



TDE Research
Methods Festival 2020
Abstract Booklet

OXFORD
BROOKES
UNIVERSITY

Friday, March 6th 2020

Welcome to the 2020 TDE
Research Methods Festival, in this
table you will find all the
information regarding today's
programme. Enjoy!

Festival

General Programme 2020

OXFORD
BROOKES
UNIVERSITY

Registration and Tea & Coffee

(The Lab, Abercrombie
ground floor, opposite
the Glass Tank)
9:30 am – 9:50 am

Festival Opening

(The Lab, Abercrombie
ground floor, opposite
the Glass Tank)
9:50 am – 10:00 am

Prof Paul Inman
Pro Vice-Chancellor
and Dean of the
Faculty of
Technology, Design
and Environment

Prof Nigel Crook
Associate Dean:
Research and
Knowledge
Exchange

Presentations

10:00 am - 11:00 am

Session 1: Big Data

(Urban Design Studio,
Abercrombie 2nd floor)

Dr Jon Cooper

"ViewCue and the new concept of
visual texture"
(School of the Built Environment)

Session 2: Mobile Methods

(AB 115a)

Chair: Shadi Eltanani

Dr Tim Jones

"Applying mobile methods to inform
more equitable and sustainable policy"
(School of the Built Environment)

Laurence Colbert

"The use of styli in field recording: What
is the real sound of the streets?"
(School of Arts)

Helena Fox

"Experiments in 'Close Noticing' and
'Connective Aesthetics' for the Clinic"
(School of Arts)

Presentations

11:10 am - 12:10 pm

Session 3: Augmented Reality

(Urban Design Studio,
Abercrombie 2nd floor)

Chair: Dr Juliet Carpenter

Dr Avar Almkhtar

"Augmented Reality as a research tool
in the built environment"
(School of the Built Environment)

Dr Tudor Georgescu

"The 'Zapworks' educator pilot project.
Enabling staff and students to
experience and experiment with AR"
(TDE Faculty Research Manager)

Session 4: Arts-based Methods

(AB 115a)

Chair: Dr Matt Parker

Rachel Barbaresi

"Material archive"
(School of Arts)

Patricia Wright

"Obtaining data through practice: A
short performance"
(School of Arts)

Peta Lloyd

"It doesn't just happen you know! The
process of a performance"
(School of Arts)

Presentations

1:00 pm - 2:20 pm

Session 5: Interdisciplinary Workshop

(Urban Design Studio,
Abercrombie 2nd floor)

Dr Esra Kurul

"Crossing disciplinary boundaries
through research methodologies"
(School of the Built Environment)

Session 6: Qualitative Research

(AB 115a)

Chair: Dr Alessandra Palidda

Catalina Morales Maya

"What happens after a space is built? A
post occupancy evaluation approach in
case study research in architecture"
(School of Architecture)

Caterina Frisone

"The role of psychological flexibility in
the architecture of the therapeutic
environment. The case of the Maggie's
Centre"
(School of Architecture)

Fatima Hashmi

"Being a researcher in stigmatised
communities: Insider and outsider
reflections"
(School of Architecture)

Dr Ben Spencer

"Sandpits and less extreme ways to find
research funding"
(School of the Built Environment)

Presentations

3:00 pm – 4:00 pm

Session 7: Film- based Methods

(AB 115a)

Chair: Dr Dalila Missero

Robert Williamson

"Using Python to access
the film database IMDb"
(School of Arts)

Lindsay Steenberg

"Between blood and data"
(School of Arts)

Dr Reza Shirazi

"Documentary film: Tool,
method, output"
(School of the Built
Environment)

Festival
Closing and
Announcement
of Poster Prize
Winners
(AB 115a)

Lunch (The Lab, Abercrombie ground floor, opposite the Glass Tank) 12:10 pm – 1:00 pm

Installations and Poster Exhibition and Tea & Coffee Break (The Lab) 2:20 pm – 3:00 pm

Welcome to the 2020 TDE
Research Methods Festival, in this
table you will find all the
information regarding today's
programme. Enjoy!

Festival

General Programme 2020

OXFORD
BROOKES
UNIVERSITY

Installations and Poster Exhibition

(The Lab, Abercrombie ground floor, opposite the Glass Tank)

2:20 pm - 3:00 pm

Aparna Maladkar

"Doodling for research to understand the role of murals in the occupied West Bank"
(School of Architecture)

Beste Ozyurt

"Review on the application of machine learning techniques in construction projects risk management"
(School of the Built Environment)

Catherine Ross

"Investigating if liminal light and space can decontextualise experience"
(School of Arts)

Dr George Blumberg

"How blockchains can be used to aid automation in construction, smart cities and the Internet of Things"
(School of the Built Environment)

Rebecca Raper

"Creating autonomous moral AI"
(School of Engineering, Computing and Mathematics)

Dr Sarah Britten Jones

"Designing the learning university"
(School of Arts)

Serkan Gunay

"3D visualization with mobile digital technologies"
(School of Architecture)

Shadi Eltanani

"Data analysis of Human Gait"
(School of Engineering, Computing and Mathematics)

