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## BAFTA nomination for virtual reality game that helps dementia research

An innovative virtual reality game co-designed by an architect at Northumbria University which aims to help the fight against dementia has been shortlisted for a BAFTA award.

One of the early symptoms of dementia is having increased difficulties in finding your way around, and so the [Sea Hero Quest](#) game was specifically designed help advance understanding of how our brain can compute spatial navigation.

As a result of its intended use, Sea Hero Quest has been shortlisted for the Game Beyond Entertainment title at the British Academy Games Awards. The nominees are voted for by BAFTA's global membership, comprising experienced games industry practitioners from a range of backgrounds in game development and production.

The game was co-designed by [Professor Ruth Dalton](#), Head of Northumbria University's Department of Architecture and Built Environment, and an expert in building usability and wayfinding. She has helped the developers design virtual levels which can examine how people are finding their way around without getting lost.

Over three million people have played the game to date – with data from two million of them saved with their permission to measure their navigational abilities and establish the benchmark for the normal range of human spatial navigation ability. This data will be used to develop new and innovative navigational tests to establish symptoms of dementia.

Speaking about the BAFTA nomination, Professor Dalton said: “The game is based on mazes of various levels of difficulty that are – by definition – meant to be tricky to navigate. In architectural research, we have developed a number of tools that can be used to measure how easy it is to navigate a particular building, neighbourhood or street. We used these techniques to help create a series of increasingly more complex game levels, which act as a controlled environment to test people's navigational ability.

“The initial findings from the game play have been fascinating. To date, more than two million people have played the game and have therefore provided us with vast sources of data about how they move around and find their way in new environments. We are seeing indicators that people from certain countries and of certain ages are better navigators than others, and we are also seeing results which show differences in male and female senses of direction.

“These findings will enable scientists to establish a benchmark of normal ranges of navigational ability for people of certain ages, genders and nationalities, which can then be used to create data-based tests to check for any dementia-related decline.

“We knew we were working on an innovative project, but to find out we have

been nominated for a BAFTA award has been a real surprise. I'm sure this must be a first for an engineering department in a university!"

Sea Hero Quest was designed in collaboration by Northumbria University, University College London, the University of East Anglia, Alzheimer's Research UK, ETH Zurich and game designers Glitchers.

The winners of the British Academy Games Awards will be announced at a ceremony in London tonight.

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## Contacts



**Rik Kendall**

Press Contact  
PR and Media Manager  
Business and Law / Arts, Design & Social Sciences  
[rik.kendall@northumbria.ac.uk](mailto:rik.kendall@northumbria.ac.uk)  
07923 382339



**Andrea Slowey**

Press Contact  
PR and Media Manager  
Engineering and Environment / Health and Life Sciences  
[andrea.slowey@northumbria.ac.uk](mailto:andrea.slowey@northumbria.ac.uk)  
07708 509436



**Rachael Barwick**

Press Contact

PR and Media Manager

[rachael.barwick@northumbria.ac.uk](mailto:rachael.barwick@northumbria.ac.uk)

07377422415



**James Fox**

Press Contact

Student Communications Manager

[james2.fox@northumbria.ac.uk](mailto:james2.fox@northumbria.ac.uk)



**Kelly Elliott**

Press Contact

PR and Media Officer

[kelly2.elliott@northumbria.ac.uk](mailto:kelly2.elliott@northumbria.ac.uk)



**Gemma Brown**

Press Contact

PR and Media Officer

[gemma6.brown@northumbria.ac.uk](mailto:gemma6.brown@northumbria.ac.uk)