



3rd Annual Postgraduate Research Conference

Wednesday 12 January 2011

The Graduate School

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**Bournemouth
University**

The Graduate School

3rd ANNUAL POSTGRADUATE RESEARCH CONFERENCE

Time:	Wednesday 12 January 2011
Location:	Thomas Hardy Suite, Talbot Campus

Time	Session	Speaker
09:00-09:30	<i>Rooms available for preparing and displaying posters</i>	-
	Oral Presentations: Session 1	Chair: tbc
09:30	Vice Chancellor's Welcome	Professor John Vinney
09:45	Research at Bournemouth University	Professor Matthew Bennett
10:00	My PhD journey ... "can you come back tomorrow"	Debbie Sadd (ST)
10:20	The Internet as a public arena for research: how do we balance the pursuit of knowledge with care for those we want to know?	Joe Flintham (MS)
10:35	The origin of the contractual nature of the banker customer relationship – why does the money belong to the bank?	Bill Davies (BS)
10:50-11:20	Poster Session 1 – with refreshments	
	Oral Presentations: Session 2	Chair: tbc
11:20	Aims, objectives and paradigms: discovering a new meaning to the word meaning	Sean Beer (ST)
11:40	SME's and the impact of environmental taxation	Sukanya Ayatakshi (BS)
11:55	Unitary Appreciative Enquiry: A new approach	Mel Hughes (HSC)
12:10	Electrocutaneous feedback system for patients with neuropathy	Jan Walter Schroeder (DEC)
12:25-13:15	LUNCH with Poster Session 2 (with Researchers available for discussion)	
	Oral Presentations: Session 3	Chair: tbc
13:15	'Finding Foucault' or: How I Learned to Stop Worrying and Love Methodology	Mark Readman (MS)
13:30	Innovative Manufacture of Large Scale Marine Components	Sonia Travaglini (DEC)
13:50	Progressing Leadership Research in Hospitality Studies	Steven Boyne (ST)
14:05	The Effectiveness of Integrated Marketing Communication in Thai Politics	Juthamas Kasemsap (MS)
14:20	Health Issues Among Nepalese Migrant Workers in the Middle East	Pratik Adhikary (HSC)
14:35	The Phenomenology of Music Festival Research	Caroline Jackson (ST)
14:50-15:30	Poster Session 3 with Refreshments	
15:15	Closing Remarks – with prize-giving	Professor John Vinney Professor John Fletcher



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POSTER PRESENTATIONS

School	Poster	Author
AS	A Rapid Method for Screening Individual Susceptibility to Methadone	Hannah Bunten
AS	The Stability of 6-Monoacetylmorphine and Cocaine in Vitreous Humor and Blood when Stored under Ambient, Refrigerated and Frozen Temperatures	Nicola Jones
AS	Analysing the Purity of "Street" Cocaine Preparations Obtained from Nightclub Amnesty Bins Located in Bournemouth Between 2006 and 2008	Mevan Kattan
AS	Evaluation of the Randox Whole Blood Drugs of Abuse Arrays for the Analysis of Alternative Postmortem Toxicology Samples	Poppy McLaughlin
AS	Set in one's way: individual consistency of threat-sensitive behaviour	Marina Nyqvist
AS	Predicting fish responses to environmental change using individual-based models	Sui Chian Phang
AS	Purity of "Street" Ketamine preparations retrieved from Night Club Amnesty Bins in London	Eva Reichardt
AS	Investigation of the Effect of Vinegar on Oral Fluid Drug Testing: Effects on Immunoassay Screening	Eva Reichardt
AS	"The assessment of habitat condition and conservation status of lowland British woodland using earth observation techniques"	Matthew Sumnall
AS	Impact of Climate Change on Extinction Risk of Montane Tree Species	Natalia Tejedor
BS	Operationalisation of the Mobile Technology Competences Construct in the Context of Creative Industries	Elvira Gallyamova
DEC	The development of traditional Kuwaiti design for the 21 st century	Abdulaziz Alsallal
DEC	Surface response of ceramics subject to erosive wear	Gonzalo Garcia Atance Fatjo
DEC	Do You Have To Look Where You Go? Gaze Behaviour During Spatial Decision Making	Olivier De Condappa
DEC	Feature-Based Probability Blending	John Ferraris
DEC	Smart Passive Adaptive Control of Composites Structures through Optimisation of Fibre Orientation	Rasoul Khandan
DEC	A New Theoretical Framework for Wayfinding Signage	Hana Kmecova
DEC	Investigation of a wireless distributed FES system with intelligent network of sensors	Choukri Mecheraoui
DEC	"Chemo-brain": Potential cognitive deficits, including language, sleep disorders, and memory, following chemotherapy for cancer survivors	Liliana Moyers Ruiz
DEC	Virtual Reality - A paradigm shift in the rehabilitation of the upper arm	Prashant Prashun
Continued...		

School	Poster	Author
DEC	Chemical Similarity Methods for Virtual Screening of Bioassay Data	Amir Ali Rafati Afshar
DEC	Brass musical instrument mouthpiece design	Malcolm Randell
DEC	Load Measurement of In-service Marine Structures to Influence their Design	Mohammad Reza Ramazani
DEC	Corrosion Mapping and Elemental Identification of Historic Military Vehicles through Non-Destructive Methods	Adil Saeed
DEC	Development Of An Epidural Simulator For Virtual Training And Administration	Neil Vaughan
HSC	The midwife as Coracle: a phenomenological study of midwives experiences of offering emotional support to women becoming mothers	Sue Barker
HSC	Website Development of a Unique Private Physiotherapy Practice for People Living with Cancer	Caroline Belchamber
HSC	Hypermobility, coordination and spinal pain; an inherent association	Carol Clark
HSC	The Emergence of a School-Based Occupational Therapy Practice Framework: Utilising Grounded Theory to Unpack Complex Interventions	Andrea Hasselbusch
HSC	Optimised measurement of cardiovascular autonomic response and the assessment of changes in autonomic tone resulting from an inflammatory response to influenza immunisation	Emma Jones
HSC	Knowledge and Knowing for Post-Qualifying Higher Education	Lynne Rutter
HSC	Testing the feasibility of a US developed actuarial child protection risk assessment tool using data from British Serious Case review reports	Heather Wood
HSC	An exploration of the experience of patients who participate in research as co-learners with primary health care teams	Louise Worswick
MS	Participatory Culture in Media Education - Initial investigations	Peter Fraser
MS	New Media Narrative and Learning	Neelam Parmar
MS	Developing brand orientation in a charitable organisation: A case study of Arthritis Care	Tauheed Ramjaun
MS	The Changing Design of Early Wireless Sets	Julia Taylor
MS	Using Social Media to Support Creativity and Innovation in the UK Media Industry	Andy Tedd
MS	Maslow Remixed? Exploring Children's Needs in Cross-Platform Media Environments	Ashley Woodfall
ST	The Role of the Local Community in the Nomination and Management of a World Heritage Site and the Impact of World Heritage on the Development of Tourism - Jatiluwih Rice Fields, Bali, Indonesia	Gde Indra Bhaskara
ST	Tourism Travel and Identity	Julia Hibbert
ST	Consumers as Producers: The socio-cultural dimensions of the events experience	Ivana Rihova
ST	The Diffusion and Adoption of Sport Psychology; the development of a conceptual framework	Amanda Wilding
ST	Development of a Conceptual Framework for the Design of Mobile Context-Aware 3D Maps for City Tourism Applications	Zornitza Yovcheva

