



Biennial Report 2021-2022



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President's Foreword

José Rui Figueira

It was a pleasure and a great honour to serve CEGIST, the Centre for Management Studies of Instituto Superior Técnico, and its members over the last four years as President, a legacy that will now be in the hands of my colleague Tânia Ramos for the next two years.

CEGIST is an FCT-funded multidisciplinary research unit that was evaluated as Very Good in the last evaluation exercise (2018).

It is housed in Instituto Superior Técnico (IST), the largest and most renowned school of Engineering, Science and Technology in Portugal.

CEGIST's overall objective is to promote research opportunities associated with the development of the knowledge, processes, tools and methods required to make decisions and shape public policies. These include the configuration of organizational structures and normative systems, design of engineering systems in sustainable patterns, and addressing problems associated with the information-intensive technology-based economy. Combining its different strengths, CEGIST manages a diverse range of research areas to provide such solutions.

Since 2020, the core research of CEGIST has been organized in five areas:

- DECISion science and management engineerING (DECISING),
- Systems modelling and Methods of Operations reSearch And analytICs (MOSAIC),
- Operations, Logistics and Supply Chain Management (OpLog);
- Strategy, Entrepreneurship and Innovation (SEI), and,
- SENSU (Strategic approaches to ENvironmental and SUstainability). In 2022, this was renamed SUSTAINS (SUSTainable solutions and Assessment for circular ecoNomy Systems) to emphasize the keywords Sustainability and Circular Economy.

"CEGIST's overall objective is to promote research opportunities associated with the development of the knowledge, processes, tools and methods required to make decisions and shape public policies"



About CEGIST

To help CEGIST better focus its activities, strengthen links between areas and promote engagement with society, a Commission of Principal Investigators of each research area was formally created in 2022.

In 2021 CEGIST launched a new more intuitive and user-friendly website (cegist.tecnico.ulisboa.pt), that includes detailed information about the work carried out, CEGIST research areas, seminars, projects, and events. The site in tandem with LinkedIn and Twitter accounts serves to communicate activities and news involving the entire CEGIST community.

In line with its engagement strategy, CEGIST organized the first CEGIST Day in 2022, an awayday where CEGIST Researchers brainstormed, discussed strategies and shared ideas for CEGIST's future. Additionally, CEGIST members have actively participated in several outreach initiatives to bring Science and Research closer to the general public, such as the IST Anniversary/Open Day, TV interviews, the International Science Festival and podcasts.

In line with international best practices and to provide professional support to CEGIST researchers, a shared Pre-Award Office was established in mid-November 2021. The office aims to promote, engage and support the preparation of competitive applications to National and International funds and thus contribute to the prosperity, growth and sustainability of CEGIST. To this end,

it has established an engagement and capacity-building strategy with the CEGIST community for different types of grants and funding sources.

Given its commitment to training the next generation of researchers and professionals in Engineering and Management, the centre strives to provide a supportive atmosphere for PhD students to develop their projects and we have seen a growth in the number of PhD students. Finally, I wish to express my appreciation for the contributions of all members of CEGIST, starting with my colleagues on the Executive Committee, the Scientific Committee, our Associate Members, all the PhD students, and the staff, without whom this path would have certainly been much more difficult. I can safely say that CEGIST would not be what it is if it weren't for the excellence of its members.



Vision

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

Mission

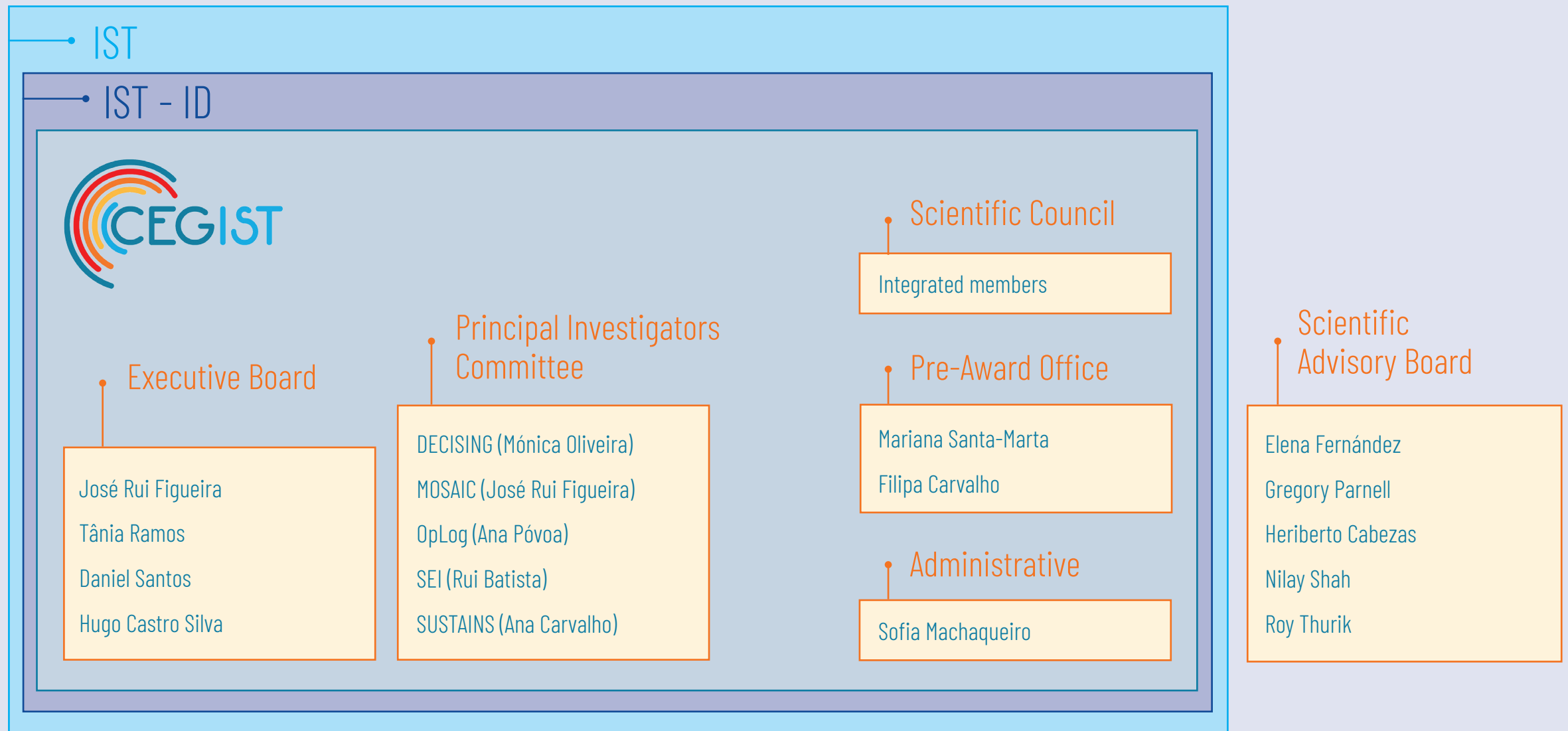
Our mission is to explore and reinforce the links between management science and engineering approaches to stimulate creativity in problem-solving, while actively collaborating with firms and stakeholders to transfer technology, add value to society, and support the development of policy. Through our research, we aim to solve society's problems and contribute to sustainable development.



