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BOOK OF ABSTRACTS

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FLASH PRESENTATIONS

Targeting IAPP Aggregation as a Nutritional Strategy for Diabetes Control: Focus on Protection by Urolithins

Sofia Ferreira^{1,2}

Health Sciences



PhD Student

PhD Program

UI/BD/151421/2021

Funding Entity

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Abstract:

Dysfunction and depletion of β -cells are crucial in the development of diabetes, with evidence pointing out the role of Islet Amyloid Polypeptide (IAPP) pathological aggregation in exacerbating these processes. Diet is a well-known modifiable factor in managing diabetes and (poly)phenols, natural compounds found in the diet, were shown to interfere with the various steps of protein aggregation.

In this project, we unraveled the protective action of urolithin B, a metabolite produced after ingesting ellagitannin-rich foods, against IAPP aggregation and β -cell function. Data from *in silico* and cell-free assays show that urolithin B physically interacts with IAPP modulating the aggregation kinetics. The *modus operandi* of urolithin B towards pancreatic function was studied in pancreatic β -cells showing that urolithin B protects against IAPP-induced cytotoxicity by mechanisms associated with redox homeostasis, calcium mobilization, mitochondrial respiration, and glucose-stimulated insulin secretion. In addition, urolithin B enhances cellular proteostasis allowing β -cells to better cope with IAPP burden. *In vivo* validation of urolithin B bioactivity is currently underway using genetically-modified



Caenorhabditis elegans models expressing human IAPP. Through its multi-faceted mechanisms of action, urolithin B offers a promising approach to mitigate IAPP amyloidogenesis and β -cell dysfunction paving the way for new dietary strategies in diabetes management. The proof-of-concept of urolithin B protective action against diabetes is currently being tested in a double-blinded randomized controlled trial to assess the impact of the PomanoX® ellagitannin supplement (Euromed Group) in attenuating IAPP dysfunction and improving metabolic markers.

DaydreamCatcher: A Pilot RCT Study of an iCBT Intervention for Maladaptive Daydreaming in University Students

Shivani Atul

Clinical Psychology

Cognitive-Behavioral Orientation

PhD Student

PhD Programme

Abstract:

Maladaptive Daydreaming (MD) is an under-researched dysfunctional cognitive process. As a clinically relevant dimension, MD involves excessive and uncontrollable use of daydreaming as an emotional coping mechanism, which leads to psychological suffering and functional impairment. MD also compromises academic progress in university students. Our project presents four main objectives: assess psychological correlates of MD in university students and expand knowledge on MD in the Portuguese academic context, translate and validate an MD measure to European Portuguese, collaborate with CBT therapists to explore the viability of an online iCBT intervention for MD and conduct a feasibility pilot RCT study to assess preliminary efficacy to reduce MD in a sample of university students.

Specters of the Visible: Towards a Decolonial Artistic Practice in Contemporary Photography

Diogo Bento

PhD Student

Media Arts and Communication

PhD Programme



Funding Entity

Abstract:

Since its inception, photography has occupied a privileged place in maintaining and amplifying the colonial project. It is, however, crucial to acknowledge the emancipatory role it has been able to play in the hands and through the gaze of the oppressed and racialised subjects throughout its history. Moreover, photography's intricate and multifaceted relationship with historiography has prompted a reparatory examination of the colonial past through the re-reading of dominant narratives.

This research project will examine the application of a series of documentary strategies selected from the field of contemporary art in a post-colonial context. These strategies will be considered and incorporated with the objective of pointing to possibilities for decolonial ways of thinking, acting and looking. To this end, we propose the creation of an artistic project concerned with the historical presence and contributions of African populations in the Sado Valley between the 15th and 18th centuries. This project aims to shed light on the often overlooked and marginalised role of enslaved populations in the transfer of technological knowledge, the development of a rice-cultivating cultural tradition, and the transformation of rice-production landscapes. These aspects have largely remained absent from the historical discourse within official Portuguese historiography. The objective of this project is to promote an artistic practice of high aesthetic value, with a strong research component, which brings to the forefront possibilities for historical reparation and cultural restitution through contemporary art.. With this project, we want to promote an artistic practice of high aesthetic value, with a strong research component and which brings to the forefront possibilities for historical reparation and cultural restitution through contemporary art.

The research and theoretical argument that accompanies the artistic project aims to establish a robust, original, and innovative epistemological framework by tracing a historical, theoretical, and artistic arc between issues ranging from the place of documentary photography in the field of contemporary art, the history of colonial photography, de-/post-/anti-colonial theories, critical aesthetic and media theory, the dominance of Eurocentric historiographies, and the question of 'Black Rice'.

