



Technology for Sustainability

Now more than ever, it is time to adopt responsible behaviors, research for new technological solutions and implement sustainable practices. This means not only environmentally but also at a human level, because sustainability only exists when all the parts are equally taken care of.

On the 6th edition of our newsletter, we will take you through some of the innovative ideas being developed for a more sustainable future.

Radar_

We CHALLENGE You

12TH EDITION

**INNOVATIVE TECHNOLOGIES
FOR SUSTAINABILITY**
IDEA CONTEST BASED ON
MSC AND PHD THESES

Fraunhofer Challenge Awards the Best Ideas for a Sustainable Future

On 27 October, the final event of the Fraunhofer Challenge awarded the six best ideas that answered the 2021 call for "Innovative Technologies for Sustainability". From a total of 27 applications, six ideas were selected as a result of their alignment with the vision at Fraunhofer Portugal: developing technology of practical utility. These ideas were also distinguished for their applicability, feasibility, and market readiness.

Read more

Data Scientist Specialized in Data Analytics Training Programme

🕒 24 hours – 16 modules
with access to certification

Data Scientist Specialized in Data Analytics training course

Fraunhofer Portugal AICOS is launching a new training programme on Data Analytics. The programme is aimed at companies looking to accompany the digital transition. The expertise of Fraunhofer Portugal AICOS in Intelligent Systems guides participants through the world of Data Analytics, Machine Learning and Signal and Image Processing, providing skills and competencies immediately applicable to each company's reality.

Know more

Challenge Winners

Discover the winning ideas pushing forward for a sustainable future. Emanuel Carlos (PhD) and Pedro Rolo (MSc) were awarded in the respective categories for their ideas focusing on green electronics and energy harvesting.



Emanuel Carlos

PhD Category

Institution:

FCT NOVA

Thesis:

“Printed Metal Oxides: A New Era for Sustainable Electronics”.



Pedro Rolo

MSc Category

Institution:

Aveiro University (UA)

Thesis:

“Instrumented and adaptive electromagnetic generators: a new concept of harvesting”.



Play video

Techonology for Sustainability

We are living in a challenging era. Economic growth, fuelled by fossil energy and careless deploy of natural resources brought us unmeasured evolution, but simultaneously put life on planet Earth at stake.



Leonor Ferreira
Researcher at Fraunhofer Portugal AWAM

Diogo Correia started his professional career at Fraunhofer Portugal AICOS in 2018, first as an intern, then with a research grant, and finally as researcher in the Connected Things group.

Get to know him and the work he develops at Fraunhofer Portugal AICOS.

We are living in a challenging era. Economic growth, fuelled by fossil energy and careless deploy of natural resources brought us unmeasured evolution, but simultaneously put our life on planet Earth at stake. Around the globe, the impacts of climate change are evident: heat waves, wildfires, severe droughts and floods, fiercer and more recurring storms, rising sea levels, etc., are adding significant strain into freshwater and food supplies. All around the globe, scientists urge governments to act and warn about the consequences of inaction and demand a turn to a more sustainable development.

Sustainability balances between three sectors: economic, social and environmental. The 2030 Agenda for Sustainable Development from the United Nations (UN) was created in this line, highlighting the importance of meeting “the needs of the present without compromising the ability of future generations to meet their own needs”. The Paris Agreement followed establishing a landmark: for the first time all nations have agreed on undertaking an ambitious effort to combat and adapt to climate change.

Reaching sustainability requires a complete restructuring of industrial processes in which it is crucial to recover, reuse and restore. Each resource is seen within a circular economy path instead of the traditional linear “treatment and disposal” approach. More than ever, the application of scientific knowledge in technological development and innovation for the economy is vital.

To this end, highly specialized technological solutions capable of meeting the demands of each industry should be further developed

and implemented, focusing not only on enhancing the industrial market competitiveness in terms of products quality and quantity but also at environmental levels.

As an applied research organization, Fraunhofer Portugal undertakes applied research that drives economic development and serves the wider benefit of society. With this clearly defined mission, Fraunhofer Portugal Centre for Smart Agriculture and Water Management (AWAM), addresses the following research areas: sustainable crop production, water treatment and bioenergy. Emerging themes like recovery of nutrients, the efficient water management to be further reused, biogas treatment and energy production are addressed in the centre.

Therefore, membrane-based technologies, process engineering, advanced oxidation processes and sensors for the monitoring and real-time detection of pollutants are pursued as core technologies. The focus is to automatize, digitalize and simplify processes in order to meet the stakeholders’ needs and to contribute to the needs of a sustainable development described above. In sum, the researchers at Fraunhofer Portugal AWAM strive to build a climate resilient future together with their customers.

In the 3rd Person_

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Fraunhofer accepted the challenge of mixing IoT with composting for smart cities and waste production prevention. The project Conposting is an example on how the methods applied by the development team can intersect the needs of citizens, waste managers and municipalities towards a more circular urban system and sustainable cities”.

Telmo Machado, R&D&I Unit at LIPOR





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