Amna Altaf (FST, PhD)

Integrating Safety, Security and Human Factors Engineering in Rail Infrastructure Design and Evaluation

The rail infrastructure is built around safety and human factors, but one important factor least talked about is cyber security. The problem this work addresses is how the process-techniques and tool-support available in safety, security and human factors engineering can be integrated to provide design solutions. We have devised an approach where Cognitive Task Analysis (CTA), along with Integrating Requirements and Information Security (IRIS) and Human Factors Analysis and Classification System (HFACS) framework is used to identify associated safety, security and human factors design concerns in rail. This approach is tool-supported using Computer Aided Integration of Requirements and Information Security (CAIRIS) platform. We carried out a preliminary evaluation of this approach by applying it to a case study of ‘Polish Tram Incident’. Furthermore, the representative rail stakeholders from Ricardo are implementing this approach on their live project and their feedback is expected to improve and strengthen the proposed research work.

Chris Williams (FM, PhD)

PSRB’s in the UK and key events in the HE sector

This poster will provide a graphical illustration and analysis of data collected as part of my PhD. The data collected identifies when Professional, Statutory and Regulatory Bodies (PSRB’s) that accredit UK undergraduate degrees began their accreditation programmes. PSRB’s were identified from data held by the Higher Education Statistics Agency (HESA) and contacted individually to establish when they began accrediting, leading to the collation of a unique set of figures. HESA’s data is used as part of the Key Information Set (KIS) that HE institutions display on their web pages and other printed material. The information is also held by the Office for Students (OfS), the independent regulator of HE in the UK. Further, the poster identifies key events impacting the UK HE sector and provides a brief analysis of any correlation with the commencement of the accreditation schemes that responded.

Dan Hills (FMC, PhD)

I’m not wrong, you are! Personality types and their influence within UK advertising practices

Advertising campaigns are inevitably the result of a complex collection of interactions between differing agents considered to be part of Advertising Communities of Practice (ACP). These agents are each unique in their skills, knowledge, experience, ideologies and importantly are subject to differing personality types, thus creating a challenge for researchers. Therefore my research focuses on personality types within ACP, and how these personality types synergise or detract from the ultimate advertising campaigns delivered to their intended audiences and consumers? My broader research, in which I focus on agents’ interactions with consumer emotional state as a targeting tool within the advertising industry uses Practice Theory as a conceptual framework. I combine this with the Myers-Briggs Type Indicator (Myers, 1962) which
identifies 16 personality type groups and attempt to unpick the complexities in understanding how various agents across ACP collaborate or compete to deliver advertising campaigns to deliver upon advertisers' objectives.

Elecia Bethune (FM, PhD)

*Real Time Resilience: An Smart Approach to Tourism Destination Resilience*

Consumer engagement has changed, and consumers have become co---creators of their experiences through access to “real---time” information and systems in response to their needs. This interoperability and seamlessness has afforded peace of mind and agility; however, as a tourist, this may not be present at destinations and can be further compounded by the onset of a disaster. Disasters have become a more complex phenomenon, which impacts their ability to be effectively managed. Tourism, is a key lynchpin and driver of the economy for many Small Island Developing States (SIDS), including the Caribbean, the second most vulnerable zone to the direct impacts of climate change. This mixed method research will develop the concept of Real Time Resilience (RTR) and explore how it can complement the burgeoning resilience ecosystem, through facilitating SMART approaches within a destination's Disaster Management systems and the tourism sector.

