

Editorial

Welcome to the 2021 issue of CISE newsletter!

For the last two years, the entire world has been living under a pandemic crisis. Despite the worldwide activities' disruption because of the COVID-19 pandemic, CISE developed, in 2021, unprecedented efforts to overcome this situation and implement its strategic plan directives.

Even with severe measures of social distancing (limiting the capacity of our research facilities and, consequently, their utilisation scale), imposition of lockdowns, and the resulting need to adjust to monthly online meetings of the team (instead of presential), CISE members demonstrated commitment and resilience to adapt to this novel context, while improving the quality and impact of the developed activities.

Over the last months, CISE was involved in the preparation of position statements targeted at public authorities, continued the development of research activities in the framework of ongoing I&D projects, and granted its participation in new I&D funded projects. One of the key results of such activities concerns the significant contributions to the advancement of scientific knowledge. Around fifty peer-reviewed journal papers authored by CISE members were published in 2021 (and several more accepted for publication). It was also a very fruitful year in terms of organisation of journals' special issues. Indeed, several special issues were finalized during that period and many more are still ongoing for next year.

Additionally, the activity of CISE went far beyond I&D. Despite the adverse context, and in respect with the health and safety pandemic guidelines, CISE managed to organise and promote in-person events, improving its visibility amongst institutions from academia, energy agencies, municipalities, and other entities.

Enjoy your reading!



Prof. Antonio J. Marques Cardoso
CISE Director

IEEE European Public Policy Committee

CISE has the pleasure to inform that the IEEE European Public Policy Committee (EPPC) has published the public policy position statement entitled **“E-mobility: Smart Charging”**, available [here](#).

CISE headed the preparation of this position statement, which provides European authorities with key recommendations to promote the transition to alternative fuels, in line with the uptake of electric and zero-emission vehicles.



Project Ef&RelDC@HomO Interview



Ef&RelDC@HomO
Efficient and Reliable DC Electricity
Distribution at Home and Offices

In the framework of Project Ef&RelDC@HomO - “Efficient and Reliable DC Electricity Distribution at Home and Offices” (POCI-01-0145-FEDER-029494), funded by Operational Programme for Competitiveness and Internationalization (Compete2020), Prof. Dr. Antonio J. Marques Cardoso, Principal Investigator of the Project, was interviewed by Compete2020, to address the project and the importance of support from Community funds.

Please click [here](#) to access the interview (in Portuguese).

Project MICADO

CISE participates as external partner in the recently approved Project MICADO - “Modular Insulated Concrete core - ADvanced and Optimized panelized production system”. It proposes the development of a new advanced production system for buildings, comprising components produced on autonomous manufacturing facilities and simply assembled on-site. The project, funded by Operational Programme for Competitiveness and Internationalization (Compete2020), will be developed over 30 months.

UNITA Workshop on Renewable Energies

CISE took part in the organisation of "**UNITA Workshop on Renewable Energies**", an event that took place on 27 and 28 October 2021. The workshop was organised in the framework of Project UNITA - Universitas Montium, funded by the European Commission, involving the participation of Università Degli Studi di Torino (Italy), Universidade da Beira Interior (Portugal), Université de Pau et des Pays de L'Adour (France), Université Savoie Mont-Blanc (France), Universitatea de Vest din Timisoara (Romania), and Universidad de Zaragoza (Spain), and Project Ef&ReIDC@HomO, funded by Compete2020.



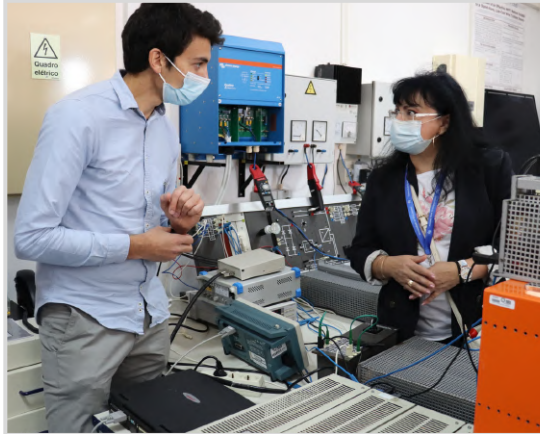
Welcome Session, from left to right: Antonio J. Marques Cardoso, Manuel Salgado and Mário Raposo.

