

# 2nd Annual NCI Research Day



### Friday, 25th of June 2021

9:30 am – 1:30 pm

Join us on Teams

### Program Friday, 25<sup>th</sup> June 2021, 9.30 am – 1. 30 pm

9:30 - 9:35	Welcome Introduction Dr Cristina Hava Muntean
9:35 - 9:45	Welcome Speech Professor Jimmy Hill, Vice President Academic Affairs and Research
9:45 - 10:00	TrainRDM – Open Science and Research Data Management Innovative and Distributed Training Programme Timothy Lawless (Norma Smurfit Library)
10:00 - 10:15	Faith in the Workplace: An Exploratory Study of the Experiences in Dublin- based Tech Companies Desmond Gibney (School of Business)
10:15 - 10:30	Clinically Validated Integrated Support for Assistive Care and Lifestyle Improvement: The Human Link Assoc Prof. Horacio Gonzalez-Velez (School of Computing)
10:30 - 10:45	Using the Implicit Relational Assessment Procedure (IRAP) to Measure Biases in the Areas of Autism, Bullying, and Attractiveness in Employability/Innocence Dr Michelle Kelly (School of Business - Psychology)
10:45 - 11:00	Innovation, Resilience and Continuity – The Impact of the Covid-19 Pandemic on Early Childhood Practice in Ireland Dr Meera Oke, Dr Conor Mellon, Anna Barr and Dr Natasha O Donnell (Centre for Education and Lifelong Learning)
11:00 - 11:15	Knowledge, Attitudes, and Behaviours Towards Schizophrenia, Bipolar Disorder, and Autism in Ireland: A Pilot Study Dr David Mothersill, Dr Ger Loughnane and Dr April Hargreaves (School of Business - Psychology)
11:15 - 11:30	Coffee Break
11:30 - 11:45	<b>Development of Functionality for Teaching Through Reflection</b> Dr Leo Casey and Dr Meera Oke (Centre for Education and Lifelong Learning)
11:45 - 12:00	Feature Selection for Machine Learning-based Phishing Websites Detection Dr Arghir Nicolae Moldovan (School of Computing)
12:00 - 12:15	Creating Restorative Communities Kate Darmody and Emma Wheatley (Early Learning Initiative)
12:15 - 12:30	Emotion Regulation Strategies and Stress in Irish College Students and Chinese International College Students in Ireland Dr Conor Nolan (School of Business - Psychology)
12:30 - 12:45	<b>Determinants of Students' Salaries in the Professional Training Year</b> Dr Panagiotis Arsenis (University of Surrey) and Dr Miguel Flores (School of Business)
12:45 – 13:00	Investigating Active Learning in Interactive Neural Machine Translation Dr Rejwanul Haque (School of Computing)
13:00 - 13:15	Competing Logics in Family Firms who Engage in the Professionalisation Process by Hiring External Professional Accountants at Management Level Theresa Mulcahy (School of Business)
13:15 - 13:30	Closing Session – Dr Cristina Hava Muntean

### **Speakers**

#### **Timothy Lawless**

Norma Smurfit Library

# TrainRDM – Open Science and Research Data Management Innovative and Distributed Training Programme

**Abstract:** Funded by the European Commission as an Erasmus+ Key Action until 2023, TrainRDM aims to empower the Education and Skills dimension of Open Science (OS) through exploring innovative mechanisms and tools to provide the skills training, in particular, for Research Data Management (RDM) good practices.

The specific aims of the project are:

- To analyse and map the skills training needs for OS and RDM in existing curricula in partner HEIs taking into account the different OS dimensions, target groups and level of existing knowledge;
- To review existing good practice in OS and RDM skills training;
- To develop a OS and RDM Training Methodological Toolkit;
- To develop, validate and diffuse a quality pilot training programme for OS and RDM;
- To develop a training network around OS and RDM concepts;
- To encourage, motivate, support and recognise staff and students skills development in OS and RDM.

This presentation will discuss the project, in terms of why we as librarians are interested in taking part. For further details on the project: <u>https://rdmtraininghub.eu/</u>

#### Desmond Gibney

School of Business



#### Faith in the Workplace: An Exploratory Study of the Experiences in Dublin-based Tech Companies

**Abstract:** A perception of working life in large US tech companies based in Dublin conforms to what a 2019 *Harvard Business Review* article described as the primary domain where people seek to fulfil their economic and social needs, offering a sense of community as well as a salary; where employees make work a pillar of their identity and turn to the workplace for help throughout their lives. But what about the spiritual needs of these employees?