Sheila Isabel Irigoyen Zozaya

"Defining and restoring the cultural landscapes and place identity of historic cities: The case of Merida, Yucatan, Mexico"
(School of the Built Environment)

TDE Research Methods Festival 2020

Committee members:

Aline Fernandes Barata
(School of the Built Environment)

Beste Ozyurt
(School of the Built Environment)

Juan Wang
(School of Engineering, Computing and Mathematics)

Shadi Eltanani
(School of Engineering, Computing and Mathematics)

Prof Sue Brownill
(School of the Built Environment)

Dr Juliet Carpenter
(School of the Built Environment)

Dr Ben Spencer
(School of the Built Environment)

Allison Stevens
(TDE Research Administrator)

About

Presentations

Session 1: Big Data

(Urban Design Studio)

School of the Built Environment

Dr Jon Cooper

“ViewCue and the new concept of visual texture”

I will outline the new concept of visual texture by demonstrating our ViewCue visual analysis application. Attendees will learn how to extract data on visual texture level and visual texture type from Google StreetView images. They will gain an understanding of the link between the visual texture of place and perceptions of attractiveness and value. ViewCue provides a platform for quickly collecting standardised visual texture data across large geographical areas. This data can be used by researchers to explore the relationships between perceptions of beauty, well-being and people’s satisfaction with place. Attendees will also hear how visual texture is being used to create property sales preference filters, being used as evidence in planning appeals and being used to identify and measure the quality of habitats.

Session 2: Mobile Methods

(AB 115a)

School of the Built Environment

Dr Tim Jones

“Applying mobile methods to inform more equitable and sustainable policy”

This session draws on recent research projects to explore how ethnographic mobile research methods can deepen understanding of transport and mobility issues in a range of urban contexts. It seeks to go beyond the consideration of urban mobility simply in terms of gathering data on blunt quantitative measures and the uses of modelling that struggle to recognise the rich and varied lived experience of people. Through the mobile methods introduced in the session we will explore how mobile interviews can capture contemporary everyday experiences of being mobile and how moving through the city is accomplished (or restricted) and the complexity of interactions between different groups of people, landscape, infrastructures and multiple transport modes. These methods can help investigate issues of power, social exclusion and mobile injustices and develop an understanding of how mobile inequalities are actually experienced.

Session 2 Chair:

Shadi Eltanani

PhD Candidate
School of Engineering, Computing and Mathematics

Shadi Eltanani is currently pursuing his PhD degree in Computer Science at Oxford Brookes University, UK. He received the MSc degree in Telecommunication Engineering from Staffordshire University, UK, in 2015 and the B.Sc. degree in Electrical Engineering, majoring in Communications and Control from the Islamic University of Gaza, Palestine, in 2009. His current research interests include Machine Learning, Data Science, and Dynamic Control Systems.

Informed by these insights, the implementation of measures to support healthy and sustainable mobility can be realised in a more context specific and equitable manner.

School of Arts

Laurence Colbert

“The use of styli in field recording: what is the real sounds of the streets?”

The histories of architecture in the city are ‘scrolls’ waiting to be discovered and read (Calvino, 1972). In investigating these scrolls through the practice of walking the streets of the city accompanied by wheeled luggage (or an iron crowbar), I have found a ‘stylus’ for reading the pavement topography, the skin of the city. The wheels of the luggage bag connect directly with the built environment, rather like putting the needle on a record: a record that is city-sized and can be played in any direction. This practice presents a way of recording, mapping, and ‘sonifying’ the streets of the city. Comparisons beg to be drawn between cities, districts, and individual streets with their unique surfaces: such as St Aldate’s, Oxford; Rui Frei, Sao Paulo; East Congress Street, Detroit; Shibuya-Ku, Japan; and Stutter Street, San Francisco. Visual patterns of the manifestations of these streets are recorded also as they appear scrolling in movement, as video footage. Stemming contextually in part from Marclay’s liminal piece *Guitar Drag* (1999), and finding relationships with Francis Alys’ *Railings* (2004): as a tempo-spatial experience this practice builds on recent scholarship on the subject of walking in the city (e.g. Wunderlich 2008, Edensor 2010, Springay & Truman 2018). In the presentation I will talk about the process I have so far developed and share some of the various experiments undertaken. I will explain the basis of my method with some field recordings, some photos and some video footage of the process in action.

School of Arts

Helena Fox

“Experiments in ‘Close Noticing’ and ‘Connective Aesthetics’ for the Clinic”

This arts and practice-based PhD explores everyday aesthetic experience related to healthcare practice. Ulti-

mately 7 prototypes for a series of new participatory processes are designed.

Medical practice is replete with emotive images and processes in small everyday interactions as well as issues of life and death. Practitioners can be deeply moved in aesthetic ways. Here, the word 'aesthetic' refers to subjective sensory perception and imagination arising from experiential participation. 'Aesthetic experience' relates to the complex bundle of human sensibilities including the latter with emotions, the tacit, embodied and pre-reflective. In order to explore and reflect on these complex lived-experiences, an arts and practice-based approach is used to extend beyond the prosaic. Aesthetic experience has been linked with values and thus may be important in healthcare.

