



Arts & Humanities
Research Council

E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL

Location-based Virtual Reality
experiences for children:
Japan-UK knowledge exchange
network:

London meeting

30/4 - 3/5

VR Design Standards
Tue 30/4
Meet at the Royal Opera
House 1000

Afternoon:
RCA Rm 229

1000-1100

Immersive Technolo-
gies at the Royal Opera
House

Annette Mees, ROH

1200-1300
Lunch

1300-1330
RCA, White City Rm 229

Children & VR +
CMF Roadshow Outputs
Dylan Yamada-Rice,
RCA

1330-1400

VR Stories for Kids:
VR Prototype
Sindi Breshani,
Juliett Coquet &
Izabela Duszenko,
Y1 MA IED

1400-1420

Shadow Play VR

Felix Scholder Y2 IED

1420-1500

AHRC Immersive Design
Standards Project
&
concluding thoughts
for the day
Steve Love

1600-

Oceans of Air
Saatchi Gallery



Annette Mees will talk to us about her work as Head of the Royal Opera House Audience Lab which mashes tech and culture.

A year ago Dubit co-produced and hosted a roadshow event organised by Alison Norrington of StoryCentral for the Children's Media Foundation on the topic of children and Virtual Reality. Our involvement in this work provides an example of how research, design and development can marry up well. The event focused on bringing together industry experts and academics on specific topics in relation to Children and such as 'crossing physical and virtual worlds in children's VR'.

This event was followed by a series of related ones in which we identified key points for VR design for children. These were then used by industry partners and RCA students to produce a series of prototype experiences. The outcomes of these will be shared during this session.



Menu



Children and Virtual Reality:

Emerging Possibilities and Challenges

Virtual Reality is fast becoming a reality, with estimates that over 200m headsets will have been sold by 2020, and the market value for VR hardware and software reaching well over \$20bn. VR is also incredibly appealing to children, but there are concerns around potential health and safety issues, as well as questions concerning the appropriateness of current content for young people.

"Children and Virtual Reality" is a collaboration between Dubit, Turner, WEARVR and the COST (European Cooperation in Science and Technology) Action DigiLitEY.

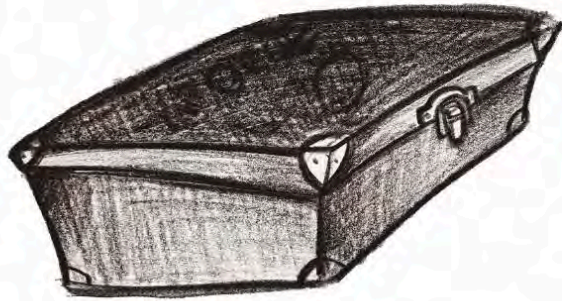
This report includes our latest findings on current VR access and appeal to children (aged 8-12 years old); appropriate VR content for children; our initial health and safety research; and regulatory perspectives from different sources, including PEGI.



VR Stories for Kids: Prototype

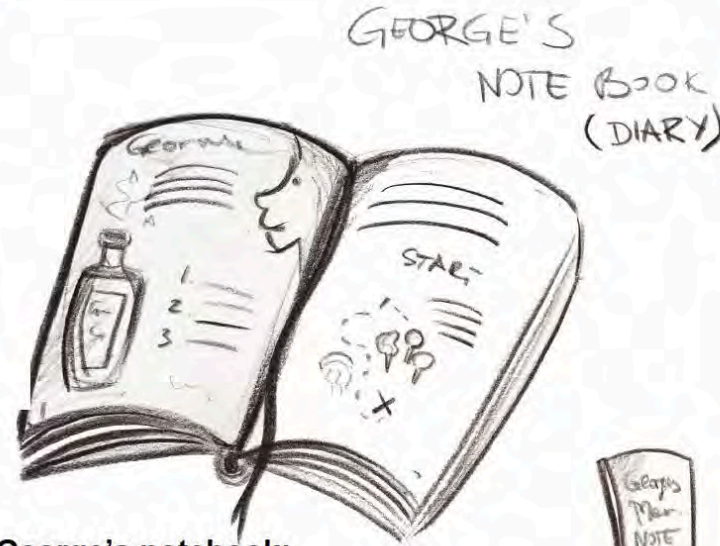
Sindi Breshani, Juliette Coquet & Izabela Duszenko, Y1 Information Experience Design Students ,
RCA

Sindi, Juliette and Izabela will show how they responded to a prototyping brief that was to design a way for children to cross from physical to virtual world while experiencing the narrative of a well-know children's storybook .



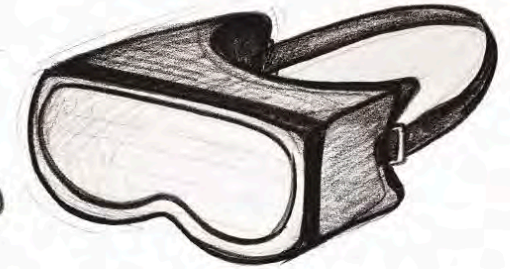
George's box (packaging) including:

- George's diary, notebook
- VR lab goggles
- pouch/box with counters/ingredients)
- timer
- board or bottle to place/mix counters/ingredients)