Emmanuella Onyinye Ejime (FM, PhD)

*The Multi-channel Purchase Journey of a Complex Service: A comparison of UK and Nigeria Motor Insurance Consumers*

Consumers are constantly faced with a vast number of channels in which to interact and purchase a product or service. Research on multi-channel choice has over the years, focused on the brand's perspective of multi-channel strategy and management and little has focused on consumers choice of channels and the purchase process. This paper aims to identify the driving factors of consumer multi-channel behaviour specifically their channel choice and channel usage across their purchase process while establishing whether the driving factors of consumer multi-channel behaviour are consistent (or inconsistent) between UK and Nigeria. A 20 face-to-face semi structured interviews, 10 each from UK and Nigeria respectively selected using criterion purposeful sampling based on the selected criteria important to address the objective of the study. Data was analysed using a CADQAS (Computer-Assisted Qualitative Data Analysis Software).

Festus Adedoyin (FM, PhD)

*Examining Causal Relationship between Energy Consumption, CO₂ Emissions, Real GDP, Financial Development, Trade Openness, Urbanization and Tourist Arrivals to Small Island Economies Dependent on Tourism*

In less than two decades, the global tourism industry has overtaken the construction industry as one of the bigger polluters, accounting for up to 8% of global greenhouse gas emissions. Consequently, research into the causal link between emissions and the tourism industry have increased significantly focusing extensively on top earners from the industry. However, few studies have thoroughly assessed this relationship for small island economies dependent on
tourism. Hence, this paper aims to investigate the causal relationship between CO\textsubscript{2} emissions, real GDP per capita, and the tourism industry. The long-run relationship is investigated using Pooled Mean Group ARDL Model. Prior to this, we conduct the Pedroni and Kao cointegration tests, the ADF-Fisher and Im, Perasan Shin unit root tests. We also examine causality using the Dumitrescu and Hurlin (2012) Panel causality tests. Our study seeks to contribute to the energy-growth-tourism debate as well as the feedback mechanism among the variables.

**Francesca Dean (FHSS, PhD)**  
*Exploring the knowledge and provision of sport psychology services delivered to youth performers within professional youth football in England.*

Successful performance in sport requires the execution of advanced psychological skills in both training and competition. Although the importance of sport psychology is now widely acknowledged, there is a need for greater clarity regarding (a) what is actually delivered under the banner of sport psychology, and (b) the needs of those receiving psychological support. One sport which is increasingly focusing on the role of psychological development is football—this is occurring via the English Premier League’s Elite Player Performance Plan. As the first stage of a PhD programme, this study aims to examine the current knowledge and provision of sport psychology services delivered to youth performers within professional football academies in England. Semi-structured interviews will be conducted with six sport psychology practitioners working within professional academies in order to gain insight into their understanding of their role, their perception of (sport) psychology, and their experience of delivering psychology services at the academy level.

**Giles Milner (FMC, EdD)**  
*Levels of Learning in Work-based Learning*

To be confirmed.

**Hazel Tennant (FHSS, PhD)**  
*Baby Friendly Initiative (BFI) implementation in a maternity organisation: What are the barriers, challenges and facilitators?*

The Baby Friendly Initiative (BFI) is a global initiative developed by the World Health Organisation and Unicef; it incorporates standards to guide maternity units on evidence based research surrounding infant feeding. The recently published NHS long term plan document states that all UK maternity units must be BFI accredited. In 2018 a local NHS hospital struggled to meet the required objectives for re-accreditation. The aim of my qualitative study is to identify barriers, challenges and facilitators of BFI implementation. Maternity staff will be interviewed utilising grounded theory methods with thematic analysis of their interview responses. Recommendations for overcoming barriers and challenges regarding successful BFI implementation into a maternity unit will be provided. There is a dearth of literature on this topic. Initial findings from an ongoing literature review reveal organisational, socio-political and individual factors as all having an impact on BFI implementation within a maternity unit.
Hina Tariq (FHSS, PhD)

Validation and Evaluation of the Contracture Assessment Screening Tool: An Overview of the Project

Contractures are a debilitating consequence of prolonged immobility potentially leading to physical impairments, limited functional mobility, decreased independence with everyday activities, and reduced social participation. There is no standard assessment tool available to assess the risk of contracture development or progression. The Contracture Assessment Screening Tool (CAST) was developed by Dorset Health Care University NHS Foundation Trust to address this gap. This project aims to establish the 1) CAST validity and 2) CAST effectiveness in reducing contracture development and progression. Timely identification of those at risk of contracture development or progression may help facilitate contracture prevention and the associated negative sequelae. To evaluate CAST, a mixed methods approach is being utilised including realist review and evaluation. Merging different methodologies and a realist approach will provide a unique perspective on CAST validation and use. This project is ongoing and the poster will present the overall methodology and significance of the project.