In this presentation, aspects of the development of the practice-based work will be discussed:

This research starts broadly with a series of experimental methods, small actions, processes and reflections from non-clinical experience. These have been called 'Experiments in Close Noticing,' a term adapted from the writings of James Hillman (1979). Initially, a variety of arts practices are explored in non-clinical settings to investigate aesthetic experience at hand in everyday situations to discover how to connect with it by paying deep attention, noticing closely and to describe it. This then related to clinic work. First-person practice-based approaches are described. Evolving from this, innovative 'Connective Aesthetic' participatory processes are designed for sharing with others. 2 of these are used for scoping. 5 further processes are designed. All aim to raise capacity for aesthetic awareness. Each includes a different aspect of connection with self, other and the environment. Although these are designed with clinic workers in mind, they are relevant to anyone who has experienced aspects of healthcare.

This is trans-disciplinary work. The researcher practices both medicine and the arts.

Session 3 Chair:

Dr Juliet Carpenter
Senior Research Fellow
School of the Built Environment

Dr Juliet Carpenter is a Senior Research Fellow in the School of the Built Environment. She is currently a Marie-Curie Global Fellow, working on a international comparison of neighbourhood governance in Canada and the UK, exploring the potential of arts-based methods such as Photovoice, to give voice in marginalised communities.

Session 3: Augmented Reality

(Urban Design Studio)

School of the Built Environment

Dr Avar Almukhtar

"Augmented Reality as a research tool in the built environment"

Augmented Reality is a technology that layers digital information onto the real world in real time through the use of a camera-equipped device like a mobile phone in order to augment or enhance reality. This technology has been recently adopted as it can provide ground breaking opportunities for the built environment in design, research, and teaching.

Planning and Urban Design can widely benefit from the use of AR a research tool. It can be very effective for public participation as a tool for virtual representations of proposed architectural designs visualised on top of existing real-world architecture which is mostly challenging to communicate for general public with limited or no design background. Urban Designers and Planners can receive real-time feedback from citizens, on virtual plans, allowing for informed decisions to be made before any construction begins making it more efficient and accurate in catering to the needs of people. The use of AR allows participants to walk through, see and experience proposed designs with all virtual modifications, overlaid onto the real world in scale, giving them a detailed look at how the environment could look in the future. While more research is needed, there are strong indications that this technology can provide a real benefit to accessible city planning and design for everyone by: Understanding the impact of new developments; Encouraging community engagement and public participation in urban development processes; Meaningful user interaction with the built environment.

This session starts with presenting the AR technology. It will be followed by a live interactive session to demonstrate the use of Augmented Reality with the built environment as a tool for teaching and research. The session will include using a tablet, smartphone and a projector. It will allow the participants to overlay one-to-one scale 3D model of a building on the existing environment and feel its scale, change of facade, materials, sunlight etc... They can engage with different design scenarios in one-to-one scale to experience its impact on the surrounding environment.

TDE Faculty Research Manager

Dr Tudor Georgescu

"The 'Zapworks' educator pilot project. Enabling staff and students to experience and experiment with AR"

Augmented Reality (AR) can help further enhance a broad range of our activities, from teaching materials to conference posters, from recruitment to creating engaging outputs for research dissemination and public engagement events. Most importantly here,

it allows individual users to generate exciting entry-level AR experiences by adding pictures, videos, sound, web links, business cards etc to your poster, as well as more advanced 3D modelling and graphic design for those wanting to gain additional skills and competences.

As part of the Research Methods Festival we are offering Zapworks user accounts to staff and students who would like to add AR content to their work! So, if you are interested in joining our trial and seeing what AR can do for you, come along to the workshop where we will:

- Have a brief introduction to augmented reality and why it's such a fab, easy, and fast way to get more out of what you do;
- Walk you through setting up your own Zapworks account as part of our educational package; and
- Help you get going with your own AR project (that is, how to get a sample up and running in some 30 min)!

At the end of our workshop you will be able to generate any number of your own zapcodes (or triggers, like QR codes) and add content to them! If you have any questions or comments about it all, please get in touch!: Tudor Georgescu, tgeorgescu@brookes.ac.uk

Session 4: Arts-based Methods

(AB 115a)

School of Arts

Rachel Barbaresi

“Material archive”

I will be showing work in progress for a project with Foundation Art & Design students and community groups in East Oxford. We are working with inter-generational conversations as a way of recording oral histories from Oxford's Windrush generation and teaching students about this important but overlooked aspect of British history. Alongside this we are looking at community archives and exhibitions to draw on a rich source of material showing the cultural activities that emerged around Oxford's Windrush generation. The students will respond creatively to this material considering aspects of memory, time, migration and belonging as they piece together a narrative from fragments of the conversations. The work will be created in close consultation with the participating community groups and will be shown as part of Oxford's Windrush Day celebrations in June.

For the presentation on 6th March we will show a series of images which explore the roles of public and domestic cultural spaces in creating a sense of belonging.