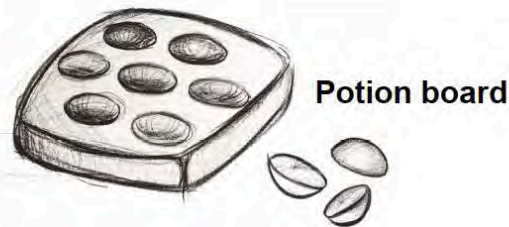
George's notebook:

- introduction to the story
- instructions
- recipes for potions
- George's notes and clues



(VR)lab goggles:

- allowing user to find ingredients and mix potions



Counters /ingredients :

- each counter represents different ingredient



Shōki Play: a shared VR experience
Felix Scholder, Y2 IED student, RCA

Shōki Play is a mixed reality installation that combines VR technology with the concept of ancient shadow play to enrich museum experiences. Step behind the paper doors onto the tatami mats and become the vanisher of ghosts. The installation pushes the boundaries of an individual VR experience to include others through physical props and set design. In a full-body narrative experience a Japanese Netsuke can be explored in detail, while its fantastical story is told through an immersive game. Therefore the active player becomes the shadow play performer for the audience outside.

www.felixscholder.de/ [Instagram felix_scholder/](https://www.instagram.com/felix_scholder/) [info@felixscholder.de/](mailto:info@felixscholder.de) felix.scholder@network.rca.ac.uk

VR Design Standards

Steve Love, Glasgow School of Art

Steve will discuss his AHRC funded design standards project and the Rich Pictures methodology he used to collect the data. The Rich Picture method is an approach that can be used to support co-design/co-creation of applications, products and services. Rich Pictures is a diagramming technique that is part of Soft Systems Methodology (Checkland, 1993), and is used to help to capture stakeholder's views non-confrontationally. Rich Pictures are a simple, but powerful, tool for addressing complex problems with diverse stakeholders and can support process improvement especially in the kind of situation where it is difficult even to get a holistic understanding of what the problem actually is, let alone begin to identify ways of solving it (Jisc Infonet). This method builds upon existing participatory design techniques to propose a way of transcending people's preconceived notions of existing technologies, and encourage them to postulate future forms and uses of technology, by emphasizing equally on their current technology interactions and activities. In practical terms, a rich picture is a graphical representation of a situation, based on the principal that a 'picture paints a thousand words'



Ocean of Air, Saatchi Gallery

We Live in an Ocean of Air is a multi-sensory immersive installation illuminating the fundamental connection between animal and plant. Step through the canvas and share a breath with the giants of the plant kingdom.

Using a unique combination of technologies from untethered virtual reality, heart rate monitors and breath sensors to body tracking, visitors will be completely immersed in a world beyond human perception. Follow the journey of your own breath from body, to plant, to planet in an intricate 3D world, where the deeper systems and connections that intimately tie together all life on Earth are made visible

<https://www.marshmallowlaserfeast.com/experiences/ocean-of-air/>



**Physical & Sonic
Elements of
Immersive Experiences**
Wed 1/5
Morning: Design Museum
Afternoon: RCA Rm 109

1000 -1200
Stanley Kubrick
Exhibition
The Design Museum

Some examples of
interactive/ immersive
narratives will be
displayed
at RCA, Rm 109

**1200-1300
Lunch**

1315-1345
Sonic Immersion
Matt Lewis
RCA

1300-1315
Opening Thoughts
Angus Main
RCA

1345-1400
Physical Play as
Immersive
Deborah Rodrigues
RCA

1400-1445
Future Aleppo
Alex Pearson

1445-1500
Shadow after
Shadow
Isobe Kota

1500-1630
Worlding Workshop
Eleanor Dare
RCA
1630-1700
Team Crit of Prototypes
Angus Main

Stanley Kubrick: The Exhibition, The Design Museum

The exhibition tells the story of Stanley Kubrick the obsessive genius, exploring his unique command of the creative design process of film making, from storyteller to director to editor.

You'll see step by step how Kubrick created genre-defining worlds for his films and relive iconic scenes from *The Shining*, *Eyes Wide Shut*, *A Clockwork Orange*, *Full Metal Jacket* and *2001: A Space Odyssey*. Get an exclusive insight into his mind through rare objects, projections and interviews exploring Kubrick's special relationship with England and particularly London, as his primary film location and source of inspiration.

The exhibition features about 700 objects, films and interviews. Expect to see a detailed model of the Centrifuge-set that Kubrick had developed for *2001: A Space Odyssey*; film props such as the infamous Born-to-Kill helmet worn by Private Joker in *Full Metal Jacket*, costumes designed for *A Clockwork Orange* and *Barry Lyndon* and much more.



Emotionally Intelligent Interaction: The Modern
Cuboid
Prometheus
Artist: Izabela Duszenko

"...I thought, that if I could bestow animation upon lifeless matter, I might in process of time renew life where death had apparently devoted the body to corruption..." M. Shelley

What is the essence of life without language? Those tiny, imperceptible movements of the body that we read like a book, life deconstructed to its bare minimum. Then to give to that a platform, technologies cuboid foot soldier of the graphical user interface, the pixel. With these elements I resurrected through old, abandoned materials, each containing their own story, a new emotional species.

Dimensions: 130 mm X 130 mm
Materials: copper, wood, Bare Conductive,
Standard Servo Motor.

Online portfolio : [https://
iduszenko.myportfolio.com](https://iduszenko.myportfolio.com)



The Experience Machine
Juliette Coquet

Insta: @tj_cqt

'Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you think and feel that you were writing a great novel, or making a friend, or reading an interesting book'
— Robert Nozick

Enter the booth. Would you eat the sweet and give up the spontaneity of experiences?