Oral Presentations - Abstracts

HEALTH ISSUES AMONG NEPALESE MIGRANT WORKERS IN THE MIDDLE EAST

Pratik Adhikary (School of Health and Social Care)

An estimated three percent of the global population migrates, mainly for economic reasons. Millions of Asian workers immigrated to the Middle East since the start of the oil boom in the 1970s. Currently about 465,000 Nepalese work in Qatar and 321,000 in Saudi Arabia, they work mainly in semi-skilled or manual jobs and they are predominantly male. Several studies on migrant workers have revealed that Asian migrant workers in the Middle East face various health risks; accidents at work; stress and mental health issues and lifestyle related factors such as illegal drinking. This review gives credence to conduct a comprehensive study among Nepalese migrant workers in the Middle East. A mixed-methods approach will be used to study migrant workers at Kathmandu Airport who are about to leave for the Middle East or just returned. This PhD study has been awarded research ethics permission from the Nepal Health Research Council.

SMEs AND THE IMPACT OF ENVIRONMENTAL TAXATION

Sukanya Ayatakshi (Business School)

More than 99% of all businesses in the UK are small and medium sized enterprises (SMEs). SMEs account for more than 70% of total pollution.

Environmental taxation gives a choice to the polluter to pollute and pay increased taxes or reduce polluting behaviour. However, for SMEs, limited resources of time, money and expertise often result in a gap between attitudes and behaviour. Also the SME owner-manager is the key decision maker and his/her attitudes influence the business attitudes. Most SMEs operate in sectors that are liable to environmental taxes such as manufacture, transport etc

The aim of the study is to research the impact of environmental taxation on SMEs in UK. The study uses Input-Output analysis to identify the high energy users thereby using that as proxy of being subject to high environmental taxes. The methodology is mixed with I-O analysis followed by interviews with SMEs.

AIMS, OBJECTIVES AND PARADIGMS: DISCOVERING A NEW MEANING TO THE WORD MEANING

Sean Beer (School of Tourism)

My PhD experience has taken me from positivist natural scientist to interpretivist social scientist.

Referring to Plato's The Apology of Socrates (West and West 1984) Derrida (2000 p. 158) maintains that,

What we must be attentive to here.....is the socio-cultural difference between languages, codes, connotations, within the same national language, the languages, in the language, the effects of "foreignness" in domesticity, the foreign in the same.

I am a foreigner: to the country from whence I came, and to the country that I have entered, but it is an exciting country with n(o)(ew) rules. Wittgenstein (1965) maintained that many of the problems of Philosophy were caused by a miss understanding of, or games that are played with, language. This foreignness though, is caused by more than a difference in language, but by a different point from which the world is viewed.

This paper will playfully explore some of these perspectives.

PROGRESSING LEADERSHIP RESEARCH IN HOSPITALITY STUDIES

Steven Boyne (School of Tourism)

This presentation draws upon a detailed literature review of leadership-focused hospitality studies. The presentation examines the nature of leadership and the development of leadership studies before turning to a critical evaluation of published hospitality studies focussing on leadership issues. The review findings are that the knowledge which has thus far been generated cannot be aggregated to provide a holistic understanding of leadership in hospitality contexts. Accordingly, it is argued that there is a requirement to develop applied hospitality leadership studies based, to a greater extent, on engagement with prior research. A move towards a more augmentative research programme would contribute towards an inter-related and more holistic framework of knowledge. Finally, such an approach is illustrated using an example linking transformational leadership, employee motivation and hospitality service.

THE ORIGIN OF THE CONTRACTUAL NATURE OF THE BANKER CUSTOMER RELATIONSHIP – WHY DOES THE MONEY BELONG TO THE BANK?

Bill Davies (Business School)

The 19th century House of Lords decision in *Foley v Hill* established beyond doubt that the legal relationship between the customer and the bank is that of creditor and debtor. The impact of this decision is that the relationship is based on contract rather than trust. Money deposited in a bank becomes the property of the bank, who may dispose of it as it wishes. This decision has enormous ramifications for both consumer banking and also wider aspects of bank regulation and governance. This paper explores the reason why the courts

adopted this course and whether any realistic alternative was available.

THE INTERNET AS A PUBLIC ARENA FOR RESEARCH: HOW DO WE BALANCE THE PURSUIT OF KNOWLEDGE WITH CARE FOR THOSE WE WANT TO KNOW?

Joe Flintham (Media School)

Ethnographic and phenomenological research is commonly used to understand the motivations behind, and consequences of, people's participation in online spaces; and such qualitative methods are arguably essential to understanding the role that virtual spaces might play in areas of mental well-being, personal health and self-help. Such techniques clearly require consideration of the ethical dimension of research practices. This presentation examines the ethical guidelines for Internet-based studies published by the British Psychological Association and examples of their implementation in research projects, and suggests that such guidelines inappropriately apply models of public space to the web, and that their application often obscures an underlying misunderstanding of Internet practices.

This presentation represents a key stage in the proposer's research into the use of online spaces by people who are bereaved, and is based on preliminary surveys prior to undertaking ethnographic and phenomenological research.

UNITARY APPRECIATIVE INQUIRY: A NEW APPROACH

Mel Hughes (School of Health and Social Care)

The presentation will introduce the relatively new research method of unitary appreciative inquiry. Cowling, who developed UAI argues that by understanding and appreciating life patterns, wholeness and uniqueness, practitioners, can better 'the lives of individuals, families, groups and communities' (2005 p294). Whilst it seeks patterns which reflect the wholeness, essence and uniqueness of a particular individual or group, reflection on these representations and patterns 'can provide a way of understanding human life, conditions and situations' (2001 p35) and as such, can be used to inform our understanding of the particular context as well as the particular person. UAI seeks to achieve this understanding by generating and collecting a range of data regarding the person or group's experience, representations of that experience using methods of creative expression e.g. music, art, storytelling, and the participants' views on the implications of that knowledge for themselves and others. The aim of the presentation is to share my own experiences and evaluations of using UAI to illuminate the impact of social work education on the whole person.

THE PHENOMENOLOGY OF MUSIC FESTIVAL RESEARCH

Caroline Jackson (School of Tourism)

This presentation focuses on the experience of the rock/pop music festivalgoer and the need to review the way that such research is undertaken. A review of experience literature (Jackson 2009) identified that there has been a gradual shift in research paradigms from a more positivist, deductive approach to a more inductive, interpretive research and therefore from more quantitative to qualitative methods. This presentation discusses the ways in which the phenomenon of the music festival experience can be researched and identifies the different methods of phenomenological research available to us. Getz (2007, p. 391) acknowledges that because "the core phenomenon of Event Studies is experiential, phenomenological research is essential." An analysis of the different methods is discussed in the context of the experiences narrated and illustrated by music festival goers.

