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## Programme

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| 14:00 | **Keynote: "Strange Bedfellows": Academia and the Indie Ecosystem**<br>Dr Celia Pearce, Associate Professor at Northeastern University, co-founder and Festival Chair of IndieCade |
| 14:30 | **Session 1**<br>**ReFiguring Innovation in Games: Dispatches from the Frontline Panel**<br><br>**Beyond the Frame: Diversifying the Potential of Virtual Reality**<br>Dr Sarah Atkinson, Head of Department of Culture, Media & Creative Industries, King's College London<br>Helen W Kennedy, Head of School of Media, University of Brighton<br><br>**Refiguring Conversational Interactivity in Games (ReCig!)**<br>Dr Sarah Atkinson, Head of Department of Culture, Media & Creative Industries, King's College London<br>Guy Gadney, Co-Founder and CEO, To Play For<br><br>**Researching Diversity in the Digital Games Industry**<br>Dr Caroline Pelletier, Reader in Culture and Communications, UCL Institute of Education<br><br>**The Case of BioWare's Mass Effect Trilogy – Designing & Developing Diversity**<br>Leandro Augusto Borges-Lima, PhD Candidate, King's College London |
| 15:45 | **Break** |
| 16:00 | **Session 2**<br><br>**A Conceptual Framework for Developing Cyber-Security Serious Games**<br>Dr Panagiotis Fotaris, Senior Lecturer in Web and Mobile Development, University of Brighton<br><br>**The Value of Co-producing Resilience Development Games for Children and Young People Facing Complex Challenges**<br>Presented by Anne Rathbone<br>Angie Hart, Professor of Child, Family and Community Health and Director of the Centre of Resilience for Social Justice, University of Brighton<br>Anne Rathbone, Research Officer, Centre of Resilience for Social Justice, University of Brighton, Senior Training and Consultancy Manager, Boingboing |
| 16:45 | **Break** |
| 17:00 | **Session 3**<br><br>**5G Context-Awareness Gaming**<br>Stan Wong, 5G DORRIC Fellow, School of Media, University of Brighton<br><br>**Neurogaming & Emotional Singularities**<br>Karen Cham, Professor of Digital Transformation Design and Academic Lead, Connected Futures, University of Brighton |
| 18:00 | **Ice Breaker Welcome Drinks in the Waterhouse Bar** |

## Presentations

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**Keynote:**

**"Strange Bedfellows": Academia and the Indie Ecosystem**

**Dr Celia Pearce**

The past decade has seen a massive explosion in independent games, supported by a range of factors including: new tools, platforms, funding and distribution mechanisms, and academia, whose influence is often ignored. In this talk, researcher and IndieCade co-founder Celia Pearce explores the role of academia in the indie ecosystem.

Celia Pearce is an award-winning game designer, artist, curator, author, teacher, and serial instigator. She holds a position as Associate Professor at Northeastern University, is co-founder and Festival Chair of IndieCade. Her writings include Communities of Play (MIT Press, 2009) and Ethnography and Virtual Worlds (Co-Author; Princeton).

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**Beyond the Frame: Diversifying the Potential of Virtual Reality**

**Dr Sarah Atkinson and Helen Kennedy**

We report back on a number of strands of ReFig-funded activity focussed upon the Virtual Reality sector in the UK which seek to understand how best to address gender disparity and underrepresentation surrounding this emerging sector, informed by the drive for diversity and inclusion in both the tech and media sectors.

Sarah Atkinson is Head of Department of Culture, Media & Creative Industries, King's College London and co-editor of Convergence: The International Journal of Research into New Media Technologies. Sarah has published three books and numerous articles on the impacts of digital technologies on film & cinema audiences and film production practices. Sarah has undertaken extensive work into the Live Cinema economy and is currently working on a number of immersive media projects.

Helen W. Kennedy is Head of the School of Media at the University of Brighton, UK. Her current research interests are feminist interventions into games culture, experience design and cultural evaluation. She is currently Principle Investigator in an AHRC funded Immersive Experience Project – XR: CIRCUS. She has published widely in game studies, and is Principle Investigator in an international project aimed at the wholescale diversification and transformation of games (REFIG.ca).

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**Refiguring Conversational Interactivity in Games (ReCig!)**

**Dr Sarah Atkinson and Guy Gadney**

We present the findings of the 'It Speaks' report which proposes a framework of five principles that all companies dealing with artificial intelligence data sets should adopt to prevent the gender diversity and unconscious bias that is prevalent in data sets from Google-sized companies down to the start-up ecosystems.

Guy Gadney is the co-founder and CEO of 'To Play For': a start-up, pioneering interactive storytelling techniques with a particular focus on character-based narrative powered by artificial intelligence through its proprietary platform, Charisma.AI. The Charisma.AI platform enables writers to create complex interactive narratives quickly and easily, so that audiences can talk directly to characters in their stories, becoming fully immersed in the narratives. As well as working with clients from the film, television and games industries, To Play For is currently producing the official game adaptation of John Wyndham's sci-fi classic, The Kraken Wakes.

*See above for Sarah Atkinson's Bio.*

### Researching Diversity in the Digital Games Industry
### Dr Caroline Pelletier

Feminist research about games has examined the diversity of representations of in-game characters, worlds and actions. It has also studied the cultures of game play. To date, however, there has been limited research on game makers, and on work culture in game-making. This presentation will introduce some initial findings from a study of work culture in an indie game studio, focusing on how terms such as inclusion and diversity translate into work practices, especially the giving and taking of feedback, and the definition and division of tasks.

Caroline Pelletier is Reader in Culture and Communications at University College London, Institute of Education who researches technology, games, learning and work. She is a member of the Re-Fig network, which brings together practitioners and researchers to promote a more inclusive game culture.

