2450007. https://doi.org/10.1142/S1464333224500078

Carrilho-Nunes, I., & Catalão-Lopes, M. The complementary effects of environmental policy and oil prices on innovation: evidence from OECD countries. Economics of Innovation and New Technology, 33(2), 185-205. https://doi.org/10.1080/10438599.2022.2150180

Castro-Amoedo, R., Granacher, J., Kantor, I., Dahmen, A., Barbosa-Povoa, A., & Maréchal, F. On the role of system integration in plastic waste management. Resources, Conservation and Recycling, 201, 107295. https://doi.org/10.1016/j.resconrec.2023.107295

Costa, E., Pestana, J., & Barros, P. P. Primary health care coverage in Portugal: the promise of a general practitioner for all. Human Resources for Health, 22(1), 55. https://doi.org/10.1186/s12960-024-00936-7

de Morais, C. S., Ramos, T. R. P., Lopes, M., & Barbosa-Póvoa, A. P. A data-driven optimization approach to plan smart waste collection operations. International Transactions in Operational Research, 31(4), 2178-2208. https://doi.org/10.1111/itor.13235

Delhaes, J. M., Vieira, A. C., & Oliveira, M. D. Natural language processing for participatory corporate foresight: The participant input analyzer for identifying biases and fallacies. Technological Forecasting and Social Change, 209, 123652. https://doi.org/10.1016/j.techfore.2024.123652

Diaz, R., Fernández, E., Figueira, J. R., Navarro, J., & Solares, E. Revisiting relational-based ordinal classification methods from a more flexible conception of characteristic profiles. Omega, 127, 103080. https://doi.org/10.1016/j.omega.2024.103080

Eichenbaum, M., Godinho de Matos, M., Lima, F., Rebelo, S., & Trabandt, M. Expectations, infections, and economic activity. Journal of Political Economy, 132(8), 2571-2611. https://doi.org/10.1086/729449

Fernández, E., Figueira, J. R., Navarro, J., & Solares, E. An Outranking-Based Approach Modeling Satisfaction–Dissatisfaction Intensity, Preference Dependence, and Discordance Strength in Group Decision. Group Decision and Negotiation, 33, 647-672. https://doi.org/10.1007/s10726-024-09880-2

Fernández-Díaz, E., de Matos, N., & Correia, M. B. Accessible Tourism through Digital Accessibility for 2030 Agenda for Sustainable Development. Are We Ready for WCAG 3.0?. Journal of Tourism, Sustainability and Well-being, 12(4), 299-318. https://doi.org/10.34623/d335-xj31

Fernández-Díaz, E., Guerrero Navarro, D., Correia, M. B., & de Matos, N. Publicidad programática: pasado, presente y futuro. Análisis bibliométrico. GECONTEC: Revista Internacional de Gestión del Conocimiento y la Tecnología, 12(2). https://gecontec.org/index.php/unesco/article/view/201

Ferreira, A., Correia, M. B. & Renda, A. I. Systematic literature review on the profile of tourists in four- and five-star hotels based on online reviews. European Journal of Tourism, Hospitality and Recreation, 14(1), 20-34. https://doi.org/10.2478/ejthr-2024-0002

Ferreira, R., Lopes, H., Lourenço, J. P., Silva, J. M., João, I. M., Ribeiro, M. F., & Fernandes, A. Ethylene removal by Ag-based ZSM-5 adsorbents for the preservation of climacteric fruits. Microporous and Mesoporous Materials, 370, 113055. https://doi.org/10.1016/j.micromeso.2024.11305

García-Zamora, D., Dutta, B., Figueira, J. R., & Martínez, L. The deck of cards method to build interpretable fuzzy sets in decision-making. European Journal of Operational Research, 319(1), 246-262. https://doi.org/10.1016/j.ejor.2024.06.039

Gelashvili, V., Martínez-Navalón, J. G., DeMatos, N., & de Brito Correia, M. Technological transformation: The importance of E-WOM and perceived privacy in the context of opinion platforms. Technological Forecasting and Social Change, 205, 123472. https://doi.org/10.1016/j.techfore.2024.123472

Gregório, B. C., Pereira, M. A., & Costa, A. S. Multi-criteria decision-aiding for public hospitals: The role of interactions among pairs of access and quality criteria. Omega, 126, 103046. https://doi.org/10.1016/j.omega.2024.103046

Hokmabadi, H., Rezvani, S. M., & de Matos, C. A. Business Resilience for Small and Medium Enterprises and Startups by Digital Transformation and the Role of Marketing Capabilities—A Systematic Review. Systems, 12(6), 220. https://doi.org/10.3390/systems12060220

Ibrahim, M. D., Pereira, M. A., & Caldas, P. Efficiency analysis of the innovation-driven sustainable logistics industry. Socio-Economic Planning Sciences, 96, 102050. https://doi.org/10.1016/j.seps.2024.102050

Jorge, D., Rocha, T., & Ramos, T. R. P. A time-driven simulation–optimization framework for the dynamic heterogeneous order-courier assignment problem for instant deliveries. Transportation Research Part E: Logistics and Transportation Review, 192, 103783. https://doi.org/10.1016/j.tre.2024.103783

Lacárcel, F. J. S., González-Padilla, P., Matos, N., & Correia, M. B. Bibliometric measurement of the resource curse and its implication for sustainable development. Resources Policy, 89, 104560. https://doi.org/10.1016/j.resourpol.2023.104560

Leitão, J., de Brito, S., & Pereira, D. Organizational ambidexterity, open innovation and innovation outputs: How do followers and low-flyer EU countries innovate?. International Journal of Innovation Studies, 8(2), 186-235. https://doi.org/10.1016/j.ijis.2024.01.001

Leitão, J., Ferreira, J., & Pereira, D. Are there Marshallian industrial districts in Portugal? revisiting the canello and pavone algorithm. Regional Science Policy & Practice, 16(11), 100132. https://doi.org/10.1016/j.rspp.2024.100132

Leitão, M. E., Amaral, M., & Carvalho, A. Reconceptualizing socio-tech entrepreneurship: A systematic literature review and research agenda. Technovation, 134, 103018. https://doi.org/10.1016/j.technovation.2024.103018

Mascarenhas, E., Miguel, L. S., Oliveira, M. D., & Fernandes, R. M. Economic evaluations of medical devices in paediatrics: a systematic review and a quality appraisal of the literature. Cost Effectiveness and Resource Allocation, 22(1), 33. https://doi.org/10.1186/s12962-024-00537-0

Miranda, R., Silvério, R., Baptista, F. M., & Oliveira, M. D. Unlocking Continuous Improvement in Heart Failure Remote Monitoring: A Participatory Approach to Unveil Value Dimensions and Performance Indicators. Telemedicine and e-Health, 30(7). https://doi.org/10.1089/tmj.2023.056

Ng, W., Ribeiro, N. A., & Jorge, D. An optimization approach for the terminal airspace scheduling problem. Transportation Research Part C: Emerging Technologies, 169, 104856. https://doi.org/10.1016/j.trc.2024.104856

Nunes, I. C., & Lopes, M. C. The effects of Energy Performance Certificates in energy poverty: A brief overview. Economic Analysis Letters, 3(1), 30-35. https://doi.org/10.58567/eal03010004

Oliveira, T., Alves, H., & Leitão, J. Co-creation and innovation in higher education institutions: a systematic literature review and research agenda. International Journal of Educational Management, 38(3), 839-872. https://doi.org/10.1108/IJEM-09-2023-0456

Ozkan, S., Sousa, H., Gonçalves, D., Puna, J., Carvalho, A., Bordado, J., Galhano dos Santos, R., & Gomes, J. Unlocking nature's potential: modelling Acacia melanoxylon as a renewable resource for bio-oil production through thermochemical liquefaction. Energies, 17(19), 4899. https://doi.org/10.3390/en17194899

Pedro, E., Alves, H., & Leitão, J. Sustainable development practices in public higher education: A new conceptual framework for nurturing student satisfaction and reinforcing attractiveness to international students. Sustainable Development, 32(3), 2565-2582. https://doi.org/10.1002/sd.2798

