REGIONAL UNIVERSITY NETWORK

EUROPEAN UNIVERSITY

RUN-EU General Assembly 2021— TUS, Athlone and Limerick, Ireland
European Innovation Hubs
Virtual Conference

POLITÉCNICO DE LEIRIA

IPCA INSTITUTO POLITÉCNICO DO CÁVADO E DO AVE

TUS Midlands Midwest

HAMK

SZÉCHENYI EGYETEM UNIVERSITY OF GYŐR

NHL STENDEN university of applied sciences

FH Vorarlberg University of Applied Sciences

03 & 04 November 2021

Schedule

Schedule

Innovation Conference

Run-EU Innovation Hubs

Wednesday Nov 3rd & Thursday 4th

Online – Via Zoom

DAY 1 - Wednesday

10:00-10:20- Opening Address - Dr Ricardo Simoes, IPCA

10:20 – 11:00 – Key Note

11:10 – 12:40 WP2 Innovation Hub Managers Presentations (20 mins each) (Chair: Ana)

12:40- 1:30 Lunch Break

1:30- 3:00 Presentations

3:00- 3:10 Comfort Break

3:10 – 4:00 RUN-EU Lightning Presentations

DAY 2—Thursday

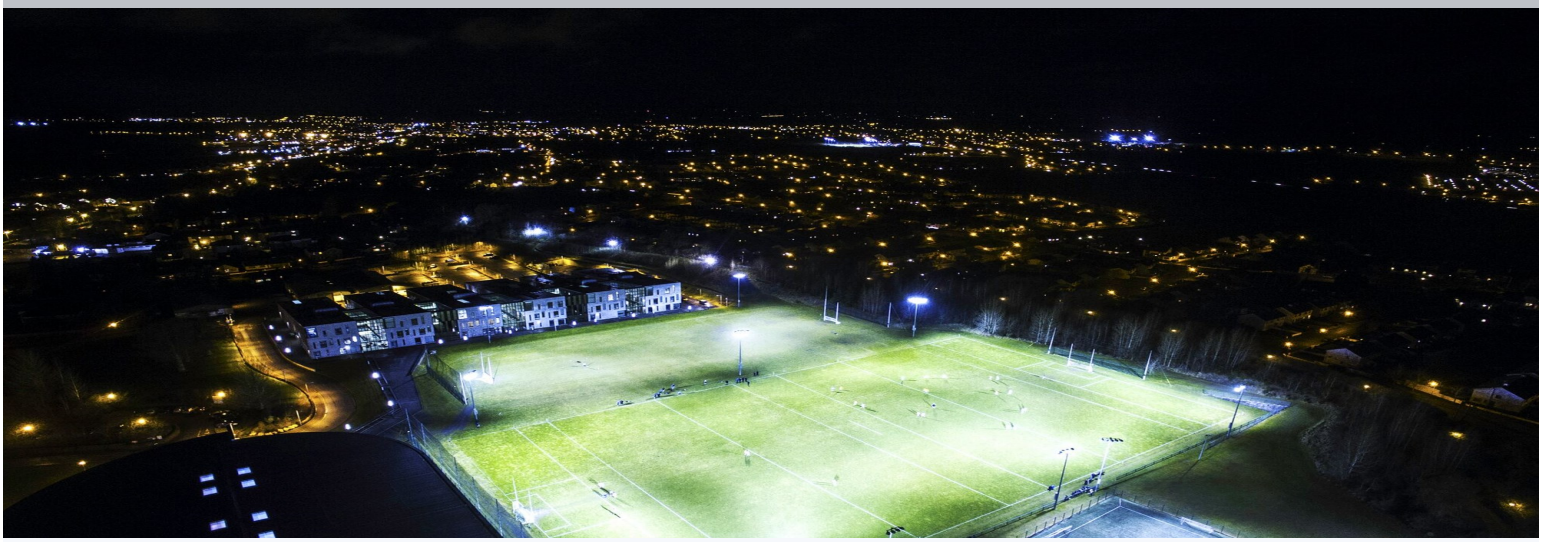
9:30 – 11:00 WP2 Innovation Presentations

11:00 – 11: 10 Comfort Break

11:10 – 12:40 RUN-EU Lightning Presentations (5 -7 mins / each)

12:40- 1:30 Lunch Break

1.30 – 3:00 Open Forum Discussion and Q&A on outputs from – Chair Jens or Ricardo



Presenter Profiles

Name

Dr Annukka Pakarinen, HAMK

Presentation Title

Smart Solutions Towards Sustainable Value Chains in Bioeconomy Business

Abstract

Very often small and medium size companies are busy with the everyday business thus not having enough time to follow research topics, complex issues concerning sustainability or new opportunities brought by digitalisation. Very often researchers are focused on narrow topics in the field of their research interest. Everyday business needs to be taken care of. Narrow topics need to be focused on to get deep understanding of issues. However, innovations and business opportunities are often sum of business instinct and know-how from research. Innovations often also arise from multidisciplinary approach.

HAMK RDI consists of four different research units and subject areas: Sustainable bioeconomy (HAMK Bio), innovative expertise in education (HAMK Edu), Intelligent services (HAMK Smart) and technology for the future (HAMK tech). In 2019 we purposefully began to diversify our expertise towards smart bio and circular economy. Research programs Bioeconomy 4.0 and Carbon 4.0 offered platform for companies and other stakeholders to löytää ratkaisuja kiinnostaviin tutkimuksellisiin biotalouden haasteisin datan ja toisaalta kestävien arvoketjujen

Overall Questions to Address in Abstract:

What problem is being addressed?

How is it being addressed?

What main outputs were obtained?

How were they translated into firms / NGOs / Social Community Groups?

What are the expectations or contributions for the European Innovation Hub to which the topic is aligned?

Abstract Guidelines for Academics / Researchers and Cluster, Enterprise or Innovation Managers:

Proposed Abstracts should be focused on presenting topics based on Innovative Solution Provision and Design Thinking relating to the development of Innovation Hubs or to the translation of outputs from Research Clusters, Enterprise Partnerships or Social Community Partnerships into Impactful Enterprise and / or cross disciplinary network activities. Translational Outputs could focus on addressing current climate change issues or other Sustainable Development Goals.

Name

Derek Blackweir

Presentation Title

Developing and Managing a Multicampus University Enterprise Centre Programme

Abstract

Higher Education Institutes (HEIs) have increasingly become major facilitators of regional entrepreneurial development. They not only help develop the entrepreneurial ecosystem but are progressively becoming innovation-intensive environments that support the growth of start-up activity and research and development engagement with SMEs and multinationals. Equally, the HEI's recognise the power of collaboration across the quadruple helix of stakeholders that is necessary to build strong innovation-driven economies and drive an impactful social return of investment. Entrepreneurship is very much on the agenda of many government departments, including education, which is especially interested in how entrepreneurial spirit can be embedded in the educational system and in the mindset of students across all sectors of the education landscape. The Technological University of the Shannon: Midwest (TUS) has been developing and experimenting in this area for more than 15 years. A key pillar of HEIs vision has been developing and supporting an impactful entrepreneurial community, understanding the need to develop job-creators and job-shapers and not just job-takers. This vision has manifested in the development of enterprise supports for our students and local stakeholders on each of our campuses and the development of programmes of support, including the national entrepreneur development programme, New Frontiers. This work has helped TUS develop critical insights into how to develop a successful multicampus enterprise centre programme. We explore the importance of strategic intent, HEI and other institutional and stakeholder influences and their impact, the activities of each centre, the reality of multicampus operations management and sustainability, PR, brand identity and communication with our stakeholders. Finally, we share some of the successes and failures and the importance of experimentation and community engagement.

Name

Victor Hugo IPL

Presentation Title

European Innovation Hub in Social Innovation

Abstract

Social innovation in the Leiria Region

EUROPE IS STILL FACING A LACK OF SOCIAL ENTREPRENEURS. Social entrepreneurs are individuals with innovative solutions to society's most urgent social, cultural, and environmental challenges. In essence, social entrepreneurship is the development and validation of new solutions to important and neglected problems in society (Almeida & Santos, 2017). Social entrepreneurship translates into "the search for sustainable solutions to neglected problems with positive externalities." (Santos, 2012, p. 335).

The term social entrepreneur appears associated with the development of activities of collective interest that aim to respond to unmet needs by capitalist companies. Social innovation responds to a context of crisis or the inability of the institutional framework to find satisfactory answers to acute problems or to entirely new situations (Klein et al., 2012). In this sense, in the Leiria Region, we aimed to fill this lack of social initiative by bridging university, social entrepreneurs and other institutions. Startup Leiria is an innovation Hub that has developed a public partnership with the Polytechnic of Leiria and Portugal Social Innovation Program. Through an innovative process of acceleration, and interconnection with different stakeholders the organization managed to accelerate more than 20 social projects, creating one of the most thriving social innovation Portuguese platforms.

Name

Vorarlberg University of Applied Sciences

Presentation Title

Alpine Research and INnovation Capacity (A-RING)

Abstract

As part of the European Strategy for Smart Specialization (S3/RIS3), most of the regions in the Alpine Space have already developed regional research and innovation (R&I) strategies. However, the triple helix for R&I (public authorities, academia and business sector) still focuses little on transnational cooperation to address topics of particular importance for the Alpine Space, e.g. the digital divide, climate change and biodiversity conservation. Likewise, the EU-Strategy for the Alpine Region (EUSALP) stresses the need to approach development challenges & potentials in wider geographical context with the overall coordination.

This circumstance is addressed by the A-RING project, which is a cooperation of several partners from science and public authorities of the Alpine macro region. It aims to establish the basis for an effective and permanent transnational cooperation among different levels and actors and to develop shared Research and Innovation (R&I) policies for the Alpine Region, promoting a coordinated and transnational multilevel governance.

The three main project outputs are:

• Blueprint for Alpine Region Research and Innovation Agenda: A strategic document that enables the creation of a common agenda for activating transnational, synergistic and complementary cooperation.

• Policy Briefs: Recommendations on options & collaborative steps for policymakers interested in establishing cooperative networks for strategy development specifically for R&I topics.

• Alpine R&I Chart: Action plan for transnational cooperation network among academia and business sector representatives to strengthen R&I in the Alpine Region.

In a bottom-up process, the outputs are generated in a collaborative fashion. Representatives of the macroregional R&I triple helix are involved the preparation phases as well in the critical analysis of the results. Thereby their expectations and knowhow are evaluated, their commitment fostered and incentives are set to consider the strategies, plans and recommended actions beyond the end of the project.

The projects and its results will show the importance of a joint approach for R&I and will provide instructions for its setup with concrete examples, easily replicable for any topic in different macro regions.

Name

Dr. B Sc. Wilbert A.J. van den Eijnde

Presentation Title

Smart Industry Hub Northern Netherlands: Guiding manufacturing SMEs in their digital transformation. Think big but start small.

Abstract

The digital transition (Industry 4.0) is manifesting itself at breakneck speed. Although significant, no one can oversee the full impact and pitfalls. The Smart Industry Hub Northern Netherlands (SIH-NN) has evolved over the years to a solid ecosystem were, according to the Triple Helix principles, stakeholders work together on solving this wicked problem.

The main goal of the SIH-NN is to guide SMEs in their digital transformation in becoming more mature. The services being offered are aimed to activate leadership and ownership within SMEs. The first point of contact are (sub)regional broker organizations. They start by assessing SMEs using the developed Smart Industry Assessment to identify gabs. When activated, SMEs can participate in so called Community of Practices (CoP) which are related to the specific topic of interest. These CoPs use the Design Thinking approach to come up with solutions. Work together based on the open innovation philosophy, on problems which SMEs can relate to, is one of the strength of CoPs. The CoP process can result in a proposal for process- or product innovation of even a blueprint of a start-up. Within the SIH-NN, the Centre of Expertise Smart Sustainable Manufacturing of NHL Stenden has worked in the past four years on setting up and guiding four CoPs related to Additive Manufacturing, Robotics&End-of-Arm tooling, Reliability Engineering and Flexible Manufacturing.

These CoPs resulted in one start-up, an associate degree course in Industrial Automation & Robotics, involving eighty-seven companies, realizing four regional demonstration environments, initiating seven public-private innovation projects, involving six courses within NHL Stenden reaching in total over hundred seventeen participating students.

The SIH-NN is selected by the Dutch Government as one of the five Dutch European Digital Innovation Hubs. The next step is to gain the EDIH status. The focus of the northern EDIH will be autonomous systems.

Name

Dr Jarmo Havula

Presentation Title

Steel Construction Excellence Center

Abstract

The built environment is an interesting area for developing sustainable solutions in the future. Among the other key materials, steel is a material which plays an important role in many built environment applications, buildings, bridges, masts etc. Globally, steel production is producing approximately 7% of CO2 emissions. In addition, heating and cooling of buildings forms a remarkable portion of the global energy consumption. Recycling of steel is already at a good level, but reusing the existing steel products, protecting the steel (coatings) to ensure longer life cycle, and reduction of material use are some of the key solutions to increase sustainability in the future.

As couple of flagship companies are located in Kanta-Häme region, close to HAMK, the Steel Construction Excellence Center (SCEC) was established 2014 to promote the development of the industry. HAMK, Tampere University, the local vocation school Tavastia, the local flagship companies, Ruukki Construction and SSAB Europe in addition to regional center, the City of Hämeenlinna are the key partners in the SCEC. Key partners have general agreement for the SCEC co-operation. Based on the agreement, the total annual budget of the key partners is 800 k€. In addition, other associated companies are participating the projects and utilizing the R&D services provided by the partners increasing the total volume of the SCEC.

Key activities include R&D&I, competence development and network co-operation. R&D activities includes International (EU), national, regional and company funded projects. Companies are also funding PhD projects. New innovations are also promoted. Competence development focuses on the development of education in degree programs and lifelong learning. Network co-operation aims to increase co-operation between companies, educational and research institutes, and other players in the field. The SCEC operation is coordinated by a steering group of key partner representatives.