Ismail Can Kurtuk (FM, PhD)

The Butterfly Effect of Decisions: Enhancement of Teaching Decision-Making in Project Management within UK Higher Education

This research is investigating how to improve the teaching in UK Higher Education of decision-making related to project management. Decision-making is a core element of effective project management, but practitioners have reported that without extensive experience of real-life project management, the decision making of newly qualified professionals is inadequate. As a result, projects are delayed, resources are used ineffectively, risks are increased and opportunities are overlooked. Using an inductive approach based upon interviews and focus groups, this research study will investigate the experience of project managers to develop a better understanding of what how decision-making can be taught more effectively, and from this new perspective, a decision-making teaching framework will be developed and validated for application across UK Higher Education.

Jack Dazley (FST, MRes)

Microbial food niche partitioning in fresh waters

Ciliated protozoa are crucial microbial eukaryotes; found in a variety of aquatic environments, they are important grazers of bacteria and algae, and provide food for microscopic invertebrates such as copepods, transferring energy from the microbial loop to macroscopic food networks. The aim of this study was to investigate the food niche partitioning by microbial eukaryotes feeding on a variety of prey species in two freshwater habitats in East Stoke Dorset. Samples were analyzed under optical microscopy, identifying what prey species microbial grazers (with emphasis on ciliated protozoa) were feeding on, and if this varied over time and the relationship between cell sizes of the ciliates and their prey organisms (specifically diatoms) were analyzed. This study can be used to understand the complex predator-prey dynamics between phytoplankton and their microbial predators (akin to behaviours observed in
animal species) and the impact that changes in the abiotic environment have on this relationship.

Juliette Hecquet (FM, PhD)

Exploring the flow experience of yoga – a phenomenological study of contemporary yoga communities

The definition of yoga remains fluid and controversial, creating an oxymoron between the philosophical roots of yoga and physical practice. The majority of published academic research is in medicalised fields; however researchers agree yoga has vast positive outcomes with the potential to be valuable in society. A lack of clarity exists on what the yoga experience now is, with sparse evidence of, non-medical, qualitative research. The flow experience and the practice of yoga continue to draws parallel’s from a philosophical standpoint. Yoga can be regarded as one of the oldest and most systematic methods of producing flow experience but has yet to be researched as one. This interpretative phenomenological research aims to explore the lived yoga experience and the potential flow experience, across contemporary yoga communities. Videos (vlogs) and in-depth semi-structured interviews will explore the research questions; how yoga participants explain their lived yoga experience and the potential flow experience.

Katie Thompson (FST, PhD)

African savanna elephant (Loxodonta africana) damage on large trees in a fenced reserve: Karongwe Private Game Reserve (KPGR), South Africa

The aim of this study was the assess whether introduced elephants have caused significant damage on various tree species in the Karongwe Private Game Reserve (KPGR), which focused on 25 highly monitored elephants. The study analysed the degree of damage across the reserve by using a transect method, where trees ≥ 4m in height (H) and a diameter breast height (DBH) ≥15 cm were assessed. A total of 793 trees were sampled using 84 transects at 100m length each. 32 different species were recorded, with 5 species accounting for 80% of the total dataset (Acacia nigrescens: 30%, Sclerocarya birrea: 19%, Commiphora mollis: 13% Combretum apiculatum : 11%, Combretum imberbe: 5%). Results show that trees ≤5.75m in height showed the greatest level of damaged trees, where the greatest number of trees were found between 6-7m (n=307).