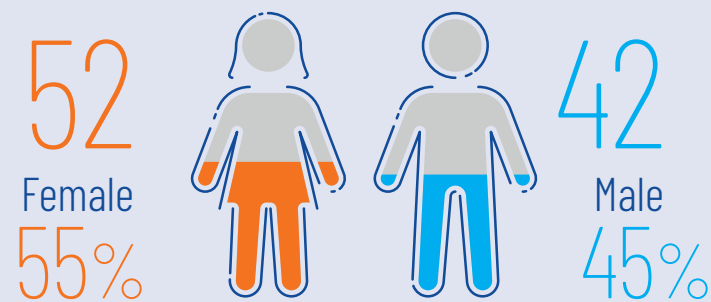
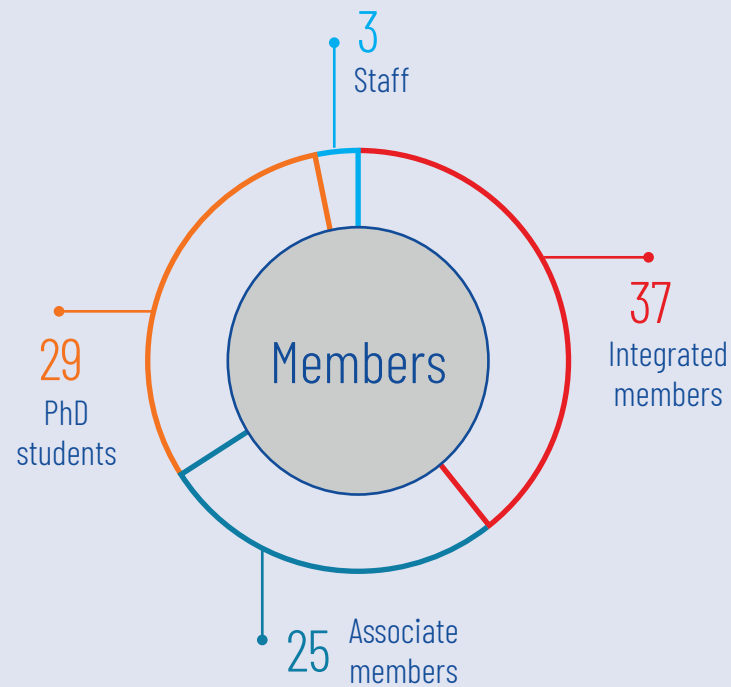
Organization and Governance

CEGIST, founded in 1995, is a multidisciplinary research centre located in the largest and most renowned Engineering, Science and Technology school in Portugal, the Instituto Superior Técnico (IST). IST develops its RD&I activities through Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento (IST-ID). CEGIST is governed by a two-year elected executive board, aided by a committee composed of the principal investigators of each

research group. The scientific council consists of the centre's integrated researchers. An external advisory board provides guidance on long-term issues and strategy development. The Pre-award Office promotes and facilitates the submission of applications from the CEGIST research community to external funds. These bodies provide effective and transparent governance, aligning CEGIST's activities with its vision and mission.



Facts and numbers



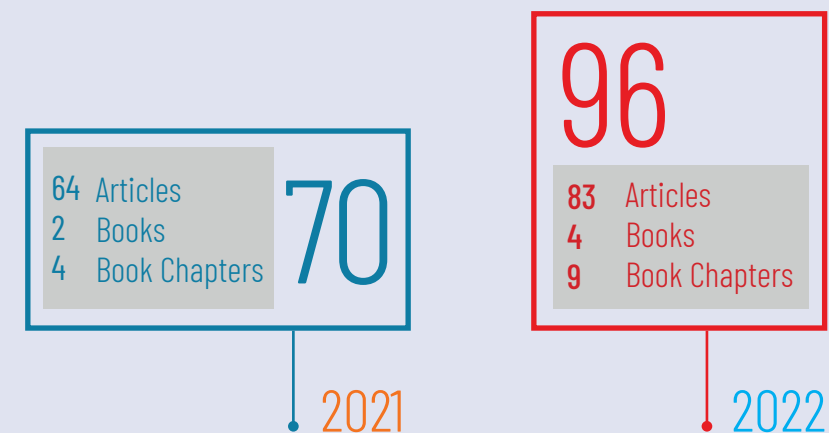
Nationalities

Note: Team members at 31.12.2022

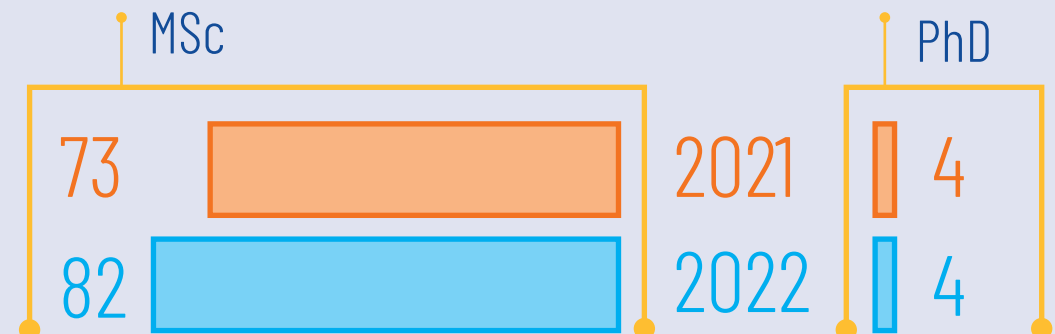
Subjects areas of publications (Scopus)



Publications



Theses



Research Groups

CEGIST core research is focused on five main areas: DECISion science and management engineeriNG (DECISING), Systems modelling and Methods of Operations reSearch And analytICs (MOSAIC), Operations, Logistics and Supply Chain Management (OpLog), Strategy, Entrepreneurship and Innovation (SEI), and Strategic approaches to ENvironment and SUstainability (SENSU) that was renamed SUSTainable solutions and Assessment for clrcular ecoNomy Systems (SUSTAINS) in 2022.



DECISING | DECISion science and management engineering



Mónica Oliveira

Mónica Oliveira is Full Professor in Decision Sciences at the Engineering and Management Department of IST, the coordinator of DECISING at CEGIST and a research collaborator of the IST Institute of Biomedical Science. She coordinates the health network of the University of Lisbon, the PhD Engineering and Management and the Clinical Engineering specialization at Técnico.

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 collaboration.