Session 4 Chair:

Dr Matt Parker

Research Fellow

School of Arts

Dr Matt Parker is a Spherispheric Investigator; an artist researching the resonances between things. His multimedia works are influenced by the practice of listening; to unsound vibratory ecologies and the economies of noise. His research engages with sound studies, media ecology, field recording and geohumanities through a critical and spatial art practice.

He has published on methodologies for listening to the infrastructures of the Anthropocene and exhibited sound and media artworks on this theme internationally. He has a PhD on the topic of listening and media infrastructure ecology from the London College of Communication, UAL, a Masters in Music Technology from the Royal Birmingham Conservatoire and a BA (Hons) in Philosophy and Psychology from the University of Leeds.

He is currently a Research Fellow with the Sonic Art Research Unit at Oxford Brookes University and the director of media infrastructural investigative collective The People's Cloud.

School of Arts

Patricia Wright

“Obtaining data through practice: a short performance”

I briefly introduce my topic of research and explain that after a five-minute performance, I would like to receive written feedback from anyone who is happy to give me feedback, just a few words. The feedback will be anonymous.

Sample performance:

‘Safety in Numbers’ requires no technical equipment. The audience are given a number puzzle with the title and couplet, ‘An apple a day keeps the doctor away; will a puzzle a day keep dementia at bay?’ A warning could be given about the subject matter and people given the opportunity to leave.

Standing on a chair wearing a voluminous dress decorated with streamers made up of paper number puzzles, I then count backwards from 100 in sevens. When I falter, I sing number rhymes learnt in childhood. Whilst doing this more puzzles are pinned to the dress. After five minutes, a timer buzzes and I stop.

Those who are happy to write a few words are given three or four minutes to write. Paper will be provided with the questions. ‘Were you engaged by anything you saw or heard in this performance? Did the performance evoke any memories or associations? if anyone would like to talk to me about the performance or subject matter, I will be around all day and very happy to answer any questions.

School of Arts

Peta Lloyd

“It doesn't just happen you know! The process of a performance”

My work examines ways in which text, particularly the written form, can become the focus of a performative practice. The works, which I have named ‘Textacts’, in-

investigate ways in which text can be activated, explore which objects can carry text and trial a range of actions through which text materialises. My chosen texts consist of composed pieces and borrowed individual words, phrases, quotes a definition and a song. The random text content is designed to place the focus upon the process of the work rather than the subject content of the words, which are then open to interpretation by the viewer. 'It doesn't just happen you know' aims to show the process of making of one particular performance from idea to the finished product.

Session 5: Interdisciplinary Workshop

(Urban Design Studio)

School of the Built Environment

Dr Esra Kurul

“Crossing disciplinary boundaries through research methodologies”

Addressing the “wicked problems” of the 21st Century, i.e. complex real world problems that necessitate the insights of more than one discipline, requires researchers who can transcend disciplinary boundaries, work collaboratively across them and handle complexity (Siedlok and Hibbert, 2014). Working in interdisciplinary teams presents a unique set of challenges and the skills required to do this are increasingly recognised as crucial to respond to the “wicked problems” (Marinova & McGrath 2004, Defila & Di Giulio, 2015). Research shows that simply putting researchers in interdisciplinary teams is not sufficient to learn and apply these transferable skills (Ritcher 2009). This workshop is based on the argument that the process of devising innovative research methodologies provides this opportunity. It aims to identify the participants' perceptions of the key opportunities and barriers that are associated with working with researchers from other disciplines in general and with adopting methodologies from outside their own discipline in particular. The participants will have the opportunity to exchange ideas on fostering inter-disciplinary collaboration across different disciplines. Siedlok and Hibbert's (2014) modes of

Session 6 Chair:

Dr Alessandra

Palidda

Lecturer in Music

School of Arts

Dr Alessandra Palidda was trained in classical singing, classics and musicology at the University and Conservatory of Milan before moving to Cardiff University for a PhD historical musicology. For her MA dissertation, she has been authorized by the Italian Ministry of Culture to explore a previously inaccessible archive in Rome, while for her PhD thesis, she worked with several primary archival sources in order to reconstruct the soundscape and repertoire of propaganda music in Napoleonic Milan. After being appointed Associate Lecturer in both Music and Italian at Cardiff University, Alessandra is currently a Lecturer in Music in the School of Arts, where she teaches UG and PG modules in history and historiography of music and in research methodology.

interdisciplinary integration, i.e. sourcing, consolidating, synergizing and configuring, will be used as the starting point. Among others, the workshop discussion will focus on the following questions: • Is disciplinary specialisation still a prerequisite for inter-disciplinary collaboration in research? • To what extent are Siedlok, F. and Hibbert's (2014) modes of integration applicable in each participant's discipline? • What are the drivers and barriers for inter-disciplinary collaboration for each mode of integration? • How do people's perception of their own potential for action and the appropriate behaviours impact on the construction and maintenance of research communities? The intention is to use the 'reverse (or negative) brainstorming' approach and live cognitive mapping to retain a holistic view of the discussion, and to establish and validate the relationships between emerging concepts.