Kelsie Fletcher (FHSS, PhD)

The momentum of Grounded Theory: Nursing research and new perspectives in disaster management

The purpose of this poster is to explore the background of Grounded Theory evolution to its application in disaster management and nursing theoretical development. It will examine why Grounded theory remains popular and useful in developing professional knowledge in healthcare research and, most importantly, why it is the methodology of choice for understanding the experiences of nurses working in a disaster region. Explicit links will be made to offer clarity of its appropriateness in this field of research and this will be enhanced by
reflections of the researcher. Nurses possess a unique opportunity to develop understanding of emergency management, public health and planning, to enhance potential responses to a disaster. Grounded theory aims to support research in subjects with little or no literature available (Charmaz 2014; Birks and Mills 2015). Due to the researcher's personal experience in disaster management provision, constructivist grounded theory is considered to be the most appropriate.

Lara Christ (FM, PhD)

**Nonprofit Brand Orientation in Emerging Countries: Antecedents, Barriers and Outcomes**

Considering the importance of the nonprofit organizations in emerging countries, the research aims to develop the elements that constitute the nonprofit brand orientation in emerging countries and identify the antecedents, barriers and outcomes of nonprofit brand orientation. In this way, the recent literature about the concept was analysed and a theoretical model is going to be proposed. The research is going to be realized in four steps: generation of indicators from an exploratory research, grouping of the indicators in factors, confirmation of the factors and test of the proposed model. We expect to produce a measurement scale of nonprofit brand orientation, antecedents, barriers and outcomes in emerging countries. In addition to the theoretical relevance of a new scale of a concept that has not been approached yet in the marketing literature, the project can contribute to the management of social organizations bringing benefits to society as a whole.

Louise Smith (FHSS, PhD)

**What are the initial information needs of younger working age stroke survivors in stroke services and how can we determine the most appropriate ways to address these needs?**

The focus of this poster is a systematic review to answer the research question What is already known about the initial information needs of younger working age stroke survivors. It will form part of a wider study involving a short autobiographical reflection and interviews which will inform a national survey and ½ day workshop. The systematic review will include databases (Web of Knowledge, Medline, SCOPUS, PsycInfo, Cinahl) and grey literature such as RCP (Royal College of Physicians) and NICE (The National Institute for Health and Care Excellence).

Inclusion criteria for the articles/reports are:

- Qualitative, quantitative and mixed methods
- Any country
- Written in English
- Provisionally from 2012

Focus on initial information needs of participants

- living with a stroke
- with experience of being in hospital (inpatient or outpatient)
- working age

This research is expected to enhance understanding of how and what messages are delivered to younger working age stroke survivors.
Marcia Amstelvina Saul (FMC, EngD)

*N170 Components of Real and Computer-Generated Faces*

With the prominence of computer-generated stimuli in scientific research, it is a necessary question to ask whether computer-generated stimuli are visually processed in the same way or similarly to real stimuli. The N170 component is an event-related potential which is associated with the visual processing of facial images. In this study, we attempt to detect any modulation effects on the N170 components by comparing the event-related potentials from images of real faces and images of computer-generated faces from the EEG data of participants. Data analysis showed three main findings. Firstly, face images elicited significantly stronger N170 activity compared to houses (control). Secondly, the right brain hemisphere elicited significantly stronger N170 activity compared to the left brain hemisphere. Finally, there were no significant differences between the N170 activities of the images of real faces and the images of computer-generated faces.