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, and policy evaluation.

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

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 behavioural operational research

Achievements

In the 2021-22 period DECISING major achievements included: a) leading role in large scale national and international research projects, developed in collaboration with European health technology agencies and Portuguese hospitals to evaluate novel medicines and medical devices, in H2020 IMPACT-HTA and FCT MEDI-VALUE; b) leadership of the Partnership for Health Systems Sustainability and Resilience in Portugal, an initiative from the World Economic Forum, London School of Economics, AstraZeneca which engaged 40 stakeholders and experts in designing policy recommendations to improve sustainability and resilience, an impactful and media-covered project; c) active organization of international events, including PhD Summer school of the European Society for Engineering Education, and International Conference on Actions for Gender Equality in Engineering; c) development of new decision modelling approaches and knowledge, designed to address real challenges, such as the collaborative development of composite indices from qualitative value judgements published in Bana e Costa et al. (2022), the book "Decision Making for Enhanced Health Security" (Springer) by G. Montibeller, and lean waste assessment in the pharmaceutical industry by (Muiambo, João et al., 2022); d) scientific award 2022 Isabel Themido by the Portuguese Association of Operational Research to article Vieira, Oliveira and Bana e Costa proposing the Collaborative Value Modelling framework (published in OMEGA); f) Consultancy work, which included the design of methods for promoting consensus ; f) leading innovative pedagogical initiatives, linked with research, such as "ANIPHI: An innovative pedagogical platform based on the Delphi method to support animal welfare teaching" (Vieira et al., 2022) and the pedagogical innovation project "Implementing flipped learning in teaching" at IST.

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 got a Full Professor position).

The systems modelling and Methods of Operations reSearch And analytICs (MOSAIC) research group 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.

Highlights

A new methodology for modelling the impact of Covid in Portugal (Figueira et al. 2022).

Multi-objective methods and algorithms for dealing with optimization problems with quantitative and qualitative information; (Mesquita da Cunha et al, 2022).

A method to deal with robustness in the decision space of multi-objective integer programming problems (Stiglmayr et al., 2022).

A stochastic model for operating room planning (Santos, D., and Marques, I. 2022).

Methods

Multi-objective Optimization

Combinatorial Optimization

Mixed Integer Linear Programming

Robust and Stochastic Optimization

Metaheuristics

Achievements

The MOSAIC research group had several major achievements over the last two years (2021-2022), in particular two national research projects funded by the Portuguese National Foundation for Science and Technology (FCT). One of these projects was hSNS – Portuguese public hospital performance assessment using a multicriteria decision analysis framework (<https://hsns.eu/>). One of the most important outputs of hSNS was the construction of a COVID-19 impact index based on OR and Analytics techniques, in a collaboration between Instituto Superior Técnico and the Portuguese Medical Association: <https://indicadorcovid19.tecnico.ulisboa.pt/>. The second project - DOME - Discrete Optimization Methods for Energy Management - was an FCT collaborative project between CEGIST, CERIS, and INESC-ID. The DOME (<https://www.inesc-id.pt/projects/1108025/>) project tackles the issue of energy management in data centers. Under these two research projects and many other activities within the MOSAIC research group, their members published more than 30 papers in top peer-reviewed journals. For the promotion of single and multi-objective combinatorial optimization, the MOSAIC research group of CEGIST along with the CMAFcIO research center from the Faculty of Sciences of the University of Lisbon launched a series of Workshops on the topic “Workshops on Combinatorial Optimization”, already with three successful editions comprised of many national and international researchers. In terms of prizes, Ana Sara Costa was awarded by the International Society of Multi-Criteria Decision Making with the prize of the best PhD thesis worldwide. The MOSAIC research group also frequently contributes to outreach activities and, in these past two years, participated in Técnico Day (May 2022), in FIC.A – Festival internacional de Ciência 2022, and in the IXth Mathematics Fair, which took place at the Museum of the History of Science, in Lisbon (October 2022), with activities such as “Come build a Tangram” and “To Cut or not To Cut: That is the Question”.

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.

OpLog research group at CEGIST conducts multidisciplinary research driven by the challenges faced by industry and services 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 contribute to strengthening the theoretical foundations necessary for supporting sound decision-making, that is further applied to improve industrial practice. Our research outcomes consist in developing decision-support products and processes that foster effectiveness and efficiency, assisting informed and systematic decision-making. 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.

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.

Diversified high-quality research.

Collaboration with a variety of international research partners.

Close collaboration with industrial partners.

Methods

Single and Multi-objective Optimization

Stochastic and Robust Optimization

Case-Study Analysis and Action Research

Data Analytics and Forecasting

Environmental Life Cycle Assessment

Achievements

In the 2021-22 period OpLog 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 leadership for the academic community, through the increase number of high-quality peer review publications accounting for a higher number of citations; host and organisers of the 3rd Ph.D. School in Sustainable Supply Chain (SSC) and the 3rd International Conference in Sustainable Supply Chain (2021), from the Euro-Working Group in Sustainable Supply Chain; 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 (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 four OpLog members as being within the 12 Best Young Women working in Operations Research (WISDOM Forum - EURO Society); 3) being national services providers for industry, through research-developed projects funded by industry leading to novel actionable research and practice insights: ValorPneu - Study of ValorPneu's Collection Logistics Network – software Prototype); SDR - Deposit Refund System, for Glass (APED); Research for national industry sectors consortia - MobFood - National Agri-food Sector; 4) being very active in outreach activities, with activities for the youngsters (e.g. "Explain it like I'm five" - with the subject "How can we choose the best path?"; "How to manage the chocolate Supply Chain?"); 5) invested in the establishment of new Laboratory for Research, Teaching and Societal Impact for Logistics and Operations - collaboration agreement established in 2022 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, University of Lisbon. He is Editor of *Small Business Economics - An Entrepreneurship Journal* 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 corporate strategy, entrepreneurship, innovation, and their relationship with industry dynamics, labour markets, and economic development.

Our research programs use quantitative empirical methods - mostly in applied econometrics - to examine the impacts of technological change, innovation and human capital on issues such as entrepreneurial success, internationalisation and globalisation, productivity and wages, industry evolution, and regional development. We aim to offer new insights into the roles played by technology, knowledge and human resources in the formation of innovative firms and competitive regions, contributing to the formulation and assessment of policies in industry, science, and higher education.

Highlights

Diversified high-quality research.

Public policy implications.

Advanced training and supervision of multiple research students.

Collaboration with a variety of international research partners.