THE EFFECTIVENESS OF INTEGRATED MARKETING COMMUNICATION IN THAI POLITICS

Juthamas Kasemsap (Media School)

Integrated Marketing Communication (IMC) has been a major communications development of the last decade of 20th century (Kitchen, Brignell, Li, Jones ; 2004, Kitchen and Schultz; 1999). IMC definition, concept (Schultz and Schultz, 1998; Swain, 2004; Ewing, 2009) and the measurability (Kliatchko; 2005; 2008, Swain; 2004, Reinold and Tropp; 2010) issues are still controversial between practitioner and academic.

However, this study takes the issue of the IMC measurability to indicate the IMC effectiveness by bringing in similarity (awareness, behaviours, exposure) and different measurement feature among IMC tools, discuss each IMC measurement methods (advertising, public relation, promotion) in order to understand the IMC effectiveness, and then examine it in (Thai) politics as a case study (2001-2010).

'FINDING FOUCAULT' OR: HOW I LEARNED TO STOP WORRYING AND LOVE METHODOLOGY

Mark Readman (Media School)

This presentation is a brief story of a rediscovery; I had found Foucault once before, but in a very different context and had not anticipated needing his help again.

But in the course of my PhD research into creativity, and struggling with the inappropriate certainty of universal concepts and scientific measures, I despaired of ever being able to discuss methodological issues in my thesis.

Fortunately I found Foucault again and, through engaging with the concept of discourse, I was able to define my primary objects of study and justify them as examples of how creativity was formed discursively.

Although articulation and implementation of methods continues to be a struggle, I have a set of principles and a theoretical framework which enables me to discuss my analytical strategies.

MY PHD JOURNEY...."CAN YOU COME BACK TOMORROW"

Debbie Sadd (School of Tourism)

Hopefully by the time of the conference I may have had my Viva. At least now I have submitted I would like to recount some of my top tips and pitfalls to avoid. These are many of the things I have learnt along my PhD journey. One of the lowest points was flying to Spain to undertake a pre arranged interview and being asked to return a few days later– hence the title of my talk.

This presentation is my journey from 2006 to date, recounting the highs and lows of my personal experiences undertaking a PhD. My research has involved trying to keep up to date with a constantly changing subject area where every five minutes a new story breaks. The presentation includes tips on undertaking key-informant interviews, as well as my own personal tips on how to manage the whole experience of completing a PhD. Of particular interest may be how I have tried to juggle family life, friendships and most importantly my supervisory team with a few mishaps along the way. Experiences from travelling and attending conferences in addition to writing for publication are also included.

ELECTROCUTANEOUS FEEDBACK SYSTEM FOR PATIENTS WITH NEUROPATHY

Jan Walter Schroeder (School of Design, Engineering and Computing)

People with peripheral neuropathy as a result of diseases such as diabetes or after chemotherapy have reduced sensations in their limbs. This sensory loss can result in numbness and as a consequence in problems in gait or balancing. An electrocutaneous feedback system might help patients to overcome these problems.

A feedback system was designed to provide augmented and replaced sensation to patients with sensory loss. The design involves a tactile shoe which can detect and transmit force feedback after an intelligent processing to areas of skin with normal sensation, and use this as augmented feedback to allow patients to learn to compensate for the areas of sensory loss.

The feedback system will help to improve people that suffer from neuropathy to improve their walk and balance ability.

INNOVATIVE MANUFACTURE OF LARGE SCALE MARINE COMPONENTS

Sonia Travaglini (School of Design, Engineering and Computing)

Current tooling for marine mass manufactured components present a challenge to increase the output of the required tooling, without major increases in cost. For larger components tooling takes a significant amount of time, which in turn limits the production of components.

The identified bottleneck in the process causes limitations in productivity and flexibility, as well as imposing constraining lead times for the manufacturer, which the tooling concept aims to reduce or eliminate.

Processes used in other manufacturing areas will be studied for suitability for application to tooling for marine mass manufactured components. Analysis and selection of a material, capable of delivering the high performance mechanical capabilities required will be carried out, and the concept initially tested.

Simulation of the tooling process will be used to compare the current and proposed concept manufacture method, and finally the concept will be scale tested for application to large scale marine components.

PROGRESSING LEADERSHIP RESEARCH IN HOSPITALITY STUDIES

Steven Boyne (School of Tourism)

This presentation draws upon a detailed literature review of leadership-focussed hospitality studies. The presentation examines the nature of leadership and the development of leadership studies before turning to a critical evaluation of published hospitality studies focussing on leadership issues. The review findings are that the knowledge which has thus far been generated cannot be aggregated to provide a holistic understanding of leadership in hospitality contexts. Accordingly, it is argued that there is a requirement to develop applied hospitality leadership studies based, to a greater extent, on engagement with prior research. A move towards a more augmentative research programme would contribute towards an inter-related and more holistic framework of knowledge. Finally, such an approach is illustrated using an example linking transformational leadership, employee motivation and hospitality service.

Poster Presentations - Abstracts

CHEMICAL SIMILARITY METHODS FOR VIRTUAL SCREENING OF BIOASSAY DATA

Amir Ali Rafati Afshar (School of Design, Engineering and Computing)

Virtual screening is the computational or in silico screening of biological compounds and complements the HTS process. It is used to aid the selection of compounds for screening in HTS bioassays or for inclusion in a compound-screening library. Virtual screening can utilise several computational techniques depending on the amount and type of information available about the compounds and the target.

Current chemical similarity methods are based on the assumption that structure and function are closely related. However, when dealing with bioassay data it is not sufficient to use these methods. 2 compounds with 100% similarity (using current methods) may produce opposite results for the same bioassay target. There is a need to investigate the best ways to represent molecular structure for computer-based analysis, the most appropriate similarity methods to apply to this representation and the usefulness of including historical-based analysis of the bioassay compounds.

THE DEVELOPMENT OF TRADITIONAL KUWAITI DESIGN FOR THE 21ST CENTURY

Abdulaziz Alsallal (School of Design, Engineering and Computing)

This research is an attempt to develop a methodology and design tool to maintain the cultural identity of Kuwaiti design in a way that keeps pace with rapid changes in the field of design. The traditional crafts are an important source of inspiration when generating new ideas, but what if the process of generation leads to cliché designs?

The focus of this research is a study of a popular traditional Kuwait product called Sadu, which is the term used by the Bedouin (desert dwellers) of Kuwait to refer to the weaving process and the woven objects themselves. The research is divided into three parts. The first identifies the Kuwaiti style by exploring the common features of Sadu, using statistical techniques on focus groups. The second part analyses and modifies the traditional style using shape grammar process as a means of generating new designs. Finally the methods will be evaluated to ascertain that the new designs have recognisable identity.

The research aims to introduce methods which could help designers to understand the principles of their cultural heritage of design features, and

to maintain their national identity through design.

THE MIDWIFE AS CORACLE: A PHENOMENOLOGICAL STUDY OF MIDWIVES EXPERIENCES OF OFFERING EMOTIONAL SUPPORT TO WOMEN BECOMING MOTHERS

Sue Barker (School of Health and Social Care)

This study has been conducted using the Husserlian philosophical approach with Giorgi's psychological method (Giorgi 1985) Using this method eight midwives were interviewed to explore their lifeworld experiences of emotionally supporting women becoming mothers.