Meera Patel (FM, PhD)


The UK and the US are the largest donors of democracy promotion, yet why is there a decline and reversion away from democratisation, globally? To answer this research question, my PhD thesis uses a mixed-method of a literature review, developing my own Conceptual Framework to measure UK/US democracy promotion and collecting independent data through interviews, to show the process of democracy promotion is in reverse. My confirmed key findings is the UK and the US promote in their own flawed self-image of democracy and has become a donor-centric initiative, leading to no permanent outcomes in recipient nations. Therefore, the process of democracy promotion is in reverse. This thesis is unique in its exploration of this topic as previous scholarship has acknowledged democratisation has stagnated in the past decade, yet has failed to develop a deeper rationale for this. My research contributes knowledge this as democracy promotion is in reverse.

Michelle Thomason (FMC, EdD)

*A Site of Conflict and Resistance: The impact of the 2014 Curriculum reform on A’ Level Media Studies*

Using the methodology of netnography and the author’s dual status as teacher-researcher, this study aims to understand the impact of the 2014 curriculum reforms on A’ Level Media through a qualitative study of subject-specific teachers’ group on Facebook. Initial findings revealed that, despite a prevailing feeling of discord and frustration about the new specifications, implicit in this was also a reinstituted energy and investment in the subject at an ideological level. This study contributes new and original knowledge at this crucial stage in the subject’s genealogy as it captures in ‘real time’ the experiences of those teaching and studying the new specifications and, thus, is able to provide an in-depth and contemporary understanding of how the subject is evolving at a time when media education is critical in a wider context.
Mohammad Naiseh (FST, PhD)
Investigating explanations design principles in Health recommender systems from Healthcare professional’s perspective – a qualitative study

The adoption of intelligent systems creates opportunities as well as challenges for medical work. On the positive side, intelligent systems have the potential to compute complex data from patients and generate automated diagnosis and prescriptions recommendations for doctors and pharmacists. However, medical professionals often perceive such systems as black boxes and, therefore, feel concerned about relying on system generated recommendations to make decisions. In this study, we are investigating the concept of explainable artificial intelligence design principles (XAI) by exploring the concept of explanation from healthcare perspective. The research conducts an interview study that collected 10-15 medical professionals’ reflection of how they interact with the health recommendations and prescriptions proposed by AI system. We use their feedback to characterize when explainability helps to improve medical professionals’ trust. We further identify the classes of explanations that clinicians identified as most relevant and crucial for effective translation to clinical practice.

Ogochukwu Ann Ijezie (FHSS, PhD)
Quality of Life of Adults with Down Syndrome: A Systematic Review

Most research on people with Down Syndrome is in the context of health needs and treatment. There is a dearth of literature focusing upon their quality of life (QoL). The purpose of this review was to synthesize the evidence relating to the assessment and experience of QoL for adults living with Down syndrome and to identify measures of QoL for adults with Down syndrome. Searches were carried out in eight online scientific databases (January 1990 – August 2019) and supplemented with grey literature searches to identify relevant primary studies. This review is registered on PROSPERO (registration number - CRD42019140056). A total of 2112 studies were identified and screened against the inclusion/exclusion criteria. Twelve studies met the inclusion criteria (ten qualitative and two quantitative study designs). The poster will present the findings from this review.

Richard Rowley (FST, MRes)
An evaluation of Image-Based-Modelling for metrically recording cultural heritage subjects suitably to enable further use in geomatics, geoinformatics, and digital humanities

Image-Based-Modelling produces 3D computational models using Structure-from-Motion, to extrapolate a subject’s 3D geometry from overlapping photographs capturing differing perspectives, combined with additional spatial data to enable scaling and real-world referencing. Demonstrably accurate datasets may contribute to monitoring change for at-risk, in-situ, cultural heritage subjects within high-energy marine or coastal environments, as well as being a viable methodology for preservation by record. This project examines both how such models of cultural heritage subjects may be produced to quantifiable levels of accuracy, in tandem with the development of creator-level evaluation methodologies. This pilot-study for future research reveals that referencing within the real-world is both more complex to achieve,
and to evaluate, than simply scaling. This forms the basis for further studies, hoping to contribute to the development of technical standards and guidelines as original elements to this research, in addition to examining the applications of such datasets to in-situ cultural heritage management.

