THE UNIVERSITY OF
NORTHAMPTON
Graduate School

Research Integrity and Innovation

The Graduate School
Annual Research Conference 2016

For Postgraduate Research Degree Students
and Early Career Researchers

Tuesday 14th June 2016

Holdenby Lecture Theatre 3
Park Campus, University of Northampton

Welcome to this year's Graduate School Annual Research Conference for Postgraduate Research Degree Students and Early Career Researchers. Entitled *Research Integrity and Innovation*, this conference reflects the University of Northampton's commitment to building and achieving high quality and outstanding research. The University has set out its research ambitions for 2015-2020 and has pledged its commitment to research that has significant social impact and changes lives.

But all researchers start out taking their first faltering and challenging steps towards a research career and this conference offers research students a vital, early opportunity to present their research, setting the essential foundations for future research achievements.

The speakers have been chosen from the University's six schools: Arts, Business, Education, Health, Science and Technology and Social Science, covering diverse areas of research and methodologies. However, they all strive to ensure the most robust research approaches and to bring new and exciting knowledge to their areas of study, hence the Conference title sums up the common threads through today's programme.

PGR & ECR Conference Working Group: Simone Apel, Alyaa Al Barrak, Amina Dawood, Kim Dodd, Alex Laws, Imane Tiahi.

ALL SESSIONS IN HOLDENBY LECTURE THEATRE 3	
09:00	Registration & refreshments
09:30 WELCOME	**Andrew Scarborough,** **Chair of the Board of Governors, University of Northampton**
09:45 Session 1	**Chair: Alyaa Al Barrak**
Lucy Atkinson	Using eye-tracking to investigate topics in second language learning.
Djamel Eddine Benchaib	Social discourse and Facebook-mediated communication.
Fiona Barchard	Understanding courage: The nursing context.
Samantha Read	Marketing to the digital self: Identifying the variables affecting the adoption and retention of branded Smartphone applications in relation to the theory of self-concept.
Zainab Al-Rubaye	Lameness detection in sheep through behavioural wireless sensor data analysis.
11:00 *Refreshments*	

11:30 Session 2	Chair: Alex Laws
Leila Benseddik	An exploration of English for Legal Purposes (ELP) teaching in Algerian higher education.
Kim Dodd	Social worker identities in mental health services.
Bochra Benaissa	Rethinking the Robinsonade: Self and environment in the twentieth-century desert island narratives.
Riyadh Abedraba Abbas	Development of scheduling process for the M2M communications system in smart cities.
12:30 Lunch	

13.30 Session 3	Chair: Alyaa Al Barrak & Ayodeji Olamide
Blessing Brenda Katampe	The contribution of aquaculture to poverty alleviation/ food security among the rural poor in the federal capital territory – (fct) Abuja.
Tolulope Eboka	Understanding the practice of girl-marriage in northern Nigeria.
Jessica York	The kinematics of the equine axial skeleton when exercising on an aqua-treadmill.
James Oakes	Applying Artificial Intelligence within a Virtualised Compute Platform.
Jessica Newcombe	Peer Mentoring for secondary school students with Profound and Multiple Learning Difficulties (PMLD).
14:45 Refreshments	

15:15 Session 4	Chair: Kim Dodd
Emily Howard-Williams	The effect of eroded ecological networks on the movements of harvest mice (*Micromys minutus*).
Souad Smaili	An exploratory study of the teaching of autobiographical writing through interactive theatre and its effect on identity development among EFL students of higher education in Algeria.
Payal Jain	Developing a framework for social value creation.
Abdellah Azzam Maachou	Films in English classrooms. Do they help?
16:15 Close	**PGR student social event starts at 16:30**

Riyadh Abedraba ABBAS

Postgraduate research student in the School of Science and Technology
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TITLE: Development of scheduling process for the M2M communications system in smart cities.

ABSTRACT: The development of Machine-to-Machine communications systems has been increasing recently, especially considering that they have a wide range of applications in smart cities and the Internet of Things (IoT). However, with the massive number of connected devices in such applications, the problem of message collision becomes a vital factor that significantly affects the reliability of the M2M systems. The research project employs the Weightless-N type M2M communications technology as a case study to focus on the collision problem and to develop an improved scheduling process to mitigate this problem. The Weightless-N utilises a special technique to send multi-copies of the message on different frequencies, which increases the probability of receiving the message correctly. A better performance has been achieved by developing a new frequency selection process, which provides a lower number of collisions than the standard technique for the same number of message copies.