The descriptions shared by the midwives of their experiences led to an understanding that emotional support is a special type of care. This care occurs in an intimate relationship between midwives and woman and nestles in a 'circle of care' including other professionals and the woman's family. Midwife's can be seen to be using themselves to support, guide and protect women at times of emotional turmoil. The metaphor of a coracle has been used to create a visual image of this care. The little round boat holding the woman safely above turbulent waters to facilitate a sense of comfort and inner peace.

WEBSITE DEVELOPMENT OF A UNIQUE PRIVATE PHYSIOTHERAPY PRACTICE FOR PEOPLE LIVING WITH CANCER

Caroline Belchamber (School of Health and Social Care)

Practice development (PD) is core to the Doctorate in professional Practice (DProf). The aim of the PD element of 'Are physiotherapists meeting National Palliative care standards? A case study approach' is recommendations for improvement in practice within the NHS, as well as the development of a unique private physiotherapy practice for people living with cancer. The latter will run concurrently with the research. The PD objective is the development of the private practice through a website, with the research findings playing an important role in shaping and directing the private practice. Follow a business model, considerations were made to the marketing and set up of this unique physiotherapy service. A website to promote the private practice was designed and developed allowing it to evolve over time (www.physiocancercare.co.uk).

THE ROLE OF THE LOCAL COMMUNITY IN THE NOMINATION AND MANAGEMENT OF A WORLD HERITAGE SITE AND THE IMPACT OF WORLD HERITAGE ON THE DEVELOPMENT OF TOURISM – JATILUWIH RICE FIELDS, BALI, INDONESIA

Gde Indra Bhaskara (School of Tourism)

The poster will cover the summary of my Phd Research. This poster will be divided into 4 main sections such as: 1. The background; 2. the purposes; 3.the framework and methodology; 4. Timetable

The Background: what are the World Heritage Site and its procedure; why is it an important topic; who addressed the problem; what is the gap. The use of a stakeholder theory to identify local community's roles and attitudes toward nomination and management of World Heritage Site.

The Purposes: To investigate the relationship between World Heritage, local community and local decision making; To examine local community attitudes toward World Heritage and tourism in a local, developing country contexts ;To investigate the role, dynamics and influence of local community as a stakeholder group in the identification, nomination and protection of World Heritage site.

The Framework and Methodology: develop a conceptual framework that incorporates the representative roles of local community in the World Heritage site.

The Timetable: a timescale for the work and the plan for completing the work within the period of registration

A RAPID METHOD FOR SCREENING INDIVIDUAL SUSCEPTIBILITY TO METHADONE

Hannah Bunten (School of Applied Sciences)

Methadone is a semi-synthetic opioid used worldwide in the treatment of heroin addiction. However increasing reports of toxic drug accumulation and involvement in drug overdose cases have highlighted an area requiring investigation. Despite rising numbers of methadone related deaths the molecular actions of the drug *in vivo* remain unknown. This can now be examined through pharmacogenomics, exploring the relationship between gene variations and drug response. Methadone acts on the mu (μ) opioid receptor and it is believed that gene (*OPRM1*) variations for this receptor will be linked with adverse alterations in drug response. It is also believed that individual differences in *CYP2B6* metaboliser status will be linked with drug susceptibility. By exploring the relationship between *OPRM1* and *CYP2B6* gene variations and methadone concentrations in post-mortem cases the role of the *OPRM1* A118G and *CYP2B6*

G516T and A785G variants will be established. This will assist in the toxicological interpretation of post-mortem methadone concentrations aiding the determination of whether an individual was more or less susceptible to the drugs effects.

HYPERMOBILITY, COORDINATION AND SPINAL PAIN; AN INHERENT ASSOCIATION

Carol J Clark (School of Health and Social Care)

Purpose: Investigate the association between Joint Hypermobility Syndrome (JHS), Developmental Coordination Disorder (DCD) and spinal pain.

Introduction: JHS is an inherited common multisystem connective tissue disorder in which pain is a significant factor. DCD is a neuromotor disorder previously described in children where coordination difficulties affect function and activities of daily life. It is suggested that poor coordination linked to DCD cause biomechanical dysfunction contributing to pain and injury

Methods: Case-comparison study consisting 90 patients with JHS from a hypermobility clinic and 113 healthy volunteers without pain from a university.

Results: DCD was identified in 56% of patients with JHS and 19% of healthy volunteers. Spinal pain was reported by 93% of patients with JHS.

Conclusions: Patients with JHS were six times more likely to report DCD than healthy volunteers. Spinal pain was a significant feature. The lifelong nature of these associated conditions is highlighted and the importance of early intervention.

DO YOU HAVE TO LOOK WHERE YOU GO? GAZE BEHAVIOUR DURING SPATIAL DECISION MAKING

Olivier De Condappa (School of Design, Engineering and Computing)

We investigated how unique and non-unique objects located at either side of intersections are utilized to memorize a route. Some intersections contained two unique objects (UU). Others contained a unique and a non-unique object, with the movement direction either towards the unique object (UX+) or the non-unique object (UX-). Participants were presented with images of the intersections and asked to indicate the direction the original route took. We found greater response times at UX- intersections than at UX+ and UU intersections. Gaze behaviour at UX intersections suggests that participants fixate on the unique object in order to identify the intersection and retrieve the movement response. Only at UX- intersections are the movement direction and the unique object spatially dissociated. The increase in response

time for UX- intersections may be due to additional gaze shifts away from the unique object and towards the movement direction before the response was made.

FEATURE-BASED PROBABILITY BLENDING

John Ferraris (School of Design, Engineering and Computing)

Texture splatting is a common technique for texturing terrains due to its efficiency and low memory footprint. The use of linear interpolation to blend different terrain types with distinct features can produce translucency artifacts that can detract from the plausibility of the scene. We present a new algorithm that addresses the feature-agnosticism of linear blending and instead makes the distinction between features (bricks, cobble stone, etc.) and non-features (cement, mortar, etc.). The algorithm blends features on a probabilistic basis where upon all texels of a given feature are drawn or discarded together. Our algorithm generates near-endless variations of irregularity at terrain texture transitions on-the-fly without the need for artistic intervention. We also eliminate the translucency artifacts that are exhibited at terrain transitions when using Bloom texture splatting.

PARTICIPATORY CULTURE IN MEDIA EDUCATION-INITIAL INVESTIGATIONS

Pete Fraser (Media School)

The media have changed dramatically in recent years, with young people often investing considerable amounts of free time engaging with social media online; the classroom, however, has struggled to keep pace with this change and at times has obstinately resisted it. This study seeks to look at how far this 'participatory culture' might be impacting upon learning within media education.

OPERATIONALISATION OF THE MOBILE TECHNOLOGY COMPETENCES CONSTRUCT IN THE CONTEXT OF CREATIVE INDUSTRIES

Elvira Gallyamova (Business School)

Mobile technologies are driving new value-added opportunities within the creative industries. However, to ensure future success we need a greater understanding of what mobile technologies are and develop a standard measurement tool. This study endeavours to measure the unique capacities and distinctive differences which firms require in order to successfully employ mobile technologies.

