

A Place to Tinker and Transform

Institute for Lifecourse Development

Our vision for the XR lab for health, well-being and education

EVA 2024 Marianne Markowski Jon Weinel Marco Gagliardi



- Our vision
- XR lab's set-up
- pilot project and upcoming projects



Vision

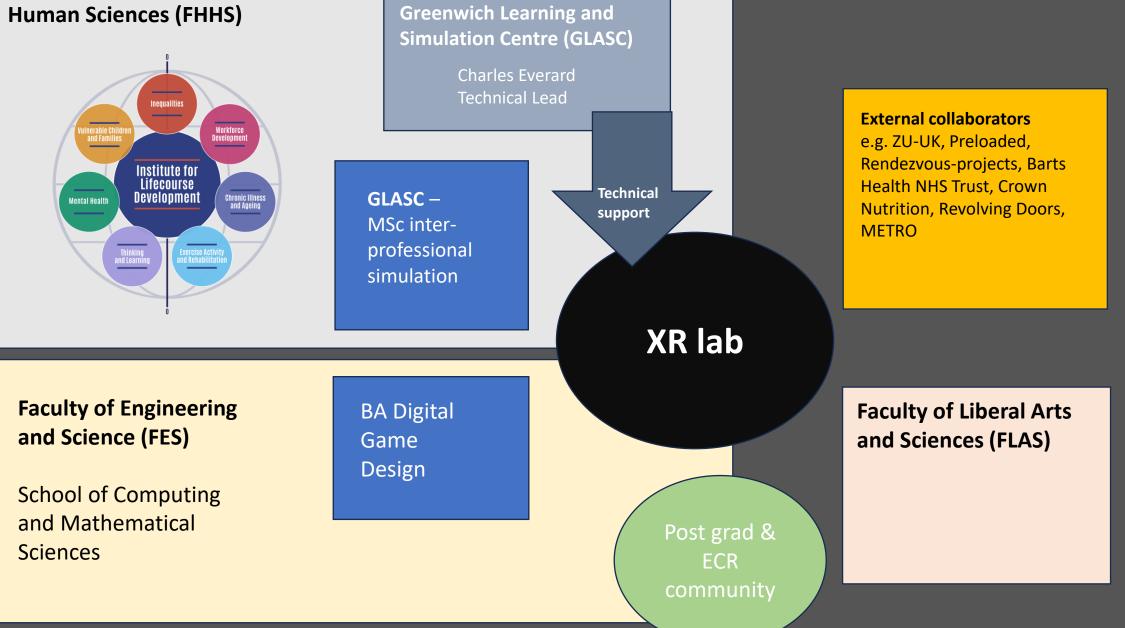
- Cross-faculty working
- A platform to collaborate with:



- fellow researchers (at different levels of subject expertise)
- technicians
- Third party organisations
- Independent artists
- A stimulating place for tinkering but also task focused
 - attract postgraduate researchers & early career researchers internationally









Academic leads in the XR lab



- Prof S. Weldon Health care simulation
- Prof J. Jameson Professional training
- Prof F. Naclerio Sport science
- Prof S. Patchay Falls and gait
- Dr J. Weinel Digital games and electronic music visualisations
- Dr M. Markowski User involvement
- Dr M. Gagliardi Psychological treatments



Technical set-

up



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- Online and in person space
- Contains stationary and portable equipment

Mix & match for research projects

VR AVRT Physiological measuring equipment

AR

Tesla suits

Recording facilities / telemetrics

The Doll-House Project A VR Application to Psychological Assessment



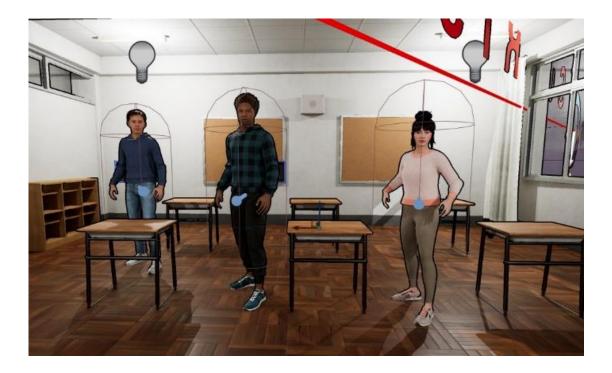


- Story-telling in VR about family interactions
- Psychology students can develop story stems and Game Design students can build characters and program responses adequate responses from the environment to player's actions



Public Speaking Anxiety A VR Working Prototype for Practice and Treatment





- The therapist changes the environmental features for safe and gradual exposure
- Project brief for 3rd year BSc Game Development student concerning the therapeutic use of VR social exposure
- Students respond with practical programming examples

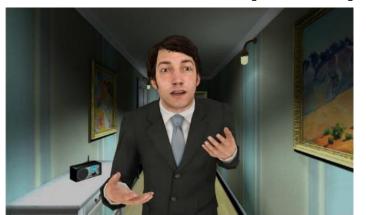


Body Image and Eating Beaviours Change of Perspective in VR



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• We change perspective on ourselves and challenge our implicit beliefs



[1st Person]

 MRC funding proposal exploring VR in the assessment and treatment of eating disorders

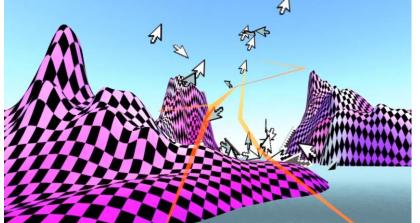
[3rd Person]

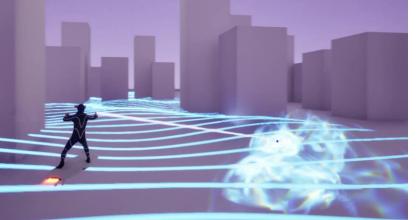




Music Visualisation Projects







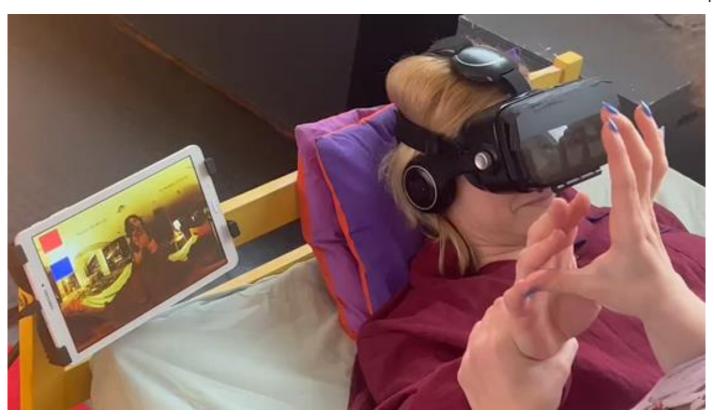
- Practice-led research
- Immersive audio-visual music experiences
- New forms of meditation
- Wellbeing aspect
- Potential of using VR or other types of immersive displays/spaces and hardware
- Communicating rave culture through audio-visual experiences

Good night sleep tight

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Credit: 'Goodnight, Sleep Tight' by ZU-UK

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AR uses in GLASC





Upcoming projects



- simulations that bring the lived experience of service users or patients to the forefront
- VR for gait visualisation and exercises
- AR for the safe delivery of experiments concerning falls
- Investigations into VR, movement-based relaxation techniques and well-being
- VR to educate about and assess eating habits for people with discorded eating.



If you have any questions, please email us on: <u>A.M.Markowski@greenwich.ac.uk</u>

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Thank you