Zainab AL-RUBAYE

Postgraduate research student in the School of Science and Technology
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TITLE: Lameness detection in sheep through behavioural wireless sensor data analysis.

ABSTRACT: Lameness is a clinical symptom referring to locomotion changes, resulting in impaired and erratic movements that differ widely from normal gait or posture. Lameness has an adverse impact on both sheep welfare and farm economy, therefore the preclinical detection of lameness will improve both sheep health and, in turn, support farming businesses. A newly developed sensor technology should enable automatic monitoring of animals to determine physiological and behavioural indicators, which would then be subsequently used as inputs into data analysis algorithms. The sensor that will be used to conduct this research is immensely accurate and sensitive. It provides acceleration, angular velocity, orientation, longitude, latitude and the time of reading which can be set up according to the demanded accuracy. This study will develop an automated model to detect lameness in sheep by analysing the data retrieved from a mounted sensor on the neck of the sheep. This model will help the shepherd to detect lame sheep earlier, to prevent trimming or even culling.

Lucy ATKINSON

Postgraduate research student in the School of Social Sciences (Psychology)
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TITLE: Using eye-tracking to investigate topics in second language learning.

ABSTRACT: Researchers in the area of second language learning are interested in both learners' knowledge of the target language and how knowledge is put to use during real-time language processing. There is now a move in the direction of capturing moment by moment interpretation of the target language, such as eye-tracking with the benefit of tapping into learners real-time processes during the uninterrupted processing of an input (e.g. a written text). Furthermore, it captures the focus of learners' attention, and records movements of the eyes during experiments. Information extracted is: (a) number of fixations for each targeted item, (b) amount of time that participants spent looking at each targeted item, and (c) duration of the first fixation.

The presentation will present an overview of eye-tracking methods and how they have been used to (a) investigate language-related topics, and (b) inform key debates in the fields of second language acquisition with respect to psychological implications.

Fiona BARCHARD

Professional Doctorate student in the School of Health
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TITLE: Understanding courage: The nursing context.

ABSTRACT:
Background: In 2012 a new vision for nurses, midwives and care givers (Cummings and Bennett 2012), outlined the 6 C's, one of these is courage. As a nurse the use of the word courage intrigued me and I decided to explore this, what did nurses think this meant to them?
Methods: Grounded theory underpinned with the epistemology of social constructionism, consistent with Charmaz (2014). Ethical approval was granted to undertake unstructured interviews with qualified adult nurses on their understanding of courage in professional practice.
Results: 12 unstructured interviews were undertaken during 2015. Initial themes suggest nurses view courage as a complex phenomenon. Age, personality, support, confidence, knowledge and experience are all seen to be integral to courage.
Conclusions: Courage as understood by nurses is a complex phenomenon. Understanding of this can inform future practice and enable us to prepare and support nurses to use courage in the practice setting.

Bochra BENAISSA
Postgraduate research student in the School of the Arts
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TITLE: Rethinking the Robinsonade: Self and environment in the twentieth-century desert island narratives.

ABSTRACT: The Robinsonade genre, which is traditionally conceived in modern literary criticism as based on self-discovery and solitude, is one that dominated children's and young people's fiction during the first half of the nineteenth century and continued its popularity during the twentieth century, with plentiful publications on the model of Robinson Crusoe. Throughout the desert island narratives, authors aim at transmitting a notion of "self" and "environment". My study draws on a range of Robinsonade novels in order to explore literary representations of self as conditioned by the environment. My thesis explores the implications of the environment on the self and how the approach to environment, such as the irrational creatures and space and their relation to the human subjectivity, thus challenging the conventional understanding of the Robinsonade.

The understanding of 'environment' I will develop is based upon the relationship between human and 'nature' as represented by animals and also the geographical environment and setting and its mutually formative relation with the protagonist. A range of different approaches will be used, mainly eco-critical theory and psychogeography.

Djamel Eddine BENCHAIB
Postgraduate research student in the School of the Arts
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TITLE: Social discourse and Facebook-mediated communication.

ABSTRACT: This paper is to establish a framework of social discourse analysis. The focus will be on digital communication mediated by the use of Facebook to examine the use of Arabic, French, and English in the Algerian discourse. This framework will apply insights that have a relationship to sociolinguistic, socio-cultural and Internet studies to find out about interactional coherence, participant frameworks, language-identity relationships and the notion of virtual community. This study will be a digital ethnography of communication which will allow using mixed methods to match appropriate data: online observation to collect posts from Facebook groups, computer-mediated discourse analysis (CMDA) to analyse language use in these posts and to create the hypotheses, and online focus group interviews (inviting 6 to 8 students and teachers in Facebook chat room) to answer questions based on the findings from the online observation and CMDA. Such a framework of analysis would be named 'Digital and Interdisciplinary Communication Analysis'.

