



ICOTEM 2023



International Conference on Technology Management and Operations Conference Program

19-21 July 2023

Universidade Lusfada
Largo Tinoco de Sousa
4760-108 Vila Nova de Famalicão



Welcome to ICOTEM 2023

ICOTEM 2023 is a forum for the presentation and discussion of research topics in the fields of Technology Management and Operations and is expected to bridge the gap between different research groups and promote the development of new disruptive multidisciplinary research groups. The main objective is to explore the role of Technology, Engineering, and Innovation in supporting the fast pace imposed by technological advancements and the operation of global markets.

Local Organizing Committee

Ana Cristina Ferreira

Rui Lima

Rui Silva

Vitor Pereira

Organizing Institutions



Universidade Lusíada, Faculdade de
Engenharias e Tecnologias (FET)



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Mercados e Gestão Industrial (COMEGI),
Portugal

[Host and Management]



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Instituto Politécnico de Benguela,
Benguela, Angola



Instituto Politécnico de Viana do Castelo,
Escola Superior de Ciências Empresariais,
Portugal



ISQ, Direção de Investigação,
Desenvolvimento e Inovação, Portugal



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ISQ, Direção de Investigação, Desenvolvimento e Inovação, Portugal

Otávio José de Oliveira

Universidade Estadual Paulista “Júlio de Mesquita Filho”, Brazil

Thiago Libório Romanelli

Universidade de São Paulo, Brazil

Rui Gabriel Araújo de Azevedo Silva

Universidade Lusíada, Portugal

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- Ana Cláudia Luciano, Universidade de São Paulo, Brazil
- Ana Cristina Ferreira, Universidade Lusíada/COMEGI, Portugal
- Ângela Silva, Instituto Politécnico de Viana do Castelo, Portugal
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- Wellington Alves, Instituto Politécnico de Viana do Castelo, Portugal



Ingrid Winkler

Ingrid Winkler is a scientist and professor at SENAI CIMATEC and the Head of the Institute for Science, Innovation, and Technology in Industry 4.0/ INCITE INDUSTRIA 4.0, a scientific and technical cooperation network that studies Immersive and AdditiveUX. She is also a CNPq Productivity in Technological Development fellow (DT2). At SENAI CIMATEC University Center, she leads the Extended Reality for Industrial Innovation Lab, as well as coordinates the Masters and Doctoral Program in Industrial Management and Technology (GETEC) and is a Professor on Computational Modeling (MCTI) Masters and Doctoral Program. Currently, she also contributes with the Ford Virtual Prototyping and eXperiences (VP&X) Lab.

Ingrid Winkler has coordinated more than 20 RDI projects with EMBRAER, HP, SHELL, VALE, FORD, Petrobras, and startups. Over 50 researchers, including PhD and Masters degree candidates, Lato Sensu Specializations, and graduates, have been supervised by her. She is presently supervising 15 PhD and Master's degree students, as well as 5 graduate students. She has 83 journal and conference papers, 15 books or book chapters, and more than 50 IP assets, including a USPTO granted patent, ten submitted patents, and registered software applications. She holds a Bachelor of Science in Computing from Mackenzie University and a Doctorate in Management from the Federal University of Bahia, during which she also spent a term at the Ecole de Gestion – HEC Montreal.



Paulo Cortez

Paulo Cortez is a Full Professor at the Department of Information Systems, University of Minho. He is also assistant director of the ALGORITMI R&D Centre. His research interests are: Business Analytics, Data Science, Decision Support Systems, Neural Networks and Machine Learning, Evolutionary Algorithms and Artificial Intelligence Applications.

Paulo Cortez is co-author of more than 200 indexed (e.g., ISI, Scopus) publications in international peer reviewed journals (e.g., Decision Support Systems, Information Sciences, Information Processing & Management) and conferences (e.g., IEEE IJCNN, ACM GECCO). He has also published the Springer book "Modern Optimization with R" (2nd edition, 2021). He has participated in more than 36 R&D projects and has supervised 6 Postdoctoral works, 10 PhD thesis, 48 MSc thesis and 18 BSc final graduation projects in the area of Intelligent Data Analysis. He is currently Associate Editor of the journals Decision Support Systems (JCR Q1) and Expert Systems (JCR Q2). Currently, he has more than 11400 Google Scholar citations (h-index of 43). Recently, he was considered a top 2% influential researcher in the areas of Artificial Intelligence and Information Technology according to a Stanford University (USA) 2020 study.