Capabilities will be assessed in terms of infrastructure, skill base and procedures that lie behind the process of mobile technology application. Two perspectives derive from the literature: mobile technologies are distinctive technologies; they are simply an extension of existing information technologies. Solution to this debate and determination of measurement scale are a subject for qualitative research exploration in the form of interviews among creative industry practitioners. The establishment of common measurement scale will provide a standard definition for future researchers and contribute to the development of standard platforms for the widespread application of mobile technologies.

SURFACE RESPONSE OF CERAMICS SUBJECT TO EROSIIVE WEAR

Gonzalo Garcia-Atance Fatjo (School of Design, Engineering and Computing)

The use of technical ceramics is becoming more common in the last decades due to its good mechanical properties, excellent wear resistance and improvements in the manufacturing process. This research is focused on the erosion mechanisms of ceramics due to cavitation exposure. The cavitation phenomena in liquids is the creation of bubbles due to a transitory condition of low pressure that collapse when the pressure returns to a normal level. If a collapsing bubble is close to a surface, it erodes the surface. It has been discovered that a pseudoplastic deformation pit is produce when a collapsing bubble impacts the surface. This pseudoplastic deformation pits, in the case of zirconia, produces a spontaneous change of phase during several weeks after the experiment.

THE EMERGENCE OF A SCHOOL-BASED OCCUPATIONAL THERAPY PRACTICE FRAMEWORK: UTILISING GROUNDED THEORY TO UNPACK COMPLEX INTERVENTIONS

Andrea Hasselbusch (School of Health and Social Care)

Occupational therapy has been described as complex and notoriously hard to define (1, 2). A complex intervention consists of individual elements, which are essential to its proper functioning with an "active ingredient" typically difficult to specify (3). Qualitative research methodologies, in particular grounded theory, have the potential to facilitate the unpacking of complex interventions (4, 5).

The purpose of this qualitative study was to explore school-based occupational therapy. Semi-structured, in-depth interviews were conducted

with eight senior school-based therapists (Ministry of Education, New Zealand). Data collection and analysis was informed by grounded theory (5). A comprehensive School-based Occupational Therapy Practice Framework (SB-OT-PF) emerged from data analysis. The SB-OT-PF consists of a non-linear practice process, inter-related practice principles, clinical reasoning processes and a collaborative problem solving process. The educational context, the school and classroom environment, was identified as a shaping element to the therapist's practice.

Unpacking school-based occupational therapy facilitates efficient induction of novices, reflective practice of experienced therapists, effective communication to clients, and development of fidelity tools and procedures for evaluative research.

TOURISM TRAVEL AND IDENTITY

Julia Hibbert (School of Tourism)

It is widely acknowledged that travel plays an important part in shaping the perception of self through experiences of other people and places. However, relatively little has been documented about how far personal identity can influence travel choices. By investigating an individual's 'travel life history' we are able to gain insight in to the evolving identity and correlating travel patterns of the person under investigation.

Many studies have shown that in order to gain understanding of identity we must understand the narratives used to affirm identities. Therefore, the method used in this research is that of narrative interview.

This poster will provide a background to the topic and method used and will introduce some preliminary findings from interviews undertaken to date.

OPTIMISED MEASUREMENT OF CARDIOVASCULAR AUTONOMIC RESPONSE AND THE ASSESSMENT OF CHANGES IN AUTONOMIC TONE RESULTING FROM AN INFLAMMATORY RESPONSE TO INFLUENZA IMMUNISATION

Emma Jones (School of Health and Social Care)

Heart rate variability describes the beat-to-beat variation in heart rate arising from the efferent activity of the sympathetic and parasympathetic branches of the Autonomic Nervous System (ANS). Reduced heart rate variability as a measure of autonomic function is a powerful predictor of adverse diagnosis in patients and is associated with increased mortality. Previous research has indicated a significant temporary

deterioration in autonomic tone resulting from acute inflammatory disease.

71 healthy volunteers opting to have a routine influenza vaccination were investigated. A number of temporal and frequency domain parameters of heart rate and breathing were assessed 2-5 days prior to and 2 days post influenza vaccination. Parameters measured were ECG, beat-to-beat finger blood pressure, pulse plethysmography (PPG) and chest plethysmography. We performed a two-minute standardised metronome guided breathing cycle (6 breaths per minute). Standard Ewing tests were also performed.

The results confirmed previous research that heart rate variability was significantly larger at a slower breathing rate. All volunteers completed a post vaccination symptom questionnaire. Three groups were identified based on the level of symptoms experienced. There was a significant difference in the composite score of temporal and frequency space parameters measured for metronome guided breathing at 6 breaths per minute in the sub group of the most symptomatic volunteers (N=15).

THE STABILITY OF 6-MONOACETYLMORPHINE AND COCAINE IN VITREOUS HUMOR AND BLOOD WHEN STORED UNDER AMBIENT, REFRIGERATED AND FROZEN TEMPERATURES

Nicola Jones (School of Applied Sciences)

Few studies have been conducted regarding the stability of drugs in stored biological tissues under different temperature conditions and with different preservatives. The current study reports on the stability of the active heroin metabolite; 6-monoacetylmorphine (6-MAM) along with cocaine in whole blood and sheep vitreous humor (VH) together with the influence of adding sodium fluoride (NaF) when stored at 20°C, 4°C and -20°C over a period of two months. Samples were prepared with solid-phase extraction and analysed via GC/MS. Blood and vitreous humor specimens suspected of containing heroin metabolites or cocaine should be stored frozen (-20°C). Addition of sodium fluoride (NaF) to blood and vitreous humor samples could significantly increase the chances of detecting 6-MAM and cocaine in stored specimens. These results have potential implications for laboratories that make up bulk standards in blood and store aliquots of these for use over a period of time.

ANALYSING THE PURITY OF "STREET" COCAINE PREPARATIONS OBTAINED FROM NIGHTCLUB AMNESTY BINS LOCATED IN BOURNEMOUTH BETWEEN 2006 AND 2008

Mevan Kattan (School of Applied Sciences)

The illicit use of cocaine in the UK has increased significantly over the years, whilst the purity has dramatically decreased. Street cocaine samples seized from amnesty bin nightclubs located in Bournemouth were analysed using GCMS to determine the purity of cocaine present. Samples were also analysed for the following common adulterants: benzocaine, phenacetin, lidocaine, procaine, caffeine, acetaminophen and diazepam.

The purity of cocaine decreased between 2006 and 2008; results which echo national statistics regarding the purity of cocaine within the UK. Statistical analysis revealed no difference in the purity of cocaine between the nightclubs in Bournemouth.

The analysis of the contents of amnesty bins can provide useful information regarding the availability of drugs on the street and offers an opportunity to keep up with ever changing drug trends. It would be valuable to undertake similar analysis of nightclub amnesty bins simultaneously in different regions, in order to compare and contrast drug profiles.

A NEW THEORETICAL FRAMEWORK FOR WAYFINDING SIGNAGE

Hana Kmecova (School of Design, Engineering and Computing)

Wayfinding signage systems are universally used to enhance orientation and navigation in large-scale buildings. Empirical work so far has primarily investigated the comprehensibility, legibility, and readability of basic sign elements such as icons and text components. There is, however, a lack of empirical studies, systematically addressing the comprehensibility of compound signs, i.e. signs in which multiple information is organized. Here I will present a new theoretical framework subsuming different factors influencing the comprehensibility of complex, compound signage systems. In particular, I will outline factors important for the layout of the compound sign. This relates to the placement of different components or kinds of information with a single wayfinding sign. Specific questions include: Should similar data be chunked or presented individually? Do users expect to find the same kind of data in the same location within the sign?