Leila BENSEDDIK
Postgraduate research student in the School of the Arts
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TITLE: An exploration of English for Legal Purposes (ELP) teaching in Algerian higher education.

ABSTRACT: The need to learn English among students of law in Algeria is not limited only to learning the sentence structure, vocabulary and legal terminology. Students' ability to truly integrate in the legal community necessitates the need to know the specific language and practice (discourse and genre) that characterize this community. Lacking this specific disciplinary knowledge and knowledge of the legal genre, Algerian law students face serious obstacles to joining the legal communities locally and internationally. The present research is an exploration of the field of international law regarding the teaching of legal English. It aims at developing and evaluating an experimental English course which will enable students not only to be highly competent academically, but also to possess a strong command of the English language in order to better perform in the legal profession. In order to do so, the researcher will conduct interviews with ELP teachers and administer questionnaires to Law students. Based on the findings of the questionnaires and interviews, the researcher will design an experimental course to be taught for law students aiming at teaching them the legal behaviours associated with legal uses of the English language. By learning the legal genres and behaviours, students will have the ability to successfully practice their legal skills in their communities.

Kim DODD
Professional Doctorate student in the School of Health
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TITLE: Social worker identities in mental health services.

ABSTRACT: This research explores how social workers construct and sustain their professional identities within mental health services, which is one of the most complex and high profile areas of public service. The literature portrays social worker identities as unclear and existing within changing political frameworks, changing notions of what social work is and changing social attitudes to welfare and disability. This research is at the stage of analysis, with completion expected by December 2016. Twelve social workers have been interviewed and their accounts analysed using Parker's (1999) 12 steps of discourse and analysis based on Foucauldian principles. Initial results have shown how identities are fought for within dominant medical discourses of mental illness and consistently drawn from discourse of social justice for people who are vulnerable and disadvantaged.

Tolulope EBOKA

Postgraduate research student in the School of Social Sciences
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TITLE: Understanding the practice of girl-marriage in northern Nigeria.

ABSTRACT: Cultural violence (CV), as coined by Johan Galtung (1969:1), refers to "aspects of a culture that can be used to justify or legitimize direct or structural violence (SV)". CV can be defined as when a person is harmed as a result of practices that are part of their culture. Most of these practices have been on-going for generations and are being used to justify or legitimize direct and structural violence. Unfortunately, CV makes direct and structural violence socially acceptable.

My emphasis is on Girl-marriage (often-called Child-marriage) as a form of CV. This empirical work specifically explored the cultural factors underpinning the perpetuation of Girl-marriage in northern Nigeria with the aim of providing understanding of this practice from the perception and practice of the people involved. The research question was how do northern Nigerians explain the practice of Girl-marriage? Observation and semi-structured interviews were used to answer this question. Data transcription is on-going.

Nadia Hameed HASSOON (Reserve paper)

Postgraduate research student in the School of the Arts
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TITLE: Daesh and sectarianism in Iraq: A critical discourse analysis of news sites' reportage.

ABSTRACT: The internet has grown exponentially to touch our lives in all spheres. However, the reader, more specifically university students, must be aware that news reports can be linguistically constructed and deliberately produced under the control of certain institutions to promote certain interests. Critical studies of news reports (Fairclough, 1992); (Van Dijk, 2001) and (Wodak, 1999) contend that language is used to naturalise an ideology to be more influential and appeal to the readers. The writer can convey reality differently in accordance with the discourse producer's interests by employing different linguistic techniques: such as including or excluding discursive elements about certain facts.

It is believed that implementing critical thinking in teaching English as a foreign language is essential. To this end, this study attempts to denaturalise the persuasive discourse of two conflict news websites.

This is a reserve paper and will be presented if any of the scheduled session presenters are absent.

Emily HOWARD-WILLIAMS

Postgraduate research student in the School of Science and Technology (Moulton College)
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TITLE: The effect of eroded ecological networks on the movements of harvest mice (*Micromys minutus*).