The Challenges of the Public and Democratic School in Portugal: An Epistemological Approach to the Teacher's Profile in the 21st Century

Susana Roxo Oliveira¹

Education

 **fct** Fundação
para a Ciência
e a Tecnologia

UI/BD/154916/2023

PhD Student

PhD Programme

Funding Entity

Co-Author: Elsa Estrela ¹

1. CeiED - Interdisciplinary Research Center for Education and Development, Lusófona University, Lisbon, Portugal.

Keywords: Educational Policies, Teacher-Subject, Phenomenology, Arts Based Research, Emancipation.

Abstract:

According to the World-Centred Education of Biesta, educating comprises three functions: qualification, socialization and subjectivization. World-Centred Education is a framework that Biesta has developed over years of research. The study presented here is part of the World-Centred Education of Biesta, to interpret, deepen the meaning of the global educational project for the twenty-first century, implemented in Portugal since 2017 and explained in the Profile of pupils leaving compulsory schooling (PASEO), where, as in other educational documents, the key competences for economic and sustainable development are explained.

From the global educational context, the study will focus on the teacher - it also proposes to interpret and deepen meanings about the teacher-subject, as a person and as a professional responsible for shaping the educational gesture, defined by Biesta as the aesthetic form of education. By putting in practice the three educational functions as the basis of the formation of the human being, this study focuses on the teacher-subject, the relationship with his "I", his relationship with the world and the relationship he establishes with the profession itself.

It is a study with a qualitative paradigm, phenomenological in epistemological, critical, hermeneutic and critical character that seeks to interpret and signify the teacher as a subject also formed in the three educational functions of the World-Centred Education of Biesta, with the use of arts-based research that as Biesta, Rancière and Mollenhauer refer to, opens the possibility to new interpretations of the biographies of the subjects and the world, evokes the expressiveness of educating and intends to provoke the break with routine in society for the teachers transformed into “spectators” emancipated.

The International Legal Community and the Possibility of Recognising a Right to Democracy: a Critical-reflexive Perspective on the Narrative as a Way of Projecting an Attentive Possible Response

Maria João de Melo

Law



PhD Student

PhD Programme

Funding Entity

Abstract:

Among the many and varied legal problems that arise for anyone who sets out to question the Law, and in particular International Law, we were particularly struck by one: the possibility of the international legal community recognizing a right to democracy. Indeed, the difficulty in understanding the shortcomings of the right of self-determination of peoples (... above all, the absence of a right to democracy in a legal community whose majority of subjects claim to be democratic), as well as the difficulty in understanding the very nature of the international legal community (... in its multiple and complex aporias), have accompanied us from the beginning of our academic journey. In this precise sense, this research is divided into three chapters: the first, which deals with the field of Law in question (Public International Law); the second, which deals with the international legal problem in question (the possibility of recognizing a right to democracy); and the third, which deals with a possible legal-internationally adequate response (the critical-reflexive perspective of the narrative as a way of projecting an attentive possible response, within the framework of an indisputably legal horizon — and thus taking into account the contents of Public International Law).

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ORAL PRESENTATIONS

HD-ICE 4: A Social Network Approach to Human Dynamics in Extreme Work Environments 4

Pedro Quinteiro



41 790€

Principal Investigator

REF: PR-23-01
Funding Entity

Funding

Abstract:

The primary aim of the project is to identify psychological countermeasures to promote mental health and mitigate group conflict during long-duration space missions. The secondary aim of this project is to identify correlates between wearable sensors, and psychological constructs. This project includes a collection of studies, happening within a 3-year time span, approved by the European Space Agency (ESA).

Partners:



Universität
Zürich^{UZH}

u^b UNIVERSITÄT
BERN



WeARTolerance: Using an Arts-based Program to Reduce Mental-health-related Stigma in Young People

Isabel Santos

Ana Beato



85 827,64€

REF: LCF/PR/SR22/52570002

Principal Investigator

Funding Entity

Funding

Abstract:

Mental health-related stigma remains a significant barrier to help-seeking and well-being, particularly among youth populations. The invisibility of mental health problems highlights the critical need for increasing mental health literacy and reducing stigma towards people with mental health problems.

Considering that psychoeducation combined with arts-based interventions have shown promise in achieving these purposes, the present study aimed to evaluate the impact of a program to reduce mental health-related stigma in adolescents, using a mixed-method design, divided into two phases. In phase 1, the program was implemented with 125 adolescents from 11 to 21 years old ($M = 13.70$, $SD = 2.06$), which answered self-report questionnaires in pre-, post-, and 6-month follow-up. In phase 2, nine participants aged between 12 and 16 ($M = 13.8$; $SD = 1.6$) participated in focus groups to assess qualitative data regarding their experience in the program. Mixed effects models examined the attitudinal outcomes over time (pre-program, post-program, and follow-up): Mental Health Knowledge Scale (MAKS), Social Distance Scale (SDS), Intergroup Anxiety Scale (IAS), and Attribution Questionnaire (AQ), with age and previous psychological problems as fixed covariates and random intercepts for participants. The results showed that knowledge regarding mental health issues improved ($b = 1.23$, $SE = 0.39$, $t(205.91) = 3.17$, $p = .002$), while social distance ($b = -0.07$, $SE = 0.03$, $t(207.80) = -2.27$, $p < .001$), intergroup anxiety ($b = -1.019$, $SE = 0.39$, $t(210.41) = -2.64$, $p = .009$), and stigma ($b = -0.479$, $SE = 0.05$, $t(214.38) = -9.31$, $p < .001$) decreased