Name

Ana Dinis

Presentation Title

Buildings regeneration in the context of environmental sustainability and social innovation: the case of Portuguese municipalities

Abstract

Several authors argue that international policies have aimed at reducing greenhouse gas emissions to achieve climate neutrality. The problem is more pronounced if we consider that buildings are responsible for nearly 40% of carbon emissions, mainly related to energy consumed for heating and cooling (IEA, 2019). This is mainly problematic for urban areas which are facing great challenges from rapid urbanization including demand for natural resources and impacts of climate change (Sancino and Hudson, 2020).Thus, buildings regeneration in the context of environmental sustainability and social innovation is increasingly seen as a public policy focused on the cities of the future (also called in the literature as smart cities), as collective goods.

The underlying concerns focus on the use of more sustainable materials, which do not damage the environment, with low carbon emissions, and which, at the same time, allow a reduction in the energy consumption of buildings and by families, meeting the 11th Sustainable Development Goal Sustainable cities and communities.The approval of financial incentives for green buildings plays a vital role in the promotion of sustainable development and carbon mitigation strategies (Rana et al., 2021) and can take the form of grants, loans, rebates, and tax credits to promote higher building performance standards (e.g. net-zero energy buildings). These measures became even more important to revive the revitalize the damaged economy due to the COVID-19 pandemic.

Governments play here a key role in adopting policy instruments to address the problem. In this way, green taxation is seen as one of the supports for a more sustainable future (including taxes on energy, transport, pollution, and resources consumption) through the implementation of tax benefits granted that lead taxpayers' behaviour towards environmental sustainability and more innovative society. Thus, as far as buildings rehabilitation is concerned, Portuguese tax law states that properties that have been completed more than thirty years or that are located in urban rehabilitation areas benefit from tax incentives, namely local tax exemptions. Although the tax incentives are meant for any property owner (individuals and companies), who must comply with the requirements established by law, namely the buildings ´energy efficiency and thermal quality, this study focuses on the tax benefits to companies, since it has a particular impact at the business level in the construction and real estate sectors. In the case under study, the recognition of the merit of the proposals and the allocation of tax incentives for regeneration intervention are dependent upon the municipality decision/option. So, we believe that local policies concerning buildings regeneration can help to understand the municipalities orientation to a more sustainable future and innovative society (following Liberalesso et al., 2020).

This research aims to contribute to the debate on the importance of tax policies and their impact on environmental sustainability and social innovation, analysing local policies granting tax benefits granted to companies, to stimulate buildings recovery, with the consequent analysis of the evolution of the efficiency of the artificial territories (and the 2030 Agenda target).

Name

Dr. Florian Maurer

Presentation Title

Business Intelligence & Innovation: a regional Digital Innovation Hub goes transnational

Abstract

As highlighted by the European Commission, around 60% of large industries and more than 90% of small- and medium-sized enterprises lag behind in digital innovation [1]. Thus, the European economy run the risk to lack the digitization of its systems [2]. To better support business and industry, the European Commission launched the Digital Innovation Hub initiative [3]. Digital Innovation Hubs are a policy instrument [3] to support the European economy (especially small- and medium-sized enterprises, midcaps) within the speed of the digital transformation in manufacturing value chains.

The Digital Innovation Hub on Business Intelligence & Innovation [4] addresses the risks, challenges, chance and opportunities of the digital transformation on regional level. It is an innovation and support service center of the Vorarlberg University of Applied Sciences and aims to mediate between academia and economy. Doing so, the Hub focuses on the support of the stakeholders within the Federal State of Vorarlberg within their efforts and activities in digitization. Furthermore, the Hub shall provide inventions in the further development of the regional Smart Specialization Strategy "Intelligent Production". In the center of the Business Intelligence & Innovation Hub is to boost research, technology and innovation for a sustainable, competitive and profitable regional development. Core services provided to the stakeholders are Artificial Intelligence (incl. Evolutionary Algorithm design and development), Innovation Research & Management, System/Ecosystem Collaboration, Resilience Engineering and Methods & Tools (for organizational change and innovation).

The Hub is part of the Interreg Central Europe Project "4Steps – Towards the application of Industry 4.0 in SMEs" [5]. This project is addressing the main challenge of advanced manufacturing as tool towards a new, digital industrial revolution. Six interregional Digital Innovation Hubs get designed and developed as well as interconnected to collaboratively provide services that address the risks, challenges, chance and opportunities of the digital transformation in organizations

Name

Fernando Poeiras

Presentation Title

Diagnostic tools for sustainable design optimisation – HUB 1 or 2

Abstract

Any sustainability strategy must reconcile different conditions: nature, economy, culture and society. The way each strategy does this leads to transformations that are more or less disruptive, more or less demanding in innovation, more or less dependent on technology. Here, we approach sustainability through optimization strategies that simultaneously reduce impacts and costs.

The creation of sustainable strategies - under the conditions of the current market economy - will have to reconcile the need for product differentiation with different ways of optimising production processes and the product itself.

We have created the AVD tool - adding value through design - which can help diagnose opportunities for optimisation, thus contributing to sustainability. This tool matches value chains with an analysis and characterisation of prices, products and processes.

This tool helps diagnose sustainable design opportunities. The tool should be used by all agents - in business, from manager to commercial, and customers - to diagnose differentiation and opportunities for value creation (with reduced environmental impact). Design solutions will be found collaboratively from this diagnosis.

Name

Sandra Cunha, IPCA

Presentation Title

TrivPlat - A monitoring, management and evaluation tool for electronic public procurement

Abstract

AbstractElectronic public procurement has been seen as an important tool for promoting competition, simplifying, and ensuring transparency in public decision-making processes, thus ensuring significant time and money gains. In Portugal, electronic public procurement replaced paper- based pre-contractual procedures for communication and processing based on information technologies and systems. The benefits of using ICT in public procurement processes translate into financial gains and organizational gains (measured qualitatively in terms of control, transparency, aggregation of needs, decentralization, rationalization of the supply base), with positive impacts on public governance.

Trviplat is a multidisciplinary project that bridges the knowledge of public management and information systems, to address some of these potential problems. It adds value through the development of an electronic public governance tool to monitor, manage, and evaluate electronic public procurement.

So, *TrivPlat* is a platform for free access, collection, organization, monitoring and dissemination of information on public purchases in Portugal. It allows research, either by public entities or by suppliers, related with the object of contract, procedure adopted, prices charged, geographic area, time space, among other research criteria; it also allows the consultation of statistics and announcements of the current procedures. *TrivPlat* clearly and objectively provides existing information, making it useful and easily accessible to all stakeholders, namely: public entities, suppliers, academy and society. *TrivPlat* is a tool to support buying/ selling decision-making, enhancing transparency and promoting market competition. This is a research project developed in a partnership between University of Minho and the Polytechnic Institute of Cávado and Ave, funded by FCT, under Portugal 2020.

In sum, this research project provides public procurement markets with significantly more relevant information and public organizations will be more equipped to make sound decisions. *Trivplat* is intended to be a contribution to transparency, integrity and good governance.

Name

Dr. Camila Bibiano

Presentation Title

Food Sustainability: Improving Soil Health And Water Quality In Agri-Food Systems

Abstract

Food sustainability embraces many factors, like sustainable farming practices that address problems being faced over the last few decades including greenhouse gas emissions and climate change. To reach a good level of food sustainability within a current global society, some crucial factors must be considered including activities and practices with low environmental impact and protection of public health. One of the biggest issues identified in the agri-food system production chain is waste; initiating from farming practices and progressing to product manufacturing and consumption. Most of the total waste generated is lost throughout the production process, and a significant amount ends up in landfills. It has been observed, by data collected in recent years, that the inefficient and irresponsible use of the resources in supply chain processes has contributed to soil degradation, reduction in fertility, water quality decline, biodiversity loss, food insecurity, among others.

With increasing population rates, and a resultant increase in demand for food, it is important that the scientific community play its role in contributing to national and international programs for the construction of sustainable solutions and implementation plans. One promising approach is to verify mechanism for restoration of crucial components such as macro- and micro-nutrients, and organic matter in the soil ecosystem. Most of the organic waste produced across various sectors has significant potential for fertilisation purposes, not only for plant nutritional necessities but also to maximise carbon sequestration and promote soil microbial communities, while influencing water filtration and preservation. Thus, the main purpose of this is study is to address issues related to soil and water use in the agri-food systems and to identify strategic mitigation plans to address some of these issues thereby rescuing, recycling, and transforming the organic waste within this system, while considering economic, societal, and environmental aspects.

Name

Marco F.L. Lemos

Presentation Title

Adding value to invasive seaweeds through fast-track-to-market biotech refineries

Abstract

AMALIA – Algae-to-Market-Lab-IdeAs is a Blue Lab funded by the European Union focused on generating products based on a sustainable exploration of seaweed biomass. The focus is to add value to invasive seaweed biomass – an ecological and economical problem of increasing relevance – by generating industrially-viable processing methodologies that maximize bioactive potentials in a circular economy approach. By harvesting this abundant biomass, the ecosystem balance is promoted while generating economic revenue for local and national communities.

Tailored extracts are produced using green, low-cost, and industrial friendly processes, and promising antioxidant, antifouling, and antimicrobial activities, among others, recovered from the harvested biomass of marine invaders such as *Sargassum muticum*, *Asparagopsis armata*, *Grateloupia turuturu*, *Codium fragile* and *Undaria pinnatifida*.

From these extracts, several products and applications for the food, feed, cosmetics, and other industries have been developed in an intensive product development program framework, and several outputs are here addressed, such as innovative bioactive feeds or smart wound-dressings. Also, the diversification of target niches has led to other industry-driven projects to deliver smart solutions to the orchard or to develop novel fish preserving bioactive packagings, and the framework for a win-win-win circular biorefinery is presented as a future-looking industry opportunity.

Name

Ricardo Simoes

Presentation Title

Improvement of Circularity of Plastic Products through circular design and environmental impact assassessment

Abstract

With the new focus on Circular Economy Policies in the EU, the need has increased to find new opportunities for the circular economy, also on the regional level. A major contribution to the prevention of waste plastics and emissions will come through proper methodologies employed and decisions taken at the design phase of products and services. In addition, the new design options should also fit new product and material life cycles, in which waste plastics are reused in new products. Companies are not only moving away from the traditional/obsolete approach of simply saying products are 'made of recyclable materials', but recently are becoming more interested in even pushing beyond the current consensual view of product end-of-life and incorporating recyclates, towards recent concepts of full circularity, where there should be refusal of redundant/useless products and materials, reuse and second use of products and a take-back of the product after the use phase and reincorporate it as product, components or raw material in production either the original product or a different one.

Together with industry and value chains, we are involved in applied design projects on these topics.

However, often companies are unable to appreciate the intricacies of very technical quantitative evaluation tools, such as life cycle assessment (LCA) on their own. The subjective practical meaning of each evaluation ranking in those methods, as well as the critical tradeoffs, makes it difficult for managers to employ such results to support decision making. Towards this goal, we are working on employing simple yet effective circularity indicators towards improving the circularity of products through a combination of circular design (in particular integrated product design with plastics) and environmental impact (in particular life cycle assessment) methods and approaches.

Name

Prof Neil Rowan

Presentation Title

"Empower Eco"– Irelands' first 'Quadruple Helix platform for accelerating Green Innovation, Education and Social Enterprise situated in the Midlands

Abstract

This timely presentation overviews the main actors and stakeholders that will contribute to the midlands community ecosystem in the Irish midlands, which will be used to support and enable Ireland's first Eco-Innovation HUB. Specifically, this framework accelerates engagements and interactions across academia, industry, government and society (termed 'quadruple' helix) to support communities and businesses transition to low carbon environment. Funding has been provisionally supported via the Just transition initiative.

Empower Eco will support regional development and regeneration through the accelerating of new green businesses, products and services. It will also support and enable social enterprises such as honey and exotic mushroom production ('food for good'), where training will be provided in the peatlands in living labs that have been future proofed for digital including virtual reality. The living labs provide state-of-the-art facilities to enable design, and testing of ideas and innovations, where there is real-time connectivity with the surrounding environment for demonstrating and validation of approaches. These test environments include sustainable aquaculture, vertical farming, agro-forestry to name but a few. Environmental testing will including net zero impact on biodiversity and ecology, which also includes pollination and ecosystem service management. The testing environment will also include sustainability measuring tools including Life Cycle Assessment (LCA), Material Flow Analysis (MFA), for processes along with micro indicators to inform businesses from a sustainability index perspective; thus, highlighting potential value and impact for businesses and communities in terms of what defines sustainability for these stakeholders.

Empower Eco, a first for Ireland, will be used to support knowledge and innovation transfer between partners across RUN-EU network and outputs will inform strategy and policy changes including inter alia, UN Sustainability Development Goals, Climate Change, Sustainability and Bioeconomy linked to important education, training and outreach for our Green New Deal era.

Name

Ing. Bojana Suzic

Presentation Title

Innovative ways to involve private investments to finance services of social interest

Abstract

Growing economic and societal challenges are calling for social innovation and stipulation of a new social economy, which could aid regions in finding innovative ways to satisfy growing needs of social sector – among which ageing population and increasing number of NEETs (young people not in education, employment, or training).

By enabling new forms of innovation and realization of new forms of financing, such economy could leverage on mutual collaboration between public-private-third sectors and simultaneously would allow the economic concepts of capital and investment to become social policy instruments - ensuring a greater value for money in public services. With this in line, the AlpSib project addressed NEET and senior's needs by introducing innovative solutions relying on social impact investment (SII) and highlighting social impact bonds (SIB), as one of the main accelerators of SII.

The main goal of the project was setting-up the Social Impact Investing Hub for knowledge sharing, policies` coordination, design, and assistance to the supply chains in delivering new SII initiatives in Alpine Space region. Specific objectives of the project were aimed at aligning knowledge and further advancing comprehension of SII and SIB in the region, as well to support transnational networking and joint development of innovative solutions and public-private partnerships to meet NEET's and senior's needs. Moreover, harmonization and acceleration of SII policies for commissioning better and measurable outcomes for NEET and seniors were in the focus of the project implementation. With this in line, main results of the project entail creation of the AlpSib Forum (promoting collaboration in the field of social impact policies in Alpine Space), AlpSib Platform (communities of practice and e-learning resources), and Alpine Space common methodologies for SII policies.