Peirone, D., Pereira, D. B., Leitão, J., & Nezghoda, O. The Role of the Agglomeration Economy and Innovation Ecosystem in the Process of Competency Development and Growth of Small and Medium-Sized Enterprises. Administrative Sciences, 14(9), 222. https://doi.org/10.3390/adM.Sc.i14090222

Pereira, M. A., & Camanho, A. S. The 'Healthcare Access and Quality Index' revisited: A fuzzy data envelopment analysis approach. Expert Systems with Applications, 245, 123057. https://doi.org/10.1016/j.eswa.2023.123057

Pires, C. P., Catalão-Lopes, M., & Jorge, S. F., & Garcês, P. Quality-price choices and market configurations when location matters. Economic Modelling, 135, 106728. https://doi.org/10.1016/j.econmod.2024.106728

Pires, C. P., Jorge, S. F., Catalão-Lopes, M., Pinho, J., Garcês, P., & Alventosa, A. Market configurations when marginal costs are quality-dependent. Managerial and Decision Economics, 45(6), 3972-3992. https://doi.org/10.1002/mde.4216

Portela Neves de Almeida, T., & Catalão-Lopes, M. Innovation and mergers in generalized asymmetric oligopolies. Managerial and Decision Economics, 45(2), 758-769. https://doi.org/10.1002/mde.4027

Ribeiro, G. K. A., & Leitão, J. Sustainable leadership and sustainable entrepreneurship: a systematic literature review. Discover Sustainability, 5(1), 188. https://doi.org/10.1007/s43621-024-00383-3

Ricardo, A. V., Costa, A. S., & Figueira, J. R. Enhancing hospital benchmarking: A multidimensional approach to quality assessment in Portugal. Socio-Economic Planning Sciences, 93, 101899. https://doi.org/10.1016/j.seps.2024.101899

Ricardo, A., Figueira, J. R., & Tavares, L. V. Integrating confidence and preservation of information in the preference elicitation process: A lexicographic order approach for inconsistent judgments. Omega, 129, 103136. https://doi.org/10.1016/j.omega.2024.103136

Sardinha, M., Ferreira, L., Ramos, T., Reis, L., & Vaz, M. F. Challenges on extrusion-based additive manufacturing of thermoplastic polyurethane. Engineering Manufacturing Letters, 2(1), 45-52. https://doi.org/10.24840/2795-5168_002-001_2675

Scholten, M., Walters, D. J., Fox, C. R., & Read, D. The unified tradeoff model. Psychological Review, 131(4), 1007-1044. https://doi.org/10.1037/rev0000458

Silva, J. L. D., Vieira, A. C. L., & Silva, S. V. Digital Maturity Models: A Characterisation Study Based on a Systematic Literature Review. BBR. Brazilian Business Review, 21(2), e20221330. https://doi.org/10.15728/bbr.2022.1330.en

Staccioli, L., dos Santos, A. M. R., Gallego, J., Kalliola, A., Fearon, O., Ortiz, P., Pitacco, W., & Carvalho, A. A life cycle assessment model to evaluate the environmental sustainability of lignin-based polyols. Sustainable Production and Consumption, 52, 624-639. https://doi.org/10.1016/j.spc.2024.11.019

Valentine, A., & Williams, B. Scientometric analysis of the publishing behaviour of EU+ UK authors in engineering education and further afield. European Journal of Engineering Education, 49(2), 389-410. https://doi.org/10.1080/03043797.2023.2287126

Vasconcelos-Garcia, M., & Carrilho-Nunes, I. Internationalisation and digitalisation as drivers for eco-innovation in the European Union. Structural Change and Economic Dynamics, 70, 245-256. https://doi.org/10.1016/j.strueco.2024.02.010

Vicente, J. J., Neves, L., & Bernardo, I. The potential of Logistics 4.0 technologies: a case study through business intelligence framing by applying the Delphi method. Frontiers in Artificial Intelligence, 7, 1469958. https://doi.org/10.3389/frai.2024.1469958

Vieira, M., Macedo, A., Alvarenga, A., Lafoz, M., Villalba, I., Blanco, M., Rojas, R., Romero-Filgueira, A., García-Mendoza, A., Santos-Herran, M., & Alves, M. What future for marine renewable energy in Portugal and Spain up to 2030? Forecasting

plausible scenarios using general morphological analysis and clustering techniques. Energy Policy, 184, 113859. https://doi.org/10.1016/j.enpol.2023.113859

Vilarinho, H., Pereira, M. A., D'Inverno, G., Nóvoa, H., & Camanho, A. S. Water Utility Service Quality Index: A customer-centred approach for assessing the quality of service in the water sector. Socio-Economic Planning Sciences, 92, 101797. https://doi.org/10.1016/j.seps.2023.101797

Wen, Z., Liao, H., & Figueira, J. R. A preference disaggregation-driven multiple criteria sorting model based on regret theory. Omega, 129, 103150. https://doi.org/10.1016/j.omega.2024.103150

Zaki, T., Zeiträg, Y., Neves, R., & Figueira, J. R. A cooperative coevolutionary genetic programming hyper-heuristic for multi-objective makespan and cost optimization in cloud workflow scheduling. Computers & Operations Research, 172, 106805. https://doi.org/10.1016/j.cor.2024.106805

Zeiträg, Y., Figueira, J. R., & Pereira, M. A. A web-based interactive decision support system for a multi-objective lot-sizing and production scheduling model. International Journal of Production Economics, 271, 109209. https://doi.org/10.1016/j.ijpe.2024.10920

Zeiträg, Y., Rui Figueira, J., & Figueira, G. A cooperative coevolutionary hyper-heuristic approach to solve lot-sizing and job shop scheduling problems using genetic programming. International Journal of Production Research, 62(16), 5850-5877. https://doi.org/10.1080/00207543.2023.2301044

Conference Papers

Azarnoosh, S., Lourenço, J. C., & João, I. M. Selection of technical improvements in product design. Human-Centric Decision and Negotiation Support for Societal Transitions. Proceedings of the 24th International Conference on Group Decision and Negotiation & 10th International Conference on Decision Support System Technology, Porto, June 2 – June 5, 2024.

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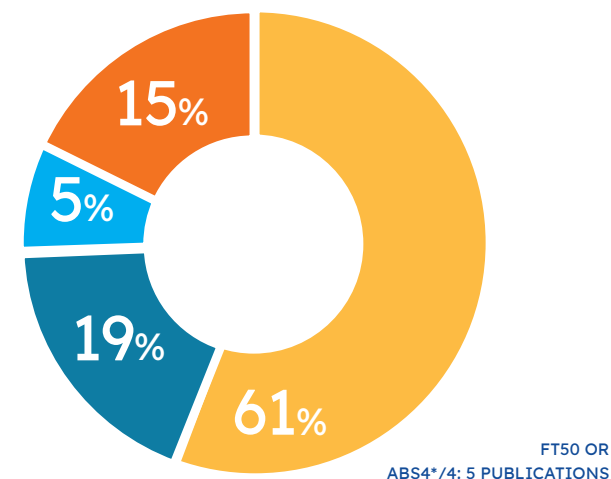
Borges, C., Pereira, R., João, I., & Ferreira, E. P. Attracting female students for Engineering. (2024). Proceedings of the 20th International CDIO Conference, hosted by Ecole Supérieure Privée d'Ingénierie et de Technologies (ESPRIT) Tunis, Tunisia, June 10 – June 13, 2024.

de Aguiar, A. R., Gomes, M. I., Ramos, T., & Ramalhinho, H. A Hybrid Biased-Randomized Heuristic for a Home Care Problem with Team Scheme Selection. In Metaheuristics International Conference (pp. 184-189). Cham: Springer Nature Switzerland.

Williams. B. EJEE This Century In The Words Of Two Editors In Chief. Proceedings of the 52nd Annual Conference of SEFI, Lausanne, Switzerland. https://doi.org/10.5281/zenodo.14254790

Wint, N., Williams, B., & Valentine, A. A Comparative Scientometric Analysis of Diversity, Equity, and Inclusion (DEI) Publications in European Journal of Engineering Education and Journal of Engineering Education. SEFI.