Session 6: Qualitative Research

(AB 115a)

School of Architecture

Catalina Morales Maya

“What happens after a space is built? A post occupancy evaluation approach in case study research in architecture”

Post Occupancy Evaluation (POE) is an applied research method that is well established in the evaluation of performance in buildings and spaces after they have been occupied. Its use has been promoted as it allows identifying what works well in that new space, what does not work and the why for both situations. This is particularly relevant at present, as governments have been setting targets for many technical elements of the built environment and this method presents a suitable way of assessing the building's performance against those targets, one by one, or simultaneously. Some of the main characteristics of this evaluation method is that it is both exploratory and explanatory, that is dependent on a real-life situation to get accurate information and that uses multiple data collection methods, both quantitative and qualitative, which in most cases include the participation of the space users and the assessment of their satisfaction. Case study research, in turn, has been widely used in the social sciences and it is highly value as it allows researchers to study complex social phenomena while maintaining a real-world perspective.

POE, due to its dual nature, as an exploratory and explanatory method, to its dependence of real-life situations and its use of multiple sources to gather information, aligns very well with case study research and, as an approach it can be a powerful ally for built environment researchers when evaluating spatial phenomena, both from a social and technical perspective. This presentation will address this methodological partnership, making a parallel between case study research and POE, showing their main characteristics and their lines of coincidence. It will give some examples on how POEs have been used before, both in practice and research, and how it is proposed to be used in the evaluation of space functionality from an Inclusive Design perspective, in

the presenter's own PhD research project.

School of Architecture

Caterina Frisone

“The role of psychological flexibility in the architecture of the therapeutic environment. The case of the Maggie's Centre”

This research seeks to find out how and at what level the Maggie's Centre, which provides practical and psychological cancer support in the UK and abroad, is an effective therapeutic environment. Because social interaction is the parameter that seems to mostly enable the positive effects on human beings, by studying how people use and gather within the building my research aims to reveal what is it that facilitate users' physical and emotional well-being and makes the Maggie's Centre a therapeutic environment. The sense of freedom, the encouragement, the pride and the ownership people feel within Maggie's are at the foundation of its successful mission. However, its effectiveness has not been tested on site. Therefore, I have undertaken my fieldwork that aims to understand the positive flexible state of mind (Psychological Flexibility) enabled in Maggie's users by the synergy between the bespoke Architecture and the people in it.

This Research started in January 2018 and will finish in December 2021. The fieldwork was part of the second stage through which I aimed to understand how the building supports visitors physically and psychologically. From September to December 2019, I have conducted behavioural observation, ethnographic work and group interviews with the visitors of 3 different Maggie Centres. The study has involved the Centre users' attendance to 4 methods: participation & observation, 'move-along', focus groups, and semi-structured interviews with Staff members. Observation, participation and moving along with people implied mapping, taking fieldnotes and photographs. Discussions and interviews with visitors and staff were recorded and transcribed. Participation was voluntary and those invited did not have to take part, and they were free to withdraw at any time, without giving any reason. Confidentiality of those who chose to participate will be assured. Any information that was supplied will remain only accessible to me as a researcher.

School of Architecture

Fatima Hashmi

“Being a researcher in stigmatised communities: Insider and outsider reflections”

This presentation aims to provide some reflections of my doctoral research in stigmatised communities and highlight my positionality as an insider and outsider. These elements fit into this study, the fact that I conducted two fieldworks, where I was an insider in Pakistan and an outsider in Colombia. Belonging from the Hazara community, I had first-hand knowledge of the language, habits and customs, explicit and implicit routines and rules of functioning. Whereas, I had the lack of knowledge of the multiple types of Afro-descendant populations in Cartagena as well as language barrier. I show how

these positionalities played a role in the research process; from the preparation by contacting the experts on Afro-descendants and Palenqueros prior to conducting fieldwork, which was not replicated to the same extent in the case of the Hazaras; to the process of gatekeepers' recruitment in both sites, which were also different but what remained the same were the research methods that were employed in both sites. I reflect on my outsider positionality in Cartagena with shared experiences, such as forced migration and belonging to ethnic group and my insider position as a mix of Hazara (Shia) and Punjabi (Sunni), where my positionalities started to become somewhat blurred.

I also highlight the methodological and ethical considerations in both communities, where more familiarity as an insider and the risk of 'repercussion' on my family and its reputation, I was more aware so as not to disrespect the elders with my questions as well as why some were chosen for life-history interviews and others were not. Born and raised in the Hazara community, the participants assumed I knew exactly what they were talking about. Whereas, as an outsider, although I had the general knowledge of the context and the history of armed conflict in Colombia, the Afro-descendant community in Nelson Mandela neighbourhood felt it was necessary to educate me about their specific regions of displacement and their own experiences of forced migration through the process of truth and dialogue. Whereas, for the Palenquero community (originating from San Basilio de Palenque, the first free town of the Americas) in San Fernando, the community leader did something similar by taking me to visit San Basilio de Palenque to witness first-hand where they come from, their rituals and traditions. I was reminded throughout my fieldwork to be mindful how I narrate their history, rituals and traditions. In both cases, reflective thinking throughout the process of data collection and analysis helped to keep enough distance so as (1) not to miss the object by being too far or (2) ignoring it by being too close.