Wonder
Akvilė Terminaitė
@akvile.term

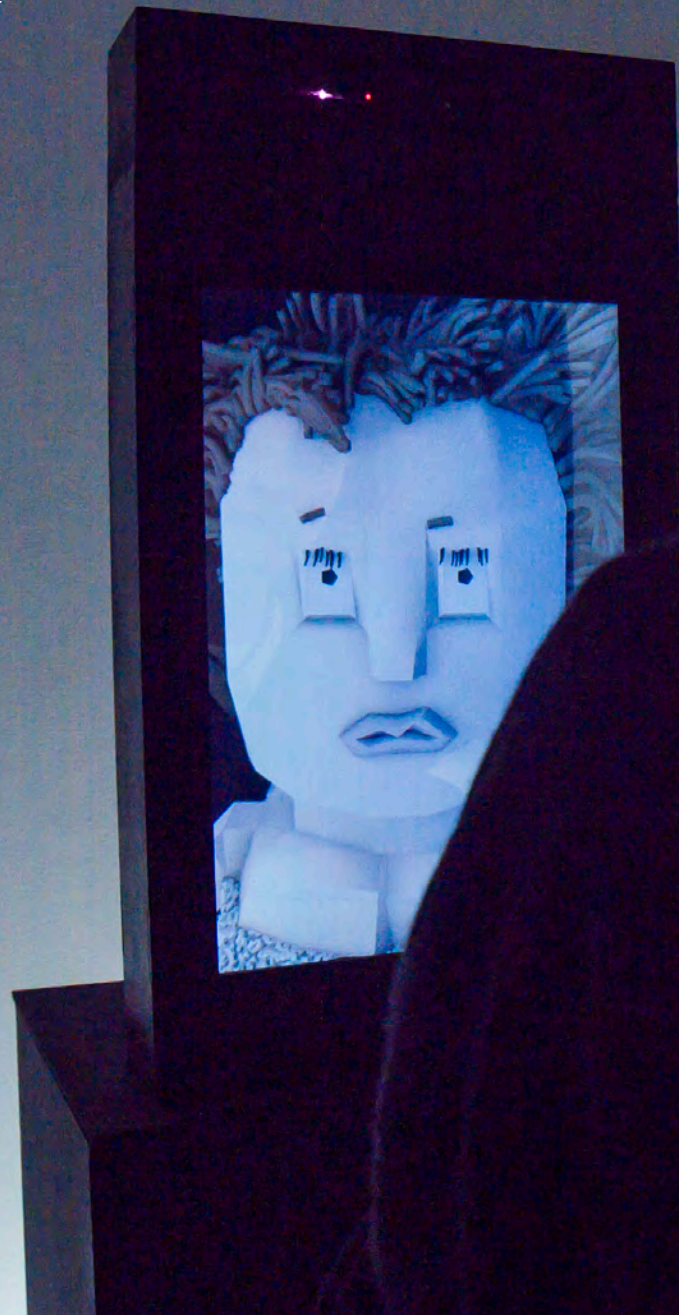
An interactive story telling piece about a fictitious creation story and child-like wonder presented through objects and moving image.



PreGenesis
Zohar Dvir

PreGenesis is a story told
through an interactive mirror

Warning: Plucking your
eyebrows might lead to
unexpected results



Sonic Immersion- Matt Lewis, RCA

From months before our birth we are immersed in sound and throughout our lives it is the sonic that places us at the centre of things and connects us to the world.

This presentation gives a curated history of developments in technologically mediated sonic experience as a way of highlighting the affordances of the use of sound in VR.

Though highly critical of the dominant visually biased approach to immersive media production the intention is not to propose a replacement of the visual by the sonic, rather to provoke ways in which a deeper understanding of our modes of perception in relationship to cultural production might result in more inclusive, democratic and convincing results.



Physical Play in VR Experiences for Children Deborah Rodrigues

We know little about children's play and creativity in relation to VR and physical objects. Through a two year research with the Makey Project, I had the opportunity to explore this subject in different ways and understand that one world doesn't exclude the other. I'll talk about the discoveries and showcase results and conclusions I had with Dylan Yamada-Rice about this subject.



Future Aleppo Alex Pearson

Alex Pearson is a Creative Producer from London who will be showcasing his project, Future Aleppo. Prior to his work in Virtual Reality, Alex worked in film and documentary, having graduated from the London Film School in 2006. From 2011, he began producing work in the emerging field of 'Transmedia'; developing projects that incorporated the audience in immersive and interactive ways. Future Aleppo epitomises this approach to participative storytelling and during his presentation, Alex will expand on his practice and the need to use media to re establish a sense of agency in the most vulnerable amongst us.



Shadow after Shadow

by Kota Isobe

Experience Designer / RCA-IIS Design Lab

“Shadow after Shadow” is a system that uses VR technology to transform the physical space into a digital mixed “Shadow” space.

People will encounter their multiple bodies, “Shadows”, in the space around them. This gives people the ability to manipulate their own body with the multiple perspectives and provides different perception towards their self existence in the space.

This installation was created while Kota was in RCA IED as a visiting research student and exhibited at RCA WIP Show 2019(Feb 14-17) and Kuma Exhibition 2019 (March 21-24/ over 7000 visitors in 4 days).