The workshop culminated, on 28 October, in an event at Guarda, dedicated to the presentation of CISE, with the activities related to latest and emerging renewable energies technologies as the main focus.

The Opening Session counted with the participation of Manuel Salgado, Vice-President of Polytechnic of Guarda, Mário Raposo, Rector of University of Beira Interior and Antonio J. Marques Cardoso, Director of CISE. The Opening Session was followed by a brief introduction of the work and the different research activities developed in the various CISE facilities.

The presentation was followed by a visit to the indoor and outdoor facilities of CISE | GIRS-RES: Guarda International Station on Renewable Energies. The event counted with the participation of around 60 attendees.





Participation in Events

Conference on "Energy Communities"



On 26 July 2021, the hybrid conference “Comunidades de Energia” (Energy Communities) addressed topics related to the energy transition, opportunities, and challenges to tackle. The event, organised by Municipality of Sabugal in partnership with CISE and other regional energy entities, featured the participation of the Deputy Minister and Secretary of State for Energy, João Galamba.

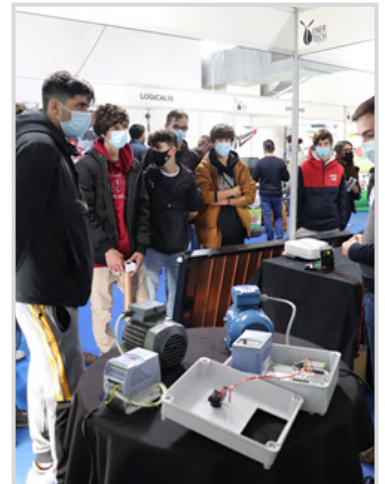
The event took place in Sabugal, Portugal, but due to the pandemic context, the in-person participation was limited, and the conference was transmitted, by livestream, in the Municipality of Sabugal Facebook page. Please click [here](#) to watch the conference recording.

ENERTECH SABUGAL 2021



CISE participated, as institutional partner and exhibitor, in the fifth edition of ENERTECH SABUGAL 2021 – Technology for Energy Fair, an event of promotion, dissemination and demonstration about renewable and environment-friendly energies, that took place in Sabugal, Portugal, from 11 to 13 November 2021. The main theme of the conferences of this edition of ENERTECH was "Challenges of the energy transition" but also included conferences on "Ecosystem and Sustainability Services", "Biomass and Forest Management" and "Short Supply Chains and Digital Markets".

CISE stand attracted the attention of visitors from the most diverse professional areas and ages.



Electrical and Computer Engineering Days



CISE participated in the VIII edition of the "Electrical and Computer Engineering Days" of the University of Beira Interior (UBI), organised by ELECTRUBI (students association and representative body of the students enrolled in Electrical Engineering at UBI), on 9 December 2021.

The event included a visit to the Laboratory of Electromechatronic Systems (CISE | LSE) and a brief presentation, made by CISE PhD and MSc Students, of their ongoing work and research activity.



Awards & Distinctions

Habilitation Examination

The Habilitation Examination in Mechanical Engineering requested by Dr. Rui Pitarma, CISE PhD Researcher, took place on 29 and 30 September 2021, in *Sala dos Atos da Reitoria* of University of Beira Interior.

Our warmest congratulations on the successful achievement!



Highly Cited Paper

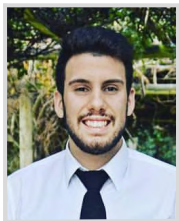


WEB OF SCIENCE™



The publication ***Reliable Detection of Stator Interturn Faults of Very Low Severity Level in Induction Motors***, by Konstantinos N. Gyftakis and Antonio J. M. Cardoso, in IEEE Transactions on Industrial Electronics, Vol. 68, Nº 4, pp. 3475-3484, April, 2021, has been listed by Web of Science as Highly Cited Paper for receiving enough citations to place it in the top 1% of the academic field of Engineering based on a highly cited threshold for the field and publication year. [Data from Essential Science Indicators SM].