Pedro Amorim

Pedro Amorim is an Associate Professor (with habilitation) at Industrial Engineering and Management Department at FEUP and also an invited professor at Porto Business School, lecturing courses on Data-Driven Decision Making and Supply Chain and Operations Management. He directs the Master in Industrial Engineering and Management at FEUP and coordinated the EURO Working Group in Retail Operations. In 2014, he co-founded LTPlabs, a boutique analytical-driven consultancy company, which applies advanced analytical methods to help make better complex decisions.

Pedro Amorim was a visiting scholar at IESE Business School (Spain) and Carnegie Mellon University (USA). He has been supervising and conducting numerous national and European funded projects, as well as co-authoring more than 60 research papers about Supply Chain Management, Retail Operations, and Optimization. His work appears in journals, such as Manufacturing Services and Operations Management, MIT Sloan Management Review, European Journal of Operations Research and International Journal of Production Economics.

Conference Program

All times in UTC+1	19 th July (Wednesday)	20 th July (Thursday)	21 st July (Friday)
9:00 am – 9:50 am	Registration	Keynote Speaker: Pedro Amorim	Keynote Speaker: Paulo Cortez
9:50 am – 11:00 am	Opening Ceremony	Session 4	Session 7
11:00 am – 11:20 am	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
11:20 am – 12:30 pm	Session 1	Session 5	Closing Ceremony
12:30 pm – 2:00 pm	<i>Lunch</i>	<i>Lunch</i>	
2:00 pm – 2:50 pm	Networking	Keynote Speaker: Ingrid Winkler	Social Program
2:50 pm – 4:00 pm	Session 2	Session 6	
4:00 pm – 4:20 pm	<i>Coffee Break</i>		
4:20 pm – 5:30 pm	Session 3		
7:00 pm – 11:00 pm		Conference Dinner	

9:50 am

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11:00 am

(UTC+1)

Opening Ceremony

Session 1 (Auditorium 1)

Chair: Rui Silva

Paper ID

Title

Authors

22

Excellence Models, Management Systems, and their integration in SME. Case study - "SME leader" and "SME excellence" located at the municipality of Vila Nova de Famalicão – Portugal

Pedro Miguel Neto Gonçalves & Manuel Ferreira Rebelo

33

The Influence of Digital Content Creators on Purchase

Andreia Martins, Ana Sofia Alves, Cristina Lopes, Cristina Torres, Isabel Vieira & Lurdes Babo

41

Organizational Ambidexterity, Individual Knowledge and Skills in Logistics: An Exploratory Approach

Juliana Alves, Lia Oliveira & Manuel da Fonseca

43

Evaluation of Performance Measurement Propositions in the Construction Sector: Perspectives from Managers and Customers

Milton Barragán-Landy, Fernando Romero & Sérgio Sousa

56

The Impact of Telecommuting on the Performance and Productivity of Teleworkers

Isabel Oliveira, Cláudia Gonçalves, Jorge Figueiredo & António Cardoso

61

Creating a Sensory Experience: A Study of How Sensory Stimuli Affect Employee Perception and Behaviour

Elizabeth Real de Oliveira, Pedro Rodrigues & Isabel Barbosa

11:20
am

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12:30
pm

(UTC+1)

2:00 pm – 2:50 pm (UTC+1)	<h2>Networking</h2>
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Session 2 (Auditorium 1)