EVALUATION OF THE RANDOX WHOLE BLOOD DRUGS OF ABUSE ARRAYS FOR THE ANALYSIS OF ALTERNATIVE POSTMORTEM TOXICOLOGY SAMPLES

Poppy McLaughlin (School of Applied Sciences)

This presentation aims to illustrate a rapid and simple tissue preparation method which allows drugs of abuse (DOA) to be screened using the Randox whole blood DOA microchip arrays. A procedure is described that allows small aliquots of postmortem samples of blood, urine, vitreous humour, liver and psoas major muscle to be analysed for numerous DOA simultaneously.

Over 100 postmortems were screened and a good agreement was obtained between the Randox assays and HPLC-DAD and LC-MS/MS analyses. The discrepancies between assay screening and confirmatory analysis may reflect differences in drug distribution between tissues as well as confirmatory analyses detecting concentrations below the assay's cut-offs.

In conclusion, the Randox whole blood DOA arrays can be used to alternative postmortem samples rapidly and simply. The simple procedure will benefit the forensic community as the entire process can be undertaken and results obtained in the mortuary whilst the postmortem is taking place.

INVESTIGATION OF A WIRELESS DISTRIBUTED FES SYSTEM WITH INTELLIGENT NETWORK OF SENSORS

Choukri Mecheraoui (School of Design, Engineering and Computing)

Each year, hundreds of thousands people are affected by a neurological related disease or lesion causing some of them partial or complete dysfunction of one or more limbs. Functional Electrical Stimulation (FES) techniques have shown a significant improvement in mobility and function to many of these neurological patients. Depending on the extent of the injury and complexity of the movement disorder, many sensors and channels of stimulation might be necessary to improve movement. However, this could result in a complex stimulator which is often rejected by the user due to the size, complexity and cosmesis. The proposed solution in this research is a distributed FES system with local stimulators placed where stimulation is needed. A wireless network is proposed to be the medium of communication between stimulators and sensors to avoid having a complex network of wires. A first prototype of a wireless FES system was made and tested to verify the feasibility. The initial results are encouraging and suggest that the system is behaving as expected.

"CHEMO-BRAIN": POTENTIAL COGNITIVE DEFICITS, INCLUDING LANGUAGE, SLEEP DISORDERS, AND MEMORY, FOLLOWING CHEMOTHERAPY FOR CANCER SURVIVORS"

Liliana Moyers-Ruiz (School of Design, Engineering and Computing)

Some patients present memory deficits after experiencing chemotherapy. Aetiology of this phenomenon remains unknown. Objective neuropsychological measures have shown inconsistency within patients' self-reports. It is proposed that Working and Prospective memory play an important role since patients' anecdotal reports correlate with deficits in some aspects of memory. Sleep, sleepiness and glucose metabolism are altered during chemotherapy which may play a role in cognitive impairment.

It is important to analyse subjective and objective measures, as well as more ecological and sensitive measures such as those of specific neuropsychological batteries in order to detect the mild cognitive impairment as sequelae of chemotherapy. Sleep, sleepiness, and glucose metabolism, should also be considered as chemotherapy treatment may affect them, and subsequently affect changes in cognition.

NEW MEDIA NARRATIVE AND LEARNING

Neelam Parmar (Media School)

PhD Title: New Media Narrative and Play

This PhD will explore the growing relationship between New Media Narrative and New Media Play in a Learning Environment. New Media Narrative creates a new type of learning environment where both interactivity and immersion play an important role in bringing about learning in the user. Today's talk will look into one of the chapters of this PhD particularly; the use of traditional narrative in a learning environment where narrative has always been used and attached itself to supporting learning vs. the use of new media narrative which has a non-linear format and which cedes control over sequence, space and time.

VIRTUAL REALITY- A PARADIGM SHIFT IN THE REHABILITATION OF THE UPPER ARM

Prashant Prashun (School of Design, Engineering and Computing)

The existing techniques used for post stroke rehabilitation have sought to offer stroke survivors with upper extremity motor deficits a system for the practice and re-learning of motor tasks. Some studies suggest that the use of Virtual Reality technologies as an assistive technology in combination with conventional

therapies can achieve improved results in post stroke rehabilitation. Despite the wealth of ongoing research attempting to build a virtual reality based system for upper extremity rehabilitation, there still exists a need for a training platform that would provide whole arm rehabilitation. In order to be practical this system should ideally be low cost and involve minimal therapist involvement. The ongoing research explores some of the applications of virtual reality that have undergone clinical trials, with patients suffering from upper extremity functional motor deficits; providing a proof of concept of a whole arm rehabilitation system.

DEVELOPING BRAND ORIENTATION IN A CHARITABLE ORGANISATION: A CASE STUDY OF ARTHRITIS CARE

Tauheed Ramjaun (Media School)

The charity sector has evolved considerably over the last decades and new issues and challenges have emerged. To cope with this changing environment, more and more charity organisations are recognising the importance of branding in today's competitive environment. This study aims at exploring the development of brand orientation in charity organisations through a participatory action research approach. While the research project will consist of assisting Arthritis Care in increasing its level of brand orientation through distinct but interconnected cycles, the whole process will be analysed with the view of providing relevant insights - or even a best practice model - to similar organisations interested in developing brand orientation within their structures. This research project is jointly funded with Arthritis Care, the UK's largest charitable organisation working with and for people who have arthritis.

BRASS MUSICAL INSTRUMENT MOUTHPIECE DESIGN

Malcolm Randell (School of Design, Engineering and Computing)

Much is believed regarding the design & manufacture of brass (lip reed) musical instruments, however, very little has been proven or scientifically assessed to give reasoning to these beliefs.

Using virtual & real space testing, it is expected that aspects relating to the various elements which make up the outer shape of a mouthpiece will allow design characteristics to be examined. Comparing FEA, human-centred blind testing & sound wave studies, will give an insight into the musician & listeners experience.

By cross referencing/comparison of virtual/real data, the study is expected to give detail & quantities to the descriptors used by the

musicians & located on the sound waves. It may even prove possible to predict characteristics of a particular design/shape.

These findings will prove beneficial to both the musicians & listeners, but also help instrument & mouthpiece manufacturers produce higher quality/more appropriate products, with reliable justifications to the design claims.

PURITY OF "STREET" KETAMINE PREPARATIONS RETRIEVED FROM NIGHT CLUB AMNESTY BINS IN LONDON

Eva Maria Reichardt (School of Applied Sciences)

Ketamine has been widely used in medicine and veterinary practice for its anaesthetic and analgesic properties linked with minimal respiratory depression. More recently the drug has gained popularity as a recreational substance amongst young people. Street prices of the drug vary between £10 and £20 per gram in the UK. The UK club magazine Mixmag survey of its readers in 2009 shows 51% used ketamine in last year, 32% in last month and 18% use it weekly. 30% experienced stomach pains after taking ketamine and 20% experienced urinary tract problems (more in women). A number of reports have appeared in the medical literature suggesting a possible link between ketamine misuse and kidney and bladder disorders. The pathological cause of the bladder related problems is at present unknown and it is uncertain whether they are attributable to ketamine or to impurities that may be present in street preparations. Little information is available concerning the purity of street ketamine hence analysis was undertaken on street preparations of the drug retrieved from amnesty bins in London night clubs. In this paper, we describe the analysis of street ketamine to determine the purity of samples commonly available and to identify what impurities might be present.