Based on this, further uptake of project outputs allows a more efficient transfer of knowledge and a greater sustainability of solutions achieved in a wider innovation ecosystem perspective. This is achieved by innovative impact investment solutions which not only promote economic dynamism and social value simultaneously, but also widens a perspective of economic and technological innovation.

Name

Marlene Rosa

Sara Gordo

Ricardo Pocinho

Presentation Title

AGILAB – A networking method in geriatric rehabilitation based on SERIOUS GAMES

Abstract

The elderly population needs specialised and innovative care, including new methodologies that promote better engagement during therapy. In this context, the literature highlighted the personalized care paradigm to promote happiness and well-being, in specific the potential of SERIOUS GAMES (SG) as an innovative strategy in this topic. Currently, AGILidades (SPIN OFF Polytechnic of Leiria) develops a network with more than 70 social institutions, aiming to develop good practices in geriatric care through SG, implementing the AGILidades Lab Centers Program (AGILAB). AGILAB teams receive certified training on the implementation of scientifically validated game-based protocols. These protocols develop activities into 3 different thoughts "Games2evaluate", "Games&Science", "Games2takecare".

The AGILAB program currently supports municipalities and social care units, promoting Active and Happy Aging based on SG-based programs. More than 140 SG have already been delivered and 30 hours of training were given to around 350 formal and informal caregivers. On 18th september, 2021, the 1st AGILAB Congress was held in a hybrid regime, which was attended by 250 participants, entitled "The game as innovation in Geriatric Care".

The AGILAB Congress was an opportunity for sharing good practices in the geriatric rehabilitation using SG, both in social residences and at home care context. In fact, 10 study cases prepared by AGILAB partners were presented. By the end of 2021, a total of 280 games will be delivered and 60 hours of network training will be conducted. As future goals, AGILAB intends to open the 3rd edition of applications to this program at the beginning of 2022 and create Centres of Excellence for training formal and informal caregivers through SG-based strategies. The AGILAB are thus agents that promote an ACTIVE & HAPPY aging process, by changing the culture of geriatric rehabilitation in social organizations, introducing SG has a gold standard framework for multidisciplinary teams.

Name

Ana Catarina Silva

Mário Fonseca

Diogo Bessa

Presentation Title

European Digital Treasures and the development of innovative merchandising for the National Archives

Abstract

In this proposal, we present the results from the cooperation project, "European Digital Treasures: Management of centennial archives in the 21st century" is integrated into a Creative Europe Program, — started in 2018, in which IPCA and DGLAB collaborate with its European partners, Archives Nationals of Hungary — Magyar Nemzeti Levéltár; International Center for Archival Research — ICARUS; Kulturdepartmentet —Ministry of Culture — Norway; National Archives of Malta and Archives of Spain.

It has a wide range of activities and actions, including the proposal of a new business model for European archives in the 21st century seeking to generate added value, visibility and economic profitability of European archives, through the identification and implementation of new business models and activities. The starting point was the acknowledgment that some archives receive hundreds of thousands of visitors and users annually, but unlike museums, most do not have their own stores or merchandising products.

o take advantage of these new opportunities and identify potential creative marketing products linked to the content of the archives, partners have invited graphic and industrial designers to think, produce and exchange ideas and samples. In response to this challenge, a multidisciplinary team of designers from the School of Design of IPCA has created seven innovative merchandising products related to the selected historical archive documents of the project, including the production of 250 merchandising prototypes.

The development of these prototypes followed the Design Thinking methodology and are under consideration for further production and commercialization on a larger scale, in the national archives' physical and online stores. The prototypes are currently displayed at Torre do Tombo and are going to travel to other partner countries, within the scope of the "European discoveries: from the new world to new technologies" exhibition tour.

Name

Aoife Prendergast

Presentation Title

Illuminating dimensions of Identity in Social Innovation– Expounding the functions of Supervisory Models in Irish Early Childhood Practice Education Placements

Abstract

Despite major changes and milestones in the early childhood education profession in the past decade, there is a compelling interest in professional identity in early childhood education. However, there is a paucity of comprehensive research about the very issue, particularly about how identities are nurtured and progress from the student professional to the fully-fledged early childhood education professional. Indeed, there is no research focusing on the complexity and challenging professional identity of the early years educator.

This research aims to articulate and examine the potential of an effective pilot supervisory model in early childhood education practice education placements in Ireland. Since the early 1990s, significant efforts have been introduced in the Irish Early Childhood Care and Education (ECCE) sector in order to improve and professionalise services provided to children under 7 years old and their families, as well as supporting professionals and students in this area (CECDE, 2006). However, the current regulatory Irish context governs professionals to possess a certain level of knowledge and skills to work in this sector, and the development of frameworks, such as Síolta and Aistear, has guided ECCE professionals (CECDE, 2006; Moloney & Pope, 2015). However, recent research has clearly demonstrated that early childhood professionals experience significant challenges in relation to their professional recognition, identity, level of qualification, and salary (Moloney, 2010; Moloney & Pope, 2015). Interestingly, there is little regard for the utilisation of professional supervision to address these fundamental challenges for early childhood professionals in practice, often disregarding formative practice education placements for students as emerging early years professionals.

Further exploration of the emerging professional identity will provide us with a clearer understanding of this dynamic role in contemporary Irish early childhood education practice. The scope of definitions and interpretations of professional identity in the extant literature are contested (Dobrow & Higgins, 2005; Sutherland & Markauskaite, 2012). Professional identity can be defined as one's self as perceived in relation to a profession and to one's membership of it. Professional identity is created through one's beliefs and attitudes, values, motives and experiences through which individuals define themselves, in their current or anticipated professional life (Bridges, Macklin, & Trede, 2012; Johnson, Cowin, Wilson, & Young, 2012; Sutherland & Markauskaite, 2012; Schwartz et al., 2011). Similarly, other definitions are offered in which professional identity relies on the process of socialisation (Ibarra, 1999; Schein, 1978). Professional identity creates a psychological attachment between an individual professional and its value of early childhood education as a profession in its one right.

The complex layers of identity highlight the ever-evolving nature of intersectionality and extremity in modern early childhood education practice. The conflicting and interwoven demands have impacted on the already stretched and struggling profession. Currently, the contemporary professionalization discourse which has remained ongoing for decades encompasses many of the challenges faced by early years educators on an ongoing basis. This includes the complexities of power, terminology and ambiguity ensures the struggle for early years educators in transformation for their own emancipatory practice and the pursuit of social justice

Name

Hugo Palmares

Presentation Title

Evolution of the design culture in the Portuguese footwear industry: Co creation of a toolkit as an interface for diagnosis, prescription, verification and validation

Abstract

In the industrial context of footwear in Portugal, an empirical observation indicates that several of these companies tend to operate in a traditionalist and outdated way from a managerial and visionary point of view. It's argued that this operating mode tends to damage its development, success and productivity rates.

How can the design culture be an innovation tool capable of contributing to the overcoming of outdated management modes in the Portuguese footwear industry?

This investigation aims to demonstrate the co-creation process of a toolkit, as an interface for diagnosis, prescription, verification and validation of this tool in organizations. This tool emancipates companies so they can evolve the design culture, contributing to a multidisciplinary business management as a vehicle for innovative processes, products and/or organizations.

Research through design, in partnership with a multidisciplinary team, applied in the footwear sector, promoting the sharing of knowledge between industry and academia.

The outputs expected from this doctoral investigation are practical results as an artifact, toolkit/product/or service, physical or digital, validated by the co- creation work; Diagrams, texts and visual/or audiovisual elements explaining the evolution of design culture in partner companies, through the replicability of the toolkit; Publication of the study in a manual/catalog/book/or website demonstrating good practices resulting from this investigation.

Name

André Martins

Presentation Title

Ensuring the transition to Future Industries with Legacy Industrial Equipment: a real-world example with CNC and Injection machines

Abstract

The industry digitalization is mandatory for future and sustainable industries, to ensure increased production performance, full quality control across all products and production stages, decreased waste, and increased customer-based product customization. Although large investments are being made for this purpose, it is not expected that industrial equipment with a lifespan of 10 or 20 years to be replaced for the purpose of factory digitalization. To overcome this problem, technologies must be put into place to enable equipment with limited communication capabilities, currently being used in the industry, denoted here as legacy equipment, to be part of these fully digital production lines.

In this work, an OPC UA-based methodology is proposed, a standard that is being increasingly adopted by the industry for communication and data sharing across different levels, from the production management, to the shop-floor control networks. Most major manufacturers of industrial equipment are integrating OPC UA on their machines, enabling remote monitoring and control. By using an OPC UA-based methodology for the integration of legacy equipment, one ensures that, from the point of view of the production management and control, legacy equipment presents an identical interface as new equipment, already prepared for the digitized industry.

The use of Companion Specifications, created by the OPC Foundation in collaboration with the industry, further ensures the use of standard information models, contributing to the plug-and-produce of both the legacy and new equipment.
This work presents the methodology and two use-cases that were developed in collaboration between the Advanced Robotics and Smart Factories research group at the Polytechnic of Leiria, together with industries in the Leiria and Marinha Grande regions, in Portugal. The developed methodology includes several approaches to cover different use cases, both for CNC and injection machines. Results are given for real-world experiments show-casing the applicability of the developed work.

Name

Dr Csilla Bartucz,Dr. László Buics

Presentation Title

Network, digitalization in last mile delivery – is this the future?

Abstract

Managing on-demand transportation services on the CEP market, especially in case of last mile delivery services, require a process based approach to achieve a holistic overview. One must keep in mind both the important factors and stakeholders affecting performance and resource utilization.

The last mile delivery market has had efficiency issues for years, which have intensified as e-commerce has grown and customer demands have changed. Regulations imposed as a result of increasing urbanization and environmental regulations have put additional pressure on the industry. Numerous solutions have been proposed in response to the challenges, but cooperation is still not typical of this industry.

The potential of a 21st century platform-based resource sharing system can perhaps be transformed into the last mile delivery industry as well, using digitalization methods to create a real-time data based network. Nevertheless, a number of questions arise that need to be answered in order to develop the model. Why is there no cooperation in the industry? What factors are needed for a collaboration to develop? Are the challenges of the 21st century compelling for the industry? What role does city management play in the sustainability of the industry? How dual a conflict of interest exists between the actors?

The present study, in order to provide answers to the topic, initiates a regional research in order to develop a platform-based business model for last mile delivery providers. Our interdisciplinary research group consists researchers from several related areas.

Name

Md Abdullah Al

Presentation Title

Data Safety and Cookie Policy: A Review from Customer's Perspective

Abstract

Adaptation of the transitional generation in the era of continuous technological advancement, their knowledge in data safety and how they keep their private data safe when browsing through the internet is an important issue. Hence, I have conducted a qualitative research on a focus group aged 20-30 who was born before the peak point of the dot-com bubble.

In the research, some wide and open- ended questions was used to collect primary data as a base of the analysis. The prime focus of the research was to gain perception of the use of private data on the internet from the customer's perspective and gain customer's knowledge in cookie policy.

According to the respondents, the cookie policy is something they are not very familiar with. However, they feel a fair amount of insecurity towards the possible leakage and misuse of their private data. The research also summarizes that the website should reform the cookie policy in a way that will be more customer- friendly and secured.

Name

Susana Silva

Presentation Title

Greenwashing The Heaviest Bill Supported By The Environment

Abstract

Greenwashing is one of the biggest concerns that our nature faces and unfortunately, a way for entrepreneurs to obtain profits that are supported by the environment.

In this type of practices, entrepreneurs spend more money on the advertising content than on the content it conveys, which means that the product apparently is environmentally friendly, but in reality, it is just a message that leads to acquisition of the referred product, by a certain consumer, who is concerned with environmental issues but who, on the other hand, is not properly trained/informed for this type of practice.

Taking into account the huge environmental challenges that all of us have to face, especially with regard to the depletion of environmental resources, were prepared the Sustainable Development Goals (SDGs), with a view to, among others, the objective of ensuring environmental sustainability, which is characterized by responsible consumption and production.

One of the ways that companies will be able to produce responsibly will be through the use of the eco-label, which guarantees to the consumer that when purchasing such a product, they are protecting the environment, since the entire life cycle of the product, from the beginning to end of life, the environmental impacts are monitored, and, moreover, this product offers the same quality as the others on the market, with a substantially reduced environmental impact in relation to the others.

Considering that currently consumers are increasingly concerned about environmental issues, by resorting to the eco-label, this guarantee is given to them and on the other hand we are saving nature and guaranteeing the future of the next generations. Therefore, educating and alerting consumers to the eco-label, as well as making traders aware of the use of this system, which, even though legally voluntary, is everyone's obligation.

Name

Juha Jordan

Presentation Title

Colour stability of natural indigo colored wood and polylactic acid after artificial weathering

Abstract

Our studies present colour stability of natural indigo pigmented wood and plastic after artificial weathering. Indigo is a blue colorant which is most commonly synthesized from petroleum- based sources. It can also be extracted from various plants, for example woad (Isatis tinctoria), thus offering an alternative for synthetic indigo.

In our studies, natural indigo extracted from woad was used in coloration of polylactic acid (PLA) and two different wood coatings. First, the indigo-colored specimens were exposed to ultraviolet radiation and water condensation in QUV test chamber. After that, their colour properties were assessed with visual inspection, reflectance spectrophotometry, Fourier-transform spectroscopy, and hyperspectral imaging.

Hitherto, results have showed that the colour stability of wood coatings with natural indigo is substantially better than colour stability of unpigmented coatings and coatings with comparative commercial pigment.