### The Case of BioWare's Mass Effect Trilogy – Designing & Developing Diversity
### Leandro Augusto Borges-Lima

This talk addresses policies and politics of gender and sexuality present in the making and playing of the Mass Effect trilogy. The outcomes indicate that current diversity policies are restrictive and insufficient. The talk also presents recommendations to improve the present state of diversity in videogames industry.

Leandro Augusto Borges Lima is a PhD candidate at King's College London, Department of Culture, Media and Creative Industries and an Editorial Board member of the game studies journal Press Start. His research explores the uses of videogame as a medium for political conversation, focusing on matters of gender and sexuality, through a case study of the game Mass Effect. Beyond his main interest in videogames scholarship, he is also keen in engaging with media studies, digital humanities, social movements and political science topics.

### A Conceptual Framework for Developing Cyber-Security Serious Games
### Dr Panagiotis Fotaris

This presentation will explain COFELET, a conceptual framework for developing cyber-security serious games based on standards and models that are used in threat analysis and modelling approaches, and the analysis and design of serious games. Its use will allow games to adapt to the learners' knowledge, capabilities and expectations, provide scaffolding and feedback, and continually assess the players' efforts.

Panagiotis Fotaris is Senior Lecturer and course leader for BSc Digital Games Development, BSc Computer Science with Games, and BSc Computing for Web and Mobile at the University of Brighton. He is a digital media enthusiast, offering more than ten years' working experience in both academic institutions and the creative industries. His research interests focus on the integration of technology in teaching and learning, particularly in the use and pedagogic potential of games, virtual/augmented environments, and data visualisation in educational settings.

### The Value of Co-Producing Resilience Development Games for Children and Young People Facing Complex Challenges
### Paper by Professor Angie Hart and Anne Rathbone, presented by Anne Rathbone

This presentation considers the co-design, co-development and evaluation of resilience-focused educational games developed by and for young people and vulnerable adults with experience of social disadvantages.  Based on the widely-embedded Resilience Framework (Hart & Blincow, 2007), the evaluation of the games has shown a value in the process of co-production in promoting their effectiveness as educational, assessment and developmental resources.

Anne Rathbone is a final year part time PhD supervised by Professor Angie Hart, and seconded from Boingboing Resilience CIC to the Centre of Resilience for Social Justice at the University of

Brighton. She has developed the game "Make Your Rainbow Bright: a game of resilience, with a group of learning disabled people as part of a research project with the Ambassadors of Arts Connect (Culture Shift, Sussex). She has also led on the evaluation of the co-produced games that are the subject of the presentation.

Angie Hart is Director of the Centre of Resilience for Social Justice at the University of Brighton. She undertakes co-productive research with children and families, especially in relation to resilience. She is also a mental health practitioner and directs Boingboing, a social enterprise specialising in resilience research and practice with, by and for people with lived experience of adversity, based in Brighton and Blackpool, UK. She has co-developed many resilience practice resources, which are used in the UK and beyond. Professor Hart is the adoptive parent of three children with complex needs and uses this lived experience in supporting others to adopt resilience-based approaches.

## 5G Context-Awareness Gaming
### Dr Stan Wong

Context-awareness gaming can take a full advantage on 5G MEC to deliver the ultimate goal of context-awareness gaming, that is to integrate the physical world with the digital world and the digital world would reflect back to the physical world to increase the game player's QoE. Therefore, context-awareness gaming is not just to shape the game play, it can also merge with the player's daily living activities. Imminently, physical and digital worlds would combine together.

Stan Wong is a research fellow and consultant. He was IT consultant in South East Asia and responsible to all the operations support system, big data products and metro ethernet deployment. He is one of the winner of European Commission Collaborative Spectrum Sharing Prize. He is the leader of Horizon 2020 research and innovation programme 5G novel radio multiservice adaptive network architecture (5G NORMA) security. He also was the leading editor of the chapter on "5G Infrastructure Public Private Partnership (5G-PPP) security work group trust model". He has been invited to give a number of the information and communications technology (ICT) security talks including a talk to the Things Connected Project funded by Future Cities Catapult in the UK. This project aims to encourage the UK Internet of Things (IoT) small and medium-sized enterprises (SMEs) to develop secure IoT applications. He gave a talk on 5G security to ITU, IET and IEEE 5G Summit.

## Neurogaming & Emotional Singularities
### Professor Karen Cham

Brain Computer Interfaces (BCI) allow us to use EEG to measure pre-cognitive responses; the limbic, visceral, biological reaction a user has to content. In 2009 I investigated perceptual, semantic and aesthetic feedback loops as mechanics for thought based HCI in neurogames. I then used EEG in the development cycle for a number of products that required pre-cognitive engagement, such as mental health and addiction interventions, and in 2013, in combination with eye tracking, facial recognition, GSR, HDR etc., found a correlation between peaks and troughs in attention span in live gameplay and a games Meta-Critic score. I defined this work as 'Neuromedia' (Gaminomics 2015) and am currently concerned with designing for emotional Singularity by investigating the potential for a pre-cognitive cybernetic language as an interface to the mind.

Karen Cham made her first electronic game in 1995. Clients have since included PlayStation, Diesel, ITV, Which?, Top Shop & EY. Her research concerns closing the semantic gap between users and machines via novel methods in human factors. She is developing cognitive UXD patterns to guide valuable & ethical singularities in IoT, robotics & immersive environments. She is University of Brighton's Academic Lead for Connected Futures, Co-lead of Digital Catapult Centre Brighton's 5G Testbed project with 5GIC as part of the government's 5G Strategy, establishing a Catapult B2B Data Privacy, Ethics & Nudge Research Lab and is a Women In Games Ambassador.