Methods

Advanced econometrics using micro data

Game theory and experimental economics

Qualitative-comparative analysis using fuzzy sets

Multicriteria satisfaction analysis (MUSA)

Data Envelopment Analysis (DEA)

Achievements

In the 2021-22 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. Researchers in the area received, managed, and completed several projects awarded competitively in topics such as Entrepreneurial Human Capital, Demographics and Entrepreneurship, Technological Change and Skills, Advances in Vertical Differentiation, Challenges for Energy Access in a Decarbonized Economy, and Improving Irrigation and Water Supply for Smallholder Farmers Using Nature-based Technologies and Practices. João Leitão, a member of the SEI area, was awarded the 2022 ERICS Prize (Estímulo e Reconhecimento da Internacionalização em Ciências Sociais) of the Instituto de Ciências Sociais, University of Lisbon. Outreach activities included media appearances and newspaper articles communicating about technology and automation, entrepreneurship, demographics, employment, and productivity, as well as contributions to institutional blogs, newsletters, and bulletins.

SUSTAINS | SUSTainable solutions and Assessment for clrcular ecoNomy Systems



• Ana Isabel Carvalho

Ana Isabel Carvalho is Associate Professor at Instituto Superior Técnico – University of Lisbon. Former coordinator of the BSc and MSc of Industrial Engineering and Management 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.

Highlights

Proposal of Circular Economy Action Plan for Portugal.

Characterization of the hazardous chemicals production and waste management in Atlantic Islands.

Technological development of a recycling machine.

Participatory methodologies and Life Cycle Assessment methods have been applied has main methodologies.

Involved in the Doctoral Degree in Sustainability Science of University of Lisbon.

Methods

Life Cycle Costing

Environmental Life Cycle Assessment

Social Life Cycle Assessment

Achievements

SUSTAINS started its activities in 2022. In 2022, SUSTAINS has been involved in several projects. The main project has been the coordination and development of a proposal for the Circular Economy Action Plan (CEAP) for Portugal. The Portuguese Environment Agency (APA) has supported this work of Técnico, coordinated by Ana Carvalho. This project has involved a team of 9 persons and has involved the interaction with more than 500 stakeholders. Another project was ISLANDS, which aimed at Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States (ISLANDS) in the Atlantic. SUSTAINS conducted field work with interviews, focus groups and workshops to characterize the local systems of hazardous chemicals production and waste management. Moreover, SUSTAINS' group was responsible for the stakeholders' engagement plan proposal and the gender balance assessment and proposal. This project has been supported by the United Nations Environment Programme (UNEP). SUSTAINS is co-responsible for the Social Innovation Lab (SILAB@Tecnico). During 2022 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. Along with the different projects several publications in top journals have been published and participation in conferences have been performed. The PI has been invited to be a Professor in the Doctoral Degree in Sustainability Science of University of Lisbon.

SENSU | Strategic approaches to ENvironment and SUstainability



Maria Rosário Partidário

Maria Rosário Partidário is a Full Professor at the University of Lisbon and international consultant, with long track record on Strategic Environmental Assessment (SEA), as a trainer, consultant and author. She created the ST4S methodology, advocating strategic thinking in SEA for sustainability.

SENSU develops research on environmental and sustainability policy, planning and assessment, exploring various features of the environment-sustainability nexus, aiming to contribute to finding and promoting pathways for sustainability. SENSU is dedicated to research on sustainability transitions using strategic lenses, conducting theoretical and practical research in three main topics: 1) Strategies in Transitions for Sustainability; 2) Strategic Environmental and Sustainability Assessment; and 3) Social Innovation, resilience and governance. Our research is grounded on four key scientific foundations: strategic thinking, complexity theory, resilience theory and systems thinking. We see our role as changing agents, contributing to innovative thinking in environment and sustainability, creating a strategic and systems thinking culture in policy, planning and assessment, looking at environment not as a barrier but as an added-value, and at sustainability not as an alternative form of environmental management, but as the intended outcome in desirable futures. We conduct participatory action research and use qualitative and transversal approaches, following constructivism and transversality paradigms to offer new development insights.

Highlights

Strategic Thinking for Sustainability (ST4S) bringing innovation in Strategic Environmental Assessment, with application to sectoral policies and planning as well as in business strategies.

Social learning and innovation leading sustainability transition and transformative change.

Participatory action research in engaging multiple actors and knowledges in co-creation for sustainability.

Sustainability Transitions in the Making: Instilling Innovation for Change in the Public Sector.

Methods

Strategic Thinking for Sustainability (ST4S)

Strategic Environmental Assessment

Stakeholders Network Analysis

Transformative change for Sustainability transitions

Achievements

SENSU's major achievements in 2021 are reflected in publications activities as well as in national and European research projects. Two peer reviewed journal papers on the role of sustainable development goals in environmental assessment, as well as on the transforming role of impact assessment were published in Q1 journals and two book chapters were completed on the spectrum of strategic environmental assessment and on the ST4S methodology. Also in 2021 the collective edition of a book on Ecosystem Services in establishing rural-urban synergies was initiated, under contract with Springer, as an outcome of the European H2020 ROBUST project. Research work concentrated in five research projects. TRUST (social innovation sTRategies for sUSTainability transitions) as a national research project to investigate how community based social learning and innovation has been leading sustainability transition initiatives in urban and rural Portugal. ROBUST as a H2020 project to analyse the linkages between urban and rural areas and explore its synergies. In this project SENSU coordinated the community of practice Ecosystem Services leading research with six partner countries. An European Erasmus + capacity-building project on strategic environmental assessment, between three universities in Europe and six universities in Asia (two in each of the following three countries: Bangladesh, Laos and Vietnam) continued to be carried out. The BRIDGE (bridging science and local communities for wildfire risk reduction), as a national research project, gets funded in 2021. BRIDGE is a participatory action research project, developed in the municipality of *Monchique*, designed to develop an approach to engage locally based communities and integrate different forms of knowledge and action with a focus on forest fire risk reduction. Finally the leading coordination by SENSU of an Horizon project – BioValue - was submitted, which was awarded in 2022.

Education

One of CEGIST's main vehicles for knowledge transfer to society is through higher education. Our researchers have a long 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 effectively manage such systems.

Education

MSc Programs

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.

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.

6

MEGIE- Masters in Engineering and Management of Innovation and Entrepreneurship

45

MEGI- Masters in Industrial Engineering and Management

MEBiom- Masters in Biomedical Engineering

14

3

MEGE- Master in Energy Engineering and Management

14

Others

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.

Community and Outreach 2021

- Cegist internal seminar
- Outreach activities (selected)



October 12-17, 2021

FIC.A - Festival Internacional de Ciência de Oeiras
Maria do Rosário Partidário presented the project ROBUST - Unlocking Rural-Urban Synergies
Tânia Ramos presented the project WSMART ROUTE - Waste Collection based on a Real Time Route Planning System

Novembro 29-30, 2021

"Novos Desafios em Saúde na ULisboa"
Mónica Oliveira as Chair of the Event that included the 3rd edition of StartHealth@ULisboa and the 5th National Conference of redeSAÚDE

February 20, 2021

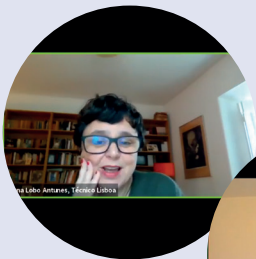
Explain it like I'm five years old
EP. 16 Tania Ramos - "How can we choose the best path?"