Name

Adhie Prayogo

Presentation Title

Effect of Pro-Environmental Behaviour, Locus of Control, Celebrity Endorsement towards the Willingness to Pay of Green Products: A case study in Hungary

Abstract

With the increasing awareness toward environmental issues, people behave more eco- friendly. Their eco-friendly consciousness also affects their buying behaviour, leading to consuming more eco-friendly products. Thus, the marketer needs to discover the current buyer motivation and the extent of their shift buying behaviour, including what aspects influence the consumer most and the price elasticity. Therefore, the primary purpose of this study is to examine the relationship between pro-environmental behaviour, locus of control, celebrity endorsement and the willingness to pay for green products in Hungary.

This study analysed the behaviour of Hungarian Students, either undergraduate, master or doctoral degree students. Collected data, using the online questionnaire, were examined by the Statistical Equation Modelling (SEM) to reveal the relationship between (1) Pro-environmental Behaviour and Locus of Control, (2) Pro-environmental Behaviour and the Willingness to Pay, (3) Pro- environmental Behaviour and the Celebrity Endorsement, (4) Celebrity Endorsement and the Willingness to Pay, (5) Locus of Control and the Willingness to Pay.

This study intends to provide more knowledge and literature for green marketing and extend the latest framework for customers' willingness to pay with an additional variable, advertisement.

The study finds that pro-environmental behaviour and celebrity endorsement have a significant and positive relationship with the willingness to pay for green products, while environmental locus of control shows a significant and negative relationship.

Name

Susana Silva

Presentation Title

Marine resources contribution towards fruit and vegetables value chain resilience: development of a seaweed based food additive

Abstract

Fresh-cut apple shelf-life is limited by its superficial browning. Fresh cut fruits and vegetables are in increasing demand as these products comply with key trend demands such as health promotion and convenience. However, its distribution relies in a demanding minimal processing which usually involves edible coatings application.

Commercial edible coatings formulation for fresh-cut Fuji apple includes synthetic substances conferring products a shelf-life of up to 8 days. Options that simultaneously extend shelf-life and comply with consumer demand for natural based additives will strengthen fruits and vegetables value chain resilience.

An industry-academia collaboration between Campotec SA and Polytechnic of Leiria identified, developed, and validated a macroalgae-based anti-browning edible coating for shelf-life extension of fresh-cut Fuji apple. The patented formulation is based on a hydroethanolic extract of Codium tomentosum seaweed.

Industrial application of known seaweed potential in food conservation depends on a long pathway from problem identification to laboratory tests to scale-up and validation towards compliance of regulatory requirements and economic viability of the developed products. Commercial potential of the developed coating depended on the validation of its functionality at industrial scale and on the establishment of the anti- browning mechanism underpinning its functionality.

Algaecoat project scaled up optimal extract production and application validating coating functionality at pilot-scale under industrial application and commercial distribution conditions.

Extract functionality has been associated with inhibition of polyphenol oxidase and peroxidase (enzymes mediating fresh-cut fruit browning). The inhibition mechanism is under study and most probably associated with extract ability to repress gene expression of enzymes responsible for browning pathways. Establishing extract anti-browning mechanism will be a keystone in extract technology transfer enabling future application for its inclusion in the European Food additives database

Name

Alina Greene

Presentation Title

Sustainable Plastics and Organisational Technology Adoption for a Transition to Circular Economy

Abstract

Ireland currently produces the most plastic waste per person in Europe (Statista Research Department, 2021). Food packaging accounts for approximately 40% of consumed plastic in Ireland. (EESC, 2020). However, only approx. 8.7% of plastics get recycled worldwide (EPA, 2018) and many plastic materials can generally only be recycled 2-3 times before the material is too weak to reuse (Sedaghat, 2018). The EU Strategy for a circular economy was launched in January 2018 and is transforming new plastic product design, to achieve the United Nations Sustainable Development Goal 12, to produce products that are regenerative and designed to be kept in continuous use, to eliminate waste (DCCAE, 2020).

A plastic material is defined as bioplastic if it is bio-based, biodegradable, or features both properties (European Bioplastics, 2016). This research investigates the relationship between the adoption of sustainable plastics and business sustainability in the Irish food packaging industry. The influencing factors affecting intention to use new technology and the role of employees in successful integration, is of particular interest to this study. Overall, this study will evaluate how the Irish food packaging businesses must change internally in order to successfully adopt sustainable plastics and produce a positive external output on environmental issues.

This study implemented constructs from the Unified Theory of Acceptance and Usage of Technology (UTAUT) (Venkatesh et al., 2003), the Theory of Interpersonal Behaviour (Triandis, 1977) and the Social Exchange Theory (SET) (Homans, 1961). A mixed method approach was implemented for a pilot study, with a random sample of 12 employees from different organisations in different sectors. The pilot findings confirm that employee's intention to use sustainable plastics are hindered by socially irresponsible practices and that the role of employees will define the success of its adoption in the businesses.

Name

Dorinda Silva

Presentation Title

A community-led exercise to identify priorities, challenges and solutions of therapy research and development in Rare Diseases

Abstract

Congenital Disorders of Glycosylation (CDG) are a large family of rare diseases for which few treatments are available. The aim of this work was to understand the current landscape of ongoing therapy research and development (R&D) for CDG and to provide future guidance. A mixed-research approach enclosing quantitative and qualitative investigation was implemented in the context of a conference on CDG for families and professionals. An electronic survey was created using SurveyMonkey platform, disseminated prior to the conference via social media and analysed with descriptive statistics tools. Afterwards, data from Think Tank discussions were analysed by two independent researchers. While in the quantitative phase a prioritization of 6 therapeutic R&D tools was done, the qualitative phase investigated the challenges and solutions for each research tool based on community-led Think Tanks.

Name

Attila Lajos Makai

Presentation Title

The role of Hungarian universities in the S3 related entrepreneurial discovery process

Abstract

The related literature is unified in the fact that the development of Hungarian innovation policy was strongly influenced by the EU integration process; norms and structures that allow for the appropriate utilization of available funding have influenced not only the methods of allocating resources, but also the system of policy institutions themselves. Higher education institutions (as regional actors) have been active participants in the design of innovation policy since the beginning, but their role and importance has grown significantly in the planning of the S3 Strategy for 2021-2027, which started in 2019. The purpose of the present analysis is essentially twofold. The first is to present the place and role of locally significant higher education institutions in Hungarian innovation policy system. The second is to outline the processes that led to the appreciation of the role of universities in the entrepreneurial discovery process related to the preparation of S3 Strategy, one of the most important documents of Hungarian innovation policy.

Name

Diana Sofia Clemente Ascenso

Abstract

In this paper, we will focus our attention on the study of the legal regime of the periods of availability.

We are talking about the times when the worker, who is not being formally working, is obliged to be at the disposal of his employer, distinct from his home, only if necessary, and in which, for that reason, is not resting, in the true meaning of the word.

To this end, it is our purpose to analyse the arising issue of the dichotomy working time versus rest time, from a legislative and jurisprudential perspective, especially with the appearance of new forms of work, mostly through digital platforms, we are witnessing a new set of problems from the limitation of working times.

Under the current Working Time Directive 2003/88/CE, and bearing in mind the contributions of the Court of Justice of the European Union, working time is placed in opposition to rest periods, as those two concepts are mutually exclusive. Also, the Directive does not stablish a "tertium genus", which means that there is not any intermediate category between working time and rest periods.

For that reason, we would like to consider two recent cases from the Court – C-344/19 and C-580/19 - in order to understand the problems that are being faced by the labour law.

In both cases, the two claimants considered that, due to the restrictions involved, their periods of stand-by time, had to be recognised, in their entirety, as 'working time' and remunerated accordingly, regardless of whether or not they had carried out any specific work during those periods.

Name

Diogo Sousa

Presentation Title

Critical Insights Towards the Development of an Sustainable Sports Tourism Management Framework for Portugal

Abstract

The concept of sustainability is currently assumed as a priority mission for the strategic development of various tourism destinations. The recognition of the importance of the values inherent in the concept of sustainability for the development of tourism strategies represents opportunities and challenges for territories and their respective Destination Management Organizations (DMO), in the sense to balance growth in a sustainable manner. In Portugal, the tourism sector is crucial for the country's economic and social development, having represented in 2019 around 15.3% of the total GDP (INE, 2021).

The strategic importance attributed to the sector has led to several investments by the government to maximize the country's competitiveness aiming for a more competitive positioning as a tourist destination. In this context, key strategic tourism products were identified, such as sports tourism, which have been integrated into the strategic planning for the development of tourism in Portugal, thus contributing for its the national territorial development. Portugal, holds unique conditions for the practice of sports tourism activities, from the privileged climatic conditions and natural resources, security and hospitality, but also by the presence of high-quality infrastructures, equipment's and services to support the sporting activity. However, the complexity of the sports tourism sector in Portugal, associated with the heterogeneity regarding the implementation of management frameworks by DMOs, raises several constraints for the establishment of sustainable tourism development in several sports tourism destinations.

This research recognizes these gaps and intends to contribute with new knowledge to the sports tourism sector in Portugal, through the evaluation of the effectiveness and applicability of any existing sports tourism management strategies and frameworks developed to date with the aim to propose a new comprehensive conceptual framework for the effective sustainable development and management of sports tourism in Portugal, placing a focus on the development of active stakeholder relationships.

Name

Fátima Mendonça

Presentation Title

An Examination of the socio-economic impact of tourism in Portugal

Abstract

The tourism sector has assumed a prominent role in the world tourism panorama. In Portugal, tourist activity has been growing exponentially (EC, 2021). It has fast become a key instrument for the country's economic growth, contributing directly to 8% GVA, worth an estimated €18.4 billion and employing over 413,000 people (EC, 2019). While the Portuguese Tourism industry suffered significant impacts and losses as a result of the COVID-19 pandemic, there are now indicators that reinforce that the popularity of tourism in Portugal with tourist arrival numbers expected to return to pre-pandemic numbers by the end of 2022 (EC, 2021). Although this will bring many positive opportunities and benefits to the destination, it will also present some challenges with respect to the long-term socio-economic sustainability of tourism in Portugal.

It has long been acknowledged that tourism in Portugal creates many socio-economic impacts, both positive and negative. While tourism can leverage and leverage opportunities for further economic growth, it is the negative impacts however, that tend to garner more attention than the positive outcomes. Issue such as increased leakages, overcrowding, traffic disruption and congestion, crime, vandalism and anti-social behaviour, noise, littering and the pressures tourism can place on local services can adversely affect community quality of life and lead to community hostility and a lack of support for tourism (Maguire, 2019). It is therefore essential for destinations to place sustainability centre stage when it comes to tourism development, planning and management due to the implications destinations face as a result of tourism growth. Through effective sustainable approaches to planning for and managing tourism, destinations can work to maximise the positive outcomes derived from tourism while minimising any negative impacts of tourism.

This research will aim to paint a picture of the socio-economic impacts, both positive and negative created by tourism in Portugal and will look to examine the level of planning and management for such impacts by policy makers in Portugal. In the longer-term, such data can be used to help inform and develop sustainable management policies and strategies for tourism in Portugal. Without effective policies and strategies, Portugal may run the risk of being unable to secure its future long-term viability and sustainability.

Name

Dr Jamie Meehan

Presentation Title

Irish Digital Engineering and Advanced Manufacturing (IDEAM) Cluster Business Model supporting Advanced Manufacturing SMEs (EIH 1)

Abstract

The 'Digital Engineering and Advanced Manufacturing' context in Ireland is transforming rapidly and the art of enhanced collaboration through cluster building can provide many benefits for industry productivity, competitiveness, internationalisation and educational engagement. Under the Department of Enterprise, Trade and Employment, the recent SME Taskforce report on 'SME and Entrepreneurship Growth Plan' has highlighted clusters as a key pillar for driving the competitiveness of Irish SMEs. Funded under the Enterprise Ireland Regional Technology Clustering Fund (RTCF), IDEAM (Irish Digital Engineering and Advanced Manufacturing) Cluster assists Manufacturing SMEs in digital transformation and Industry 4.0. IDEAM brings together industry, academia and government to represent the needs of the digital engineering and advanced manufacturing ecosystem in Ireland. The cluster helps more than 290 active users and over 80 SMEs, from all over Ireland and internationally on:

- Educational Engagement: Sustainable Supply of Digital & Manufacturing Talent
- SME Productivity: Business Growth Promotion & Supporting Cross-Industry Collaboration
- SME Competitiveness: Collaborative R&D Strategic Projects between Industry & Academia
- SME Internationalisation: Supporting Irish Advanced Manufacturing SMEs & Start□Ups to Grow & Export

At a regional economic level, the impact of the IDEAM Cluster will be the retention and attraction of 2,000 jobs within the first three years. The manufacturing sector in Ireland is made up of a strong base of 36.7% of GDP (€102.8 billion in exports), over 230,000 employees (11.2% of workforce), €771 million annual spend on R&D, €8.73 billion annual spend on Irish materials and services and 34.6% gross added value. It has been well documented that companies involved in clusters have greater access to resources, skilled labour, talent, capital, 2 knowledge, and institutions. There are over 3,000 industry clusters in Europe and 7,000 globally which emphasises their significance and value-added impact on economic activity. IDEAM's cluster strategy will be shared at the RUN-EU Innovation Conference as a novel innovative and practical industry-driven cluster approach for relevant stakeholders, policymakers, cluster experts and managers. Thus, to enable clusters as a key pillar for driving the competitiveness of SMEs and the national economic recovery, renewal and resilience process

Name

Maria Nipo de Sá Moreira,

Presentation Title

Potential of organic waste in the enhancement of soil quality

Abstract

The European Union has stated that due to increasing population by 2050 the world will consume three times more food than nature has to offer, and that waste production may increase by as much as 70%. Therefore, the utilisation of circular economies will be essential to give new purpose to otherwise-considered waste materials and reduce the dependence on natural resources. Additionally, this project is aligned with European Union's sustainable goals numbers 2 (zero hunger), 12 (responsible consumption), 13 (climate action) and 14 (life on land). A soil conditioner is a product which is added to soil to improve its mechanical, physical, or nutritional qualities. Agricultural practices have been focused on the replacement of nutrients through chemical fertilizers, however this leads to extreme environmental pressure, reduced biodiversity, and increased gas emission.