However, I question whether my positionality is risking to bring bias in my research? I conclude with reflecting on whether the positionalities of the researcher have to be within the set boundaries of an insider and an outsider or is there a space between that is blurred? Or maybe were they evolving during the research process? Is it influencing the way I am looking at the data today? Or because of the blurred boundaries, now I look at both data the same way, simply as a researcher and not as an insider or an outsider.

School of the Built Environment

Dr Ben Spencer

“Sandpits and less extreme ways to find research funding”

Sandpits are extended, interactive workshops designed so that a multidisciplinary mix of participants can identify and develop responses to research challenges. This session will describe the pros and cons of the full sandpit approach and introduce a series of smaller-scale Brookes research collaboration events. These events are being run by the emerging research networks at Brookes, including Healthy Ageing and Care. We will explore how these events aim to involve researchers at all career stages, and

across faculties, in developing collaborative bids in response to funding calls such as the Healthy Ageing Challenge.

Session 7: Film-based Methods

(AB 115a)

School of Arts

Robert Williamson

“Using Python to access the film database IMDb”

IMDb (Internet Movie Database) is an online database of information related to films, television programs, and streaming content online – including cast, production crew and personal biographies, plot summaries, trivia, fan and critical reviews, and ratings. It has approximately 6.5 million titles (including episodes) and 10.4 million personalities in its database. IMDb allows detailed analysis of its data via the programming language Python.

Python is a general purpose, high level, interpreted language which will, after some work and more installing, run on Windows 10. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects. I will outline the tasks required to install and run Python under Windows 10.

Once installed, program scripts can then be written to extract enormous amounts of information on films, for example based on key words, and/or country of origin. Since a programming language is used, there is no limit to the complexity of the interrogations of the database. My research is focused on British films within a fixed time frame, so I will give some examples of Python that have been written for that in mind. I can also supply some details of other film related projects of a more complex nature done by others in the field. The aim is to give a flavour and power of using Python in researching using databases, so you will be inspired to use it yourself on your research in whatever subject area you are exploring.

School of Arts

Lindsay Steenberg

“Between blood and data”

From the OK Corral to the Colosseum, the fight sequence is one of the primary building blocks of Hollywood cinema. Despite its ubiquity, it has received little critical attention as a discrete unit of cinema. This presentation focuses on the multi-modal methodology I am designing and applying to address this gap. This includes the design of a large-scale database of fight sequences drawn from across post-millennial Hollywood cinema in order to map the fight sequence. Not only will I introduce the methods used

in this research, I will briefly showcase the innovative teaching practices around fight choreography that are building on this project.

The methodology presented here forms part of two larger research projects, the first analysed the archetype of the gladiator in visual culture, giving particular focus to the arena-based fight sequence. The second project has just been funded by the Canadian government and widens the scope of the fight sequence analysis to include all of post-millennial Hollywood action cinema.

School of the Built Environment

Dr Reza Shirazi

“Documentary film: Tool, method, output”

The goal of the presentation is talking about documentary film-making as a research tool. I will discuss how documentary film can be utilised as a method of research or as an output for dissemination. My talk will be based on my personal experience in directing a documentary film about the fight for environmental justice in Bayview-Hunters Point neighbourhood in San Francisco.

I will give a 10 minutes talk and then screen 5 minutes of a documentary film I have produced for my research.

Session 7 Chair:

Dr Dalila Missero

Research Fellow
School of Arts

Dalila Missero is a Research Fellow at the School of Arts, at Oxford Brookes University, where she is working on a project on Latin American women's media memories. She has received her PhD in Visual, Performing and Media Arts at the University of Bologna and has published essays on gender, sexuality and cinema in the Journal of Italian Cinema & Media Studies, Feminist Media Histories and The Italianist. In parallel with her new project, she is also completing her first monograph “Italian Women and Cinema: The Making of a Feminist Film Culture” for Edinburgh University Press.

About

Installations and Poster Exhibition

School of Architecture

Aparna Maladkar

“Doodling for research to understand the role of murals in the occupied West Bank”

The use of art in the humanitarian field has intensified, and seen as creative, analytical and transformative tool. For this master’s research, doodle was considered as the most effective art tool to appreciate another art tool: doodling to understand the role and reason for the thriving of murals in the West Bank, and its impact on people who are affected by conflict, occupation and forced displacement. The visual methodology of doodling and photography along with surveys, in-depth observations and semi-structured interviews were chosen as effective research approaches to collate primary data. Scrutinised murals illustrated depiction of important issues like Palestine’s resistance, internal social discords, lack of outdoor spaces, hope to create new identities instead of the stereotypical victimisation, and the potential for positive creative transformations. These are paramount in determining impacts on peoples’ development, identity, safety and self-realisation. Extensive visual tools including doodles, photomontages and sketches were applied to illustrate results that demonstrate murals help in strengthening coping strategies and resilience within the community. The murals become a universal medium for expression to resist, improve communications and yearn for a positive change in conflict scenarios. The visual becomes an additional outlet for articulating thoughts and feelings difficult to voice. Doodles effectively illustrated research findings to compare timelines of murals in the West Bank to global art movements, and understand the potential of murals as coping strategies to review: conflict topography in the West Bank; disharmony and social exclusion in the society; impact of protracted social conflict; and impact of loss of outdoor spaces. The visual aims to enrich discussions through images to connect spaces, relationships, processes, and changes, which help people to understand their problems holistically. Both murals and doodles create a powerful impact across language and cultural barriers to encourage effective participation, interactive problem solving, and constructive confrontation techniques.