ABSTRACT: Habitat fragmentation and degradation of ecological networks have been identified as an influencing factor of *M. minutus* population viability, although, this has yet to be fully quantified. Mortality rates over winter for this species can be as high as 95%, therefore well connected habitats are essential for maintaining genetically viable populations. The development of a novel ecological survey method for studying *M. minutus* has allowed this previously unmeasured ecological parameter to be recorded. Within a specially designed release enclosure located in semi-improved grassland, various sized gaps were created in cross sections of 'hard' (artificial road surface 4.8m) and 'soft' (mown, with low vegetative cover 1m, 2m and 4.8m). Movements of a reintroduced population of *M. minutus* (Soft ♂N=5, ♀N=9; Hard ♂N=8, ♀ N=13) over these gaps were recorded. This method utilised a combination of an automated Radio Frequency Identification network and individually fitted Passive Integrated Transponders. Movements over smaller 'soft' gaps were frequent in both sexes ($\bar{x}$: 1m ♂=2.6 ♀=3 and 2m ♂= 0.8 ♀= 1.44) with no significant difference between the sexes (P = 0.945, 0.957 respectively). Whilst both genders crossed narrower fragments that have ground vegetation, as gap width increased willingness to cross decreased significantly (P < 0.001), with little or no crossings of the 4.8m gaps. The implications here suggest that gaps over just 2m will impede movement and dispersal of both sexes, with potential genetic implications on *M. minutus* populations.

Payal JAIN

Postgraduate research student in Northampton Business School
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TITLE: Developing a framework for social value creation.

ABSTRACT: Social and commercial organisations are contributing towards social value creation in a myriad of ways (Acs *et al.*, 2011). Within social organisations, social enterprises are leading the sector in producing sustainable social value (Bull *et al.*, 2010). In addition to this, the UK government is contributing to the creation of social value through legislation: the 2012 Social Value Act, which requires public authorities to consider social and environmental value, in addition to economic value, in public contracting processes (Social Value Act, 2012). However, despite the significant attention, there remains a paucity of research that seeks to identify and quantify what constitutes social value (Emerson, 2013). The study will employ Q methodology to understand the perspectives of a wide-range of stakeholders for the creation of a holistic framework for social value.

Blessing Brenda KATAMPE

Postgraduate research student in the School of Science and Technology
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TITLE: The contribution of aquaculture to poverty alleviation/ food security among the rural poor in the federal capital territory – (fct) abuja.

ABSTRACT: Poverty alleviation and food security has become a central discourse in recent times, and this has been driven predominantly by growing populations and urbanisation, changes in the world economy, technology and the state of the environment. This development stresses the need for action to be taken to address consumer needs and demands, access, supply and nutrition. Aquaculture practice is the fastest developing primary food production sector in the world and it is recognised as a possible sustainable solution for poverty alleviation, food security and a way to augment dietary intake amongst the very poor.
The study is intended to determine among other things, what contribution and impact if any aquaculture has on rural farmers and how this can further be improved if the farmers are empowered. To achieve the aim of the study, the researcher visited Nigeria and spent some time administering questionnaires and conducting interviews with respondents. Results from data gathered during the visit convinced the author that fish farming is playing an important role in the livelihood of its adopters.

The aquaculture industry is a viable venture and has a huge potential in developing countries as a source of poverty alleviation and food security measure especially in Africa. However, to achieve this goal, more needs to be done by all stakeholders involved.

Abdellah Azzam MAACHOU

Postgraduate research student in the School of the Arts
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TITLE: Films in English classrooms. Do they help?

ABSTRACT: In Algeria, one common problem in the teaching and learning of English as a Foreign Language (EFL) is low student motivation. This research will investigate if the use of films in the classroom will help EFL learners to improve their English and communication abilities (case study: 1st year English students at the university of Djillali Lyabes, Sidi Bel Abbes, Algeria).

This research will investigate three sets of theories: learner motivation and identity, socio-cultural theories, and multi-channel processing (watching, reading subtitles and listening at the same time). The methods used in this research are divided into teacher-related methods which are interview, group discussion and classroom observation and student-related methods, which are mini module (using The Chronicles of Narnia: The Lion, the Witch and the Wardrobe as a teaching material), group discussion, and a survey.

Jessica NEWCOMBE
Postgraduate research student in the School of Education
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TITLE: Peer Mentoring for secondary school students with Profound and Multiple Learning Difficulties (PMLD).

ABSTRACT: The paper provides insights into the field of inclusive education regarding students with profound and multiple learning difficulties (PMLD). Inclusive education for students with PMLD is considered by some to be unrealistic because of the levels of support required to meet the needs of students with PMLD. The paper explores how to ascertain students with PMLD preferences and experiences as research is often done 'to 'rather than 'with' students with PMLD.