Further information is available on web.



↑ RCA-IIS Design Lab
www.designlab.ac



↑ Portfolio ↑
kotaisobe.com



この体験を通じて、体験者は多重に存在する自身の身体に遭遇し、元々いた空間との関わりを保ったまま新しい身体感覚を得ることができます。



↑ “Shadow after Shadow” film
<https://youtu.be/zN9YBAKRErg>



STORYWORLDS

VR WORLDBUILDING PROTOTYPES

RCA WHITE CITY

15:00-16:00

ROOM 109

Storyworlds
Eleanor Dare, Royal College of Art

Wednesday 1st May, 1500-1630 'Worlding' Workshop Eleanor Dare, RCA. Applying ideas gained throughout the day to producing a prototype of a physical set for location-based VR with RCA students. We will use physical objects as well as sound and touch to rapidly prototype a storyworld based on Maurice Sendak's children's book Where The Wild Things Are. We will evaluate the experiential differences and potential of using a physical set for VR story development.

**VR
for Education & Health
UCL Knowledge Lab
Thurs 2/5**

**1000-1005
Welcome
John Potter
UCL**

1005 - 1030
Playing the Archive

Kate Cowan &
John Potter

1035-1100
Reflections on
Immersive
Play in Punchdrunk
Enrichment's 'The
Oracles'

Angela Colvert
Roehampton
University

1100 - 1125
'Exploring touch
in VR experiences'

Nikoleta
Giannoutsou
UCL

**1120-1130
Break**

1130-1210
VR to prepare children
to have an
MRI scan

Penny Curtis,
University of Sheffield,
Dylan Yamada-Rice
& Amy Clark, Dubit

1210-1300

Jackie Marsh,
University of
Sheffield

**1300-1400
Lunch**

1430 - 1515
Intro: What is
CASA? Examples of
projects

Andy Hudson-Smith,
CASA

1515-1615
VR and AR in
Playing the Archive
and others

Valerio Signorelli,
CASA

1615
Questions and
reflections on
the day

John Potter

Playing the Archive Kate Cowan & John Potter

Kate and John will explore how multimodal narratives enable children to work alongside researchers to explore the lived experience of their play, its cultural repertoires and media related resonance. The data presented is drawn from an ongoing 2 year UK research council funded study, Playing the Archive, being conducted by UCL Institute of Education and the University of Sheffield. This study explores the nature of play in and out of school settings by children of primary school age and seeks to involve them as researchers. They are fully engaged, alongside the ethnographers, in media recordings, both audio and visual, alongside making drawn and written maps and texts of their games and imaginary play. These are intended to update an earlier collection of games collected by Peter and Iona Opie and held in the Bodleian Library in Oxford and to assist in finding ways to present these games to the public in a digital format, in a museum context with the V and A Museum of Childhood in London and Weston Park Museum in Sheffield. This work includes the incorporation of a range of techniques which employ both VR and AR.





Reflections on Immersive Play in Punchdrunk Enrichment's 'The Oracles'
Angela Colvert, Roehampton University

Angela will present reflections on a recently completed project with an immersive theatre company which invited children to simultaneously experience artefacts in a blended story environment.

Nikoleta will be talking about her research into Digital Touch in Immersive Virtual Reality in connection with the In-Touch Project which studies 'touch' as it is digitally mediated through haptic devices, wearables, robotics, virtual reality and other digital touch devices, systems and environments that go beyond the everyday touch screen.





Drawing in Outer Space: Young Children's uses of Tilt Brush in Virtual Reality

Bobby Nisha & Jackie Marsh

This paper shares the findings from an international study of Makerspaces in the early years, MakEY, which involved six and seven year old children in creating galaxies using the paint palette software, Tilt Brush, in Virtual Reality (Parry, Nisha & Marsh).

Two classes of twenty-six children were observed engaging with a range of makerspace activities simultaneously with children in Aarhus, Denmark and Melbourne, Australia. The overarching theme was space and the children in each country created work related to the theme and posted it in a closed online forum, commenting on each others' postings. This was a particularly interesting context for observing children's first engagements with drawing / painting in VR, foregrounding a particular set of semiotic meaning making resources as well as materials such as clay, paper, plasticine, glue, ipads, colouring pencils and pens.

The field notes and video recordings of the children's engagements were analysed and coded using Dyson's concept of child agendas to help identify four different ways the children used Tilt Brush and VR. These four uses which involve the exploration of the possibilities, perspectives, positionalities and physicality offered by the technologies build on important recent research focused on children's playful creativity using digital technologies (Sakr, 2017).

We conclude that the use of software such as Tilt Brush in VR provides young children with important liminal spaces for creativity (Potter and Cannon, 2018) which are further enhanced by being integrated into broader cultural and pedagogic contexts. We suggest this has important implications for those introducing new technologies into early years learning contexts.



VR to Help Children Prepare to Have an MRI Scan

Penny Curtis, University of Sheffield
Dylan Yamada-Rice, Royal College of Art
Amy Clark Dubit

Recently, we spent time in primary schools working with children aged 4–10 years old. The aim was to gain their ideas for a med-tech product in the form of a play kit (that includes VR and AR) to help children their age have an MRI scan.