The goal of the project is to characterize potential organic wastes and formulate a soil conditioner based on the waste material characteristics. Waste materials from various industries can be used as soil conditioners after processing of the waste, including mushroom spent substrate, spent brewers' grain, waste brewer's water, and seaweed. The results of this research, gathered so far, have revealed that the waste streams selected for this study are useful sources of macronutrients, such as phosphorus and potassium, and micronutrients, such as zinc, iron, and copper.

Mushroom spent substrate is rich in almost every element tested, soy mash is rich in both phosphorous and potassium and the spent brewer's grain can be used as a source of zinc and iron, while most of the macronutrients are present in the water waste resulting from beer production. Additionally, seaweed is rich in potassium.

The following tasks involve the formulation of different mixes of conditioners, which will be tested in plant growth trials. In conclusion, analysis of these waste materials indicate that they are great sources of macro and micronutrients essential to plants and contribute to the development of a circular bio- economy.

Name

Outi Tahvonen

Heta Rintala,

Essi Ryymin

Presentation Title

Promoting carbon-smart practices in domestic urban gardens

Abstract

This presentation highlights multidisciplinary collaboration between research units HAMK Bio and HAMK Edu at the Häme University of Applied Sciences. The study discusses how urban gardens could be further employed as a means to support carbon sequestration and presents a bottom-up initiative of garden coaching as a social learning process between researchers and gardeners. Often, urban gardens are not considered as part of the ecosystem or nature that could be protected through more ecological and sustainable practices. In previous research, gardening practices have been described as a continuum between conventional (orthodox approach) and ecological (unorthodox approach) practices, where the previously mentioned relies on the human intervention, chemical use and the availability of fresh water and the latter acknowledges existing resources and conditions and aims at conserving them. To promote these more ecological and sustainable practices, there is a need to consider urban gardeners' motivations, values and attitudes to engage in them. The study sets out to answer following research questions: RQ1) What kinds of motivations, values and attitudes are related to gardens and gardening practices? RQ2) Based on urban gardeners' views, what kinds of measures could support adopting more carbon-wise gardening practices? The current gardening practices and values and attitudes related to gardens and gardening practices are presented based on questionnaire (N=120) and interview data (N=24) collected in Hämeenlinna. The study suggests that respondents especially enjoy and value relaxation, fresh air and exercise that gardens offer, but they also wish to create a pleasant environment. Nevertheless, descriptive data related to the images of versatile gardens show that individual's perceptions of gardens and their pleasantness vary a lot. Interview data collected from participants in the garden coaching initiative further shows the importance of personal and family motives (e.g. aesthetics, usability of the garden) and social norms when choosing gardening practices. Moreover, the role of knowledge, awareness-raising activities and incentives are discussed based on interview data.

Name

Susana F.J. Silva

Presentation Title

Marine resources contribution towards fruit and vegetables value chain resilience: development of a seaweed based food additive

Abstract

Fresh-cut apple shelf-life is limited by its superficial browning. Fresh-cut fruits and vegetables are in increasing demand as these products comply with key trend demands such as health promotion and convenience. However, its distribution relies in a demanding minimal processing which usually involves edible coatings application.

Commercial edible coatings formulation for fresh-cut Fuji apple includes synthetic substances conferring products a shelf-life of up to 8 days. Options that simultaneously extend shelf-life and comply with consumer demand for natural based additives will strengthen fruits and vegetables value chain resilience.

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Industrial application of known seaweed potential in food conservation depends on a long pathway from problem identification to laboratory tests to scale-up and validation towards compliance of regulatory requirements and economic viability of the developed products. Commercial potential of the developed coating depended on the validation of its functionality at industrial scale and on the establishment of the anti- browning mechanism underpinning its functionality.

Algaecoat project scaled up optimal extract production and application validating coating functionality at pilot-scale under industrial application and commercial distribution conditions.

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Name

Tim Yeomans

Presentation Title

Shannon ABC; a model of an Innovation Hub for the Midlands and South West

Abstract

Shannon Applied Biotechnology Centre is an Enterprise Ireland funded Technology Gateway, and Research Centre. It is a collaboration between two recently formed Universities in Ireland – the Technological University of the Shannon: Midlands Midwest and Munster Technological University.

Shannon ABC's mission is to contribute to and improve the competitiveness of Irish companies in the Biotech, Food and Life Science Industries through strategic short, medium and long-term partnerships, providing creative, innovative solutions to industry's challenges as well as access to our research-based pipeline of commercially focussed technology offerings. Shannon ABC has developed significant expertise in bioresources – detection, identification, characterisation and valorisation - and collaborates with industry and other research centres in order to deliver this expertise in applied settings.

Intellectual property left on University shelves, commercialisation of research and industry engagement are three significant challenges for RPOs in Ireland and across Europe. The under-utilisation of IP represents poor value for money for State investment and leads to repetition of research projects. RPOs have a responsibility to engage with enterprise as they are a repository of significant state investment for leading edge equipment, facilities and intellectual property. The return on state investment can most significantly be realised through industry collaborations.

Shannon ABC is core funded by Enterprise Ireland to engage with Irish enterprise and to support them in solving a range of scientific and technical challenges. Shannon ABC sits within a network of Technology Gateways that provides for an enterprise friendly ecosystem. This funding-dependent engagement with enterprise provides for a model that creates a natural flow between core research (performed in the Research Centre) and enterprise engagement (through the Technology Gateway).

The co-location of Shannon ABC provides for broader opportunity identification, access at scale for enterprises and ensuring IP is utilised appropriately. We will present case studies to illustrate the impact of this structure, management, metric setting, co-location and commercialisation of research, and address challenges to Hub development as they expand.

Name

Antonio Moreira

Presentation Title

Sustainable Industrial Maintenance with Digital Twin and embedded Artificial Intelligence

Abstract

"Industry 4.0" or also known as the fourth industrial revolution is the term used to describe the combination of several technologies and techniques that are innovating the energy and manufacturing sectors. Although some advances exist, most of current industry still struggles to adopt this general concept, either by its cost or difficulty in estimate its benefits.

One of the most widespread and problematic areas is the maintenance, in this sense, advances in Ai-based predictive maintenance plays an important role in reducing long-term maintenance costs, unplanned downtime, and improving the lifetime of industrial machines. Usually, machines produce common and well-defined characteristics (heat, noise, motion, etc.) that can be locally monitored (embedded Ai) and correlated with the performance and condition of machines, helping in the active diagnostics of problems.

With focus in further pushing the boundaries of Ai and digitalization in the industry, the concept of Digital Twin, fosters a broader supervision of systems combining artificial intelligence capabilities with decision making tasks taking place with be a virtual representation of a physical asset with bidirectional transfer or sharing of data between the material and virtual counterparts, including quantitative, qualitative, historical, environmental and real-time data. Within these areas, our research group is focused in creating systems to increase industry digitalization acceptance by promoting plug-and-play Ai-based systems in several areas, such as maintenance, quality and human interaction, interconnected with digital twin systems for real-time ecosystem control.

Currently several embedded (edgeAi / tinyML) devices are being developed addressing real machine problems, that will be integrated in a larger initiative to develop an Intelligent Digital Twin and Hyper Automation Manufacturing software solution. We believe that these key-concepts will be the main enablers for a more sustainable, efficient and reliable industrial ecosystem.

Name

Dr Frank Houghton

Presentation Title

Empowering Adolescents & Young Adults to 'Read' Environmental Cues: Exploring Alcohol, Gambling and other Commercial Determinants of Health

Abstract

Ireland has an extremely problematic relationship with alcohol. Alcohol's impact on mortality, morbidity and health services usage is significant. The financial impact is equally disturbing, as is the link between alcohol, sexual assault, rape, domestic violence, suicide, and self-harm. Evidence indicates that many young people, as well as a high proportion of adults in Ireland, exhibit unhealthy drinking patterns. This pattern is increasing mirrored across Europe.

Equally concern is growing around problematic gambling. Gambling is increasingly normalised, and yet can lead to mental and financial health impacts. These in turn may result in physical ill-health. It should be noted that the last iteration of the DSM (Diagnostic & Statistical Manual of Mental Disorder) includes gambling disorder, indicative of the growing acceptance of the problematic nature of this issue.

This proposal is based on a school based project designed to respond to Ireland's intoxigenic environment. Drawing on elements of Ireland's Public Health (Alcohol) Act, 2018 this easy to use toolkit aims to develop an awareness of spatial issues associated with alcohol marketing in Ireland. This new toolkit introduces students to legislation, NGOs, Regulatory Bodies, analytical techniques and grassroots local activism. This project is currently being extended to include gambling. It could equally be extended to include other commercial determinants of health including Fast Food and Tobacco.

The proposal is to develop a European Program that would equip youth & young adults to understand their environments in relation to the promotion of alcohol, gambling, tobacco & Fast Food.

Name

Catarina Mangas

Presentation Title

Innovate to include in School | The ProLearn4ALL Project

Abstract

Modern societies intend to accept and welcome all citizens respecting their differences, expectations, and needs, valuing their potential. Many international entities such as UNESCO or United Nations understand that education can be a key area if it is free, universal and equitable, contributing to social cohesion and justice. Inclusive education implies the development of concrete actions that reinforce, from childhood, the sense of participation and belonging.

ProLearn4ALL | Learning Products for ALL, developed by the Polytechnic of Leiria in partnership with other non-profit entities, bases itself on these principles. The project aimed to make primary school children aware of the need to accept difference, by developing pedagogical resources that explain, in a ludic way, the main domains of disability (visual, hearing, cognitive, and motor).

Over two years, an innovative work was developed grounded on a problem-based research methodology. The search for solutions implied the connection between different scientific areas (Education + Arts + Social inclusion) and multiple agents from the educational and regional community (lecturers, researchers, professional consultants, technicians, students of higher education, and young learners with disabilities).

The multidisciplinary nature of the project, the diversity of the team, and the involvement of different regional entities allowed us to apply and develop new scientific knowledge to address the needs in the inclusive education area. In an articulated way, we sought to explore design and illustration techniques to enhance the accessibility of resources concerning all children, regardless of their characteristics, through cycles of critical and grounded reflection.

Throughout the various project phases, the ludic-pedagogical resources were tested and the results shaved an increment in children's knowledge about disability domains and a better conscientiousness about difference. This situation, when occurring in a period of crucial identity formation, may result in behavioral changes that allows them to foster habits and attitudes of inclusion in society.

Name

Sónia Monteiro

Presentation Title

Proposal of Sustainable Development Goals (SDGs) conceptual reporting framework for Portuguese Higher Education Institutions (promoted by IPCA/CICF)

Abstract

In 2015 the United Nations (UN) approved the 2030 Agenda, defining 17 Sustainable Development Goals (SDGs), placing education at the heart of the strategy to promote Sustainable Development. UN 2030 Agenda represents an opportunity for the improvement of higher education institutions' (HEIs) management, the relationship with stakeholders and the community, and the articulation and consolidation of education policies with the SDGs. HEIs are in a unique position to lead the cross-sectoral implementation of the SDGs and advance the 2030 agenda, providing an invaluable source of expertise in research and education on SDGs, in addition to being widely considered as neutral, trustful and influential players. HEIs need to be able to assess their impact on the SDGs and review their strategies and practices accordingly. For that purpose, it is necessary to collect and report new and updated data. Therefore, reporting can play an important role by informing the HEIs' progress towards the SDGs. The need for a common set of performance indicators proves to be paramount to stakeholder's ability to compare the contributions of HEIs to the achievement of SDGs. This project aims to propose a SDGs conceptual reporting framework that enhances the accountability and comparability performance of Portuguese public HEIs. In order to achieve this major goal, the specific objectives are the following: (1)Map the practices that the Portuguese HEIs are performing the SDGs in all the core activities: education, research, operations and external leadership; (2) Analyse the disclosure practices of Portuguese HEIs regarding the SDGs; (3) Draw up a proposal of indicators to assess the HEIs' performance in the SDGs area; (4) Build a conceptual reporting framework of the HEIs' contribution to SDGs, which considers the set of indicators proposed. Therefore, this project is fully framed on the SDGs, although, concerning its essence, it is particularly centred in the goals 4, 12 and 17.It is expected that this project will contribute to the improvement of knowledge sharing and transfer on the SDGs performance and reporting areas, filling the scarcity in theoretical and empirical literature, within the higher education scope. This project has several practical implications:

(i) It allows to increase the awareness and actions of all stakeholders towards sustainable development.

(ii) The framework offers a practical guidance to assist HEIs on how to report on SDGs contributions. It shall be able to lead HEIs to a process of continual improvement in their 4 nuclear areas:Education (providing students with the skills, values, and knowledge related to the achievement of the SDGs);Research (ensuring that the knowledge generated by research outputs is useful and visible for different stakeholders);Operations (controlling the own social and environmental impacts of HEIs);community engagement (as key stakeholders who actively participate in the societal dialogue regarding the issues covered by the SDGs)

(iii) The framework can be seen as benchmarking tool to improve HEIs SDGs performance.

(iv) The framework proposed may offer lessons for SDGs-related reporting in other sectors, particularly the wider public sector.

Name

Dave O'Hanlon

Presentation Title

Innovation Area 3 -Social Innovation

Abstract

Opportunities to engage with learners from across the globe (without leaving the classroom) can provide rich learning experiences for students who may not have the resources, confidence or time to study abroad.

Feedback from students and reflections of staff engaged in a 2019/2020 project designed to foster online experiential learning between students from Athlone Institute of Technology (AIT) and the Community College of Baltimore County highlighted several ways to enhance the student learning experience.

Whilst most students valued the experience, a more sustained time together was found to be critical to help students appreciate the challenges of intercultural teamworking. Nurturing student self-reflection on intercultural teamworking was also seen as necessary to make the most of the experience.

Having previously facilitated intercultural teamworking using the Team Based Learning (TBL) approach within the physical classroom, the author identified Online Team Based Learning (Clarke et al., 2018) as a possible teaching and learning strategy for similar projects in the future. Online TBL was implemented by faculty within a number of programmes in AIT last year. Student interview and survey data are currently being analysed as well as qualitative observational and questionnaire research with students who completed online TBL within another Irish third level institute.