This presentation is based on an exploratory study of the experience of faith in the workplace and the potential for workplace chaplaincy. The literature suggests a range of possible motivations; such as an attempt to integrate spirituality into the workplace, or to improve the performance of the business; or to provide a type of care for employees that would otherwise be unmet, or to demonstrate management's care and concern for employees as whole persons.

In-depth interviews were conducted with senior managers in three leading US tech companies based in Dublin. Attitudes of key decision-makers are examined. Potential opportunities for faith in the workplace and/or workplace chaplaincy are explored. Finally, the challenges of a multi-faith corporate environment with a large proportion of expatriate employees and contractors, are considered.



#### Assoc Prof. Horacio Gonzalez-Velez

School of Computing



### Clinically Validated Integrated Support for Assistive Care and Lifestyle Improvement: The Human Link

**Abstract:** One of the most important lifestyle risk factors for many chronic conditions in the older age, low physical activity has shown to have significant impact on the sustainability of national welfare in many developed countries. Technology-based assisted living solutions can effectively be used to enable older adults to optimise their health-related quality of life, as well as to promote an active and healthy longevity. This talk discusses vINCI---an interdisciplinary research project to actively support assisted living for older adults via state-of-the-art assistive technologies---which seamlessly deploys an ambient intelligence environment to integrate wearable devices, networking, software, and personalised services. It entails clinical validation and feedback at home and residential care facilities via a cloud microservices platform.

#### For further details on the vINCI project:

https://eur02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.aaleurope.eu%2Fprojects%2Fvinci%2F&data=04%7C01%7CCristina.Muntean%40ncirl.ie%7Cd2a 6bea4889449a887c808d92cdb0089%7C6edb49c1bf724eea8b3fa7fd0a25b68c%7C0%7C0%7C637 590141377005334%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJ BTil6lk1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=hkOqn%2BsgbZP0kFDNHjpvHaHJn1%2Fp nb5ARBtkRZc%2Bgoc%3D&reserved=0

#### Dr Michelle Kelly

School of Business (Psychology)



### Using the Implicit Relational Assessment Procedure (IRAP) to Measure Biases in the Areas of Autism, Bullying, and Attractiveness in Employability/Innocence

**Abstract:** The aim of the current research was to use the IRAP, a measure of relational responding, as a supplement to traditional subjective questionnaires in assessing biases in the following areas: (i) attitudes towards children with autism, (ii) bullying in schools and colleges, (iii) beauty bias in employment, and (iv) attractiveness bias in assessing innocence and guilt. Across three cross-sectional studies and one intervention study, 307 participants were recruited. Each participant completed the IRAP and a range of subjective questionnaires. Findings from the empirical studies suggest that the IRAP provides an interesting insight into relational biases; in studies (i) and (ii), educational material influenced biases towards those with autism and bullying in varying ways, while in studies (iii) and (iv), attractiveness bias was shown to influence decisions related to employment and innocence/guilt. A final theoretical paper (v) discusses the applicability of the IRAP as a training tool to improve older adults cognitive functioning.

#### Dr Meera Oke, Dr Conor Mellon, Anna Barr, and Dr Natasha O Donnell

Centre for Education and Lifelong Learning

Innovation, Resilience and Continuity – The Impact of the Covid-19 Pandemic on Early Childhood Practice in Ireland

**Abstract**: This presentation offers some initial findings from the first wave of data generated from a broader longitudinal project, which is attempting to understand more about the seismic changes brought about in ECEC practice in Ireland due to the pandemic. The project employs semistructured interviews with educators from ten Early childhood Settings, as well as data on children's wellbeing and outcomes, via the Strengths and Difficulties Questionnaire completed by educators and parents for 2–4-year-olds. Preliminary findings indicate that key elements of policy, pedagogy and play, family participation have required reconfiguration and innovation. Furthermore, educators continue to strive to nurture and sustain relationships with one another, parents and the children in their settings, as well as their wider community. The pandemic has required acts of innovation, resilience, and even resistance on the part deeply committed educators, as they continue to face significant challenges. While it was envisaged in March 2020, that this 'first' closure would only be necessary for a matter of weeks; early childhood settings have closed and reopened several times since and have been subject to a range of policy and practice reforms over the course of the pandemic.