Magnetic Resonance Imaging (MRI) is a non-invasive scanning method that employs strong magnetic fields and radio waves to examine parts of the body. An MRI scan is used to facilitate diagnosis, help determine treatment and evaluate its effectiveness. In 2016–17, 142,020 MRI scans were carried out in England on children aged 0–14 (Dixon, 2017). Dixon (2017) also notes that MRI activity is expanding rapidly with an increase of 10% between 2015–16 and 2016–17.

The play kit is begin developed by a team of researchers and developers at Dubit, the Royal College of Art, the Glasgow School of Art, Sheffield Children's Hospital NHS Trust and the University of Sheffield.



Royal College of Art

**THE GLASGOW
SCHOOL OF ART**



Sheffield Children's
NHS Foundation Trust



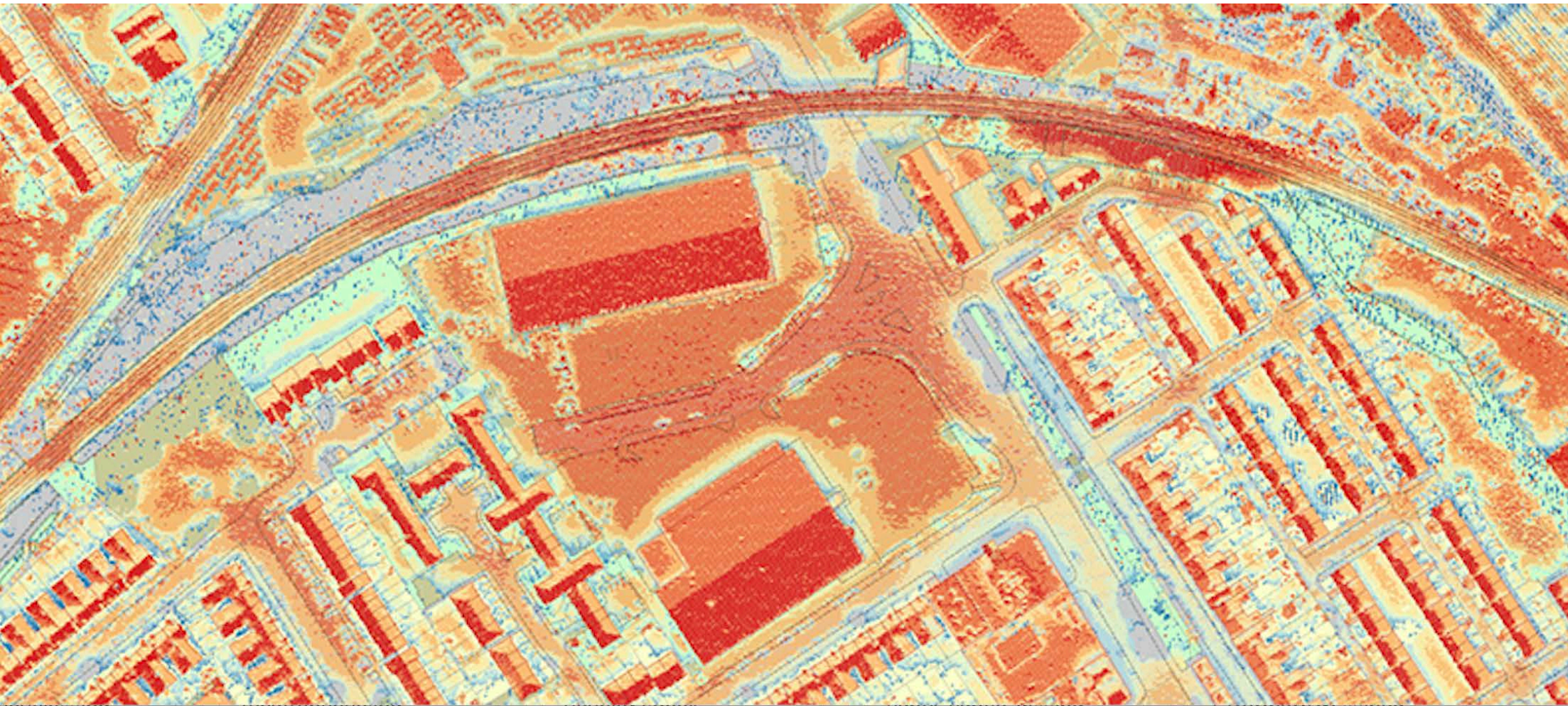
The
University
Of
Sheffield.

A visit to The Centre for Advanced Spatial Analysis (CASA)

CASA is an interdisciplinary research institute focusing on the science of cities within The Bartlett Faculty of the Built Environment at UCL. The centre was established in 1995 to lead the development of a science of cities drawing upon methods and ideas in modelling, sensing the urban environment, visualisation and computation.

It seeks to examine and offer solutions to the problems of resource efficiency and effective planning and governance shared by all cities. Our vision is to play a central role in the science of smart cities applying it to city planning, policy and architecture in the pursuit of making our cities better places to live.

Based in Bloomsbury, London, CASA is our living laboratory. As one of the world's truly global metropolises there is nowhere more ideal than London for learning about the challenges confronting modern cities. CASA has established a concentration of academics with a wide breadth of expertise from a range of disciplines, all with a common domain knowledge in cities.



