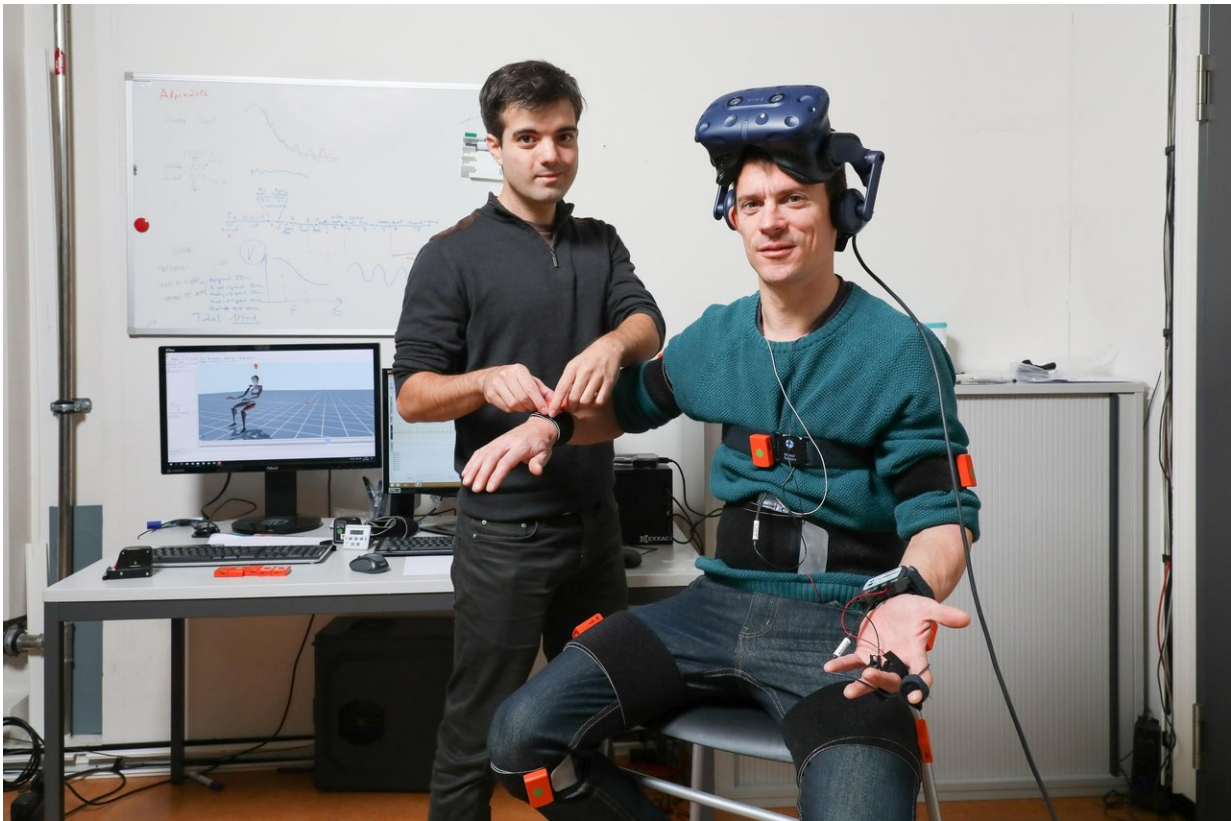


VRTIGO lets you test your nerves in virtual reality

November 5 2018, by Sarah Aubort



EPFL researchers have developed a virtual-reality program that examines how users – equipped with a headset and sensors – react to a vertiginous stroll. The system will be presented at the Geneva International Film Festival on 5–10 November. Credit: Ecole Polytechnique Federale de Lausanne

Why do some people react more strongly than others when faced with

the unknown? Researchers at EPFL's Laboratory of Behavioral Genetics, headed by Professor Carmen Sandi, have set out to learn more with a new virtual reality program. Their system evaluates how users' personality traits and prior experience influence their responses to anxiety-inducing situations. Designed to be tested on a large sample of volunteers, it will be available for visitors to try out during the Geneva International Film Festival on 5–10 November, where it will be featured in the Digital Out of Competition category.

Scary, but fun

The developers want to keep the surprise under wraps, but the program's name – VRTIGO – gives an idea of what users can expect. Volunteers will be asked to don an immersive headset and will be led to a sectioned-off area where the experiment will take place. The program will transport them to a [virtual world](#) that appears surprisingly realistic.

"Even though users consciously know it's a virtual experience, the perception they get from their senses tells them otherwise. And their bodies react accordingly – their palms start sweating and they start walking very carefully," say João Rodrigues and Erik Studer, two of the researchers who developed the program. The virtual walk into the unknown is perfectly safe and designed to be fun, but is nonetheless limited to adults over 18. "We've gotten excellent feedback from people who've tried it," adds Studer. "And if the experience starts feeling too intense, users can just close their eyes or take off the headset and their sensory perceptions will return to normal."

Crucial data for research

The VRTIGO experience, although amusing, provides valuable data for scientists studying human anxiety. The data are completely anonymous;

volunteers are asked to fill out a short questionnaire on their antecedents and emotional state. During the experiment, the system's sensors relay information about users' physiological responses, while accelerometers track their body positions, movements and the directions in which they are looking. Samples are also taken of [users'](#) saliva to determine their cortisol levels – an indicator of how much stress they feel.

"These tests carried out among the general public will give us data from people of many different ages and backgrounds, and help advance our research on this issue," says Studer. The research team hopes to publish their findings in 2019.

More information: For more information, see 2018.giff.ch/en/events/vrtigo-en/

Provided by Ecole Polytechnique Federale de Lausanne

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