Dr David Mothersill, Dr Ger Loughnane and Dr April Hargreaves

School of Business (Psychology)

### Knowledge, Attitudes, and Behaviours Towards Schizophrenia, Bipolar Disorder, and Autism in Ireland: A Pilot Study

**Abstract:** Introduction: Discriminatory attitudes and behaviours towards people with mental disorders is a worldwide problem but may be particularly damaging for young people. This pilot study examined knowledge, attitudes, and behaviours towards schizophrenia, bipolar disorder and autism within a large sample of adults in Ireland to better understand public views on these groups. Methods: In a correlational, cross-sectional design, 316 participants completed a questionnaire over Google Forms examining knowledge, attitudes, and intended behaviours towards schizophrenia, bipolar disorder, and autism. Responses were compared using trimmed mean ANOVA to examine whether responses to questions about schizophrenia, bipolar disorder, and autism differed.

Results: ANOVA and post-hoc tests revealed significant differences in knowledge, attitudes, and behaviours towards schizophrenia, bipolar disorder, and autism (p < 0.005), with more negative attitudes and behaviours reported for schizophrenia compared to bipolar disorder and autism.

4





Behaviour towards each group was more negative in participants who reported having no personal experience of the disorder, either by having it themselves, or having a loved one with it. Conclusions: Given the differences in knowledge, attitudes, and behaviour towards these mental disorders, we suggest that future policy and campaigns also focus on improving knowledge about specific groups, such as schizophrenia, to reduce stigma.

#### Dr Leo Casey and Dr Meera Oke

Centre for Education and Lifelong Learning



#### **Development of Functionality for Teaching Through Reflection**

**Abstract:** Reflective practice is bedrock of most teacher development programmes. It also underpins the practice component for many other subjects in higher education. We ask our students to 'reflect' on experience and to submit reflective reports. However, reflection is under-theorised and there are gaps in our understanding of what constitutes reflection and how it supports experiential learning. This leads to student uncertainty and confusion on how to engage in reflection and how to demonstrate the process in written form. This research builds on the work of Vygotsky, better known for sociocultural development processes in children, to propose a framework for reflective practice to support novice teachers. Vygotsky argued that 'dramatic moments' evidenced in children's play, are the energisers for learning and development. In other words, we learn from the unusual and the unexpected in the social environment. Similarly, novice teachers develop their abilities through dramatic moments in the classroom. To test the theory, a guided approach to reflection known as the Teaching Moments Mindful Awareness Practice has been developed. An audio-visual version of the guidelines has been produced and will be available on a pilot basis to some student cohorts. Insights and feedback from participating students will inform further refinements of the approach.

#### Dr Arghir-Nicolae Moldovan

School of Computing



#### Feature Selection for Machine Learning-based Phishing Websites Detection

**Abstract:** Phishing is a social engineering technique that is commonly used to deceive users in an attempt to obtain sensitive information such as username, passwords or credit card details. While there was extensive research on machine learning-based phishing detection, some prior works proposed a large number of features and not all of them are feasible to extract for real-time detection. This work combined two datasets with 30 and 48 features respectively, to identify 18 common features. Moreover, feature selection was conducted to identify 13 optimal features for a more robust model. A comparison with prior research works on the same datasets showed that the best models built on all features using the random forest algorithm scored lower on the 30 feature dataset, and achieved better performance on the 48 features dataset. The best model on the 13 features achieved an accuracy of 0.937.

#### Kate Darmody and Emma Wheatley

Early Learning Initiative

#### **Creating Restorative Communities**

**Abstract:** Restorative practice (RP) is an emerging social science that studies building, maintaining and repairing relationships and community. For the last seven years, ELI has been leading a community RP project within Dublin's North East Inner City. Its initial focus was to create a network of locally-based RP advocates, who would share learning and develop joint activities to promote the use of RP within organisations, and across the community. Over the years, it has developed into a complex integrated system of learning, development, support and mentoring. This Community Action Research (CAR) project has gathered data across its seven years — through surveys, observations and organisational self-reflection.

Indicative evidence suggests that RP is effective in improving peoples' ability to build relationships and manage conflict, with participants in the project recognising the multiple benefits of RP. There is also evidence of a relationship between higher levels of implementation of RP and greater levels of improved outcomes in an organisation. This presentation will share these indications of the benefits of the project, while also considering the long-term strategic approach required to sustain and embed restorative change within the community.