**Immersive Experiences
for Entertainment**
Fri 3/5
RCA, White City Rm 229

1000-1015
Welcome
Eleanor Dare

1015-1045
Storytelling: Immersion
& Emotion

Alison Norrington
Storycentral

1045-1145
Akihiro Ando,
Hashilu, Japan

Kei Miyoshi
Location-based VR
Association

1145-1200

Break

1230-1330
Haptic Shape Illusion
Takuji Narumi
University of Tokyo

1200-1230
Moments of Surprise
& Delight

Ian Lisddell &
Peter Caddock
immotion

1330-1430
Lunch

1430-1630
Prototype-athon

Bobby Thandi XR Games
Andy Douthwaite
WEARVR

1630-1700

Next steps to Japan &
beyond
Dylan Yamada-Rice

Storytelling: Immersion & Emotion
Alison Norrington, Story Central



Hashilus
Miyoshi, Kei & Ando Akihiro

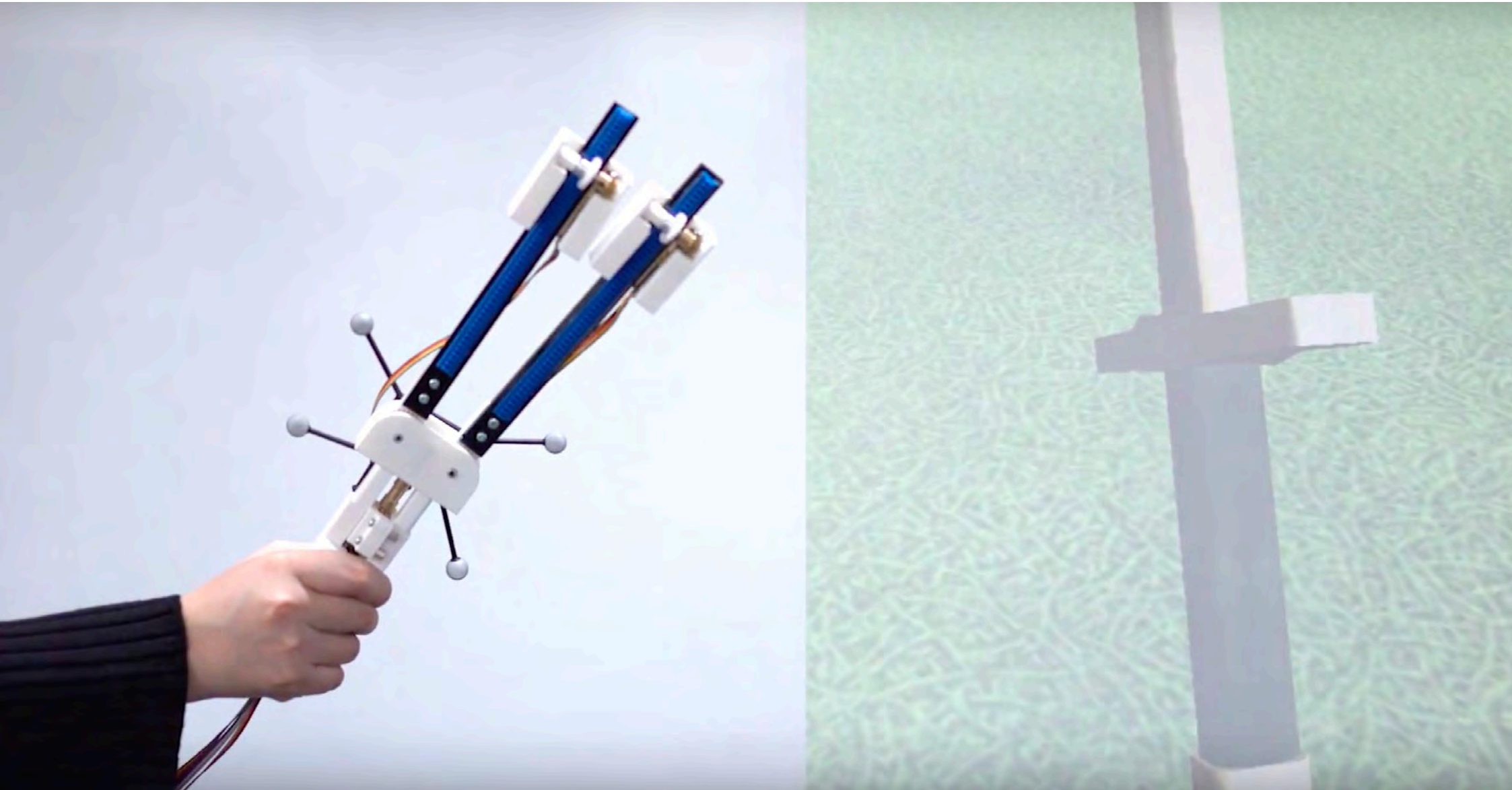
Kei and Akihiro will show examples of their work at Hashilus, a location-based VR company based in Japan.
They will also outline the work of the Location-based VR Association
<https://hashilus.co.jp/>



Haptic Feedback Systems Narumi Takakuji, University of Tokyo

Narumi will present two works about haptic feedback systems built in VR controllers and provide realistic haptic perception based on perceptual illusion. Further details about the systems can be found here:

http://www.cyber.t.u-tokyo.ac.jp/~jotaro/transcalibur_web/
<https://dl.acm.org/citation.cfm?id=3281759>



WEARVR & XR Games
Present
Prototype-athon



WEARVR



Eleanor Dare is the acting Head of Programme for MA Digital Direction at the Royal College of Art, a course about storytelling and emergent technologies.