INVESTIGATION OF THE EFFECT OF VINEGAR ON ORAL FLUID DRUG TESTING: EFFECTS ON IMMUNOASSAY SCREENING

Eva Maria Reichardt (School of Applied Sciences)

Oral fluid (OF) drug testing has become increasingly popular during recent years as an alternative matrix for drugs of abuse (DOA) testing. OF is simple and easy to collect and offers a non-invasive means of sample collection that can be applied for use in the work place, hospitals, drug treatment centers and at the roadside. Although numerous studies have been published in relation to OF drug detection and identification, little work has been undertaken to investigate the effects of substances. In a

separate study we evaluated several different foods and beverages and the result from this indicative study inferred the possibility that vinegar could cause an effect on an immunoassay screen. This study was conducted to look at this effect in greater detail. This study investigates the effects of different types of vinegars on the Orasure "Intercept" and microplate screen and the new Concateno "Certus" OF collection devices with homogenous immunoassay screen.

CONSUMERS AS PRODUCERS: THE SOCIO-CULTURAL DIMENSIONS OF THE EVENTS EXPERIENCE

Ivana Rihova (School of Tourism)

The study of consumer behaviour has mainly concentrated on the consumer as a decision-maker, with marketers interested in what factors influence consumer purchase decisions, and how to improve service quality to ensure satisfaction and loyalty. However, the emergence of some new paradigms, such as the experience economy and S-D logic, has shifted emphasis toward the subjectivity and individuality of consumer experiences, and called for a more thorough scrutiny of the narrative processes that allow consumers to 'co-produce' their experiences.

Based within the context of special events, the present study utilises photo-elicitation as the preferred research method in order to extract the particular cultural and symbolic values and meanings associated with experience consumption. Thus, the author attempts to contribute to consumer behaviour research by presenting a socio-cultural framework of consumer experiences.

KNOWLEDGE AND KNOWING FOR POST-QUALIFYING HIGHER EDUCATION

Lynne Rutter (School of Health and Social Care)

This professional doctorate applies the theory of personal epistemology (the nature of knowledge and knowing) to post-qualifying higher education, focusing on themes of authority and validity concerning what counts as knowledge, who can know and how they can know.

The literature review highlighted three major issues: 1) the underlying 'epistemology' of any curriculum is a fundamental aspect of a programme's design and delivery and therefore of the student experience as well; 2) further epistemological explicitness and clarity is needed for a post-technocratic (reflective and experiential) educational approach; 3) major epistemological conflicts and tensions exist, e.g. objectivity vs subjectivity; philosophical, political and organisational issues.

A case study approach utilising a pragmatic and qualitative methodology has so far explored the epistemological nature of a post-qualifying social work programme using documentary analysis, as well as the personal epistemology of the students using questionnaires and interviews. Findings show: a) a wide range of knowledge being utilised and some lack of consistency and alignment in course documentation language; b) students' lack of recognition of their knowledge /knowing from reflective practice, and lack of experience in constructing 'personal theories'; c) the complexity of issues associated with integrating theory and practice in written assessed work.

MATERIAL LOSS MEASUREMENT THROUGH ULTRASONIC SCANNING IN HISTORIC MILITARY TANKS

Adil Saeed (School of Design, Engineering and Computing)

Large military vehicles such as military tanks were exposed to extreme physical and environmental conditions during the war, in addition after the war the vehicles were left unattended for an unidentified period in the uncontrolled environment resulting accelerated aging mechanisms. Corrosion is one of the growing relentless problems in these historic vehicles. The historic vehicles in The Tank Museum are stored in two discrete controlled and uncontrolled environments with a transitional mode when some vehicles move between the two. Altering environmental conditions together with operational factors pose a significant risk to these vehicles.

Historic military vehicles provide wealth of information and insight into the past design process, design methods, materials and manufacturing techniques in practice in those times. These exceptional & historic collections are priceless assets for our and the future generation.

These historic vehicles like any other museum artefacts are associated with deterioration due to aging mechanisms such as corrosion, cracks, undesired stresses and wear.

Sustainable preservation techniques are required to slow or suspend the deterioration within these historic vehicles so as to preserve them in a valuable state for the benefit of the society.

In order to devise sustainable preservation methods and to slow down the aging mechanisms i.e. corrosion, it is vital to understand the material profile of these vehicles and the associated rate of material loss because of corrosion. For this purpose this research implemented non-destructive methods of X-Ray Fluorescence (XRF) for elemental identification and Ultrasonic Scan to measure the material loss

to establish how to avoid any damage and to help retain their cultural biography.

THE ASSESSMENT OF HABITAT CONDITION AND CONSERVATION STATUS OF LOWLAND BRITISH WOODLAND USING EARTH OBSERVATION TECHNIQUES

Matthew Sumnall (School of Applied Sciences)

Currently woodland quality assessments are performed through fieldwork, where forest stand structure, composition, dead wood, regeneration, and ground vegetation are assessed. Such detailed fieldwork is hampered by cost and restricted spatial coverage, and is often neither objective nor repeatable. Combining airborne hyperspectral and LiDAR data is expected to offer detailed and complimentary information about the structure and composition of woodlands, allowing substantially improved identification of structural features. This project proposes to pioneer the use of a sensor-fusion approach to surveying forests, developing habitat condition indicators at a variety of scales from the individual tree to the landscape level. The method developed will assess the relative contribution of these indicators to determine condition, how they vary across sites, and ultimately how sites are affected by management processes. It is hoped that the techniques developed will be transferable to different woodland sites throughout the UK.

THE CHANGING DESIGN OF EARLY WIRELESS SETS

Julia Taylor (Media School)

The poster will illustrate the changing design of early wireless sets from the 1920s throughout the 1930s until the Second World War brought it to a sudden halt. The spread of domestic wireless sets has a particular significance as the first item of technology to be owned on a mass scale in Britain. However, when they first entered the home during the early part of the twentieth century, many were home-constructed, built by amateur hobbyists. The sets resembled pieces of scientific apparatus, a series of valves, wires and crystals bolted to a wooden board; experimental equipment more appropriate to a laboratory than a living room.

The difference in appearance from the sets produced during the early 1920s and those made in the 1930s was striking; the scope for design was considerable because the technology developed so rapidly. In fact, by the end of the 1920s the two types of wireless sets which had established the British wireless industry just a few years earlier – the crystal set and the battery valve receiver with its separate batteries and external loudspeaker – had become obsolete and

the mains receiver with everything self-contained within an attractive cabinet would predominate right through the 1930s and beyond.

USING SOCIAL MEDIA TO SUPPORT CREATIVITY AND INNOVATION IN THE UK MEDIA INDUSTRY

Andy Tedd (Media School)

The poster looks at one of the central hypotheses of my research – the Cathedral and the Bazaar of media co-production. Some aspects are suited to a crowd-sourced approach eg radio phone-ins whereas more complex activities, such as co-authoring a running order, are better handled with an 'elite' subset of the audience.