Book Chapters

Duarte, I., Mota, B., Pinto-Varela, T., Amaro, A., & Barbosa-Povoa, A. P. Design and Planning of Socially Responsible Pharmaceutical Supply Chains Considering Procurement

Strategies. In Computer Aided Chemical Engineering (Vol. 53, pp. 1087-1092). Elsevier. https://doi.org/10.1016/B978-0-443-28824-1.50182-4

Eusébio, M., Pinto, T., & Vieira, M. The consistent vehicle routing problem: an application to the pharmaceutical supply chain. In International Conference on Optimization, Learning Algorithms and Applications (pp. 424-437). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-53025-8_29

Mateus, R. J., Pinto, F. S., Fauth, J., Azenha, M., Granja, J., Veludo, R., Muniz, B., Reis, J., & Marques, P. Improving Regulations for Automated Design Checking Through Decision Analysis Good Practices: A Conceptual Application to the Construction Sector. In International Conference on Flexible Automation and Intelligent Manufacturing (pp. 160-169). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-38241-3_19

Pereira, D., & Leitão, J. Do the human and social capital of startups matter for initial hiring decisions and survival? An empirical application to the Portuguese entrepreneurial ecosystem. In Research Handbook on Entrepreneurial Ecosystems (pp. 294-318). Edward Elgar Publishing. https://doi.org/10.4337/9781800378988.00022

Pereira, M. A., Nunes, A. M., & Ferreira, D. C. IDEAL: The 'Infectious Disease Transmission Climatic Suitability Index'. In Planetary Health and Climate Change: Understanding the Impacts of Climate Change to the Well-Being of Our Planet (pp. 327-344). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-72740-5_15

Silva, F. B., da Silva, C., & Barbosa-Póvoa, A. P. Design and planning green hydrogen supply chains: characterization and optimization. In Computer Aided Chemical Engineering (Vol. 53, pp. 2419-2424). Elsevier. https://doi.org/10.1016/B978-0-443-28824-1.50404-X

Simões, J., Carvalho, A., Pinto-Varela, T., & de Matos, M. G. Influence of Knowledge, Motivations and Behaviors on Consumer Food Waste—Results from a Survey in Portugal. In International Conference on Water Energy Food and Sustainability (pp. 23-34). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-48532-9_3

Stilwell, G., & Vieira, A. C. L. Enhancing Animal Welfare Through Disease Prevention in Goats. In The Welfare of Goats (pp. 295-324). Springer, Cham. https://doi.org/10.1007/978-3-031-62182-6_8

Theses 2023

PhD 2023

Amaro Segunda Ricardo
Essays on prioritization investment in large-scale public infrastructure in Angola, PhD in Engineering and Management, IST
Supervisors: Rui Domingos Ribeiro da Cunha Marques, José Rui de Matos Figueira

Andreia Maria Rodrigues dos Santos
Roadmap for sustainable forest supply chains - A life cycle assessment approach, PhD in Engineering and Management, IST
Supervisors: Ana Isabel Cerqueira de Sousa Gouveia Carvalho, Ana Paula Ferreira Dias Barbosa Póvoa

Eric Ofori-Ntow Jnr
Methodological Approaches For Forecasting Electricity Demand And Renewable Energy Availability: The Case Of Ghana, PhD in Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Maria João dos Santos Rodrigues

Jörg Michael Delhaes
Advancing participatory methods in Corporate Foresight: New approaches for improved decision-making in management, PhD in Engineering and Management, IST
Supervisors: Mónica Duarte Oliveira, Ana Catarina Lopes Vieira Godinho de Matos

Paulo Roberto de Sousa Abreu
A data-driven optimization approach for resource planning at Emergency Medical Services, PhD in Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos, Ana Paula Ferreira Dias Barbosa Póvoa

MSc 2023

Afonso Duarte Pinto Bastos Delgado
Desempenho dos países no desenvolvimento da indústria e da economia e na erradicação da pobreza: Uma abordagem de benchmarking aplicada aos ODSs 1, 8

e 9, MSc in Industrial Engineering and Management, IST
Supervisor(s): Diogo Filipe da Cunha Ferreira, Paulo Alexandre Fernandes Varela Simões Caldas

Alice Roque de Pinho Oliveira de Sousa
Forests Supply Chain Materiality. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Isabel Cerqueira de Sousa Gouveia Carvalho, Andreia Maria Rodrigues dos Santos

Ana Carina Avelar Anastácio
Developing Multi-Criteria Resource Allocation Tools for Policy Evaluation Under Uncertain Conditions Policy Evaluation Under Uncertain Conditions. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Mónica Duarte Correia de Oliveira, João Carlos da Cruz Lourenço

Ana Rita Cunha Salgado
Ontology-based analysis of the semiconductor supply chain: the use-case of the Battery Management System. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa

Ana Sofia Neves Pascoal
Drivers for innovation in energy storage and energy efficiency technologies. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina, Inês Isabel Carrilho Nunes

André Miguel Machado Querido
Immigration and Real Estate Prices in Portugal: A Panel Data Analysis. MSc in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro, Hugo Miguel Fragoso de Castro Silva

António Albuquerque Simões Furtado Ramiro
Through the User's Eye: A Mixed Methods Approach to Enhancing the

Understanding of End User Needs in Health Information Technologies. MSc in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Salomé Guedes Sequeira de Pádua Azevedo

António Jorge Novais Vidal Fernandes
User Acceptance Testing Process for a Digital Public Service. MSc in Industrial Engineering and Management, IST
Supervisors: Miguel Leitão Bignolas Mira da Silva, Tânia Rodrigues Pereira Ramos

António Maria Corte Real Teles Branco
A framework for the implementation of automation-based projects in warehouses - The Case Study of Worten. MSc in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Pedro Costa

António Maria de Calheiros e Menezes Ferreira de Almeida
Uma Abordagem à Eficiência de um Conjunto de Unidades Hoteleiras por Município em Portugal Continental. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Isabel Craveiro Pedro, Rodrigo Soares

António Maria Gargate Costa Sousa Andion
Aumento de Produtividade numa linha de Produção de Equipamentos de Refrigeração Industrial. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos

António Pedro Baptista Nunes Simões de Carvalho
Imagining the future with citizens: Driver validation in a participatory foresight approach for assessing animal products consumption patterns in the future. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Sofia Santos

Bruno Filipe Francisco Reis
Exports and imports effect on performance - A study on Portuguese firms. MSc in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro, Miguel Simões Torres Preto

Chris-Lennert Roters
"Learning Methods and their Impact on Training of Customers for Artificial Intelligence Based Analysis Platforms in Logistics and Production: A Qualitative Study on Motion-Mining®". MSc in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Sascha Kaczmarek

Constantin Wegner
Scenarios for the future of the agrifood industry - strategic recommendations and future steps for acembex - the scenario of -grains for the gains. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Daniel Gaspar Pereira
An optimization approach for sustainable logistics. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Bruna Alexandra Elias Mota

David Miguel Franco Rodrigues
Developing a framework for collaborative development of multidimensional management dashboards: A use case for remote patient monitoring in heart failure. MSc in Computer Science and Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira

Edoardo La Motta
Scenarios for the Future of the Digital Payment Industry in Europe: Exploration of Strategic Implications for the Payment Gateway Provider Paybyrd. Megatrend and Trends 1, Scenario 3 Narrative and Strategic Implications. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Filipa Maria Braz Silva
Design and Planning Green Hydrogen Supply Chains - The Case of Portugal Industrial Sector. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Filippo Ferronato
Scenarios for the future of the agrifood industry - strategic recommendations and future steps for acembex - the scenario of -home meat home. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Francisca Filipa Pereira Barbosa Afonso
Incorporating uncertainty in Healthcare Time-Driven Activity Based Costing: From a literature review to a framework for remote care interventions. MSc in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Rafael Alexandre Pires Miranda

