

# NOTTINGHAM TRENT UNIVERSITY



A breakthrough that has had a significant impact on global security and the fight against terrorism has been chosen for this year's award.

The new method of 3D X-ray imaging -developed by an academic at Nottingham Trent University - is used to detect weapons and explosives hidden in luggage and has been incorporated into about 4,500 systems around the world.

During the inspection of an object, a single stationary X-ray source creates divergent X-ray beams that capture different views of the object, eliminating the need for multiple X-ray sources and complex movement mechanisms. The X-rays provide details of an object's shape and depth, and recently the method has incorporated molecular signature techniques to identify specific materials.

The impact of the work, led by Paul Evans, professor of applied imaging science, was recognised as part of Nottingham Trent's 2015 Queen's Anniversary Prize.

The institution has also formed a spin-off company -Halo X-ray Technologies -with Cranfield University to commercialise the technology.

The judges were impressed by the way the original research has been successfully commercialised, saying that the "pioneering research" had "led to the development of 3D imaging that is now used worldwide in managing security and public safety".

The judges commended the university for its continued refinement of the original research, which recently resulted in a multimillion-pound grant from the US Department of Homeland Security.