Preliminary findings suggest that in order to facilitate Online TBL feasibly across borders in a manner that prompts reflection on intercultural teamworking there are some key requirements that need to be addressed in future iterations:

- A seamless online experience of the steps of TBL for staff and students

- Regular team debriefing and evaluation coupled with culture-focussed reflections

- Appropriately designed application exercises from faculty trained in TBL

-Effective balance of time allocated between synchronous and asynchronous interaction

Name

Kieran Hanrahan

Presentation Title

Locating Trust within Corporate Social Responsibility.

Abstract

This research into Corporate Social Responsibility (CSR) is seeking to establish if mechanisms can be designed to seed and accelerate trust and thus facilitate equitable relationships between previously unconnected corporate funders and Not-for-Profit (NFP) recipients.

The research can be summarized as follows: -

CSR is the environment.

NFPs and Corporations are the dyadic actors.

Trust, as a process, is the lens for examining this domain.

Interorganizational trust (IOT) differs from Interpersonal trust (IPT) given IOT studies dominantly focus on supply chains, joint ventures, R&D consortia, and other forms of networked organizations. These studies do not capture the unique nature of CSR; - commercial organizations tend to be homogenous, whereas by virtue of their divergent goals and cultures, NFPs and Corporations are distinctly different.

Despite being the main mechanism by which CSR actions are delivered, research into NFPs' experience within CSR is sparse. The initial research phase is exploring their attitudes to and experience of CSR. A different sequential mixed methods design will be deployed with the corporate participants.

A synthesis of current trust theory and information theory has produced concepts including a feasible organizational trustworthiness profiling tool. Allowing participants use this to create organizational profiles will enable them (a) measure the gap between prospective partners and (b) understand how targeted information exchange can help each party better understand the other.

Current CSR platforms focus on transparency and governance in partner selection, funding dispersal and associated tasks. This research is focused on building trusting relationships. The final phase will see participants invited to co-design a bespoke online platform, which will use both experimental and qualitative techniques to establish if profiling and targeted information exchange can build trust and enable long term strategic arrangements with the potential for mutually beneficial symbiotic CSR

Name

Jennifer Moran Stritch

Presentation Title

"Let Them Eat Cake: Death Cafes as Death Education Opportunities for RUN EU Medical Health and Social Care Students"

Abstract

Death, loss and grief are inextricably linked to life. However, many societies in the post-modern age are affected by death-denying, death-defying and death-avoidant attitudes and practices, which may leave individuals with limited capacities to manage both the practical aspects of end-of-life and dying as well as the grief that can follow. Death is universal but deeply complicated, and the global effects of COVID19 have heightened our individual and collective concerns around our mortality.

Death education refers to various formal and informal educational activities and can include topics such as attitudes toward death, the processes of dying and bereavement, and support for those affected by loss and grief. Death education is critical for preparing care professionals such as nurses, doctors, social workers, social pedagogues, social care workers, psychotherapists, counsellors etc. to effectively support people affected by grief and loss. However, the inclusion of formal death education in training programmes for the care professions is haphazard at best.

One accessible approach to death education is found in the Death Café phenomenon. The Death Café movement provides events where people gather to talk about all aspects of mortality with a facilitator and eat cake as a means of celebrating the preciousness of life. The Death Café approach helps people talk about difficult subjects, increasing self-awareness and potentially reducing death anxiety as well as death- and grief-avoidant behaviours.

I am proposing a pilot project across RUN-EU institutions that would allow those enrolled in medical/health/social care programmes to attend an online Death Café event as part of their coursework, emphasising reflection and personal learning. Participants would include fellow students in their own university and colleagues in other countries enrolled in similar courses. This kind of interprofessional experiential education could provide valuable insights on death and dying from student peers in a relaxed and unpressured atmosphere.

Name

Kevin Dwane

Presentation Title

Using animation as a therapeutic tool for people with depression

Abstract

Mental health and in particular depression has become one of the biggest issues of the modern era. There are many different methods for dealing with depression such as medication, art therapy, talk therapy, group activities etc. The purpose of this research project is to gain an understanding of the experience of having depression through the use of qualitative methods such as, semi-structured interviews and focus groups. The data gained will be used to determine if engaging in the process of creating animation could be of benefit to people with depression and what the benefits might be. Could animation be a new therapeutic tool for dealing with depression?

In this presentation I will discuss some of the key findings, such as “depression management” and “amplifiers and triggers of depression”. How these findings will be used to drive the development of animation workshops designed to be of therapeutic benefit to people with depression. Additionally, how the research will contribute to our understanding of depression and how stop motion animation can be used to benefit this particular group.

Name

Lisa O'Rourke Scott

Presentation Title

Tackling Gender based abuse by translating research to action

Abstract

Gender-based abuse (GBA), domestic abuse (DA) and coercive control (CC) are major societal challenges that predominantly affect women and girls. Ireland's Second National Strategy on Domestic, Sexual and Gender-based Violence (2016) asserts that GBA reflects and reinforces power inequalities experienced by women with respect to men in society, an assertion reinforced by Goal 5 of the UN Sustainable Development Goals (2015) and the Istanbul Convention (2011). International policy has evolved in recent years, viewing GBA, DA and CC as serious crimes and prioritising victim safety and perpetrator accountability. A critical concern of policy formulation is that the emerging policy will be implemented in the spirit and manner intended. Increased policy focus on victim safety and perpetrator accountability necessitates effective implementation that will result in reductions in the incidence and impact of GBA, DA and CC, and in survivors experiencing enhanced services and supports.

The current project is a Research Translation Centre: Gender based abuse. The purpose of the project is to connect researchers and frontline workers across Europe and to identify how research can be translated into practice which will reduce the incidence of gender-based abuse. Begun in Ireland with the establishment of an online resource which houses a searchable data base of researchers and allow practitioners and scholars to connect; the web resource provides information, webinars and training.

Having established the resource in Ireland we plan to expand our activities across Europe and to leverage further funding that will allow mapping of policy and practice in action. Outputs include: networking opportunities, working relationships and engaged partnerships between researchers, policy makers, police, community-based support services and survivors of GBA, DA and CC; increased research capacity; understanding of policy and practice strengths and gaps in the area across Europe; and dissemination of relevant research in the field in a manner that informs education and training, practice, policy and the development of further legislation

Name

Mary.Smyth

Abstract

This practice-based project is in collaboration with Aiséirí, one of Ireland's longest established addiction treatment services. A qualitative approach led to three focus groups with individuals in recovery at Céim Eile, their secondary care service, and were undertaken to produce data for short animated films. The group sessions provided various perspectives and experiences relating to addiction and recovery in Ireland. These sessions also included art-based tools in the form of a life-graph, as a reflective tool, and a character-design clay activity.

The questions and the clay activity, which asked the participants to personify their own addiction in plasticine, provided invaluable theme and visual research for animation development, allowing a rich insight into how the participants viewed their addiction. Thematic analysis contributed to the development of key themes from session transcripts. The four major themes include: 1. Illusion of Control, 2. The Click, 3. Significance of Help in Recovery, and 4.The Snake (symbol representing addiction). There were also four minor themes. Participants emphasised the depths of darkness and isolation in addiction, stressing how difficult the path to recovery is, yet they offered aspiration of a successful recovery by means of achieving 'the Click'.

Due to the findings, the first film takes an overview of the group recovery themes and focuses around five distinct points: Illusion of control; Losing control (realisation of one's own powerlessness); Loss; Help; and the Click. Other themes and visuals then interweave within this journey storyline. The second film is in production stage and highlights the two most prominent themes further in detail. The animations are age-friendly and will serve as recovery assets for Aiséirí and their service users in preventative and family programmes. They will also be available as online resource.

Name

Dr. Marie Taylor

Abstract

Social Enterprise has been identified as one of the main players for the economic recovery, economic growth and sustainable development of the next few decades (OECD, 2020) and and has become the focus of increased policy attention both nationally and internationally. The offer of education and training in the field of social enterprises has grown significantly in the EU in the past few decades, at formal as well as beyond formal education (EU, 2020). The provision of education and training in social enterprises varies among EU countries (SocialB, 2020a). There has been limited analysis done on mapping these training offers as well as on evaluating their potential. Therefore, an in-depth research of both university and professional training courses on social enterprise was found to be fundamental.

This research is based on the European project Social Business Educational Ecosystem for Sustainability and Growth (SocialB) funded by the Erasmus+ Knowledge alliance programme. Its aim is to design, develop and pilot an accessible suite of learning resources to support individual learning, organisational learning and network development in the field of social enterprise. They are designed to address identified skills gaps and training needs in key areas critical for the development, sustainability and expansion of the Social Enterprise sector. The resulting Learning Units will aim to stimulate significant changes in HEI curricula & VET training programmes by integrating a learner-centred approach oriented to real, problem-based learning and skills acquisition in the field of social entrepreneurship.

The results of this research thus far, illustrate that the role SEs will be able to play in the future will strongly depend on the development and dissemination of new teaching programmes and on the use of new teaching methodologies, among students and professionals of SEs.

Name

Gavin O'Donnell

Presentation Title

A cabbage a day keeps the cancer away

Abstract

The hydrolysis products of glucosinolates have many health benefits for humans when they are consumed regularly as part of a person's diet. The known health benefits of these hydrolyse products include prevention of cancerous tumours, prevention of heart attacks as well as aiding in the prevention of development of type 2 diabetes. The hydrolysis products of glucosinolate compounds have also been known to have agricultural uses in biofumagation.

Cultivation of plants high in glucosinolates such as those from the brassicaceae family, which is commonly know as the mustard family, such as cabbage, broccoli, radish, etc contributes to the well-being of those of all ages ensuring the live healthy lives. The anti-proliferative effects of glucosinolates like sinigrin have been investigated on cancer cells and were shown to induce apoptosis during the cell cycle at G0/G1 phase by triggering over-expression of p53 and down-regulation of Bcl-2 family members and caspases. Sulforaphane, the hydrolysis product of the glucosinolate glucoraphanin has shown beneficial effects on the cardiovascular system by inducing dietary phase 2 proteins, which detoxify enzymes and reduce oxidative stress. Glucosinolates have show reduction of pests like nematodes along with reducing the number of weeds when put into the soil of cucumbers making the cucumbers less reliant on chemical input from fertilisers and pesticides.

Currently this research includes the extraction of glucosinolates from brassicaceae plants followed by qualitative and quantitative analysis using HPTLC, which is an automated version of TLC. HPTLC is used to due to the environmental benefits it provides using less chemicals during analysis compared to common techniques like HPLC. Future research will involve growing plants from the brassicaceae family in an effort to increase glucosinolate concentrations. This will be done using controlled environments that allow for changes in environmental factors sure as temperature, photoperiods, light intensity and light wavelength.

Name

Nikita Chandra

Presentation Title

Measuring LIT's Entrepreneurship Pathways - "The effectiveness of Higher Education Institutes supported pathways for entrepreneurs: the LIT experience".

Abstract

PROBLEM: My Research Project Title is 'Measuring LIT's Entrepreneurship Pathways - "The effectiveness of Higher Education Institutes supported pathways for entrepreneurs: the LIT experience".

This would include:

Listing the names of all the entrepreneurs who studied from LIT.

Detailed survey to be conducted about their experience of studying in LIT.

Assistance given by LIT in establishing of their business & start-ups.

ADDRESSED: LIT offer a wide range of supports for start-ups and growing companies such as access to students / graduates, a local to global network of connections, R&D support, office space, access to expertise, mentoring such as the Entrepreneur in Residence mentoring programme, programmes, and flexible learning and more.

Ireland is the World Leader for Start-ups and Innovations Hub: 50 Nos of Research Institutions ,8 Nos of Universities, 2,36,000 No of Students, 349 No Research Scholars ,1270 No of Publications.

OUTPUTS:

• One of the oldest in Europe for Industry Research, Patents & Number of Irish Entrepreneurs have set up Enterprise in USA.

• One of highest FDI receiving Country in Europe

• World 's backbone of Pharma, Biomedical and IT industry

• Education Level 95%

• Pro Industry Policies & Support from Enterprise Ireland for incubation, loan, debt, and infrastructure

• Level playing fields for national and international entrepreneurs.

• Stable Governance and 5 th Ranking in Ease of Doing Business.

• The entrepreneurs profile case studies in conjunction with the LIT Hartnett Centre.

EXPECTATIONS & CONTRIBUTIONS:

• To be projected across the globe as "HUB OF INNOVATIONS & START UPS''.

• To project, promote & publicize "START UP IRELAND''

• Attracting investors across world that too Young needs to redefine, restructure, reinvent & reclassify our approach

• Need of hour is how to reach and teach maximum number of investors "WHAT IRELAND IN PLATTER FOR THEM TO ROLL OUT FASTER THAN ANY ONE IN WORLD"

• With the fastest ever spinning times the Entrepreneurs need to act at faster speed then internet

• Present day investors like to listen, understand, and act if found feasible.

Name

Rufat Aghabalayev

Presentation Title

The Role of Supply Chain Management on Sustainable Development Goals (SDG): Evidence from Azerbaijan

Abstract

Regardless, the developments in the concept and application of Sustainable Supply Chain Management (SSCM), global supply chains and distribution networks continue to pose growing social, environmental, and economic threats, which have adverse consequences worldwide. Therefore, the purpose of this study is to investigate and explore the role of current and future applications of SSCM practices, its influences on Sustainable Development Goals (SDGs) and characterize the constraints and challenges connected with SDGs implementation in supply chains by the result of the empirical research, which is going to be conducted in Azerbaijan.

The sustainable supply chains are becoming more and more of a foundation of competitive edge. To increase organizational efficiency and service quality, supply chain innovations integrate advances in information technology with novel logistical techniques. This research aspire to formulate the innovative framework, which will benefit from the application of sustainable supply chain innovations into the sustainable development goals. This study also aims to come up with the recommendations for improving the current SDGs mechanism. Therefore, this research is essential in terms of the findings and recommendations, which may contribute to effective SDGs Implementation Mechanism in Azerbaijan.