Francisco Amoedo Casqueiro Alves da Silva
Developing simulation models for the implementation of Next-Generation Sequencing in the Lisbon region. MSc in Industrial Engineering and Management, IST
Supervisors: Mónica Duarte Correia de Oliveira

Francisco De Sousa Lima Frias Costa
Scenarios For Future Sourcing Strategies In The Context Of The Use Of Green Hydrogen To Achieve Carbon Neutrality In Dortmund By 2035 – Strategic Implications For DEW21. Scenario 3: hydrogen apogee - narrative and strategic recommendations. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Francisco José da Silva Fernandes
Empreendedorismo em Portugal por parte de trabalhadores em situação de perda de emprego involuntária após o fecho de empresa. MSc in Industrial Engineering and Management, IST
Supervisors: Hugo Miguel Fragoso de Castro Silva

Francisco Rosa Santos Cabral
Otimização da Logística Interna através da Reorganização de Armazéns, da Gestão do Material de Embalamento e do Abastecimento à Produção. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos

Gonçalo de Matos Silva Sousa Félix
Public Investment in sports and culture and public health – a longitudinal study. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro

Gonçalo Manuel Silva Lousa
Strategic Deployment of Green Hydrogen Refueling Stations: The Case of the Portuguese Highways. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Gonçalo Minhoz Costa Rodrigues
Sustainable Practices Implementation in 3PLs. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Susana Isabel Carvalho Relvas

Inês dos Santos Falcão
Importância da Hotelaria na contribuição para a preservação ambiental e patrimonial da Região Demarcada do Douro. MSc in Hospitality Management, ESGHT, University of Algarve
Supervisors: Marisol Correia Cláudia Henriques

Inês Ferro Passinhas de Medeiros Rodrigues
A meta-heuristic approach for the design of a green hydrogen supply chain in Portugal. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Tânia Rute Xavier de Matos Pinto Varela, Nelson Martins

Inês Madeira Ferreira
Optimizing Supply Chain Management Practices to Reduce Water Loss Related With Food Waste. MSc in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota, Lukas Messmann

Joana Carreira Domingos
Analysis of the Impact of Exogenous Variables on the Efficiency of Tourist Accommodation Establishments Efficiency Analysis on Local Housing in Coastal Portuguese Municipalities. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Isabel Craveiro Pedro, Rodrigo Soares

Joana Gonçalves Moreira de Carvalho
Technological Change and Wage Inequality in Portugal. MSc in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro, Hugo Miguel Fragoso de Castro Silva

João Félix Pimenta
Selection and prioritisation of medical devices for HTA evaluation: Towards a socio-technical framework based on multiple criteria decision analysis. MSc in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Helena Miguel Fernandes Monteiro

João Francisco Ferreira Marques
The Effectiveness of Enterprise Risk Management: A Case Study in The Navigator Company. MSc in Industrial Engineering and Management, IST
Supervisors: António Manuel Nave Quintino

João Martins Antunes
Scenarios for the future of the agrifood industry - strategic recommendations and future steps for acembex - the scenario of -worldwide meat. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

João Pedro Fernandes Ribeiro
Machine Learning aplicado na seleção de doentes submetidos à TRC-D do Hospital de Santa Marta. MSc in Biomedical Engineering, IST
Supervisors: Daniel Rebelo dos Santos, Sérgio Matoso Laranjo

João Pedro Ferreira dos Santos
Analysis of Artificial Intelligence in Smart Cities - User's Perspective of the Drivers and Barriers to AI. MSC in Information Management, NOVA IMS
Supervisors: Aleš Groznik, Celso Augusto de Matos

João Pedro Fiéis de Melo
Using multicriteria decision analysis to measure the value of different scenarios of replacement of beef by pulses in two EU countries. MSc in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Sara Monteiro Pires

João Pereira da Silva
Integrality, contiguity, and absence of holes in forming political districting maps. MSc in Computer Science and Engineering, IST
Supervisors: José Rui Figueira, Luís Russo

João Rafael Guerreiro Coelho
Electric Vehicles Performing Home Deliveries - Leroy Merlin Portugal Case Study. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos

João Tiago Teixeira Faria de Abreu
Consistent vehicle routing problem with workload balance in the pharmaceutical distribution. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rute Xavier de Matos Pinto Varela, Miguel Vieira

João Victor Cardoso Saraiva
Managing Price Risk for Energy Commodities: A Gas Combined Cycle Power Plant Case. MSc in Industrial Engineering and Management, IST
Supervisors: António Manuel Nave Quintino, Guilherme Frederico Bernardo Lenz e Silva

José Lucas Lira Cordeiro
Viabilidade económica de um projeto de investimento pecuário: a área da suinicultura como estudo de caso. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos

José Maria Pereira de Almeida Branco Pardal
Green Hydrogen transportation: Development of a decision support tool and application to a case-study. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rute Xavier de Matos Pinto Varela

José Rego Macedo Ferreira
Idade relativa no futebol jovem – do contexto nacional às competições internacionais. MSc in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro

Karen Rodrigues Villarroel
The effects of energy accessibility on income inequality in Latin America and Caribbean countries. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina, Inês Isabel Carrilho Nunes

Lara Emília Jaco Ramos
A Decision Support Tool for Scheduling Master´s Thesis Defences. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos, José Rui De Matos Figueira

Leila Tavaria Lemos
Comparison of Formulations for Single and Multiple Objective Political Districting Problems. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos, José Rui de Matos Figueira

Leonor Brito Barata
Integrated Production and Distribution Planning in the Cement Industry under Carbon Regulatory Schemes The Secil Case Study. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Leonor de Távora Barroco e Moreira dos Santos
"Estimating the performance of Portuguese public hospitals through a stochastic multicriteria acceptability analysis". MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Diogo Filipe da Cunha Ferreira, José Rui de Matos Figueira

Lutz Karl Von Der Heyden
Scenarios For Future Sourcing Strategies In The Context Of The Use Of Green Hydrogen To Achieve Carbon Neutrality In Dortmund By 2035 – Strategic Implications For DEW21. Scenario 2: victorian development. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Madalena Alexandre Lourenço
"A multi-criteria classification approach for assessing energy poverty in the European Union". MSc in Energy Engineering and Management, IST
Supervisors: José Rui de Matos Figueira, Carla Oliveira-Henriques

Margarida da Costa Graça
Scenarios for the future of the agrifood industry - strategic recommendations and future steps for acembex - the scenario of -neighbor´s garden. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Margarida Isabel Bento Espadinha
Design and planning of symbiotic supply chains: a case study in pulp and paper and cement industries. MSc in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota

Margarida Maria De Sousa Aires de Abreu
Bi-Objective Districting and Routing Problems: A Comparison of Models. MSc in Industrial Engineering and Management, IST
Supervisors: José Rui De Matos Figueira, Daniel Rebelo dos Santos

Maria Ana Pereira Ferreira da Silva Gesteiro
Evaluating Flexibility on Master Surgery Scheduling to reduce waiting lists: A case study in a Portuguese Hospital. MSc in Biomedical Engineering, IST
Supervisors: Daniel Rebelo dos Santos

Maria Ana Ramos Monge
Global Pharmaceutical Supply Chains: How can we navigate through the impact of uncertainty?. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rute Xavier de Matos Pinto Varela, Nelson Fernando Chibeles Pereira Martins

Maria Beatriz Bonança Castanho Pires Sequeira
Jobs Across Borders: Analysing the Influence of Immigration on Occupational Unemployment in Portugal. MSc in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro, Hugo Miguel Fragoso de Castro Silva

Maria Francisca Cabral das Neves Reynolds de Sousa
Sustainable supply chain management under water stress – exploring the use of industrial symbiosis alternatives. MSc in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota

Maria Inês Fernandes Pereira
Sustainable Supply Chain Design and Planning against Water - Related Risks. MSc in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota

Maria Joana Nunes da Silva Lopes Figueira
Analysis and optimization of JMD's distribution chain - The Case Study of JMD. MSc in Industrial Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Maria Margarida De Araújo Matos Barbosa
Using Nudges to Increase Hand Hygiene Compliance in a Hospital Setting. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Diogo Gonçalves, António Miguel Areias Dias Amaral