**Sara Stride (FHSS, PhD)**

*Midwives’ experiences when women sustain severe birth trauma*

The format of my doctorate is an integrated thesis. The poster presentation will highlight my journey so far and current findings as well as how the integration of publications, research and final thesis presentation is aimed to be achieved. Benefits and challenges of this format will also be highlighted. My initial interest was in birth trauma sustained by women at the point of birthing their baby. Using mixed methods, three particular areas that influence practice were analysed: i) relevant NHS guidelines; ii) an online national survey to illuminate midwives’ practice and iii) focus groups with midwives to understand their attitudes and beliefs regarding birth trauma. The findings are being written up for publication aimed at obstetric, midwifery and health service journals. Findings have informed the next phase: using grounded theory to explore midwives’ thoughts and feeling when caring for women who have sustained birth trauma, and the support they need.

**Shepuya Famwang (FMC, PhD)**

*Audience perception of the role of the media in the Farmers Herders conflict in Nigeria*

Farmers and pastoralists in Jos Plateau State Nigeria have been in conflict since 2002 in the aftermath of the Jos crisis of September 2001 to this day. Some identify over population, climate change, ethno-religious differences as the cause of this conflict. Nigerian Media researchers have identified frames that the media in Nigeria uses to tell the news about this conflict such as the episodic frame, the thematic frame etc. This research aims to understand the Nigerian public perception of the Farmers herder conflict based on the frames that will be identified and then republished to the public through the internet in an experimental survey. Some questions in this research are: what is the public's opinion of the conflict based on media’s performance, what has been said about the conflict affected the public's opinion of the conflict – does it engender peace or fuel the conflict.

**Shiva Shangari Manoharan (FHSS, PhD)**

*The physical and psychosocial (P&P) effects of a whole systems wellness (WSW) intervention for older adults living in care homes (CH). A feasibility- mixed method study*

What are the P&P effects of a WSW intervention in older adults living in CH? What is the feasibility of collecting P&P outcome measures in older adults living in CH? What are the barriers and facilitator of implementing a WSW intervention in a CH? Care home residents (CHR) will be recruited. The CH staff will be trained by trainers to deliver the WSW intervention to CHR. Quantitative data (P&P outcome measures) from CHR will be collected to compare the effects of the intervention. The results will be used to understand the feasibility of collecting data in CHR. At 6 months post intervention, CH staff will be invited to a focus group discussion
to understand the barriers and facilitators of applying the intervention (qualitative data). Recommendations for a larger randomised controlled trial. The intervention could be further improved to maximise its effects. Provide recommendations on how sustainability of an intervention can be achieved in a CH.

**Sidra Shahid (FM, PhD)**

*Measuring Success and Sustainability in Project management: a case study quality education*

Research Questions: (1) What major themes have been identified during the success measurement process? (2) What criteria can be used by UN to measure the success for sustainable projects such as Quality Education? (3) Combining the outcomes of RQ1 and RQ2, what framework can be devised for the organizations that wish to adopt sustainability in their projects?

Methodology: For this research, I have chosen Abductive Approach that is the combination of Quantitative Research and Qualitative Research.

Initial Findings: The primary data received by people on the understanding of the concept sustainability then devising the criteria that suits best to the field of practise.

**Stephen Fordham (FST, PhD)**

*Using Long-Read Sequencing to Investigate Bacterial Genomes in a Clinical Setting*

Introduction: Antibiotic resistance genes in bacteria are a leading cause of Hospital acquired infections (HAIs). The spread of antibiotic resistance is both a national and global concern due to the transfer of resistant genes between bacteria. Determining which antibiotic-resistant/virulent genes are present can lead to the selection of appropriate treatment strategies.