over time. The results of the qualitative content analysis showed that participants recognized the activities' relevance, expressed overall satisfaction with the program, and demonstrated great enthusiasm and a strong willingness to learn more.

Findings indicate that integrating creative activities with psychoeducation can lead to sustained improvements in attitudes towards mental health among youth populations.

Partners:



INTENT: Intelligent Health Monitoring of Road Infrastructures Using Bender Elements Embedded in Pavements

Ionut Moldovan



250 000€

Principal Investigator

REF: 2022.06879.PTDC

Funding Entity

Funding

Abstract:

The expansion of road networks in regions with poor soils has led owners to call for improved and continuous monitoring solutions. Accurate and timely geotechnical information enable better planning of retrofit interventions, with huge savings to the €30B/year EU highway maintenance budget.

Currently, most pavement monitoring solutions are based on periodic inspections of the asphalt course. However, the pavement foundation (subgrade, capping, sub-base) and the granular base course are essential components of the road structure. The foundation acts as a construction platform for the upper layers and must sustain the traffic loads once construction is completed. Likewise, the base course sustains the construction of the asphalt course and spreads the loads to reduce the stresses in the foundation. The failure of the base course will inevitably compromise the pavement and is much harder to detect visually than the damage of the asphalt course.

The objective of this project is to develop a new embedded sensing device, based on the bender element technology, for the continuous monitoring of the dynamic stiffness (shear modulus) of unbound granular layers, and to use it, along with conventional sensors and advanced numerical models, to fuel machine learning algorithms for the continuous monitoring of pavement infrastructure.

The bender elements developed in this project enable the continuous measurement of the stiffness of the granular layers during construction, ensuring

that pavement design requirements are met, and during the service life of the structure, enabling retrofit actions in the early stages of damage. They can be embedded in any layer with minimal disturbance, and their signal analysed automatically to extract the shear modulus of the layer. They will be coupled with conventional sensors to get a comprehensive picture of the condition of the layer, and the data analyzed in real time by machine learning algorithms for damage detection. Advanced numerical models will help machine learning algorithms distinguish the between gradual loss of stiffness and/or gradual increase of permanent deformation under cyclic loading (concept of fatigue) and the sudden, catastrophic deterioration of the geomaterial (concept of failure). A damage progression prognosis toolbox will be developed to compare the expected and measured rates of degradation of the geomaterial and estimate its future condition.

Partners:



ClimAID: Building resilience to climate change through Cultural Heritage and Urban Arts

Célia Quico



200 000€

[REF: 101099776](#)

Principal Investigator

Funding Entity

Funding

Abstract:

ClimAID is an innovative project idea combining cultural heritage, climate change and Urban Art activities. The idea relies on the promotion of cultural heritage practices in tackling climate change, through arts and technologies. Climate change, according to literature, is an evolving process affecting societies and cultures that constantly had to find solutions to adjust their living according to the new environmental realities.

The impact of climate change on history and culture are often represented in climate policy and research. However, a new trend on research is arising with the reversed objective. How Cultural heritage can provide an insight of methods and good practices to manage climate changes? In order to give answers to the aforementioned, the project adapts a research methodology to identify cultural heritage best practices across Europe and then promote them through digital education and urban art. The project will create a toolbox of best practices, which will be integrated into an open resource platform. The platform will allow users to experience the full implementation of these practices in a 3D environment.

The participation of well-known universities and major cultural actors in Spain, Portugal, Italy, Greece and Cyprus will ensure the sustainability of the results by developing an e-learning course especially designed to provide knowledge on the impact of Heritage and Urban Arts to mitigate Climate Change for the needs of Universities, Archaeological sites, tourist guides, cultural centers, museums, municipalities etc.

Project's activities will be embraced by an Urban art campaign with national street festivals, implementing real wall murals, act performances, music & dance contributions in several cities of project countries. The project aspires to reach out more than 2000 youth, potential beneficiaries and cultural actors due to the large scale campaign and to high impact results.

Partners:



Universidad de Zaragoza, Espanha

BOAMISTURA

BoaMistura, Espanha



Universidade Lusófona, Portugal



Gruppo Archeologico, Itália



Municipal de IOS, Grécia



Centre Del, Chigre