Maria Margarida Sá Costa Valente
Health Risk Maps: Moving towards novel ways to incorporate uncertainty analysis. MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Mónica Duarte Correia de Oliveira, Gilberto Montibeller

Maria Teresa Rodrigues Ribeiro Magina
The Role of Digitalization in Reducing Energy Poverty. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina, Inês Isabel Carrilho Nunes

Mariana Anjos de Melo e Castro
How can innovative Portuguese businesses better position themselves in the global market?. MSc in Industrial Engineering and Management, IST
Supervisors: Hugo Miguel Fragoso de Castro Silva

Mariana dos Reis Sobral Pires Paixão
Bulky items delivery process optimization using simulation and GIS. MSc in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Pedro Costa

Marina Fragkiskou
The relationship between the employees' perception of gamification and their intrinsic motivation at work: a systematic literature review. European Master of Science in Information Systems Management, NOVA IMS
Celso Augusto de Matos, Anton Manfreda.
Supervisors: Celso Augusto de Matos, Anton Manfreda

Martina Lourenço Monteiro (2023).
"Optimizing Water Impact in Textile Supply Chains: The Case of Hemp as a Textile Fiber" MSc in Industrial Engineering and Management, IST
[Supervisor(s): Bruna Alexandra Elias Mota]

Matteo Deketh
A multicriteria classification approach for assessing energy security in Europe. MSc in Energy Engineering and Management, IST
Supervisors: José Rui de Matos Figueira Carla Oliveira-Henriques

Maximilian Zimmer
Scenarios for the Future of the Digital Payment Industry in Europe: Exploration of Strategic Implications for the Payment Gateway Provider Paybyrd. Framing & Scoping Stage, Scenario 1 Narrative and Strategic Implications, Scenario 4 Narrative and Strategic Implications. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Mickaël Anthony da Silva
Railway planning: optimization approaches for the rolling stock rotation problem. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos

Mrad Selima
Scenarios for the Future of the Digital Payment Industry in Europe: Exploration of Strategic Implications for the Payment Gateway Provider Paybyrd. Megatrend and Trends 3, Uncertainties 3 & 4, Scenario 2 Narrative and Strategic Implications, Monitor Stage. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Nguyen Pham
The implementation of artificial intelligence to simplify the first level support of a management system at a large company. European MSc. in Information Systems Management, NOVA IMS
Supervisors: Celso Augusto de Matos, Anton Manfreda

Nuno Afonso Adrião Monteiro
Previsão de vendas de bens de consumo embalados com recurso a técnicas tradicionais e a aprendizagem automática. MSc in Industrial Engineering and Management, IST
Supervisors: João Carlos da Cruz Lourenço

Paulo Daniel Teixeira da Silva
Impacts of Implementing a High-Density Automated Storage System in a Warehouse Worten Case Study. MSc in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Ricardo Cardão

Pedro Alexandre Antunes Ganhão
Gestão de risco em entidades municipais Divisão de Segurança e Saúde no Trabalho da Câmara Municipal de Sintra. MSc in Industrial Engineering and Management, IST
Supervisors: António Manuel Nave Quintino

Pedro Caramelo Dórdio Carreiro
"The impact of product innovation on merging activity and vice-versa - The case of 5G and North Macedonia". MSc in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina

Philip Grabowski
Scenarios For Future Sourcing Strategies In The Context Of The Use Of Green Hydrogen To Achieve Carbon Neutrality In Dortmund By 2035 – Strategic Implications For DEW21. Phase II: Explore – Megatrend I & Megatrend II. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Rafaela Ferreira Veiga
"Ex-jogadores de futebol – efeito na remuneração do capital humano acumulado". MSc in Industrial Engineering and Management, IST
Supervisor: António Sérgio Constantino Folgado Ribeiro

Régis Jean François Malpas
Designing a virtual warehouse operator integrating fatigue, recovery and learning using agent-based modeling Worten Case Study. MSc in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Manuel Kolp, Pedro Costa

Ricardo Brazão Verissimo
A Responsabilidade Social Empresarial Interna na promoção da Satisfação no trabalho e do Compromisso dos colaboradores - Estudo de caso - Delta Cafés. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina

Rita Cardoso Lourenço Silva Fernandes
Construção de um Modelo de Regressão Linear Múltipla para a Previsão de Tempos Cirúrgicos no Âmbito da Especialidade de Ortopedia do Hospital da Luz de Lisboa. MSc in Industrial Engineering and Management, IST
Supervisors: Daniel Rebelo dos Santos, Paulo Santos

Rita Simões Barreiros
Iberian centralization in reception and processing of maritime containers - The Leroy Merlin Case Study. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos

Rodrigo Manuel Aniceto da Silva e Costa
Os Sistemas de Custeio: Análise ao sistema atualmente usado e proposta de implementação de método alternativo numa empresa industrial de curtumes. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Isabel Craveiro Pedro

Ruben Pires
Simulação de Colunas de Destilação com Integração Interna de Calor. MSc in Chemical and Biological Engineering, ISEL
Supervisors: João M. Silva, Isabel M. João

Rui Pedro Marques Tavares
Otimização de materiais de embalagem em e-commerce. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos, Andreia Maria Rodrigues dos Santos

Sara Filipa Lemos Veiga
Towards an Enhanced Risk Assessment Framework for mHealth Apps: Exploring and Adapting the FMEA Approach. MSc in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Liliane Pintelon

Sarah Aguilos
Scenarios For Future Sourcing Strategies In The Context Of The Use Of Green Hydrogen To Achieve Carbon Neutrality In Dortmund By 2035 – Strategic Implications For DEW21. Scenario

1: high tension - narrative and strategic recommendations. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Sofia Santos
Gestão Lean numa empresa de manutenção de sistemas de tratamento de águas residuais. MSC in Quality and Environmental Engineering, ISEL
Supervisors: Isabel M. João

Teresa Maria Favinha Palma Vasa de Jesus
Scenarios For Future Sourcing Strategies In The Context Of The Use Of Green Hydrogen To Achieve Carbon Neutrality In Dortmund By 2035 – Strategic Implications For DEW21. Scenario 4: electrolysis apprehension - narrative and strategic recommendations. MSc in Management, NOVA – School of Business and Economics
Supervisors: António Alvarenga

Tiago Almeida Santos Simões
Roadmap para auxiliar uma organização inserida na Indústria Farmacêutica a iniciar a sua transição rumo à Indústria 4.0. MSc in Industrial Engineering and Management, IST
Supervisors: Tânia Rute Xavier de Matos Pinto-Varela

Tiago Correia de Seabra Duarte Neves
A performance review of Venture Capital and of Governmental VC policy The Case of Portugal Ventures. MSc in Industrial Engineering and Management, IST
Supervisors: Maria Isabel Craveiro Pedro

Tomás Fernandes Miranda
Corporate Social Responsibility in the Food Retail Market. MSc in Program in Data-Driven Marketing, NOVA IMS
Supervisors: Celso Augusto de Matos

Tomás Zaki
Optimizing task scheduling in cloud: A multi-objective approach using hyper heuristics and genetic programming. MSc in Computer Science and Engineering, IST
Supervisors: José Rui Figueira Rui Neves

Theses 2024

PhD 2024

Paulo Lima Brasil Maia de Loureiro
INSIGHTS INTO SCIENCE AND SOCIETY POLICIES: Public participation in science, involvement of non-academics in academic research, and challenging the deficit model in the age of Responsible Research and Innovation, PhD Program in Engineering and Public Policy, IST
Supervisors: Hugo Duarte Alves Horta, Rui Miguel Loureiro Nobre Baptista

João Henrique Pires Ribeiro
Quantitative tools to aid decision-making towards Resilient Supply Chain, PhD in Engineering and Management, IST
Supervisor: Ana Paula Ferreira Dias Barbosa Póvoa

Mariana Bayão Horta Mesquita da Cunha e Silva
Advancing Multi-Objective Optimization: Representation and Preference inclusion methods, PhD in Engineering and Management, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, José Rui de Matos Figueira