Dr Conor Nolan

School of Business (Psychology)

# Emotion Regulation Strategies and Stress in Irish College Students and Chinese International College Students in Ireland

**Abstract:** Little is known about the association between emotion regulation strategies and perceived stress in college students, and in particular the strategies used by international students. Present research examined if differences exist in the use of emotion regulation strategies between Irish college students and Chinese international students, and investigated the relationship between emotion regulation strategies and perceived stress in these two student populations. Chinese students reported more frequent use of cognitive reappraisal and expressive suppression compared to Irish students. There was a significant negative association between the habitual use of cognitive reappraisal and levels of stress in both Irish and Chinese students. There was a significant positive relationship between the habitual use of expressive suppression and levels of stress in Irish college students, but not in Chinese students. The findings highlight the importance of cultural context when investigating the association between emotion regulation strategies and perceived stress in students.

Further information on: https://www.ojed.org/index.php/jis/article/view/2516





#### Dr Miguel Flores and Dr Panagiotis Arsenis (University of Surrey)

School of Business



#### Determinants of Students' Salaries in the Professional Training Year

**Abstract:** This paper studies the main determinants of salaries for economics students in their yearlong industrial placements. Using three different sources of data on three cohorts of economics placement students, including demographic characteristics, academic performance, programme of studies and employability-related characteristics, we find that *academic performance, job location* and *industry type* are the main determinants of placement salaries. We show not only that students' academic performance can increase the returns of the placement year due to the possibility of high salaries, but such returns significantly increase at the top of the salary distribution. Students' previous job experience also matters for high-paying placements. Conversely, demographic characteristics, such as age, nationality and ethnic background, do not appear to determine placement salaries. Finally, we find *no* evidence of gender differences in wages.

Further information on:

https://www.tandfonline.com/doi/abs/10.1080/13562517.2020.1863345?journalCode=cthe20

#### Dr Rejwanul Haque

School of Computing



#### Investigating Active Learning in Interactive Neural Machine Translation

**Abstract:** Interactive-predictive translation is a collaborative iterative process, where human translators produce translations with the help of machine translation (MT) systems interactively. Various sampling techniques in active learning (AL) exist to update the neural MT (NMT) model in the interactive-predictive scenario. In this paper, we explore term based (named entity count (NEC)) and quality based (quality estimation (QE), sentence similarity (Sim)) sampling techniques - which are used to find the ideal candidates from the incoming data -- for human supervision and MT model's weight updation. We carried out experiments with three language pairs, viz. German-English, Spanish-English, and Hindi-English. Our proposed sampling technique yields 1.82, 0.77 and 0.81 BLEU points improvements for German-English, Spanish-English and Hindi-English, respectively, over random sampling-based baseline. It also improves the present state-of-the-art by 0.35 and 0.12 BLEU points for German-English and Spanish-English, respectively. Human editing effort in terms of number-of-words-changed also improves by 5% and 4% for German-English and Spanish-English, respectively, compared to the state-of-the-art.

Further information on:

https://amtaweb.org/amta-2021-1st-call-for-papers-presentations-and-workshop-and-tutorial-proposals/

#### Theresa Mulcahy

School of Business



## Competing Logics in Family Firms who Engage in the Professionalisation Process by Hiring External Professional Accountants at Management Level

**Abstract:** Family firms possess many unique traits one of which is their commitment to family values and family involvement, the notion of "familiness" (Pearson et al., 2008). Familiness highlights the existence of "family logics" within family firms with commanding characteristics such as loyalty to family, household norms, and family politics (Friedland and Alford, 1991; Thornton, 2004; Thornton et al., 2012).

The notion of logics stems from institutional theory (Meyer and Rowan, 1997). The theory introduces institutional logics as the values people hold relating to their institution (Miller et al., 2017) and the vehicle by which to define and explain institutional change (Greenwood et al., 2017). Business logics are commercial in nature and relate to norms of competition, authority based on competency and economic success (Thornton and Ocasio, 2008; Thornton et al., 2012), performance-based rewards, efficiency, competition and entrepreneurship (Thornton et al., 2012). When family firms professionalise and introduce external professional accountants to their firm, business logics will inherently be introduced. The family firm may be able to exploit both logics and gain the best of both worlds (Miller et al., 2017) or both logics may emerge incompatible (Parada et al., 2010). Studies have found that business logics can dilute family values (Stinchcombe, 1965) but also that family logics can constrain outside professionals when executing strategic changes as these changes may challenge long-standing family values, norms, and strategies (Bertrand and Schoar, 2006). Others have argued that for family firms to fully professionalise they must abandon family logics and endorse business logics (McConaughy, 2000) as many family logics are inconsistent with business logics (Parada et al., 2010). In contrast, Miller et al., (2017), found that firms with both a strong business logic and a strong family logic have lower agency costs and greater stewardship from family members.

The objective of this study is to explore competing logics in family firms who engage in the professionalisation process by hiring external professional accountants at management level.