July 14, 2021

COVID-19 Indicator
Partnership between the Portuguese Medical Association (OM) and Instituto Superior Técnico

Novembro 8, 2021

"90 seconds of Science" @ Antena1
EP. 1191 Daniel Santos - ImproveOR project uses artificial intelligence to improve access to patients scheduled for surgeries



2022



February 10, 2022
Margarida Catalão-Lopes wrote a Blog article entitled "A Teoria de Jogos e as Suas Aplicações"



April 26, 2022
Ana Carvalho e Marta Brazão wrote a blog article "A (falácia) da substituição dos materiais como promotora da circularidade"



October 10 and 13, 2022
Hugo Castro-Silva participated in a TV show showing his work. Longevidade - Desafios Económicos e Sociais (Episode 1&2), aired October 10 and 13



October 21-22, 2022
IX Mathematics Fair, Lisbon
CEGIST presented the activity "To cut or not to cut (or how to cut), that is the question"



May 23, 2022
Participation on the First IST Open Day, on the 111th anniversary of IST. CEGIST participated with the activities "How to Manage the Chocolate Supply Chain", "How to minimize waste when cutting wood" and "How to build a Tangram and use it to solve an OR problem"

October 10-16, 2022
FIC. A - International Science Festival 2022, Oeiras
Participation in FIC. A - with the 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 OR problem" and "Organic Waste Management: Peels that Fertilise"



December 7, 2022
Mónica Oliveira led the presentation of the Partnership for Health Systems Sustainability and Resilience Portugal Report, in an event organized by Expresso and AstraZeneca, in Lisbon



Projects & Industry contracts

CEGIST research is supported by National and International competitive funding sources. During 2021-2022 CEGIST had 25 active projects of which 2 were institutional Core Support, 8 were coordinated by CEGIST Researchers and 15 were partnerships (6 International and 9 National). Besides, CEGIST researchers actively collaborate with several industries. These partnerships resulted in 6 active contracts.

Projects

European Commission (EC)

European Network for Game Theory (GAMENET)

This Action seeks to understand and optimize complex networked systems like social, telecommunication, and transportation networks using game theory. It aims to unite researchers from varied fields such as mathematics, computer science, engineering, and economics, providing expertise to industrial partners and establishing a diverse community of scientists to address problems with considerable technological and socio-economic impact.

Local PI: José Rui Figueira
(Management committee)
CA COST Action; CA16228
Partner

Improved Methods and Actionable Tools for Enhancing Health Technology Assessment (IMPACT HTA)

IMPACT HTA is a research project looking at new and improved methods across ten thematic areas, aiming at understanding variations in costs and health outcomes within and across countries, and integrating clinical and economic data from different sources, to improve methods in economic evaluation in the context of HTA and health system performance measurement.

Local PI: Mónica Oliveira
H2020; GA: 779312
Partner

Innovative Training for Technology-based Frailty and Falls Management (Fall-In-Age)

The Fall-in-Age Project aims to develop and implement an online open course for students, specialists and professionals in the area of healthcare and geriatrics. The course focuses on the application of biomechanical technologies for the assessment and treatment of frailty and reduction of the number of falls in elderly people.

Local PI: Mónica Oliveira
ERASMUS; PT01-KA203-047343
Partner

Rural-Urban Outlooks: Unlocking Synergies (ROBUST)

The ROBUST project involves 24 partners from 11 countries. Running from 2017 to 2021, it seeks to enhance understanding of rural and urban interdependencies and promote sustainable governance models, thus stimulating rural job creation. This was achieved via 11 Living Labs and five Communities of Practice.

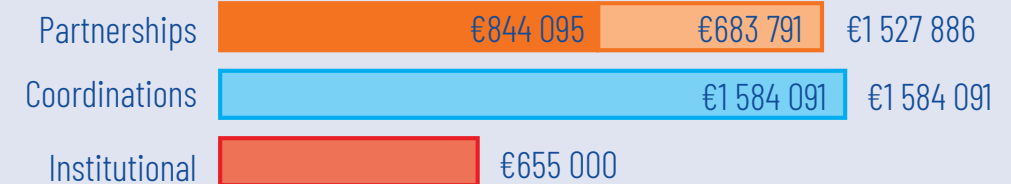
Local PI: Maria Rosário Partidário
H2020; GA:727988
Partner

Strategic Environmental Assessment for Capacity Development in Higher Education in Asia (SEA-Asia)

The Erasmus+ SEA ASIA program aims to strengthen cooperation between universities in the EU (Denmark, Portugal, Sweden) and Southeast Asia (Bangladesh, Laos, Vietnam), enhancing their ability to deliver quality higher education in strategic environmental assessment (SEA).

Local PI: Maria Rosário Partidário
ERASMUS; 2019-1936/001-001
Partner

Active projects



Total secured funding of active projects

Global Environmental Facility (GEF), UNESCO

Implementing Sustainable Low- And Non-chemical Development in SIDS (ISLANDS) in Cabo Verde, Guinea-Bissau and Sao Tomé & Príncipe

ISLANDS aids to prepare a CEO endorsement request document for a Full-Size Project, in line with the approved ISLANDS Programme PFD and Child Project Concept and the latest UNEP and GEF guidelines.

Local Co-PI: Ana Carvalho
GEF ID: 00000 (ISLANDS Atlantic) S1-32GFL-000632
Partner

Fundação para a Ciência e Tecnologia (FCT)

Bridging Science and Local Communities to wildfire risk reduction (BRIDGE)

BRIDGE is a Portuguese participatory action research project designed to develop an approach to integrate different forms of knowledge and action with a focus on forest fire risk reduction.

PI: Maria do Rosário Partidário
PCIF/AGT/0072/2019

Building decision support tools for improved operating room management (ImproveOR)

Aims to improve surgical care delivery efficiency and access to surgical care, by increasing the readiness and responsiveness level of hospitals to surgical demand.

PI: Mónica Oliveira & Co-PI: Daniel Santos
PTDC/EGE-OGE/30442/2017



Developing HTA tools to consensualise MEDical devices' VALUE through multicriteria decision analysis (MEDIVALEUE).

Aims to develop innovative methodologies and tools to assess the multidimensional value of Medical Devices, being ultimately aligned with promoting resilient health systems that balance access to care with innovation and sustainability.

PI: Mónica Oliveira & Co-PI: Carlos António Bana e Costa
PTDC/EGE-OGE/29699/2017

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
EXPL/EGE-ECO/1179/2021

Managing Sustainable Supply Chains (mSSChain)

Aims to develop comprehensive and innovative general models for the design, planning and operation of resilient Sustainable Supply Chains under uncertainty. These models will be validated using real industrial cases.