MSc 2024

Afonso Maria Resende Faria
Impact of Automated Sorting on Inbound Warehouse Flows: The Case Study of Worten, M.Sc. in Industrial Engineering and Management, IST
Supervisor(s): Daniel Rebelo dos Santos, Susana Isabel Carvalho Relvas

Afonso Souto
Developing a Digital Maturity Model for the Portuguese Manufacturing SMEs: Framework and Pilot Study. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Diogo Gonçalves, Miguel Preto

Alexandre Torrinha
Visualizing Efficiency: Integrating Data Visualization tools in a Digital Twin for Enhanced Decision-Making in Retail Distribution Center. M.Sc. Computer Science, IST
Supervisors: Sandra Gama, Susana Relvas

Ana Canas
Fused Filament Fabrication Life Cycle Cost Modeling: An Application to Non-Pneumatic Tires Development. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Tânia Ramos, Manuel de Figueiredo Sardinha

Ana Catarina Lourenço Teixeira
Exploring Technology Acceptance Models: A Study on RPM-Based Services in Healthcare. M.Sc. in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Salomé Guedes Sequeira de Pádua Azevedo

Ana Margarida Oliveira Ferreira
Analysing the profile of tourists in four-and five-star hotels in the Algarve region: Online reviews and ratings. M.Sc. in Hospitality Management, ESGHT, Algarve University.
Supervisors: Marisol Correia, Ana Isabel Renda

Ana Sara Guedes da Costa Marques
Simulation and Optimization of Inbound Operations in a Pharmaceutical Warehouse: An Alloga-Logifarma Case Study. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Diogo Filipe da Cunha Ferreira

Ana Teresa Nolan Ruas Rego Canha
Avaliação de desempenho de fornecedores de uma empresa da indústria farmacêutica. M.Sc. in Industrial Engineering and Management, IST
Supervisors: João Carlos da Cruz Lourenço

André Miguel Machado Querido
Immigration and Real Estate Prices in Portugal: A Panel Data Analysis. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Ribeiro, Hugo Castro Silva

António Félix Macedo
Valuing data using an MCDA model. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Miguel Mira da Silva, Mónica Oliveira

António Luís Lobo Pimentel
Exploring Data-Driven Approaches for Short-Term Load Forecasting of an Energy Utility's Customer Portfolio. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Inês Isabel Carrilho Nunes, Daniel Santos

Bárbara Azevedo
Drivers and Outcomes of Customer Loyalty in the E-banking context: the moderating effect of Attitude Towards AI, Personalisation, and Financial Literacy. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Celso Matos

Beatriz Lourenço Franco
Benchmarking de Modelos de Previsão: Aplicação ao Planeamento de Capacidade da Manutenção Aeronáutica. M.Sc. Engenharia e Gestão Industrial, Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa
Supervisors: Duarte Dinis, Ana Paula Barroso

Beatriz Lourenço Ribeiro
Modeling social impacts: correlation analysis of child labour and causality in discrimination. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Andreia Maria Rodrigues dos Santos, Inês Isabel Carrilho Nunes

Beatriz Maria Ferreira Vidigueira
Multi-Sourcing Process Control in Bottleneck Environment for Electronic Supply Chains. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas

Beatriz Martins Duarte
Evaluating lean practices in sustainable supply chain management: a multi-criteria decision analysis. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Cátia Rafaela Ferreira Medeiros da Silva Coelho, Miguel Alves Pereira

Beatriz Santos Alves da Cunha
Desenvolvimento de um Projeto Lean no Hospital Lusíadas Lisboa – Serviço de Manutenção e Engenharia Clínica: Estudo de Caso. M.Sc. in Biomedical Engineering, ISEL-ESTeSL
Supervisors: Isabel João

Bernardo Gonçalves Teixeira
Enhancing Warehouse Efficiency through Real-time Flux Control: A Digital Twin Approach. M.Sc. Computer Science, IST
Supervisors: Sandra Gama, Susana Relvas

Bruno Filipe Francisco Reis
Exports and imports effect on performance - A study on Portuguese firms. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Ribeiro, Miguel Torres Preto

Carolina de Oliveira e Barbeira
Say Goodbye to my Little Firm. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Hugo Miguel Fragoso de Castro Silva
Carolina Morgado Carvalho (2024) "Simulação Dinâmica da Utilização de Zeólitos em Processos de Adsorção" M.Sc. in Chemical and Biological Engineering, ISEL-IPL, [Supervisor(s): João Silva, Isabel João].

Catarina de Sousa e Silva Pereira
Innovation for a Sustainable Future: A Global Analysis of Efficiency in the Energy Transition. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Inês Isabel Carrilho Nunes, Miguel Alves Pereira

Cecília Maria Teixeira Pinto
Optimizing Wastewater Network Design for Sustainable Water Reuse in Agriculture. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota

Cláudio José Andrade Pinto
O papel dos animais domésticos nas experiências turísticas de lazer dos seus proprietários. A sua participação no prazer, nas emoções e nas memórias. M.Sc. in Marketing Management, Economics Faculty, Algarve University
Supervisors: Nelson de Matos, Marisol Correia

David Alcalay
Implementação de um CMMS: Um Estudo de Caso no Setor Retalhista. M.Sc. Engenharia e Gestão Industrial, Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa
Supervisors: Duarte Dinis

Diogo de Oliveira Reis
From Theory to Reality: How Is Value-Based Healthcare Currently Being Implemented. A Realist Review of the Literature. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Carl Savage

Diogo Manuel De Freitas Duarte Nunes
[CAPSTONE] - Towards a Distribution Centre Digital Twin at Jerónimo Martins: the case of reception of goods. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Sandra Pereira Gama

Eduarda De Oliva Fonseca dos Santos David
Fit-For-Purpose Water Reuse in Water Stressed Supply Chains: A Case Study on The Textile and Apparel Industry. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Bruna Alexandra Elias Mota

Filipa Rama Marques de Madureira Mexia
Design and Development of a Decision Support System Integrating Macbeth Voting for use in health contexts. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Rafael Alexandre Pires Miranda

Filipa Taveira D'Água
Reducing burnout among Portuguese hospital nurses and physicians during the COVID-19 pandemic: A scoping review and a cross-sectional study. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Diogo Filipe da Cunha Ferreira, Maria Isabel Craveiro Pedro

Gabriel Gioia Ávila Oliveira
Enhancing resilience in education: An econometric study of pedagogical strategies. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Miguel Alves Pereira, Maria da Conceição Andrade e Silva

Gabriel Gustavo Soares Santos
Nudge theory as a change management support tool. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Diogo António Fernandes Gonçalves

Gabriel Kurt
Football stocks and their impact on portfolio risk and return: a case study of selected European clubs. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Ribeiro, Inês Isabel Carrilho Nunes

Garcia Lufuankenda Rogério
Cooperation for the Internationalization of Portuguese SMEs: Learning Experiences from PME Connect. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Paulo Alexandre Fernandes Varela Simões Caldas

Gonçalo de Matos Silva Sousa Félix
Public Investment in sports and culture and public health – a longitudinal study. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: António Sérgio Ribeiro

Guilherme Gomes Correia
Planeamento de capacidade da Manutenção Operacional do setor aeronáutico: Valorização de dados numa perspetiva de melhoria do processo de decisão. M.Sc. Engenharia e Gestão Industrial, Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa
Supervisors: Duarte Dinis

Helena Isabel Peixoto da Silva
Labour-replacing automation and the future of employment: A firm-level analysis for Portugal. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Hugo Miguel Fragoso de Castro Silva, Pablo Casas Aljama

Helena Tello
Mitigating vandalism in Lisbon's social housing elevators: Developing contextually tuned nudge solutions leveraging emotional responses. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Diogo Gonçalves

Inês Freitas da Silva Mendes
Methodology for Waste Management and Reduction in a Retail Operations Warehouse: The Case Study of Worten. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Afonso Barroso Worten

Inês Ramos Pina
Competition Law Enforcement and Notable Competition Cases in the Platform Economy. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Maria Margarida Martelo Catalão Lopes de Oliveira Pires Pina