Keywords— Sustainable development goals, Sustainable supply chains, UN SDGs, Drivers

Name

Tamás Gyulai

Presentation Title

Innovation by territorial planning in cross-border context

Abstract

The Ministry of Innovation and Technology has created the Territorial Innovation Platform (TIP) in several towns in Hungary with the objective of developing the innovation ecosystem with strong involvement of universities and this platform can also support the territorial planning activities that are especially important for the 2021-2027 period.

Győr was one of the towns where TIPs were organised and the Széchenyi István University implemented an important role in the last year because the expert team of the University prepared the operational plan of Győr-Moson-Sopron county for 2021-2027. Active involvement of experienced professionals has it made possible that innovation and sustainability be considered as important aspect of the territorial plan. Another contribution to the entrepreneurial discovery process is that "Industry 4.0 Lab" has been created jointly by the University and the national centre for automation (SZTAKI) in Győr and it offers modern infrastructure to local companies for technological experiments.

Consequently, I would like to highlight in my presentation the innovative aspects of territorial planning in Győr-Moson-Sopron county as well as the role of TIPs in the national strategy for innovation and digital transformation. I also intend to present how smart city initiatives and cross-border cooperation can contribute to the territorial planning in Győr-Moson-Sopron county as well as the cooperation between the University and the local companies for digital transformation on regional level.

Name

Vera Santos

Presentation Title

Using co-design methods to develop a patient monitoring system in hospital emergency care

Abstract

Involving healthcare professionals and patients in the development of a patient monitoring system to help supporting patient hospitalisation at emergency care requires an approach which acknowledges an equal and reciprocal partnership. In previous research, efforts have been made to develop a model to engage healthcare professionals and patients in healthcare services and resources improvement (Neves et al 2021).

In Portugal, there has been a lack of patient and healthcare professionals participation in healthcare service innovation. The Organisation for Economic Co-operation and Development (OECD) reported that promoting patient involvement and learning from patient feedback needs to be a priority to improve the quality of care in Portugal (OECD 2015, 22). In the Safetrack study, concerned with the development of a patient monitoring system to increase patient safety for hospitalized people, designers joined the more traditional healthcare support specialism in the research team. The designers are introducing methods and tools to involve all key stakeholders (i.e., nurses, doctors and patients) in the design of the new patient monitoring system concerned with early detection of clinical deterioration to ensure patient safety in emergency care at the hospital.

Specifically, through the nature of co-design workshops and the use of participative tools, these approaches are intended to better empower patients and healthcare professionals in this co- development process, to help open up their agendas in this context. SafeTrack uses a participatory co- design approach involving three phases of this co-development process enabling patients and healthcare professionals to voice their issues when developing a patient monitoring system. Rather than outcomes being determined through a top-down ‘consultation’ model (The New Economic Foundations 2014), the researchers debate in a more equal and reciprocal partnership with patients and healthcare professionals.

Name

Katrin Weittenhiller

Presentation Title

Examining the Impact of Clusters on Economic Growth and Entrepreneurship in European Regions: An Employment-Based Methodology with the Irish Digital Engineering and Advanced Manufacturing (IDEAM) Cluster

Abstract

Under the Department of Enterprise, Trade and Employment, the recent SME Taskforce report (2021) on 'SME and Entrepreneurship Growth Plan' has highlighted clusters as a key pillar for driving the competitiveness of Irish SMEs and the national economic recovery, renewal and resilience process. A cluster is a "geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities" (Porter, 1990). Clusters are collaborative engines for driving economic recovery, renewal and resilience whilst supporting business growth opportunities. Considering this, the examination of clusters as a mechanism to influence and impact economic and enterprise growth, alongside a view on regional competitiveness facets are considered imperative areas of study.

The Centre for Commercialisation, Enterprise, Innovation, Design & Engagement (CEIDE) in collaboration with the Irish Digital Engineering and Advanced Manufacturing (IDEAM) Cluster is facilitating an employment-based Research Masters. Within the initial 2 years of the Research Masters programme, the aim is to identify those IDEAM Cluster SMEs that have benefited the most innovatively and to develop a model of best practice to support IDEAM Cluster members. Furthermore, the research pertains to measuring the impact and influence of clusters on economic growth and entrepreneurship activity, through case study learnings and benchmarking activities.

The methodology includes a comprehensive literature review, synthesising content on 'Enterprise Cluster Concepts', 'Economic Cluster Theory', and 'Entrepreneurship and Economic Growth' within an EU Policy context. A full review and descriptive analysis of the levels of influence of the IDEAM Cluster on entrepreneurial activity on the island of Ireland will be conducted. The primary research will follow a mixed–methods approach, using a combination of both quantitative statistical data analysis and qualitative NVivo software analysis using a semi-structured open-ended interview approach. The primary research will be facilitated via access to IDEAM Cluster members.

The research will help to promote and educate relevant policymakers on the direct and indirect economic benefits of clusters. Moreover, the establishment of a model of best practice that can be internationally used for the building of clusters will be developed. The effectiveness and impact of the IDEAM Cluster will be assessed, thus adding to the sustainability strategy of the IDEAM Cluster model. The overarching objective is to advance the research to a PhD/doctoral level by expanding the study to other clusters, partners and institutes across EU regions.

Under the Department of Enterprise, Trade and Employment, the recent SME Taskforce report (2021) on 'SME and Entrepreneurship Growth Plan' has highlighted clusters as a key pillar for driving the competitiveness of Irish SMEs and the national economic recovery, renewal and resilience process. A cluster is a *"geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities"* (Porter, 1990). Clusters are collaborative engines for driving economic recovery, renewal and resilience whilst supporting business growth opportunities. Considering this, the examination of clusters as a mechanism to influence and impact economic and enterprise growth, alongside a view on regional competitiveness facets are considered imperative areas of study.

Name

Ciara Davis

Presentation Title

Proposal for Lightning Talk: Run EU Innovation Conference 2021

Abstract

Selenium is an essential nutrient for human health; however, it is not required by plants. It is estimated that 800 million people suffer from selenium deficiency (Sarwar, 2020). Selenium is necessary for thyroid function, contributes to a healthy immune system and acts an antioxidant in the body, reducing cancer risk. Some plant species can accumulate selenium without affecting biomass of the plant. The human population is set to rise to 9.7 billion by 2050 (United Nations, 2019). Under Sustainable Development Goal number 2, there is a need to end hunger, improve nutrition, and promote sustainable agriculture.

This research aims to test sodium selenate uptake by hydroponically grown lettuce and spinach, two commonly eaten green leaves, and test the effects of different light wavelengths on the uptake and distribution of selenium, with the goal of increasing the nutritional value for human consumption.

Hydroponics is a method for plant growth that does not employ soil. Instead, plant roots are held in an inert material while nutrients dissolved in water are made available to the roots. Hydroponic methods have distinct benefits over soil growth including less water usage. It is estimated that only 5% of water used in irrigation systems for crops grown on farmland is needed for hydroponic systems (Sadare, 2013).

Growth chambers are innovative systems that allow great control over environmental conditions for plant cultivation. Temperature, humidity, carbon dioxide production, and light can all be controlled to create environments for optimum plant growth, replicating different seasons and climates to suit crops. “Vertical farming” which stacks shelving units minimises space necessary for growth.

The lack of stress on the plant, the ability to grow year-round, and the small space taken up by the chambers increases yield and ensures sustainable production of crops.

Name

Jeovan A. Araujo

Presentation Title

Valorisation of agricultural waste to produce cellulose-based bioproducts for hydroponic farming

Abstract

One thing the use of fossil fuel-based chemicals and products has done is to raise concern about its environmental and ecological impacts. Thus, the utilisation of renewable resources as an alternative way to manufacture versatile and valued materials for modern life has become of great public interest. As a green material, cellulose offers outstanding and unique advantages due to its renewability, intrinsic properties and abundance on Earth. Cellulose can be obtained from a range of sources including biomass, plants and bacteria, in which the production method used usually rely on mechanical, chemical or enzymatic treatments, or a combination of these techniques.

Hydroponic farming is a method of growing plants without using soil, so growing substrates are required for a hydroponic system to hold the plants. In this work, a combination of mechanochemical treatments (blending, sieving, extraction, boiling, bleaching, drying, milling) has been used to recover cellulose fibres from agricultural waste such as wheat straw (WS). The average yield of WS is nearly 1.5kg per kg of grain produced. Therefore, agricultural waste can be used as inexpensive starting materials to produce added-value cellulose fibres. Biomass sources are composed of not only cellulose, but also other compounds including hemicellulose, lignin and other small chemical impurities, for this reason different treatment conditions in order to favour the recovery of cellulose fibres were applied.

Chemical separations, optical microscopy (OM), Fourier Transform infrared spectroscopy (FTIR) and differential scanning colourimetry (DSC) were used to investigate the chemical content, morphology and thermo properties of the extracted cellulosic materials. The extraction yield of each material was evaluated by mass balance calculation. Furthermore, the cellulose produced has been tested as substrate for growing plants in hydroponic farming systems, and as a starting material for the production of cellulose acetate. The cellulose acetate produced will be 3D printed into plant containers for the hydroponic farm. In summary, the materials produced herein can be used to produce added-value cellulosic with the potential to pave the way towards a more sustainable agriculture that will secure the planet's ability to produce food for future generations.

Name

Leonardo Engler

Presentation Title

A degradation study of biodegradable blends under seawater and home composting environments

Abstract

Packaging is responsible for several tons of waste, representing nearly 50% of the total waste produced. The majority of them end up in landfills, dumps, or are incinerated, being barely recovered. To improve packaging waste management, producers expect to increase their recovery responsibility from 25% of all plastic produced to 55% by 2030. To approach this target and improve the circular economy of those materials in the environment, improvement in recycling strategies and introduction of polymers from natural resources, know as biopolymers, has been an attractive alternative.

There is a vast range of biopolymers that have been investigated to be used for single-use packaging and agricultural application. some of those biopolymers are willing to be biodegradable and compostable which is an interesting alternative in terms of biological circularity. Despite this, many biopolymers have lack mechanical properties, poorly performing when compared to high-performance fossil-based polymers available in the market. To overcome it and improve the biopolymer mechanical properties, the blending process through extrusion combines the performance of different biopolymers to be incorporated into applications like packaging.

This project intended to study different formulations with PHB, PLA, and PCL, to evaluate their main mechanical and chemical properties, as well as the preparation of tensile specimens itself by extrusion process and evaluation of its biodegradability in seawater and home composting environments during 56 days. The results showed that under 56 days of seawater and home-composting degradation, the samples did not present a significant variation in weight mass, thermal properties, and crystallinity.

However, a significant change was observed in the mechanical properties, especially with samples from seawater after 56 days that became more brittle. Further tests are necessary to improve the biodegradability of the blends and also improve the miscibility of the polymers by the addition of thermoplastic starch and compatibilizers such as microcrystalline cellulose.

Name

Morgan McNamara

Presentation Title

Proposal for Lightning Talk: Run EU Innovation Conference 2021

Abstract

Natural food supplements of interest are creatine, caffeine, and whey protein. These supplements are prevalent in the diet supplement market and delay fatigue, improve performance, training adaptions, injury prevention, and recovery from physical activity . These supplements can help achieve Goal 3 of the Sustainable Development, which is to 'ensure healthy lives and promote well-being for all at all ages.' The supplements may also be applicable to the Sustainable Development Goal 2, '… to achieve food security and improved nutrition'.

The aim of this research is to utilise encapsulation technology to selectively control the release of supplements such as caffeine and creatine to allow for higher bioavailability by protecting from enzymatic and chemical degradation by the digestive system. This method can be used to deliver other nutrients such as vitamins and minerals, and improve their respective bioavailability resulting in less nutrients being needed overall.

Microencapsulation is creating microparticles containing one or more active ingredients which is protected by a wall material. Microencapsulation can be carried out by an already widespread method in the food industry, namely spray-drying. This creates microparticles called microcapsules. Alternatively, blank whey protein microbeads can be manufactured by polymerisation using sodium alginate and calcium chloride to uptake selected nutrients and deliver them undamaged to the small intestine for optimal absorption, therefore increasing their bioavailability.

The main aim of the research is to compare these two techniques in how well they can capture or uptake the selected supplements and nutrients and how well they selectively release those supplements in a simulated gastrointestinal tract. The global sport supplement market was worth $16.45 billion in 2020 and is forecasted to more than double to $35.35 billion in 2026. The applications of this research can impact wider society by delivering other nutrients that may be lacking in the wider population.

Name

Naomh Burke

Presentation Title

Microbead Encapsulation of Plant-Derived Bioactive Compounds

Abstract

30% to 50% of females have their daily lives impacted by their menstrual cycle. Menstruation disorders can lead to poor performances in daily activities such as school, work and social activities. (Peggy Maguire, 2018) A healthy diet has been proven to reduce the severity of some symptoms along with increasing the chances of implantations. In particular, bioactive compounds from organic seeds have been proven to have bioactive properties that can help reduce some menstrual symptoms. Phytoestrogens, for example, are plant oestrogens that can have oestrogenic and anti-oestrogenic effects in the body. (Muhammad Imran, 2015)

The aim of this research is to encapsulate key bioactive compounds found in four types of seeds; flaxseeds, pumpkin seeds, sesame seeds and sunflower seeds. The seeds selected are rich in bioactive compounds such as lignans, zinc, omega-3 and omega-6 fatty acids. (K.L. Nyam, 2009) (Muhammad Imran, 2015) The study will also develop an encapsulating method that will be compatible with the chosen bioactive compounds. This research is influenced by a diet plan known as "Seed Cycling". Seed cycling is a technique used to naturally re-balance the hormone levels, such as oestrogen and progesterone, in the body by consuming seeds. This study will propose an alternative dietary supplement where the bioactive compounds from these seeds will be encapsulated as a distinct, single-dose product.

