

Computer codes make sweet music for selfplaying piano

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Credit: University of Nottingham

Unique computer codes have been used to create an interactive selfplaying piano performance that is part of a new videogame music and audio festival taking place in Nottingham this weekend.

Researchers from the Mixed Reality Labaratory at the University of Nottingham have collaborated with pianist and composer in residence Maria Kallionpaa to create a unique performance <u>composition</u> called "<u>Climb</u>."

"Climb" is part of the first "All Your Bass' festivel taking place on Friday 19th and Saturday 20th January at the National Videogame Arcade, Antenna and the Royal Concert Hall.

Unique musical composition



This unique musical composition combines contemporary piano with elements of <u>computer</u> games to create a non-linear piece of music accompanied by graphics in which the pianist negotiates an ascent of a mountain, choosing their path as they go, encountering weather, animals and other obstacles along the way.

Specially developed computer code or 'musiccodes' communicate with the piano to create different musical pathways, meaning there are many different possible compositions the pianist could create.

Dr. Adrian Hazzard, Research Fellow at the University of Nottingham's Mixed Reality Lab said: "Climb is made up of 23 fragments or musical events that the <u>code</u> allows to play in different orders. These fragments are like pieces of a puzzle that can be put together in different ways to create different pieces of music for the <u>pianist</u> to play and the audience to experience. The added visual element of the performance takes inspiration from videogames and provides a more immersive experience."

Duets and challenges

The codes can also trigger duets and challenges with the interactive system mimicking an invisible musical partner who may jump to new points in the score testing the pianists skills.

The Mixed Reality Lab creates interactive technologies to enhance everyday life. Research is grounded in the field of Human-Computer Interaction and crosses into the arts and social sciences. Using computer science methodology the team of experts develop novel digital technologies and deploy and understand them in real situations.

Adrian said: "We're delighted to be participating in All Your Bass. The NVA is at the vanguard of bringing cutting edge work to the public and



we can't wait to see what they make of our interactive musical experiences."

Provided by University of Nottingham

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