School of the Built Environment

Beste Ozyurt

“Review on the application of machine learning techniques in construction projects risk management”

Managing risk effectively is one of the critical success factors in construction projects.

Companies operating in project-based industries usually use systematic risk management systems, prepare project risk management plans and update/monitor risk plans throughout their projects. This involves the use of a large amount of text-based data in risk management. However, current decision support systems rely heavily on quantitative/numerical data, which is not always available. Moreover, the use of text-based information in decision-making can be tedious and time consuming for decision makers. Thus, there is a need for computer-assisted analysis of text-based data to expedite decision-making process in construction project risk management. In this research, it is argued that machine learning specifically, natural language processing, could be a solution for the problems in construction risk related-text processing and data mining techniques could be used to support risk management tasks such as risk identification, assessment and response strategy formulation in projects.

The objective of this research is to critically review the literature on machine learning generally and specifically, text processing in the construction industry. For this purpose, the state-of-the-art review of literature on natural language processing and data mining of text documents including existing application construction management will be reviewed.

This research may contribute to utilisation of machine learning in construction. It is believed that this research will help companies to determine the potential areas of utilisation of machine learning and to take advantage of artificial intelligence for better risk-informed decisions. Moreover, researchers can identify possible research fields regarding natural language processing that can be investigated as a future work.

School of Arts

Catherine Ross

“Investigating if liminal light and space can decontextualise experience”

This poster presents my initial ideas regarding my creative methods during the first semester of my MPhil/PhD by Fine Art practice.

From a preliminary literature review it appears that the link between liminality and arts-based methods is an undeveloped research field; few artists make reference to if or how liminal, visual practice can confront perceptions through decontextualizing experience.

Liminality derives from the Latin word, ‘limin’ meaning ‘threshold’. The anthropologist Arnold Van Gennep (1909) first proposed liminality indicates changes in state, place, social status and age. Victor Turner (1967) also defined liminality as indicating marginal and transitional times, beings and consciousness. Here deconstruction oscillates with transformation to foreground anxiety and agency. Liminality is now a multi-disciplinary concept found in many fields, for example art practice/therapy, education, ethnography, literature and psychology.

It is the subject and method of art. As creative practice inhabits an indeterminate state where the unknown is questioned in a pre-semantic, symbolic dialogue of metaphor and image.

I am employing as an artist researcher a visual auto ethnographic methodology; the self-orientated study of my social world. Using the visual as research is enabling access to divergent, original, non-text -based forms of knowing. My data sets are my records of visual methods and a diachronic, reflexive log.

Through my art practice I am constructing new understandings; focusing on the spatio-temporal dimension of liminality in photographic images of liminal spaces in liminal light, such as tunnels and subways at twilight. I want to distil the essence of liminality in my art practice so that the two coalesce in a symbiotic relationship.

In conclusion this poster summarizes the very first steps in my research project to develop the liminal links between art production and research methodology with the potential to formulate a liminal model for use in visual research practice.

School of the Built Environment

Dr George Blumberg

“How blockchains can be used to aid automation in construction, smart cities and the Internet of Things”

Blockchains are immutable online ledgers that record business transactions of participants trading within a network. Although originally created for cryptocurrency, the technology has evolved, and its use extended to enable future services such as those required by autonomous vehicles and the Internet of Things. Many have written and spoken about blockchains as a revolutionary platform technology with applications across industry, government and civil society, but the most interesting use in construction and engineering (C&E) projects is in the automation of administrative functions. For example, they can be used to trigger secure automatic payments to subcontractors if and only if all their contracted tasks are complete, inspected and approved using a digital signature.

The system architecture for blockchains for C&E projects is distinct from cryptographic systems. To begin with, C&E projects require the deployment of multiple blockchains, unlike cryptocurrency, which requires only one. This allows private trading channels to be created. Cryptocurrencies also demand open networks with no central control, whereas for C&E projects, closed (and therefore private) networks with central data management are preferred. These full-featured blockchain systems, with their integral code (or smart contracts), extended database and event management are known as digital ledger technology (DLT).

There are reasons to be optimistic about the potential for the adoption of this new technology. To begin with, blockchain systems are built from the bottom up, rather than

from the top-down as in other systems. Furthermore, if used extensively in a project, they have the potential to provide similar functionality as in an Enterprise Resource Management (ERM) system. They can, in effect, provide a degree of automated project governance.

This poster demonstrates a prototype system that has been designed and built as an experimental tool to explore the application of blockchain technology for C&E project management. The unique architecture is designed around the powerful Hyperledger Fabric system, an open development framework supported by several hundred companies including IBM and Oracle. As DLT require a significant amount of processes modelling, the poster shows flow and ladder charts used to replicate trading interactions.

