New device ‘sees’ through walls

Men with vision: UOW students Matthew Kitchener, Wenbin Shao, Alex Song, Professor Salim Bouzerdoum and Jie Yang are part of a team which has developed a new radar system that can “see” through walls and solid objects.

Matthew Jones

IT'S the stuff of science fiction - the ability to see through walls and other solid objects, in real-time. But thanks to an enterprising group of University of Wollongong students, that's now possible - and rights optional.

Alex Song, Matthew Kitchener, Wenbin Shao, Jie Yang and Yhen-xin Feng's work on the aptly-named Compressed Sensing Imager, or CSI, recently gained them a national innovation award.

While other systems to see through walls and other solid objects exist, the UOW team's solution offers the benefit of portability, with the whole system able to be packed into a container the size of a briefcase and carried or mounted on a vehicle.

Mr Yang said the CSI could save lives some day, with emergency services able to use it to spot survivors trapped beneath rubble or differentiate between hostages and their captors.

"For resource exploration and infrastructure maintenance, the system can also reveal underground objects non-intrusively," he said.

The system also has a range of military use, with soldiers able to quickly determine friend from foe.

Software designed by the students also makes it easier for operators to understand and act on the information the system gathers, which is delivered in real-time, unlike other systems which can only deliver an image every few minutes.

The team collaborated with universities in the United States and have created prototypes, with plans to commercialise the technology soon.

Each member of the UOW team was given $1000 for their win at the NASSCOM Innovation Student Awards in Sydney last month.

Team supervisor Professor Salim Bouzerdoum last year won the Eureka Prize for Outstanding Science in Support of Defense or National Security for his role in the development of the technology.