Method: Genomic and Plasmid DNA is extracted from clinical isolates, obtained from Poole hospital using the QIAGEN Genomic Tip Protocol. This protocol extracts high-molecular weight DNA. A 1D-squared library is prepared and sequenced using the Oxford Nanopore sequencer. The successful reads generated from the sequencer are assembled and compared against a reference database for identification.

Initial Findings: High molecular weight genomic extraction has been optimised, and we are ready to start working with hospital samples.

Impact: Rapid identification of high-consequence pathogens in a matter of hours.

**Thai Le (FM, PhD)**

*Convergence and heterogeneity in global diets*

Worldwide obesity has almost tripled since 1975. This trend is the consequence of demographic, epidemiological and nutrition changes that have taken place as countries develop and become more globalised. This research examines the global trends in food consumption over the period 1961-2013 using data from the Food and Agriculture
Organisation. Evidence shows that national diets are evolving over time and across countries in ways that are both similar yet distinct. This research presents the application of an innovative space-time clustering technique that allows the identification of countries’ agglomeration characterised by similar dietary trends. The findings are further analysed to identify cultural and economic factors that most matter in explaining the pace of dietary change and the convergence that is observed globally. The findings will inform the public policy debate on the relationship between diet and obesity and provide evidence to those interested in formulating national policies to promote healthy diets.

Varshini Nandakumar (FST, PhD)

*Design of a Functional Electrical Stimulation Device Adaptive to Walking Scenarios*

Functional Electrical Stimulation (FES) is a neuro-rehabilitation technique commonly used to aid walking in individuals suffering from Drop Foot (DF), a condition that limits ankle dorsiflexion leading to drag the foot while walking. FES devices make use of small electrical pulses to generate functional muscle contraction, enabling dorsiflexion to overcome DF. Existing FES devices are aiding mobility significantly, but one limitation in them is the inefficacy to allow the user to walk confidently in different walking scenarios. As reported by users, this is caused due to the inability to lift their foot sufficiently to ambulate on different walking scenarios. Hence this project proposes to overcome this limitation using machine learning algorithms to develop a predictive model to identify steps, ramps, and kerbs. The output of this model will then be used to control the stimulation levels to provide sufficient stimulation to enable the user to overcome the obstacle.

Victoria I. Adedeji (FST, PhD)

*Return-sweep saccades in oral and silent reading*

Return-sweep saccades take reading fixations from the end of one line of text to the beginning of the next. During silent reading, the fixation prior to a return-sweep is shorter in duration than intra-line fixations (Parker, Slattery, & Kirkby, 2019). However, with reading aloud the eyes often lead the voice (Laubrock & Kliegl, 2015) and this coupling may impact return-sweep planning and execution. In this study, eye movement data of participants who read paragraphs, either aloud or silently were analysed to explore return-sweep execution differences in both modalities. Overall, findings reveal that the time cost associated with reading aloud was significantly greater for line-final and line-initial regions in comparison to intra-line regions. These findings suggest that when reading aloud, return-sweeps offer a natural pause in the uptake of new visual information which readers can use to prevent the eyes from getting too far ahead of the voice.

Yitian Lu (FM, PhD)

*Firms Don’t Have to Marry University for Innovation: Causal Relationship Will Do!*

Traditionally researchers identify university as an important partner to industry by transferring explicit knowledge to firms, complementing firm’s internal R&D and by doing so new products or processes can be introduced. This innovation is achieved by Contractual-Based Collaboration.
(CBC) channels, in which collaboration mechanism is managed by formal agreement between universities and firms. In addition to CBC, this research investigates collaborations based on frequent personnel interaction, for which we defined as Relational-Based Collaboration (RBC), and their impact on firm's innovation and economic performance. Based on the data from 100 Chinese manufacturing enterprises, our analysis reveals that while CBC positively affects the technological innovation, RBC positively contribute to the non-technological innovation of firms. Besides, mediated by non-technological innovation, RBC also has a positive influence on firms' economic performance. The findings have implications not just for firms, but also for universities and public policy makers.