Inês Sofia Venâncio Serol
Environmental assessment of pharmaceutical packaging and analysis of innovation drivers in firms' investment. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Andreia Maria Rodrigues dos Santos, Inês Isabel Carrilho Nunes

Isabel Margarida Vieira Gomes
Analysis and improvement within food retail store management. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas

Joana Martins Santos
Strategic Sensor Placement Problem in Waste Management. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos

Joana Sofia Lemos Alves
Integrating Clinical and Non-clinical Risk Management: An MCDA Framework using ELECTRE TRI nC. M.Sc. in Industrial Engineering and Management, IST
Supervisors: José Rui De Matos Figueira, Miguel Alves Pereira

João Eduardo Mortágua Silva
Mapeamento, Análise e Melhoria do Planeamento de Curto Prazo da Manutenção Aeronáutica. M.Sc. Engenharia e Gestão Industrial, Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa
Supervisors: Duarte Dinis

João Francisco Antunes Ferreira de Oliveira Belo
Exploratory Study to assess willingness to share health data digitally collected - The Portuguese Case. M.Sc. in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Salomé Guedes Sequeira de Pádua Azevedo

João Francisco Peixoto Imaginário
Optimizing Green Hydrogen Supply Chains in Portugal: Balancing Economic Efficiency and Water Sustainability. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Tânia Rute Xavier de Matos Pinto Varela, Nelson Martins

João Moreno Camacho de Campos Trindade
Estratégia e Modelo de Expansão Nacional de uma Associação Sem Fins Lucrativos: Caso de Estudo Just a Change. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Paulo Alexandre Fernandes Varela Simões Caldas

João Pedro Ramos de Campos e Sousa
Modelo de Apoio à Decisão de Manutenção Industrial: O Caso do Parque de Madeiras do Complexo Industrial de Setúbal da Navigator Company. M.Sc. in Industrial Engineering and Management, IST
Supervisors: João Carlos da Cruz Lourenço

José Luís Gomes Leal da Costa
[CAPSTONE] - Towards a Distribution Centre Digital Twin at Jerónimo Martins: The case of the allocation of goods. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Sandra Pereira Gama

José María Díaz-Fernández Torrijos
Sistema de evaluación multicriterio de la Responsabilidad Social Corporativa. M.Sc. en Ingeniería Industrial, University of Castilla-La Mancha
Supervisors: María Carmen Carnero

José Ricardo Ferrari Longhini
Viability of Landfill Biomethane Plants and Potential Environmental Impacts in São Paulo, Brazil. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Maria Isabel Craveiro Pedro

Laetitia Claire Bernadette Masarweh
Boost Strategic Decisions with Supply Chain Digital Twins. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Diana Jorge, Susana Relvas

Lenira Simone Soares Gomes Sousa de Barros (2024).
"Implementação do Sistema de Gestão Ambiental num Concessionário e Oficina automóvel" M.Sc. in Quality and Environmental Engineering, ISEL-IPL
Supervisor: Isabel João, Hugo Padrão

Leonor Loureiro Rodrigues
Demand prediction and capacity planning of home hospitalization: the Portuguese case. M.Sc. in Biomedical Engineering, IST
Supervisors: Ana Paula Ferreira Dias Barbosa Póvoa, Mariana Saraiva

Luís Filipe Fernandes Monteiro
Avaliação multicritério de sistemas de transporte urbano com foco no sistema Personal Rapid Transit: Aplicação à ligação Estação do Oriente - Aeroporto de Lisboa. M.Sc. in Industrial Engineering and Management, IST
Supervisors: João Carlos da Cruz Lourenço

Luiz Guilherme de Freitas Andrade Pires
Carbon Leakage: Empirical Evidence from the European Union Emissions Trading System (EU ETS). M.Sc. in Industrial Engineering and Management, IST
Supervisors: Inês Isabel Carrilho Nunes

Manuel Espadas López
Benchmarking multicriterio de sistemas de gestión del mantenimiento asistidos por ordenador (GMAO). M.Sc. en Ingeniería Industrial, University of Castilla-La Mancha
Supervisors: María Carmen Carnero

Manuel Garcia
Higher Education Entrepreneurship Observatory. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Susana Relvas, Marta Ramilo Abrantes

Maria Antónia Ribeiro Marques
Marketing Digital e Inteligência Artificial: Um estudo das implicações para o futuro das Start-ups nascidas em Incubadoras". M.Sc. Gestão, Universidade da Beira Interior
Supervisors: Vítor Manuel Pinto de Figueiredo, Dina Batista Pereira

Maria Beatriz Bonança Castanho Pires Sequeira
Jobs Across Borders: Analysing the Influence of Immigration on Occupational Unemployment in Portugal. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Ribeiro, Hugo Castro Silva

Maria Beatriz Silva Oliveira
From maps towards decision-making: Developing a multi-methodology framework to help decision-makers design and select spatial based policies in pandemic contexts. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Manuel Luís Castro Ribeiro

Maria Francisca Belém de Gouveia Franco Brígida
Logistics Distribution Model for Worten's Own Brands on European Marketplaces: The Case Study of Worten. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Diana Rita Ramos Jorge, Susana Isabel Carvalho Relvas

Maria Inês Carvalho Neto de Castro Tavares
How Efficient is the Sustainable Management of Healthcare Supply Chains of United Nations Member States?. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Ana Isabel Cerqueira de Sousa Gouveia Carvalho, Miguel Alves Pereira

Maria Madalena Ferreira Graça Nunes
Routing and Scheduling of Home Hospitalization visits: The Case Study of CUF. M.Sc. in Biomedical Engineering, IST
Supervisors: Daniel Rebelo dos Santos, Mariana Saraiva

Maria Margarida Gomes Graça
Melhoria da Eficiência Operacional numa Unidade Industrial do Sector Farmacêutico. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Amílcar Arantes

Maria Teresa Ferreira Roquette Madeira
Driving Sustainability: A Comparative Analysis of Electric vs. Combustion Vehicles: Case Study CTT. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Andreia Maria Rodrigues dos Santos, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Maria Vitória Pinto Miranda
Deterministic and Stochastic Environmental Assessment of a Machine Tool. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Andreia Maria Rodrigues dos Santos, Cátia Rafaela Ferreira Medeiros da Silva Coelho

Mariana Alexandra Baptista de Oliveira
Enhancing Predictive Efficiency Analysis in Healthcare with DEA and Machine Learning. M.Sc. in Biomedical Engineering, IST
Supervisors: Miguel Brau Canadas Alves Pereira, José Rui De Matos Figueira

Mariana Dias Gomes Candeias
Application of Project Management principles to enhance environmental sustainability at music festivals. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos

Mariana Pina Camarneiro
Decision-Support Tool for Sustainable Supply Chain Design and Planning: An Optimization-Simulation Approach. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Cátia Rafaela Ferreira Medeiros da Silva Coelho, Miguel Vieira

Mariana Rodrigues Pereira
Enhancing Emergency Department Efficiency through Participatory Simulation Techniques at ULSSM. M.Sc. in Biomedical Engineering, IST
Supervisors: Miguel Brau Canadas Alves Pereira, Rui Tato Marinho

Mariana Simões Lopes
Decoding judicial efficiency: A data-driven analysis of Portuguese first instance courts. M.Sc. in Data Science and Engineering, IST
Supervisors: Miguel Alves Pereira, Maria Conceição Silva

Marina Fragkiskou
The relationship between the employees' perception of gamification and their intrinsic motivation at work: a systematic literature review. European Master of Science in Information Systems Management, NOVA IMS
Supervisors: Celso Augusto de Matos, Anton Manfreda

Marta Catarina Lopes Augusto
Developing a Business Case for a Reuse Centre Integrated into Municipal Solid Waste Management. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Tânia Rodrigues Pereira Ramos

Marta Ferraz Alves
Improving Waiting List Management through Master Surgery Scheduling. M.Sc. in Biomedical Engineering, IST
Supervisors: Daniel Rebelo dos Santos Rui Cortes