Chair: Otávio Oliveira		
Paper ID	Title	Authors
20	Toward Quality 4.0: Identifying trends for future studies	Ana Carolina Costa, Fernanda Ellen Francisco & Otávio Oliveira
28	Data Protection in Cloud Computing – A Comparative study between the EU and the USA regulations	Inocêncio Barros & Isabel Alvarez
37	Virtual and Hybrid Immersive Events from the Knowledge Management Perspective – Brazilian Oil & Gas Company case	Azevedo Jr, Muniz Jr. & Campos, R.
40	Systemic approach for bioenergy policies: A study case for Brazilian energy matrix and the sugarcane sector	Flávio Eduardo Fava & Thiago Libório Romanelli
53	Managing Sustainable Megaevents: Past, Present and Future	Elizabeth Real de Oliveira & Fernando Cardoso
63	Equipment definition for a robotic architecture of a biosensor agent applied to poultry farming – mechanical system	Glauber Balthazar, Marcos Vinicius da Cruz & Iran José de Oliveira Silva

2:50 pm
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4:00 pm
(UTC+1)

Session 3 (Auditorium 1)

Chair: Thiago Romanelli

Paper ID	Title	Authors
16	Improvement of Acquisition Processes for Highly Perishable Products by Using Lean, TRIZ and Kano Model	Navas, H., Dias, A., Morgado, T., Abreu, A. & Anes, V
36	Intuitionistic fuzzy X- R control charts based on IF-WABLdefuzzification method	Amanda dos Santos Mendes, Túlio Sérgio de Almeida, Marcela Machado & Paloma Rocha Rizol
39	Interval Type-2 Fuzzy X-S Control Charts for Univariate Processes	Túlio Sérgio de Almeida, Amanda dos Santos Mendes, Marcela Machado & Paloma Rocha Rizol
48	The Sustainable Development path for the survival of the planet and the contribution to the 2030 Agenda	José Motta Reis, Dayana Elizabeth Silva, José Medeiros Barros, Nilo Souza Sampaio, Gilberto Santos & Luís Motta Barbosa
55	Data acquisition system for soil and air data monitoring using LoRA technology	José Costa, João Ferreira, Pedro Gomes & Vitor Pereira
60	Vegetation index as a tool for monitoring soybean yield in Center-South region of the state of Parana - Brazil	Gustavo Satyro de Oliveira & Ana Cláudia Luciano

4:20
pm
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5:30
pm

(UTC+1)

9:00 am — 9:50 am (UTC+1)	<h2>Keynote Speaker: Pedro Amorim</h2>
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Session 4 (Auditorium 1)

Chair: Rui Lima		
Paper ID	Title	Authors
9	An adapted analytic hierarchy process for the supplier selection: model validation for a textile industry application	Bruna Ramos, João Silva, António Vila-Chã, Henrique Azevedo, João Ramos & Ana Cristina Ferreira
23	Centre of gravity method for locating an electric charging station - an initial approach for Viana do Castelo	Catarina Gonçalves, Ângela Silva & Helena Sofia Rodrigues
24	Shift Scheduling with Linear Programming: a case study in a fire station	Ana Rita Silva, Helena Sofia Rodrigues & Ângela Silva
25	The influence of the maturation status of components on their approval in new product design	João Paulo Dourado, Rui Silva & Vitor Pereira
30	Layout Evaluation to Improve Picking Process in a Boat Company Warehouse	Gonçalo Novo, Júlia Kilic, Lia Oliveira, Liliana Rodrigues & Ângela Silva
32	Warehouse makeover: rethinking warehouse organization after growth	Maria Carolina Matos & Isabel Cristina Lopes

9:50 am
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11:00 am
(UTC+1)

Session 5 (Auditorium 1)