Best Presentation Award



João Antunes Rodrigues, CISE PhD Student, was awarded with the **Best Presentation Award** for his outstanding presentation of the paper "Prediction of Sensor Values in Paper Pulp Industry Using Neural Networks", at the *Efficiency and Performance Engineering Network 2021 and the 6th International Conference on Maintenance Engineering*, Tianjin, China, 22 October 2021.

Future Events

CISE will participate, as institutional partner and exhibitor, in the sixth edition of ENERTECH SABUGAL 2022 – Technology for Energy Fair (*dates to be defined*).

Special Issues - Call for Papers

Prof. Antonio J. Marques Cardoso and CISE researchers serve as Guest Editors of several Special Issues. Prospective authors willing to contribute to these Special Issues are invited to refer to the respective Call for Papers.

Machines Predictive Control

MDPI journal *Machines* - [Call for Papers](#)

Deadline for manuscript submissions: 28 February 2022.

Future Trends in Advanced Design of Electrical Machines, Drives and Electric Vehicles Using Additive Manufacturing Approaches

MDPI journal *Machines* - [Call for Papers](#)

Deadline for manuscript submissions: 15 March 2022.

Line-Start Electric Motors: Opportunities and Challenges

Electrical Engineering - *Archiv für Elektrotechnik*

Deadline for manuscript submissions: 30 March 2022.

Latest Trends in the Design of Hairpin Winding Machines for Transport Electrification Purposes

MDPI journal *Machines* - [Call for Papers](#)

Deadline for manuscript submissions: 31 March 2022.

Condition Monitoring and Diagnostics of Energy Storage Systems Components

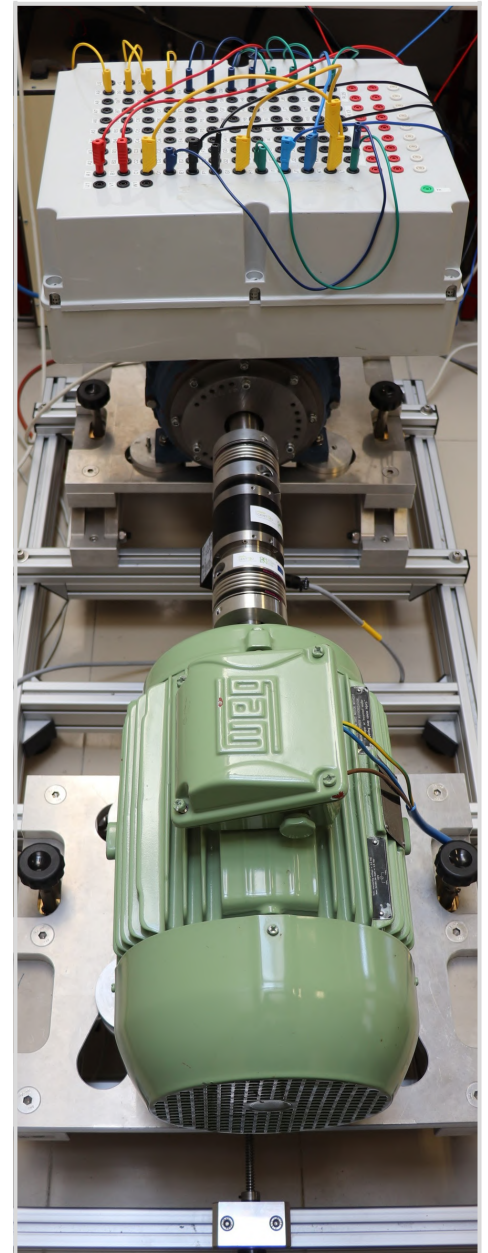
MDPI journal *Electronics* - [Call for Papers](#)

Deadline for manuscript submissions: 01 April 2022.

Thermal Analysis of Electric Machine Drives

MDPI journal *Machines* - [Call for Papers](#)

Deadline for manuscript submissions: 30 April 2022.



Happy Holidays

