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Australia designs 3D-printed sensor bracelet as new assistive healthcare technology

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Made with a type of resin, the bracelet works by picking up tiny movements in the user's wrist when they move their fingers



Australian researchers are developing a 3D printed bracelet to allow people living with hand-impairment to easily use computers and play video games. The bracelet and programme have been developed by a team of engineers in the University of Sydney's School of Computer Science.

In 2020, Dr Withana received an ARC DECRA fellowship to investigate novel sensor fabrication techniques for wearable applications. Currently, the research team is funded by Cerebral Palsy Alliance and Neurodisability Assist Trust to further investigate how this technology can be used to help people living with cerebral palsy.

The sensors were designed using computational fabrication techniques, with the components able to be printed using a low-cost, commercial 3D printer. The team has also developed a simple, easy-to-use tool that allows users to customise the sensor to fit their needs.

The researchers plan to release the tools to create sensor bracelets as open-source software, with the aim of improving accessibility for people living with disability worldwide.