Her research and practice address digital technology and the limits of symbolic representation, as well as VR, AR and mixed reality non-fiction.

She is interested in the role of embodiment in knowledge production and storytelling.

She has a PhD and MSc from the department of Computing, Goldsmiths.

Dylan Yamada-Rice is a Senior Tutor in Information Experience Design at the Royal College of Art.

She is also a Senior Research Manager for Dubit, a company that specialises in strategy, research, and digital for kids entertainment brands. Her research is at the intersection of experimental design and social sciences, focusing on the design of digital storytelling, games and play on a range of platforms such as apps, augmented and virtual reality, as well as new content for television. She specialises in experimental visual and multimodal methods.

Twitter: @dylanyamadarice
Insta: @komesanyamada

Steve Love leads research activities

in the School of Simulation and Visualisation at The Glasgow School of Art. His primary research expertise is investigating the impact of digital applications and services on people's behaviour and lives.

He has been the PI, Academic Project Lead and Project Partner on research projects that have been sponsored by funders such as the AHRC, EPSRC, ESRC, InnovateUK, Scottish Funding Council, European Space Agency, the European Social Fund, BT, Orange, Sharp Laboratories Europe and "3".
He is a member of the AHRC peer Review College.

John Potter is

Associate Professor (Reader) of Media in Education at the University College London, Institute of Education.

His research, teaching and publications are in the fields of: media education, new literacies, creative activity with technology and learner agency.

He has taken part in a number of participatory projects around media and technology with primary and secondary aged students and is interested in research methods which develop new knowledge about how meanings are made and shared in digital culture.

Angus Main is a Tutor in Information Experience Design at the Royal College of Art.

Angus Main is a designer, researcher and critical technologist who has over 12 years of experience working within interaction design and education.

His career began in industry, leading design and programming teams for digital agencies and managing strategic research and development.

At the RCA he focuses on the theme of post-digital behaviour. He runs workshops on a range of digital skills and critical approaches to technologies.

Bobby Thandi is
Founder and CEO of XR
Games where they make con-
sole and mobile VR/ AR games for
licensed Intellectual Properties.

XR Games is a VC backed startup. Previously,
Bobby was VP Digital at Dubit, looking after a
team of 50 staff, making games for clients
such as LEGO, DreamWorks, Mattel, BBC,
PBS KIDS, and other leading entertain-
ment companies.

Andrew Douthwaite
is the Chief Operating Officer of
WEARVR - the largest independent VR
App Store and discovery platform.

He has tried almost every VR experience availa-
ble and first tried VR on the Oculus Development
Kit 1, back in 2015.

As well as managing the day to day operations of
WEARVR, Andrew regularly travels to meet with
developers and speak at global events about VR.
WEARVR will be launching their own crypto-
currency this year - Weave. This will power a
new decentralised app store for VR/AR,
enable developers to crowdfund new
projects, and create a virtual
goods exchange for
creators.

Penny Curtis is
Professor of Child and Family
Health and Wellbeing in the School of
Nursing and Midwifery, University of
Sheffield.

She has undertaken a broad range of child-fo-
cused research and has a particular interest in
understanding children's perspectives on design
in the development of children's care environ-
ments. Her interest in the potential of VR to
support children preparing for, and undergoing
medical procedures developed following a
study tour of children's hospitals in Aus-
tralia and New Zealand.

Amy Clark is a
Research Executive at Dubit, a
digital studio based in Leeds .

A graduate from the University of Leeds,
Amy Clark, holds a BSc International Degree in
Psychology, with an interest in developmental
and health Psychology of children. She is a
researcher with a focus on qualitative projects,
including the development of a playkit to prepare
children for an MRI scan.

She also undertakes app and content testing
at Dubit's PlayLab, and research into youth
sports programmes and competitions.

Kate Cowan is an
education researcher
interested in children's multi-
modal communication.
Based at UCL Knowledge Lab and the
V&A Museum's Research Institute, her
research covers areas including play, crea-
tivity, literacies and digital technologies.

Kate's work also involves developing
multimodal methodologies and con-
siders the ethics of video-based
research with young children.

Narumi Takuji

Narumi is situated in the Cyber Interface Lab at Tokyo University.

Narumi, along with colleagues Prof. Inami and Dr Wakisaka from Inami Lab, Tokyo University (collaborators in this network), are focused on the next generation of VR experiences. To this end they have established a cross-disciplinary VR education Centre that is focused on industry-academic collaboration.

Nikoleta Yiannoutsou

is a Research Fellow at the UCL Knowledge Lab. Her research interests lie at the intersection of education, psychology, design and technology studies. Her work focuses on the design and evaluation of emerging technologies (multi-sensory technologies, robotics, mobile technologies and digital games) for learning in school and culture related education. She has worked as Research Associate in a number of projects, most recently: 'WeDraw: Exploiting the best sensory modality for learning arithmetic and geometrical concepts based on ICT multi-sensory technologies and Serious Games', 'ER4STEM (EU) Educational Robotics for STEM'.

Kei Miyoshi

has been the Director and Chief Secretariat of the Japanese Location-based VR Association. Inc since May 2017 and director of Hashilus Co, Ltd from December 2015.

Kei is also a legal attorney and is Vice Preesident of Miyoshi & Associates Law Firm.

Jackie Marsh is

Professor in the School of Education at the University of Sheffield.