PI: Ana Barbosa-Póvoa

PTDC/EGE-OGE/28071/2017

Portuguese public hospital performance assessment using a multi-criteria decision analysis framework (hSNS)

Aims to measure the hospital performance in terms of its quality and access dimensions to improve the quality of healthcare services that will be delivered, support management by monitoring and controlling performance indicators, benchmark healthcare providers, accountability and governance and better finance healthcare providers (according to their performance).

PI: José Rui Figueira

PTDC/EGE-OGE/30546/2017

Social Innovation Strategies for Sustainability Transitions (TRUST)

This project adopts a participatory research and multi-actor approach with empirical observations in both urban and rural social-ecological contexts from three Portuguese case study regions, Lisbon, Aveiro and Évora, to contribute to create locally based sustainability transitions initiatives, boosting transformative processes, through social innovation strategies, that can enable changes in approaches, routines, practices, systems, and mind-sets.

PI: Maria do Rosário Partidário

PTDC/GES-AMB/28591/2017

The Role of Human Capital in Entrepreneurial Success: A Reconceptualization (CHE)

Aims to compare technology regimes underlying university R&D with technology regimes underlying the industrial structure in surrounding regions and evaluate their influence in the effectiveness of technology transfer, and the creation, location choice and subsequent performance of knowledge-based start-up firms.

PI: Rui Baptista & Co-PI: Francisco Lima

PTDC/EGE-OGE/31152/2017

Advances in Vertical Differentiation: theory and applications (AVD)

This project aims to enhance the literature on vertical differentiation models by studying firms' quality decisions when costs increase. Theoretical models will be developed and validated using experimental economics, with a focus on the housing market.

PTDC/EGE-ECO/29332/2017

Artificial Intelligence for Blood Management (LAlfeBlood)

LAlfeBlood aims to boost Instituto Português do Sangue e da Transplantação's (IPST) blood supply efficiency. The project involves analyzing historical data for patterns, creating predictive models for collections and transfusions, and developing software to optimize nationwide collection planning based on IPST resources.

DSAIPA/AI/0033/2019

Data Science for Optimization of Emergency Medical Services (Data2Help)

Data2Help aims to optimize Instituto Nacional de Emergência Médica's operations in Portugal through improved resource assignment. This includes forecasting CODU workload, aligning staff schedules with demand, modeling regional emergency vehicle needs, and using software to balance resources nationwide per shift.

DSAIPA/AI/0044/2018

Discrete Optimization Methods for Energy management (DOME)

This project aims to address energy management challenges in data centers by developing tools for workload management, server virtual machine allocation, and heat dissipation optimization. It will employ powerful discrete optimization technology and multi-criteria analysis to enhance decision-making. These tools will be deployed in a medium-sized data center.

PTDC/CCI-COM/31198/2017

Pharmaceutical Supply Chain of the Future (Future Pharma)

Future Pharma addresses the development of an optimization platform for designing a responsive and sustainable pharmaceutical supply chain.

PTDC/EME-SIS/6019/2020

Spatial Data Sciences for COVID-19 Pandemic (SCOPE)

SCOPE will provide daily updates of health indicator maps for the COVID-19 pandemic history, offering insights into the spatial patterns during mitigation and endemic phases, enhancing the understanding of the disease's dispersion over time.

DSAIPA/DS/0115/2020

Spatial Modelling for mapping COVID-19 risk (SMOCK)

This project gathers a multidisciplinary team of experts in geo-spatial data sciences, epidemiology, public health, computer sciences and decision sciences in health to develop a set of tools to model the spatial and temporal evolution of the risk of infection to support decision-making of health and civil protection authorities.

Research4COVID-19 special fund (Project No. 391)

Portugal 2020 (PT2020)

Mobilizing scientific and technological knowledge in response to the challenges of the agri-food market (MobFood)

MobFood, led by Portugal's Agrofood Cluster, aims to create a sustainable and efficient food sector, prioritizing safety and health. This consortium of 43 entities will implement new processes, products, or services to achieve these goals. IST leads a key research area, the Collaborative Sustainable Agro-Food Supply Chain.

LISBOA-01-0247-FEDER-024524

Partner

Aligning Manufacturing Decision Making with Advanced Manufacturing Technologies (DM4Manufacturing)

DM4Manufacturing aims to optimize factory productivity by integrating advanced robotics and decision-making in a human-robot collaboration setting. The project balances automation with improved working conditions and has broad social, economic, and scientific implications, with applications in automotive and aerospace sectors, bridging the gap from R&D to real-world impact.

LISBOA-01-0145-FEDER-016418

Partner

Industry Contracts

Valorpneu

Estudo da Rede Logística da Valorpneu

This project aims to analyse the current network of Valorpneu (collection centers, used-tires producers, and recyclers) in terms of geographic coverage and capacity usage (demand vs. supply) and develop a tool/app to help the re-design of the network by identifying the optimal locations and optimal capacity for new collection centers.

PI: Tânia Ramos

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

PI: Mónica Oliveira

London School of Economics, World Economic Forum and AstraZeneca

Partnership for Health System Sustainability and Resilience (PHSSR)

The Partnership for Health System Sustainability and Resiliency (PHSSR) is committed to the collaboration between sectors and borders to help build more resilient and more sustainable health systems for the future.

PI: Mónica Oliveira

SDR – Portugal

Deposit Refund System for Glass

Study the environmental impact of the introduction of a Deposit Refund System for Glass.

PI: Tânia Ramos

Sociedade Ponto Verde

Mobile-Pro-U: Mobile Unit for Processing and Recovery of Glass

Development of a processing system to recover packaging glass from undifferentiated flows, which can be operated in both fixed and mobile configurations. The project included the characterization of municipal waste, the mechanical design of the mobile processing unit and the design and plan of the logistics system.

PI: Teresa Carvalho (CERENA) & Co-PI: Tânia Ramos

Awards and distinctions

2021

Ana Póvoa

was considered one of the most influential scientists in 2021 by Stanford University (USA) and the Elsevier Editorial Group.

was ranked in the Top 10 of the best scholars in the area of Engineering and Technology in Portugal by Research.com. was listed as one of the best Computer Science Scientists in the 7th edition of Research.com ranking

José Rui Figueira

were awarded with the INFER Policy Research Award for the Best Policy Paper. (September 8-10)

Hugo Castro Silva and Francisco Lima

2022

Ana Sara Costa

received the MCDM Doctoral Dissertation Award given by the International Society on Multiple Criteria Decision Making to the best dissertation related to MCDM.

Ana Vieira, Mónica Oliveira and Carlos Bana e Costa

were awarded the Isabel Themido Award, in the Portuguese Association for Operational Research (APDIO) Congress. (November 6-8)

Ana Póvoa, Carlos Bana e Costa

were ranked in the Top 10 of the best scholars in the area of Business and Management in Portugal by Research.com.