This research can help achieve a number of the Sustainable Development Goals outlined by the UN 2030 Agenda. The product developed will be rich in different nutrients that are essential for a balanced diet. The research will contribute to Goal 2 which aims to '…to achieve food security and improved nutrition' and will also contribute to Goal 3 which aims to 'ensure healthy lives and promotes well-being for all at all ages'. This research aims is to improve women's health and to reduce to negative impact menstrual disorders can have on their daily lives. Therefore, this research can also help to achieve Goal 5 which aims to 'achieve gender equality and empower all women and girls'. (Nations, 2015)

Name

José Ferreira Fernandes

Presentation Title

A Critical Insight and overview of the sustainable practices of Portuguese hotels

Abstract

The concept of sustainability in the tourism and hospitality industry has long been the topic of much discussion and debate in tourism and hospitality management literature. Key stakeholders including policy makers, DMO's and hotel operators have therefore been tasked with the challenge of working to achieve greater levels of sustainability within the hospitality industry in light of the growing concern for sustainability issues stemming from over tourism. As a result, they have had to look for new ways to change, adapt, and innovate their approaches and practices to measure, monitor and manage sustainability performance but a question that is regularly raises is how effective are such approaches and practices implemented by hotel operators in transitioning towards more enhanced levels of sustainability.

In Portugal, a number of plans and strategies have been developed with the aim of developing more sustainable and responsible practices in the hospitality and hotel industry. The focus here is placed on building a more sustainable, competitive, cost effective, and resilient sector moving into the future. However, there exists a current gap in knowledge in relation to the adoption and implementation of effective tools and practices to measure and monitor sustainability performance within the hospitality and hotel industry in Portugal. This research therefore aims to examine what tools and practices, if any, hotels in Portugal have been implementing to measure and monitor sustainability performance and ultimately meet the sustainability agenda set out in many national and local level government policies.

The significance of this research is incremental at a time when tourism in Portugal has been impacted significantly by the COVID-19 pandemic with a reported almost 100% contraction in overnight stays which were estimated to be 70.2 million pre-pandemic (Costa, 2021) with GDP falling below 7.6% (European Commission, 2020). This has emphasised the fundamental need to better protect and preserve the Portuguese tourism and hospitality industry through more sustainable measures moving into the future and navigating a "new normal".

Name

Tamás Gyulai

Presentation Title

Innovation by territorial planning in cross-border context

Abstract

The Ministry of Innovation and Technology has created the Territorial Innovation Platform (TIP) in several towns in Hungary with the objective of developing the innovation ecosystem with strong involvement of universities and this platform can also support the territorial planning activities that are especially important for the 2021-2027 period.

Győr was one of the towns where TIPs were organised and the Széchenyi István University implemented an important role in the last year because the expert team of the University prepared the operational plan of Győr-Moson-Sopron county for 2021-2027. Active involvement of experienced professionals has it made possible that innovation and sustainability be considered as important aspect of the territorial plan. Another contribution to the entrepreneurial discovery process is that "Industry 4.0 Lab" has been created jointly by the University and the national centre for automation (SZTAKI) in Győr and it offers modern infrastructure to local companies for technological experiments.

Consequently, I would like to highlight in my presentation the innovative aspects of territorial planning in Győr-Moson-Sopron county as well as the role of TIPs in the national strategy for innovation and digital transformation. I also intend to present how smart city initiatives and cross-border cooperation can contribute to the territorial planning in Győr-Moson-Sopron county as well as the cooperation between the University and the local companies for digital transformation on regional level.

Name

Tielidy A. de M. de Lima

Presentation Title

The use of Rhododendron Ponticum residue for the production of micro-fibrillated cellulose by twin screw extrusion

Abstract

Rododendron ponticum is a large evergreen shrub with leathery leaves that has spread across Ireland. It was introduced in the 18th Century from Asia and north-west China as an ornamental plant. However rhododendron spreads rapidly and is described as one of the biggest threats to peatlands in the west of Ireland and the government has spent almost half a million euro on clearing this species from Connemara National Park. The main reason for working with an invasive species is to find alternative products that are interesting to encourage its extraction and still present added values. Herein, Rhododendron pulp was used as a raw material in order to produce micro- fibrillated cellulose (MFC) by twin screw extrusion (TSE).

A chemical pre-treatment was applied using TEMPO (2,2,6,6-Tetramethyl-1-piperidinyloxy) reagent. Our main proposition in this work is to characterise the fibres in each process and we also evaluated the effect of various steps of defibrillating cellulose using this technique extruding the cellulose pulp multiple times. One of the group's challenges is to produce a cellulose with an increased surface area.

Through the chemical modification, it is possible to improve the surface area of cellulose, and these modified properties are useful in many applications, for example, removing impurities from water (metals), as drug delivery among other possibilities. In addition to cellulose production, the group has already characterized Rhododendron leaves and found many potentially useful antioxidant compounds. We are studying the possibility of using these compounds and determing their feasibility in biomedical applications.

Name

Tünde Olexó

Presentation Title

The spread of disturbances on graph representations of price indices; examining the effects of the coronavirus pandemic and the energy crisis

Abstract

The coronavirus, the energy crisis, and their mathematical generalization, the universal disturbance, have a significant impact on our consumption habits, thus also the consumer price index. The presentation examines the spread and temporality of the effect in the graph representations of price indices, which clearly presents the calculation process, COICOP levels, and the spread and smoothing process of the disturbance.

In the presentation we are going to talk about a special property of the Laspeyres-type price index: the 2-year weighting in accordance with EUROSTAT rules, which causes the coronavirus to have a greater impact later, and directly a much smaller impact on the price index. The reason behind is that only the price change and the termination of availability can be seen directly due to transport problems; the impact on price indices can only be seen and calculated through replacement products methodology.

The quantitative change - although a slight effect was taken into effect in 2021 - is methodologically only reflected in the weights of the consumer basket 2 years later. On the other hand, the energy crisis is not really starting to change availability, volume, but has an immediate price change, thus has an immediate, direct impact on consumption.

In the lecture we present the spread of the disorder by coloring the edges of the mathematical graph model of price indices, and explain both the mathematical, statistical, and economic aspect of the process.

Name

Netto-Rocha, Constança; Marques, Daniela S.

Polytechnic of Leiria –

Masters in Design for Health and

Poster Title

Service Design for stakeholder capacitation in health literacy, in the county of Leiria

Poster

In the county of Leiria, Portugal, part of the population is known for making unhealthy life choices on a big enough scale to bring the idea of how low health literacy can affect people's lives. To address it, institutions in Leiria such as the townhall and Polytechnic of Leiria decided to conduct a longitudinal and prospective cohort study, where a sample of the population will be followed throughout time to understand if their choices regarding health and sustainable habits, are indeed affected by their health literacy levels. Additionally, this project aims to raise health literacy through capacitation processes, requiring a communication improvement between stakeholders and the general public.

The capacitation processes will be oriented by Service Design methodologies, such as, informal interviews and user group definition, that will allow us to create personas to characterize the stakeholders. This will enable the formation of archetypes that will be studied on how different communication techniques and strategies work, preparing the stakeholders to adapt their communication when facing people from different generations, education and social backgrounds.

Additionally, we are in line with the creation of a service blueprint with guidelines for a local service that enhances not just health literacy, but also promotes a healthier lifestyle among the population of the county of Leiria.

Being an ongoing project, our hypothesis is that the health literacy of the population is related to the interaction of the healthcare professionals, and how that interaction affects people's lives. The creation of guidelines may offer a replicable service.

All this is in line with the Social Innovation topic from the European Innovation Hub, considering that the aim of this project is to create a service that does not yet exist and an experience that will improve the life of its participants.

Name

Shekhar Silwal

HAMK University of Applied Sciences

Poster Title

Shear Resistance of Sandwich Panels

Poster

A typical sandwich panel comprises of two stiff and thin faces which are connected by low- density core material, making it remarkably strong and lighter in weight. Sandwich panel being lightweight, strong and durable can be entailed as a high-performance structure that satisfies the sustainability aspects but exhibits various failure modes depending on different panel configurations (e.g., core material and profile of facings).

The research data on failure mode caused by the core material and shear strength of the sandwich panel can hardly be found in the literature. The development of a test method to determine the shear strength of the sandwich panels has not followed the development of the products. There are methods given in the standard EN 14509 to determine the shear strength of the core. However, the existing method is not always giving the shear failure for thick sandwich panels and the results are below the real ones.

Thus, this research intends to thoroughly investigate the shear strength of sandwich panels having Mineral wool (MW) and Polyisocyanurate (PIR) foam as core material by implementing both experimental and finite element analysis (FEA). Based on the results obtained, a formulation and test method to evaluate the core shear strength of the sandwich panel will be executed that will be implemented to help develop the European standard.

Name

Nuno Sousa-Santos1,2, Maria Pedro Guarino1, Maria João Heitor2,3

Poster Title

Influence of Nutrition in Depression Treatment (INDEPT) study presentation

Poster

Background: Major Depressive Disorder (MDD) is a leading cause of disability in the world (1), with major societal costs. Early onset of MDD is a determinant of low education, higher teen pregnancy rates, marital distress and unstable employment (2), with unmeasurable pain and suffering for individuals and a very high cost for the society.
Only 40% of patients suffering from MDD are successfully helped by the first antidepressant prescribed. Two years after the initial diagnosis, even after attempts with several lines of treatment, about 30% of patients aren't able to recover, eventually being diagnosed with Treatment Resistant Depression. These patients frequently have elevated inflammation biomarkers, suggesting an implication of inflammation pathways in the pathophysiology of MDD, associated with worse prognosis (3).
Healthier dietary patterns, namely the Mediterranean Diet (MedDiet), have been associated with a decrease in the risk of MDD and symptoms of depression (4–7). These associations might be related with anti-inflammatory properties of healthy dietary patterns (4).
The "Influence of Nutrition in Depression Treatment (INDEPT)", aims to assess the effectiveness of dietary counselling promoting MedDiet, a dietary pattern with recognized anti-inflammatory properties (4,8), to decrease depressive symptoms in adults recently diagnosed with MDD and with elevated inflammation biomarkers.

Trial design: 12-week, multicenter randomized parallel-group open controlled trial.

Methods: Adults attending outpatient psychiatric appointments, recently diagnosed with MDD and elevated inflammation biomarkers, will be invited to participate and allocated to: (a) intervention group with six dietary appointments promoting MedDiet and MDD treatment-as-usual (TAU) or (b) control group with MDD TAU. Sample size is estimated in 190 participants.
Discussion: This study will improve our understanding of the role of inflammation and nutrition in the treatment of MDD. It might open new and innovative treatment possibilities that can be translated to vulnerable Social Community Groups, at a higher risk of MDD.

Name

Poster Title

An Investigation into the current training load monitoring practives in Gaelic Games

Poster

Introduction: In elite sport, the smallest of margins are the difference between failure and success. Getting the balance between optimal performance and reducing the risk of injury can prove to be a major challenge at times. It is vital that coaches find the correct balance between training load and recovery to optimise performance. The response of each player to training is individual and is determined by multiple factors. Training load is a modifiable risk factor, that when monitored, can reduce the risk of injury and can also increase performance. To date, no research has investigated the training load (TL) monitoring practices currently in use in Gaelic games.

Aim: The aim of this study was to investigate the TL monitoring practices used by strength and conditioning (S&C) coaches across senior inter – county male and female sports.

Methods: A previously validated questionnaire was circulated to each S&C coach through the secretary of each senior inter-county team. Accompanying the questionnaire was an introductory letter outlining the purpose of the questionnaire, the time commitment required, and the confidentiality of information. The questionnaire, "An Investigation into the current Training Load monitoring practices in Gaelic Games" was broken up into 7 sections: 1) Coach Biography, 2) Coach Education, 3) Team Biography, 4) Monitoring Practices, 5) Rate of perceived exertion, 6) Acute: Chronic workload 7) Using your data. There were 25 questions in total.

Results: A total of 33 responses were returned from those contacted in Hurling, Camogie and Football. The findings of this study show that S&C coaches have varying backgrounds, levels of experience and education. A major finding of this study was that all 33 respondents stated that they monitor the TL of the players. The results of this study also found that subjective measures, such as session rating of perceived exertion (sRPE), are the most common methods used to monitor training load. The low cost, ease of use and time effectiveness, makes this method heavily relied on in amateur sport. Similarly, communication with players ranked highly in this study and should be a key component when developing monitoring practices.

Conclusion: The results from this study highlight the need for clear understanding when using varying methods for monitoring. It is also essential that the most up to date research should be used to shape training courses in order to develop the knowledge of coaches.

Name

Tânia Filipa Baridó Urbano Ferreira, Post-Graduate student in Solicitadoria de Empresa, IPL -Leiria

Poster Title

Whistleblowing and Organizational changes in Portugal

Poster

Whistleblowing acts as a form of ethical frontier and organizational watchdog, witnessing wrongdoings within the organization and reporting them to channels that have the power to correct the situation, willingly submitting to the possibility of devastating reprisals.

In most European countries whistleblowing is a relatively new phenomenon. Some countries have implemented legislation aiming to protect them, some have laws that, despite not being specific shield them to some extent, and in others whistleblower protection falls into a legislative void.

Portugal, to date, is placed in the middle tear in terms of whistleblowing protection – we have labor law that doesn´t allow for unjustified dismissal, moral or physical harassment, discrimination, amidst other protective measures that apply to general workers or to witnesses, specially seen that the employee is legally bound to secrecy. Therefore, most cases of whistleblowing that were brought before a Portuguese court were mostly deemed as breeches of the labor contract, just cause for dismissal, and acts of slander against the employer, causing the whistleblowers to have suffered heavy penalties for having come forth with their complaints. But to consider that it suffices a set of general rules suffice to assure protection to such specific circumstances is to be optimistic, at best.

Derived from the need to transpose the Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law, Portugal has set in motion the basis for a new legislation which will have a high impact on corporative organization and culture, namely by the adoption of a sustainability posture, adherence to codes of conduct and implantation of whistleblowing channels.
Thus, we set out to explain which organizational changes must occur within the Portuguese Entrepreneurial Fabric to incentive whistleblowing.

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