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Australian researchers invent a device to better identify and treat pain

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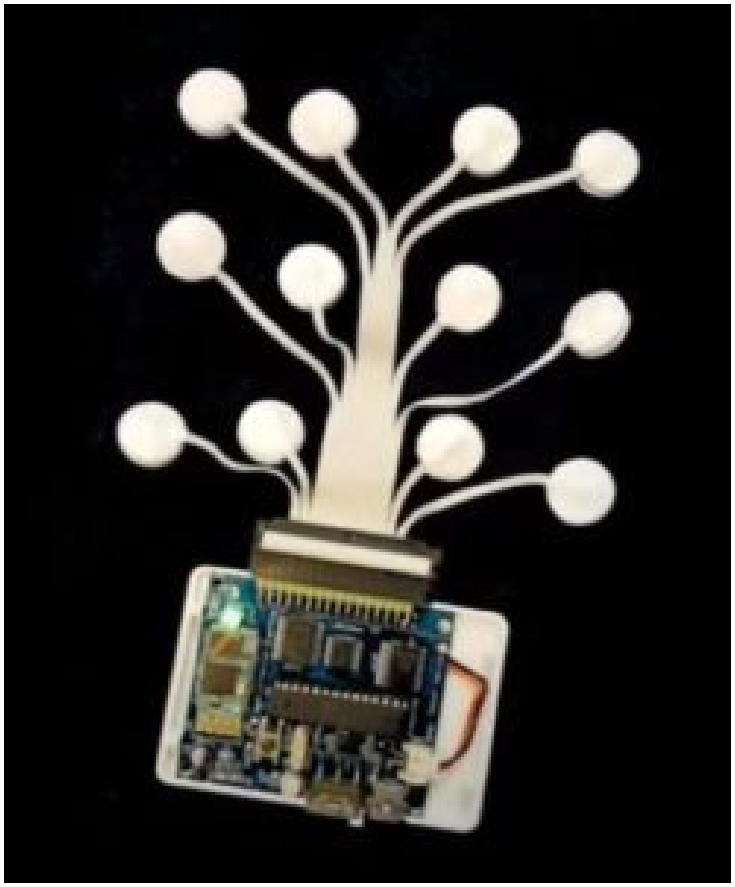

A team of Griffith health technology researchers has won the iAwards 2020 Business Industry Solution of the Year with a device they created to better identify and treat pain.

Menzies Health Institute Queensland NHMRC Early Career Research Fellow Dr. Daniel Harvie and his team of PhD candidate Nick Olthof and Griffith Electronic and Computer Engineering alumnus Dylan Chippindall won the national award after taking out the state prize in October.

Their invention, the Imprint Tactile Acuity Device (iTAD), will soon be tested in clinical trials. The national award recognises their research as an innovative step in the right direction.

Dr Harvie said their aim was to solve a significant issue in a practical way, with the cause of persistent pain often invisible, and thus very difficult to treat.

“Tactile acuity is the ability to precisely feel the location and quality of touch on the body,” Dr Harvie said.

“This sensory impairment has shown to correspond to changes in the area of the brain that processes information from the body (and) it has been proposed that re-training tactile acuity might reduce pain by reversing these changes.”

The iTAD is a device that delivers vibro-tactile impulses through 12 nodes, imbedded in a wearable strap and is designed to create greater visibility when treating pain.

“New science suggests that changes in the nervous system can be a key cause and the iTAD can help identify and treat those changes in the nervous system,” Dr Harvie said.

“Using our wirelessly connected tablet, clinicians like physiotherapists can measure how accurately patients can perceive sensations and they can identify people who might benefit from sensory training using the device.”

Not only does the iTAD provide an interface for sensory testing and training games while offering feedback to patients and therapists, but it is also more efficient than its alternatives.

“The iTAD fills a real gap in the management of a massive problem and it does so in a way that is really, really practical,” Dr Harvie said.