

Neurology research used in thrilling ride that adapts to riders' brain activity

March 12 2015, by Emma Thorne



Thrill seekers brave enough to test drive a new mixed-reality ride will only have themselves to blame if they find it a little too wild for their taste.

For the new attraction uses research from The University of Nottingham to adapt the experience to the rider's own [brain activity](#).

The new ride—Neurosis—has been developed by technology-inspired performance artist Professor Brendan Walker, a principal research fellow in the University's School of Computer Science, dubbed the 'world's only Thrill Engineer'.

It draws on research being conducted by Professor Walker and academics at the University's Horizon Digital Economy Research institute which is developing novel ways of using biosensors to capture

and present data from the human body.

Neurosis will receive its world premiere at the FutureFest festival taking place in London this weekend.

The pursuit of pleasure

Professor Walker said: "The fairground has a long tradition of being a place that the public can literally ride new and emerging technology in the pursuit of pleasure and excitement. Neurosis is a ride that will appeal to anyone fascinated by the recent explosion in body monitoring technologies and services on offer, the personalised entertainment experiences they might be able to help create, or simply those looking for new types of thrilling experience."

Neurosis features a six-degree-of-freedom motion simulator and virtual reality headset to immerse the rider in a surreal environment controlled not by a ride operator but by the rider's own brain activity.

This activity generates an audio-visual virtual world where pathways emerge, tumbling, twisting and twirling the rider through a psychedelic landscape. The rider's real-time neurological responses to music, motion and visible wonders activate fairground lighting.

The neuro-data constantly transforms the futuristic ride artwork while music pumps and the simulator mechanism undulates and sways.

Creative applications

The Performing Data research group at Horizon. Led by Professor Steve Benford, is developing the digital data management technology which sits at the heart of Neurosis and is being developed as a flexible set of

tools for the creative industries. It allows data to be gathered from any sensor, analysed and broadcast for use in a growing number of creative applications including TV and the entertainment industries.

For Neurosis, the Performing Data platform is being used to monitor brain activity and to make that data available to a sound artist, a virtual world games designer, theatre lighting designers and the controller of the motion platform, developed by researchers at Middlesex University—all of whom will respond in real time.

Professor Walker, through his design company Aerial, has been commissioned to deliver the site-specific ride by Nesta—an innovation charity dedicated to helping people and organisations bring to life great ideas that could potentially improve all our lives—with ride development funded by Arts Council England.

Nesta uses FutureFest to gather some of the planet's most radical thinkers, makers and performers together to create an immersive experience of what the world might be like in decades to come.

More information: futurefest.org/

Provided by University of Nottingham

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