Chair: Ângela Silva

Paper ID	Title	Authors
45	What Project Management delivers to Engineer-to-order? An analysis of a furniture company	Lalleska Araujo, Sara Martins & Wellington Alves
10	Procurement Operations: An empirical study about the reality of Portuguese SMEs	Ângela Silva, Henrique Azevedo, Ana Ribeiro, Bruna Ramos & Ana Cristina Ferreira
19	Reorganization of a warehouse in a multi-brand clothing retail company	Margarida Pires & Ana Ribeiro
34	Management of Hospital Resources and Hospitalization in EU27: a Factor Analysis	Catarina Borges, Diego Balona, Rita Nunes, Cristina Lopes, Isabel Vieira, Lurdes Babo & Cristina Torres
49	Supply Chain Analysis Through Partner Suppliers: A Study of a Small-Medium Sized Company in Brazil	José Motta Reis, Dayana Elizabeth Silva, Ronald Cardoso, José Barros, Nilo Sampaio, Gilberto Santos & Luís Barbosa
51	Logistics and social responsibility: an analysis of a retail company	Mara Cunha, Helena Sofia Rodrigues, Ana Teresa Oliveira & Wellington Alves

11:20
am
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12:30
pm
(UTC+1)

2:00 pm – 2:50 pm (UTC+1)	<h2>Keynote Speaker: Ingrid Winkler</h2>
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Session 6 (Auditorium 1)

Chair: Ana Cristina Ferreira		
Paper ID	Title	Authors
8	Hydraulic projects prioritization in the steel industry: An Analytic Hierarchy Process approach	Nuno Torre, Luis Quezada & Valerio Salomon
13	Energy management in industry: Multi-criteria decision-making applications	Vania Oliveira, Valerio Salomon & Geraldo Oliveira
26	A simulation algorithm for optimization of mixture design applied to the assignment of weights in a goal programming problem	Cristiane Defalque, Aneirson Silva, Guilherme Defalque, Fernando Marins & David Edwards
31	Automated Warehouse Implementation Study Applied to Boat Industry	Cátia Sousa & Ângela Silva
52	Study of the impact of technological innovations on the sustainable freight transport	Ana Pereira, Lia Oliveira, Jorge Garcia & Ana Rodrigues
57	Mapping SDG 11 in Alto Minho Region - Sustainable cities and communities	David Silva, Mariana Abreu, Helena Sofia Rodrigues, Ângela Silva & Jorge Garcia

2:50 pm
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4:00 pm

(UTC+1)

9:00 am
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9:50 am
(UTC+1)

Keynote Speaker: Paulo Cortez

Session 7 (Auditorium 1)

Chair: Vitor Pereira

Paper ID	Title	Authors
35	Implementation process of collaborative robots (Cobots) in anautomotive technology supplier company	Carolina Oliveira, Filipe Pereira & António Rocha
6	Application of SMED to reduce parameterization times in the production of corrugated carton packaging	Anita Fernandes, Senhorinha Teixeira & Ana Cristina Ferreira
46	Optimization and flexibility of the stock management process of aconsumables warehouse - The case of Toyota Caetano Portugal	Vânia Silva, Lia Oliveira, Carlos Rodrigues & Carmen Guimarães
47	Supply Chain 2.0: the concept evolution in response to market changes	Leonardo Macedo & Lia Oliveira
58	Developing intermodal freight transport solution to boat industry	Liliana Rodrigues & Lia Oliveira

9:50 am
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11:00 am
(UTC+1)


11:30 am

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12:30 pm
(UTC+1)

Closing Ceremony

Social Program


2:30 pm – Guided visit to the permanent exhibition “Torre Literária: Louvor e Simplificação da Literatura Portuguesa” (Literary Tower – Praise and simplification of Portuguese Literature) of Cupertino de Miranda Foundation.

 41° 24' 23.463" N 8° 31' 6.306" W



Pause at the outdoor sitting areas of the urban centre, next to the Cupertino de Miranda Foundation, followed by a walk towards Parque da Devesa (entrance through Praça da Cidadania, next to the Famalicão Bus Station, route through the Park and arrival at Casa do Território around 4:30 pm).

4:30 pm – Guided visit to the permanent exhibition “Tempo, Espaço & Ser – Território de V.N. de Famalicão” (Time, Space & Being – The territory of V.N. de Famalicão) of Casa do Território.

 41° 24' 38.0" N 8° 30' 31.2" W



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The conference is supported by the Portuguese national funding through the FCT – Portuguese Foundation for Science and Technology, as part of the project UIDB/04005/2020