Rui Baptista

is one of the authors with most articles citations in economics and related areas.

João Leitão and Dina Pereira

were distinguished with the Best Paper Award, at the annual conference of the Society of Open Innovation (SOI). (July 6-8)

Team

Integrated members



Ana Barbosa Pova

Supply Chain Management
Operations Research
Sustainability



Ana Carvalho

Sustainability
Circular Economy
Life Cycle Assessment



Ana Sara Costa

Multiple Criteria Decision Aiding
Decision Support Systems
Classification Problems



Ana Vieira

Behavioural Operational Research
Foresight
Health Technology Assessment



Antonio Quintino

Risk Analysis
Decision Support Systems
Operational Research



António Manuel
Alvarenga Rodrigues

Foresight
Scenarios
Strategy



António Sérgio Ribeiro

Entrepreneurship
Labour economics
Sports economics



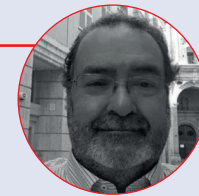
Bill Williams

Scientometrics
Inclusion, diversity and equity
Engineering value creation



Bruna Mota

Supply chain
Sustainability
Optimization



Carlos António
Bana e Costa

Strategic Decision Support
Process consultation
Multicriteria Value Measurement



Daniel Santos

Integer Programming
Combinatorial Optimization
Stochastic Optimization



Dina Batista
Pereira



Carolina Soares de Moraes

Smart waste collection
Vehicle routing problem
Optimization



Francisco Lima

Applied econometrics
Policy evaluation
Innovation



Hugo Castro Silva

Automation
Employment
Entrepreneurship



Isabel Maria da Silva João

Sustainable Product Design
Decision Aiding
Quality Engineering



Inês Carrilho Nunes

Technological change
Environmental policy
Energy poverty



Inês
Marques Proença

Integrated members



**João Agostinho
de Oliveira Soares**



João Lourenço

Multi-criteria decision analysis
Portfolio decision analysis
Decision support systems



José Figueiredo

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



José Rui de Matos Figueira

Multi-Objective Optimization
Multiple Criteria Decision Support
Decision Support Systems



Marc Scholten

Decision making
Intertemporal choice
Choice under risk and uncertainty



Margarida Barata Monteiro

Strategic and Sustainability Assessment
Governance
Transitions to Sustainability



Margarida Catalão-Lopes

Competition
Strategy
Sustainability



**Maria Isabel da Conceição
Santos Reis dos Santos**

Simulation
Metamodel
Regression



**Maria Isabel
Craveiro Pedro**

Management
Accounting
Finance



Mónica Oliveira

Decision sciences
Health care management science
Management engineering



Paulo Caldas

Sustainability
Government
Strategy



**Paulo Vasconcelos
Dias Correia**

Sustainable development
Urban and regional planning
Innovation

Rui Abrantes



Rui Baptista

Entrepreneurship and Innovation
Strategic Human Capital
Technology and Labour Markets



Tânia Ramos

Routing
Reverse Logistics
Optimization



Susana Relvas

Logistics
Retail
OR & Management Science



**Tânia Rute Xavier
de Matos Pinto Varela**

Manufatura
Supply chain: pharmaceutical
Hydrogen



**Teresa Sofia
Cipriano G. Rodrigues**

Associate Members

— Acácio Porta Nova



Ana Cristina Santos Amaro
Supply Chain Management
Sustainability
Logistics

Ana Sofia Mascarenhas
Proença Parente da Costa



— Augusto Manuel
José Eusébio

Carlos Monteiro
User-centered product design
Perceptual mapping
Multivariate statistics

— Carlos
Lucas de Freitas



Diana Jorge
Operations Research
Metaheuristics
Logistics

Diogo António
Fernandes Gonçalves



Duarte Dinis
Business analytics
Project management
Forecasting



Gilberto
Montibeller



Fábio Medeiros
da Silva Coelho
Industry 4.0
Logistics
Operations Research

Helena Maria
dos Santos Paulo
Supply Chain Design
Biomass
Optimization



João Leitão
Entrepreneurship
Innovation
Sustainable Development



Klára
Dimitrovová



João Pedro da Cruz
Fernandes Thomaz



Lúcia Piedade
Aeronautical Management
Airport Management
Emergency and Contingency Plans



María Carmen Carnero
Multicriteria Decision Making
Maintenance
Sustainability



Miguel Alves Pereira
Management science
Efficiency measurement
Decision analysis



Marisol Correia
Business Intelligence
eTourism
Evolutionary Computation

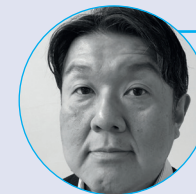


Miguel Vieira
Production planning
Optimization
Decision support



Murat Karaoz

Ricardo Jorge
Gomes Mateus



Yoichi Kumagai

PhD Students



Alicia Soto Robles



Ana de Paula Nogueira Roque de Oliveira



Ana Raquel Aguiar
Vehicle Routing Problems
Mathematical Programming
Home Care



Andreia Rodrigues dos Santos

Sustainable supply chain management
Sustainability assessment
Life cycle assessment



Edgar José Sanches Mascarenhas

Behavioral Operations Research
Multi-criteria Decision Analysis
Decision Sciences



Amaro Segunda Ricardo
Decision science
Operational research
Public policies



Ana Flavia Alves dos Santos
Operational Research
Multi-Criteria Decision Analysis
Collaborative Modelling



Ana Torrado
Optimization
Sustainability
Blood Supply Chain



Beatriz Cassuriaga
S-LCA
Social Sustainability
Circular Economy



Cátia Rafaela Ferreira Medeiros da Silva

Supply chain
Sustainability
Risk management



Erika Celestino
Household organic waste
Circular economy
Recycling behaviour



Eric Ofori-Ntow Jr

Inês Ralheta Duarte
Pharmaceutical Supply Chains
Optimization
Sustainability



Inês Risques Saavedra



João Pires Ribeiro
Resilience
Supply Chain
Management



João Almeida
Academic scheduling
Multi-objective optimisation
Meta-heuristics



José Luiz da Silva



Liliana Freitas
Behavioural Operational Research
Multicriteria Decision Analysis
Health Technology Assessment



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

Maria Eugénia Leitão
Entrepreneursip
SDG
Social Development



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



Maria Meneses
Supply chain management
Operational Research
Optimization



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

PhD Students



Mariana Oliveira
Operations Research
Optimization
Health services



Paulo Roberto de Sousa Abreu
Data-driven decision making
Optimization
Operations management



Rui Agostinho
Entrepreneurship
Demographics
Firm-creation



Rafael Miranda
Health technology assessment
Decision engineering
Remote patient monitoring