IMPACT OF CLIMATE CHANGE ON EXTINCTION RISK OF MONTANE TREE SPECIES

Natalia Tejedor (School of Applied Sciences)

Forests in mountain areas are already threatened by habitat degradation and destruction. Climate change is adding to these pressures, as montane tree species are particularly vulnerable to changes in temperature and rainfall. If current patterns change, it may force tree species to shift to higher altitudes, and possibly increasing the risk of extinction. This project will evaluate a wide range of montane tree species, by using the IUCN Red List assessment highlighting the species extinction risk and providing valuable information for conservationist and policy makers.

DEVELOPMENT OF AN EPIDURAL SIMULATOR FOR VIRTUAL TRAINING AND ADMINISTRATION

Neil Vaughan (School of Design, Engineering and Computing)

Epidural injection is a complex medical procedure involving injection of anaesthetic between spinal vertebrae.

We are aiming to develop a simulator combining a 3D interactive model of the lumbar spine with a force feedback needle injection device, allowing anaesthetists to train without actual patients, viewing the position of the needle in the spine. The spine model will adapt to patients of different size weight and BMI to simulate variation between patients.

Difficulties for doctors training for epidural procedures include the 'blind' nature of needle insertion and the small target between vertebrae. Doctors commonly rely on feeling to avoid vertebrae and sense when the needle has arrived at the target epidural space – up to 8cm deep – a technique named 'loss of resistance.' This skill

until recently could only be learned on real patients.

Incorrectly administered epidurals can damage dura mater, causing post-dural puncture headaches. Epidural simulation helps reduce morbidity in patients.

THE DIFFUSION AND ADOPTION OF SPORT PSYCHOLOGY; THE DEVELOPMENT OF A CONCEPTUAL FRAMEWORK

Amanda Wilding (School of Tourism)

Whilst coaches' perceptions of, and attitudes towards sport psychology have been widely examined, the manner through which these perceptions and attitudes are formed has, to date, been neglected. Hence at present there is no understanding of why or how perceptions and attitudes are formed in the area of sport psychology and the extent to which they influence the uptake of theory and professional practice. This corresponds with Weinberg's (1989) identification of the need to facilitate a progression from academic knowledge to practice and more recently, in 2004, the proposal by Anderson, Knowles and Gilbourne that researchers need to assess theoretical frameworks that investigate the reasons for the lack of use of sport psychology. The current research is thus concerned with exploring the diffusion of sport psychology, as experienced by track and field coaches: the aim being to increase understanding of the factors influencing the diffusion and adoption of sport psychology.

TESTING THE FEASIBILITY OF A US DEVELOPED ACTUARIAL CHILD PROTECTION RISK ASSESSMENT TOOL USING DATA FROM BRITISH SERIOUS CASE REVIEW REPORTS

Heather Wood (School of Health and Social Care)

Risk assessment is important in child protection because the public and government expect teams to prevent child deaths from abuse or neglect.

Child protection teams in the UK lack a safe, evidence based risk assessment tool. Many local 'risk assessment tools' use unweighted factors which may be poor predictors in practice.

Actuarial risk assessments like the US Family Risk Assessment of Abuse and Neglect (FRAAN) use risk factors which are the strongest predictors of further maltreatment of children following an initial incident. Families assessed as 'high risk' then receive maximum support to protect children from further harm.

This feasibility study uses 58 British Serious Case Review reports (SCRs) from 13 counties over 12

years as a data source for risk factors present before major cases of neglect or abuse, some of which were fatal. The FRAAN was sensitive to 88% high risk in these known high risk cases, but specificity could not be determined without false positives in a low risk sample.

The FRAAN did not differentiate between general high risk cases and those which resulted in child homicide, but additional factors drawn from forensic studies of convicted adults did demonstrate significant differences for fatal child cases within a high risk sample.

MASLOW REMIXED? EXPLORING CHILDREN'S 'NEEDS' IN CROSS-PLATFORM MEDIA ENVIRONMENTS

Ashley Woodfall (Media School)

This study sets out to explore the practices and typologies of the newly coalescing cross-platform media landscape, whilst placing particular emphasis on productions aimed at children within the UK. Rather than in much previous research, which has concentrated on the 'effect' of media technologies on an audience or the everyday 'use' of media technologies, this study focuses on a user's 'needs' as potentially answered by media technologies, with the overarching objective being to explore whether an awareness of these needs can inform professional cross-platform development and production processes. Headline questions set within the study are: whether it is possible to develop a basic taxonomy of children's needs within cross-platform media technology environments, and do professional cross-platform development practices correspond with children's user needs?

AN EXPLORATION OF THE EXPERIENCE OF PATIENTS WHO PARTICIPATE IN RESEARCH AS CO-LEARNERS WITH PRIMARY HEALTH CARE TEAMS

Louise Worswick (School of Health and Social Care)

Our consumerist approach to public services has seen increased public involvement in research with mixed outcomes, little consensus about who, why and how to involve people and criticism about tokenism and 'ticking the box'.

What isn't reported is what it is like for those who get involved. What is the patient/public perspective and what can we learn about their experience of being involved in research?

I have used the LIMBIC* project as a case study -
*Learning to Improve the Management of Back pain In the Community - an evaluation of an

educational initiative about interprofessional education, improvement, primary care and back pain. Eight half day workshops with the nine practice teams took place over nine months and **patient representatives** joined the teams in their learning and their improvement projects.

Patient representatives were involved at several levels which provided many sources and types of data for analysis. For example; research reports, patient stories, interview transcripts, workshop evaluation forms and the project wiki.

Taking a pragmatic approach, I will next develop a data analysis strategy that allows the approach to fit with the purpose for each dataset and commence analysis, working with the numerous datasets which are in excess of 100.

The LIMBIC project www.limbic.org.uk was funded by an award from the Health Foundation www.health.org.uk

DEVELOPMENT OF A CONCEPTUAL FRAMEWORK FOR THE DESIGN OF MOBILE CONTEXT-AWARE 3D MAPS FOR CITY TOURISM APPLICATIONS

Zornitza Yovcheva (School of Tourism)

Three-dimensional (3D) map-based context-aware mobile applications have great potential for city visitors since they are able to serve relevant, realistic, and up-to-date information, at any place and time. Surprisingly, despite the huge attention that context-awareness received in the last decade, there has been little emphasis on the (contextual) factors that influence the use and usability of 3D map-based visualization of relevant information in mobile tour guides for tourists, exploring unfamiliar urban environments. One possible reason for this lack of studies is that, in the last couple of years, the main accent was on the underlying technologies that facilitate acquisition, processing and interpretation of context information, while its actual use and its visualization with respect to the needs of the users were often neglected. This process led to software developers lacking the understanding of what to consider as context, and how to represent this special type of information in their applications (Vieira et al., 2011). To fill this gap, the main aim of this study is to establish the guiding principles for a conceptual framework for provision and rendering of relevant contextual information in mobile, 3D map-based interfaces, in order to support effectively the user's needs in unfamiliar urban environments.