Marta Sofia da Silva Santos
Monte Carlo Simulation for Sustainable Closed-Loop Supply Chain Optimization: A Decision Support Tool. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Cátia Rafaela Ferreira Medeiros da Silva Coelho, Miguel Vieira

Matilde Da Silva Rodrigues Fróis Reis
The Impact of Digital Technologies on Employment Dynamics in Portuguese Municipalities. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Ribeiro, Hugo Castro Silva

Matilde Pitôrra
Mitigating Desirability Bias in Scenario Planning: Leveraging NLP and Personality Diversity. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Marisa Isabel Clemente da Silva

Matilde Ribeiro Godinho
Market Power Dynamics in the Innovation-Survival Nexus of Portuguese Firms. M.Sc. in Industrial Engineering and Management, IST
Supervisors: António Sérgio Constantino Folgado Ribeiro, Hugo Miguel Fragoso de Castro Silva

Mattia Mauri
On the use of Natural Language Processing for improving automatic maintenance report labelling in the aviation field. M.Sc. in Management Engineering, Scuola di Ingegneria, Università degli studi di Bergamo
Supervisors: Roberto Sala, Fabiana Pirola, Duarte Dinis

Miguel Joaquim Roque Fernandes
Advancing the use of MACBETH in health settings: A new decision support system to assist moving from qualitative judgments towards numerical value functions. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, João Carlos Nunes Bana e Costa

Nguyen Pham
The implementation of artificial intelligence to simplify the first level support of a management system at a large company. European M.Sc.. in Information Systems Management, NOVA IMS
Supervisors: Celso Augusto de Matos, Anton Manfreda

Patrícia da Conceição Silva
Estratégias a desenvolver pelo hotel Algarve Race Resort para combater a sazonalidade dos eventos de automobilismo/motociclismo. M.Sc. in Hospitality Management, ESGHT, Algarve University
Supervisors: Celísia Baptista and Marisol Correia

Paulo Rodrigo Freitas Lopes
Omnichannel warehouse consolidation flows design with process engineering and analytics. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Susana Isabel Carvalho Relvas, Raquel Bernardino

Pedro Miguel Padrão Ribeiro da Cunha
Sustainable synergy: A computer-based heuristic approach to optimize padel club scheduling and manage court energy consumption. M.Sc. in Mechanical Engineering, IST
Supervisors: Miguel Alves Pereira, Carlos Santos Silva

Raquel Carrión Pérez
Evaluación de Enterprise Resource Planning de Software libre. M.Sc. en Ingeniería Industrial, University of Castilla-La Mancha
Supervisors: María Carmen Carnero

Rita Alexandra Santinhos Costa
Exploring Innovative Ways to enhance Multiple Criteria Decision Analysis and MACBETH in Health Settings with Big Data and Data Intelligence. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Jayanht Raghothama

Rui Manuel Brioso Infante
Enhancing Argumentive Delphi processes with Dialogue Mapping: Setting discharge criteria for Day Hospital patients with follicular lymphoma. M.Sc. in Biomedical Engineering, IST
Supervisors: Mónica Duarte Correia de Oliveira, Ana Cristina Frazão Lopes Alho

Sarah Pereira
The Psychometric Profile of Portuguese Managers and Organizational Effectiveness: An Empirical Study. M.Sc. in Engineering and Management of Innovation and Entrepreneurship, IST
Supervisors: Diogo Gonçalves

Tiago Mendes Rodrigues
Optimizing football player scouting for clubs with limited resources. M.Sc. in Industrial Engineering and Management,IST
Supervisors: José Rui De Matos Figueira, Miguel Alves Pereira

Tomás Fernandes Miranda
Corporate Social Responsibility in the Food Retail Market. M.Sc. in Program in Data-Driven Marketing, NOVA IMS
Supervisors: Celso Augusto de Matos

Tomás Francisco Da Mota Rodrigues Alves Inácio
The role of costing in implementing value-based healthcare: challenges and opportunities. M.Sc. in Biomedical Engineering, IST
Supervisors: Ana Catarina Lopes Vieira Godinho de Matos, Marisa Isabel Clemente da Silva

Vasco Miguel Ferreira Dingle
Enhanced Hospital Efficiency Analysis by Targeting Worst Practices: Integrating Operational Research and Advanced Analytics. M.Sc. in Biomedical Engineering, IST
Supervisors: Miguel Brau Canadas Alves Pereira

Verónica Ferreirinho Nunes
Plano de Exploração para a Comercialização de uma Molécula Inovadora para Combater a Doença de Parkinson: Estudo de Caso da Molécula Nsv-1 E Dispositivo Intranasal da Neurosov. M.Sc. Ciências Biomédicas, Universidade da Beira Interior
Supervisors: Dina Batista Pereira, Ana Clara Braz Cristóvão

Vitor Gabriel Anunciação Ferreira
Estratégia e Modelo de Negócios do Projeto SHELTER. M.Sc. in Industrial Engineering and Management, IST
Supervisors: Paulo Alexandre Fernandes Varela Simões Caldas

Funding

The list below includes external competitive funds and industry and public contracts awarded or actively running in 2023 & 2024.

Research Projects

Sustainable Intelligent Management of Indoor Air Quality for the Culture and Creative Industries (SIMIACCI)
HORIZON; CL2; GA:101178095
Coordinator

Biomimicry and carbon adsorbent ecomaterials for a climate-neutral economy (CSTONE)
HORIZON: MCA-SE; GA: 101086302
Coordinator

Developing Skills and Capabilities for Innovative Air Mobility (AIRMOB)
ERASMUS; GA: 101194074
Partner

Entrepreneurial and innovation skills for developing the new value chains of mobility, health and manufacturing (HEI4Future)
EIT Urban Mobility; GA: 19669
Partner

Healthy Cities Generator €VALUE: €conomic Valuation for Life Expectancy in Urban Environments (HCG€)
EIT Urban Mobility; GA: 23829
Partner

UNITA Universitas Montium (UNITA)
ERASMUS; GA:101124853
Partner

United Nations Environment Programme (UNEP) ISLANDS - Atlantic Regional Project
UNEP; GEF 10848
Coordinator

Fundação para a Ciência e Tecnologia (FCT) Towards a Smart Waste Collection Route Planning System (WSmart Route+)
FCT; 2022.04180.PTDC
Coordinator

Challenges for energy access in a decarbonized economy (CHARADE)
FCT; 2022.08870.PTDC
Coordinator

Entrepreneurship, Demographics and Ageing (Age)
FCT; EXPL/EGE-ECO/1179/2021
Coordinator

Centro de Estudos de Gestão do Instituto Superior Técnico(CEGIST)
FCT; UIDB/00097/2020
Coordinator

Centro de Estudosde Gestão do Instituto Superior Técnico (CEGIST)
FCT; UIDP/00097/2020
Coordinator

Improving MEDiterranean irrigation and Water supply for smallholder farmers by providing Efficient, low-cost and nature-based Technologies and practices (Med-wet)
FCT; PRIMA/0008/2020
Partner

Pharmaceutical Supply Chain of the Future (Future Pharma)
FCT; PTDC/EME-SIS/6019/2020
Partner

Spatial Data Science Services for COVID-19 Pandemic (SCOPE)
FCT; DSAIPA/DS/0115/2020
Partner

Artificial Intelligence for Blood Management(LAIfeBlood)
FCT; DSAIPA/AI/0033/2019
Partner

Digitalisation in the Portuguese Labour Market: Potential Transformative and Destructive Effects
FFMS;
Coordinator

Start to Spark Biomedical Challenge
IST
Coordinator

Industry & Public Contracts

Circular Economy Action Plan for Portugal
Agência Portuguesa Do Ambiente (APA)

Environmental and Social Life Cycle Assessment
Association ARDITEC

Competition Economics and Industrial Economics
LisbonEconomics

Consenso sobre Inflamação do Tipo 2 e Gestão de Doentes – Contexto Português (INFLAT2-PT)
Instituto de Saúde Baseado na Evidência/SANOFI

Máquina Reciclar
Câmara Municipal de Oeiras

Análise de Ciclo de Vida de novo revestimento desenvolvido no projeto IPaintS
SIKA