She is interested in young children's digital literacy practices in homes, communities and early years settings. She has conducted research projects that have explored children's access to new technologies and their emergent digital literacy skills, knowledge and understanding. She has examined the way in which parents/carers and other family members support this engagement. Jackie also has conducted a number of research projects that have explored how creative and innovative teachers have responded to the challenges of the new media age.

Akihiro Ando started his career of producing VR content in 2012, after his first career as a Japanese traditional style magician since 2001.

Akihiro became representative director of Location-Based VR association Inc, Japanese VR industrial organisation on May 2017 and representative director of Hashilus co., Ltd Japanese VR content company on December 2015.

Matt Lewis is

is a Sound Artist and Musician, his work focusses on the relationships between sound and the social. Key areas of interest include the politics of sound, urbanism, sonic inclusivity and immersivity. His work is most often focused on particular physical sites, or around particular social issues, such as regeneration, disability and urban planning. Matt is also co-director of Call & Response, one of Europe's only independent sound spaces.

Angela Colvert

is a Senior Lecturer in English Education at the University of Roehampton, with particular expertise in using digital games to develop children's literacy.

She has been involved in the development of award-winning educational games, including the Bafta-nominated 'Teach your Monster to Read' and completed her PhD research into alternate reality games (ARGs) in education at University College London (UCL), Institute of Education (IOE). She was recently awarded a national research prize for this work.

Petter Caddock

is Director of VR at Immotion and Studios at Salford, Media City, UK.

He is a VR designer, producer, developer, programmer of bespoke, immersive, cross platform, interactive, real-time 3D experiences, 3D games, 2D games, simulations and applications.

He is also on the Industry Advisory Board for MMU.

Kota Isobe is a VR

Experience Design Engineer at RCA-IIS Tokyo Design Lab.

He was a visiting research student at RCA IED and explored how we can build a new relationship between physical and virtual reality and created an installation called "Shadow after Shadow".

He belongs to the RCA-IIS Tokyo Design Lab which is a research collaboration between the RCA and the University of Tokyo.

The Design Lab brings together creatives, scientists and engineers, working together to develop meaningful and deployable innovations.

Ian Liddel is

Group Creative Director at Immotion

IMMOTION GROUP brings together world-class CGI experts, award-winning content creators, amazing storytellers and state-of-the-art motion platform technology to provide customers with immersive 'out-of-home' VR experiences.

Andy Hudson-Smith

is a Professor of Digital Urban Systems and is Editor-in-Chief of Future Internet Journal; he is also an elected Fellow of the Royal Society of Arts, a member of the Greater London Authority Smart London Board.

Until earlier this year Andy directed the Centre of Advanced Spatial Analysis which has been at the forefront of using digital visualisation in the built environment since 1995, and has built an enviable track record of work in 3D environments and gaming engines, linking them to participatory planning, procedural generation and open data.

Bobby Nisha is a faculty member at the University of Sheffield where she is the Programme Director of the MA in Urban Design and Planning and runs a dedicated course blog for Urban Design and Planning.

Her research interests are focused on the psychological impacts of urban design, design decision-making with a focus on bridging the gap between the physical space and its perceived counterpart and use of immersive virtual reality to understand how people experience, understand, interpret and navigate through spaces.

Valerio Signorelli is Research Associate with UCL CASA.

An Architect by training, Valerio holds an M.Sc in Architecture and Urban Design (2009) and a Ph.D. in Territorial Design and Government (2013) from the Department of Architecture and Urban Studies (DASU) at the Politecnico di Milano.

His research interests focus on sensory urbanism, specifically on the multisensory integration between visual and auditory modalities, and digital simulation tools for visualising urban data sets in their temporal, sensory and spatial peculiarities.

Deborah Rodrigues

(aka Tartaruga Feliz) works with Art and technology, exploring the intersection of learning, interaction and play as a path to strengthen creativity.

With her project Glück Workshops, she works with children in very different parts of the planet, passing on her values and helping them to connect with their creative power.

She recently finished a research program on Virtual Reality and childhood with the University of Sheffield in England.

Alison Norrington
is the Founder & Creative Director of storycentral.

she wears a series of creative hats as Brand & Creative Director and Strategist, Talent & Content Development Lead, Creative Franchise Design & Story Architect, Writer, Digital Producer and Media Lecturer and work with networks, brands, storytellers, filmmakers and theme parks.

Clients include:
Walt Disney Imagineering R&D
FOX International
YouTube
Sundance TV
CBS Interactive
McCann

Literature Review Structures

Shifting modes of play and their historical connection to narrative

Dylan Yamada-Rice

This looks at the relationship between narratives in digital games and their connection to modes and senses. The aim is show shifts in these connections across the history of interactive digital gaming.

The pervasive rhetoric of empathy in adult 360 VR and its apparent absence in children's VR

Eleanor Dare

Does children's VR invoke the same rhetoric of immersivity and empathy as so many adult VR works do? How is location framed in claims for the empathetic potential of VR? The review examines Chris Milk's famous assertion that VR is a kind of 'empathy machine', it will ask if McLuhan's theories about Hot and Cold media (1964) and the aesthetic form of children's VR are significant factors in its relationship to constructs of empathy

Approaches to participatory research with children in the context of media and technology

John Potter

VR in Children's Museum Education

Steve Love

Review of the literature from 2015 onwards concerning research methods used in projects related to VR for children's museum and gallery experiences