School of Engineering, Computing and Mathematics

Rebecca Raper

“Creating autonomous moral AI”

Deemed by many as The Fourth Industrial Revolution, Artificial Intelligence (AI) promises grand advancements in the way we live, work and socialise as human beings. AI is already present in many of our lives, from the algorithms that decide which online TV programme we should watch next, to the facial detection technology used in our cameras. AI is also rapidly advancing. It famously defeated the world champion at the board game ‘Go’, and autonomous vehicles are promised to be on our roads soon. As AI becomes ever more autonomous, however, there is a call for it to be constrained in the same way that humans are -- by morals.

This research poster looks into how we can create such AI: AI with morals, and proposes a design and testing experiment. I detail an approach inspired by the development of morals in children, and a testing design informed by philosophy.

School of Arts

Dr Sarah Britten Jones

“Designing the learning university”

The rapid change, complexity and uncertainty experienced during this century are unprecedented, and require new ways of working and thinking. Those organisations able to embrace continuous learning will be better equipped to offset the challenges of ineradicable uncertainty in the future (Demos Helsinki, 2019). The organisational structures we built to serve an industrial model of education are not adaptable enough to function effectively in an era of increasing complexity and uncertainty. As a learning-based organisation with practical and theoretical expertise, the university must have learning capabilities. It now needs to transfer and apply its proficiency in learning to its own operation and strategy.

Organisational learning is difficult to identify, visualise and measure. Design methods

can help individuals within an organisation to understand the shape of the systems and culture they work within and develop mental models. Design methods can enable the organisation to see itself, and therefore imagine how things could be different in the future. By modelling organisational learning, we can imagine how the organisation might be wired for the capability of learning. This can help us to align our people and systems to apply knowledge from lessons learned throughout the organisation.

School of Architecture

Serkan Gunay

“3D visualization with mobile digital technologies”

The process of building digital models of lost heritage has become increasingly advanced and accordingly this enables the potential of utilizing mobile digital techniques as a tool in the context of research. Depending on the objective of the research, there are various tools and outcomes. Ranging from information management projects by using Building Information Modelling (BIM) and Geographical Information Systems (GIS) technologies, to providing Virtual Reality (VR) and Augmented Reality (AR) by using smart technologies for visualization of lost architectural and archaeological heritage, there is an increasing demand because of their fast developing technological abilities.

Understanding the data visualization capabilities of different digital technologies creates enhanced virtual experiences by using different software options. This could be achieved by providing 3D visuals that displays geographical data for identified lost architectural heritage examples. Izmir in Turkey and Thessaloniki in Greece are the two case studies for this research. The social and economic importance of these selected case studies can be identified through the existing historic buildings as well as the lost architectural heritage. 3D architectural models that were generated by Image Based Modelling for Izmir and Thessaloniki were then rendered with further details and for the purpose of creating more realistic virtual experience. Current stage of the research includes further explorations of heritage visualization by using AR/VR technologies. Some of the 3D models generated have been visualized with the help of VR/AR mobile applications and through VR goggles and tablet computers as well as mobile devices.

This paper aims to discuss the role of mobile digital technologies, particularly VR and AR by using smart technologies, on virtual reconstruction of lost heritage in the context of Izmir – Turkey and Thessaloniki – Greece.

School of Engineering, Computing and Mathematics

Shadi Eltanani

“Data analysis of Human Gait”

The human-being body is a well-built biological system, which does involve many non-linear dynamical processes. To understand such a human behaviour, it is always possible to interpret and to analyse the generated biological data with respect to its source. Human Gait (HG), for instance, is a well-known motive means for humans as it is both

energetically demanding and does reflect several bio-system dysfunctionalities such as physical disorders (muscle atrophy), mental disorders (Alzheimers, Parkinsons), and human energetic imbalances (Diabetes, Obesity, Malnutrition).

In this research, the main aim is to analyse clinical human gait data using the Criticality Analysis (CA) approach, and to apply Machine Learning (ML) theory to validate this data for categorisation purposes for specific human diseases. The validated data has to be quantified and to be represented in a mathematical model to accurately reflect on any given data.

The outcome of HG analysis and classification of biosystem disorders can not only help the General Practitioners (GPs) in diagnosing these disorders, but also can assist people in an early-and-easily health check.

School of the Built Environment

Sheila Isabel Irigoyen Zozaya

“Defining and restoring the cultural landscapes and place identity of historic cities: The case of Merida, Yucatan, Mexico”

The city of Merida, Yucatan, is a typical example of Mexican cities where new settlements coexist with heritage areas. In the past, the Solar Maya as a basic plot unit within the Maya tradition in Yucatan was the symbol of sustainable design and identity that shaped the development of the cultural landscapes for centuries. Even though the Mayan cultural landscape was transformed, key heritage values have remained, evolved and mixed with new cultural trends that enriched the local cultural landscape until the first half of the twentieth century. Today nevertheless, unsustainable solutions in architecture and urban design are being produced that lead to the homogenization of the cultural landscape in Merida. This erosion is a major concern for the residents and various professional groups, who are seeking new ways to preserve their heritage in order to rediscover their identity and to achieve sustainable solutions at the urban level.



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