The purpose of this paper is to explore the methodology used in this research. It investigates the views of peer mentors and students with PMLD about peer mentoring and it explores the extent to which preferences and experiences of students with PMLD can be ascertained. Using participatory methods the students with PMLD and the peer mentors became co-researchers. They and all of the participants collected data about the peer mentoring process. Using the 'mosaic approach' the data was gathered then was pieced together through dialogue, reflection and interpretation from all participants. This paper contributes to the knowledge of specialised education for students with PMLD through exploring the uses of peer mentoring. It provides opinions and experiences of all the participants involved in the peer mentoring process especially the students with PMLD.

James OAKES
Postgraduate research student in the School of Science and Technology (Computing)
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TITLE: Applying Artificial Intelligence within a Virtualised Compute Platform.

ABSTRACT: With any virtualised compute platform, effectively applying automation methods and computer based management techniques is critical to ensure uniform deployment of Virtual Machines (VMs), system performance management, and continuous operations and service. This paper proposes improvements on existing manual, semi-automated and automated control methods by introducing and applying Artificial Intelligence (AI) and computer based decision making using an Intelligent Decision Engine (IDE) to assist in removing human error from the deployment, build and management process for VMs operating within a virtualised compute environment. The investigation centres on the development of seven perceived AI mechanisms and capabilities. These address the key areas of VM deployment, VM migration, platform event handling (data in), results analysis learning and decision making, self-monitoring, self-healing and remote monitoring and management. The end objective of this work is to demonstrate and evidence the advantages of utilising AI within virtualised private and public cloud environments.

Samantha READ

Postgraduate research student in Northampton Business School
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TITLE: Marketing to the digital self: Identifying the variables affecting the adoption and retention of branded Smartphone applications in relation to the theory of self-concept.

ABSTRACT: This research explores the extent to which Smartphones and Smartphone apps can be viewed as an extension of ourselves. Digital technology allows us to shape who we are (our actual self) and re-invent who we want to be (our ideal self), yet little research has explored how a consumer's self-concept effects their brand engagement with Smartphone apps. Drawing on research from Marketing Communications, Psychology and Human-computer interaction, the relationship between consumers' digital selves and adoption, usage and retention of branded Smartphone apps will be analysed. A longitudinal, mixed methods exploratory study will examine whether a users' self-concept affects their app usage behaviour. Expected outcomes from the research include contribution of academic knowledge to the area of app usage as well as mobile marketing and digital brand engagement. The variables identified will also provide recommendations for the creation of Smartphone applications as a marketing communications tool.

Souad SMAILI

Postgraduate research student in the School of the Arts
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TITLE: An exploratory study of the teaching of autobiographical writing through interactive theatre and its effect on identity development among EFL students of higher education in Algeria.

ABSTRACT: This study explores the teaching of autobiographical writing among students of English as a Foreign Language (EFL) in Algeria through interactive theatre. It investigates the effect of students' autobiographies on their multiple identities related to multilingualism, and how these are affected by the different roles the students articulate in their theatrical performance. The study's objective is to recommend to Bejaia University a new approach to teaching writing.

A narrative approach will be followed, in which a pilot study will be conducted at Bejaia University, including classroom observation. Also, thinking-aloud sessions will be designed to analyse the students' narrative abilities. Structured and semi-structured interviews will investigate students' and teachers' perceptions of autobiographical writing as a new module to be taught via interactive theatre. Moreover, students' diaries are going to be collected throughout the study. A multi-storied method will be used for data analysis. This study brings a distinctive research design to Algerian Universities because of integrating this innovative approach to writing.

Jessica YORK
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TITLE: The kinematics of the equine axial skeleton when exercising on an aqua-treadmill.

ABSTRACT: Equine aqua-treadmills are commonly used for training and rehabilitation. As yet, still little research exists to quantify movement when horses are moving through water on a treadmill, although anecdotal reports are habitually positive in how this type of exercise improves a horse's way of going. This PhD has sought to investigate the movements of the axial skeleton when horses are exercised on an aqua-treadmill at increasing water depths using state-of-the-art 3D motion tracking (Qualisys©) and inertial sensor (Xsens©) technologies. Focus has been on investigating the effect of water depth on vertical displacements comparing the front and back ends of the horse, mediolateral displacements of the spine at increasing water depths, comparing overground and aqua-treadmill locomotion, and including the addition of a training aid both overground and through the aqua-treadmill exercise. Results so far have been positive and exciting. It is anticipated that published results will aid the development of constructive, specific and controlled therapeutic rehabilitation and fitness programmes.

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