Salomé Guedes Sequeira de Pádua Azevedo



Sanaz Azarnoosh
Product design
Decision support models
Portfolio analysis



Yannik Zeiträg
Multi-objective optimization
Scheduling
Machine learning



Vânia Veloso
Circular Economy
Industrial symbiosis
Sustainable agri-food supply chains

Staff



Filipa Carvalho
Pre-Award
Funding
Communication



Mariana Santa-Marta
Pre-Award
Strategy
Funding



Sofia Machaqueiro
Communication
Teamwork
Interpersonal Skills

Appendix

Publications 2021

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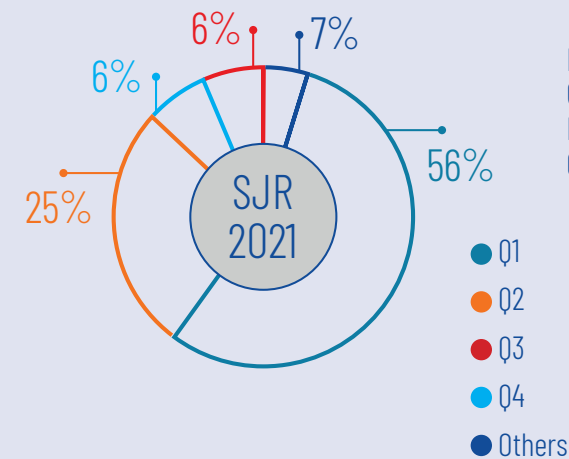
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SJR: Scopus Scimago Journal Ranking
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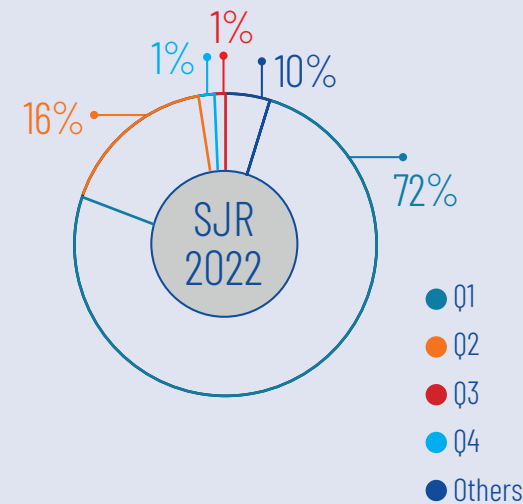
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In 2022, 83 articles were published, 8 (9,6%) were ranked as ABS4 or higher and 1(1,2%) as FT50. From these 62 (72,3%) were published in SJR Q1 journals.

SJR: Scopus Scimago Journal Ranking
ABS: Association of Business Schools UK: journal rankings go from 4* (highest) to 1 (lowest)
FT50: Ranking list of 50 journals used in Financial Times.

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Tiago Almeida Santos Simões
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Tomás Maria Loureiro Sarreira Mateus Rocha
[Optimization of Order Assignment to Couriers for On-demand Delivery](#)
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Supervisors: Tânia Ramos & Diana Jorge

Tomé Estêvão Cupido dos Santos
[A model for elective patient scheduling integrating regular and additional production](#)
MSc in Biomedical Engineering, IST
Supervisor: Daniel Santos

Global Environmental Facility (GEF), UNESCO

Implementing Sustainable Low- And Non-chemical Development in SIDS (ISLANDS)
in Cabo Verde, Guinea-Bissau and Sao Tomé & Príncipe
GEF ID: 00000 (ISLANDS Atlantic) S1-32GFL-000632
Partner

Fundação para a Ciência e Tecnologia (FCT)

Advances in Vertical Differentiation: theory and applications (AVD)
FCT; PTDC/EGE-ECO/29332/2017
Partner

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

Bridging Science and Local Communities to wildfire risk reduction (BRIDGE)
FCT; PCIF/AGT/0072/2019
Coordinator

Building decision support tools for improved operating room management (ImproveOR)
FCT; PTDC/EGE-OGE/30442/2017
Coordinator

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

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

Data Science for Optimization of Emergency Medical Services (Data2Help)
FCT; DSAIPA/AI/0044/2018
Partner

Developing HTA tools to consensualise Medical devices' VALUE through multicriteria decision analysis (MEDIVALUE).
FCT; PTDC/EGE-OGE/29699/2017
Coordinator

Discrete Optimization Methods for Energy management (DOME)
FCT; PTDC/CCI-COM/31198/2017
Partner

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

Managing Sustainable Supply Chains (mSSChain)
FCT; PTDC/EGE-OGE/28071/2017
Coordinator

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

Portuguese public hospital performance assessment using a multi-criteria decision analysis framework (hSNS)
FCT; PTDC/EGE-OGE/30546/2017
Coordinator

Social Innovation Strategies for Sustainability Transitions (TRUST)
FCT; PTDC/GES-AMB/28591/2017
Coordinator

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

Spatial Modelling for mapping COVID-19 risk (SMOCK)
FCT; REF
Partner

The Role of Human Capital in Entrepreneurial Success: A Reconceptualization (CHE)
FCT; PTDC/EGE-OGE/31152/2017
Coordinator

Portugal 2020 (PT2020)

Mobilizing scientific and technological knowledge in response to the challenges of the agri-food market (MobFood)
LISBOA-01-0247-FEDER-024524;
Partner

Aligning Manufacturing Decision Making with Advanced Manufacturing Technologies (DM4Manufacturing)
LISBOA-01-0145-FEDER-016418
Partner

Projects

The list below includes projects that were actively running during 2021 & 2022

European Commission (EC)

European Network for Game Theory (GAMENET)
CA COST Action; CA16228
Partner

Improved Methods and Actionable Tools for Enhancing Health Technology Assessment (IMPACT HTA)
H2020; GA: 779312
Partner

Innovative Training for Technology-based Frailty and Falls Management (Fall-In-Age)
ERASMUS; PT01-KA203-047343
Partner

Rural-Urban Outlooks: Unlocking Synergies (ROBUST)
H2020; GA: 727988
Partner

Strategic Environmental Assessment for Capacity Development in Higher Education in Asia (SEA-Asia)
ERASMUS; 2019-1936/001-001
Partner

The list below includes partnerships with industry actively running during 2021 & 2022

Estudo da Rede Logística da Valorpneu
Valorpneu
PI: Tânia Ramos

Circular Economy Action Plan for Portugal
Agência Portuguesa Do Ambiente (APA)
PI: Ana Carvalho

Instituto de Saúde Baseado na Evidência
PI: Mónica Oliveira

Partnership for Health System Sustainability and Resilience (PHSSR)
London School of Economics, World Economic Forum and AstraZeneca
PI: Mónica Oliveira

Deposit Refund System for Glass
SDR - Portugal
PI: Tânia Ramos

Mobile-Pro-U: Mobile Unit for Processing and Recovery of Glass
Sociedade Ponto Verde
PI: Teresa Carvalho (CERENA)
Co-PI: Tânia Ramos

Industry Contracts



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