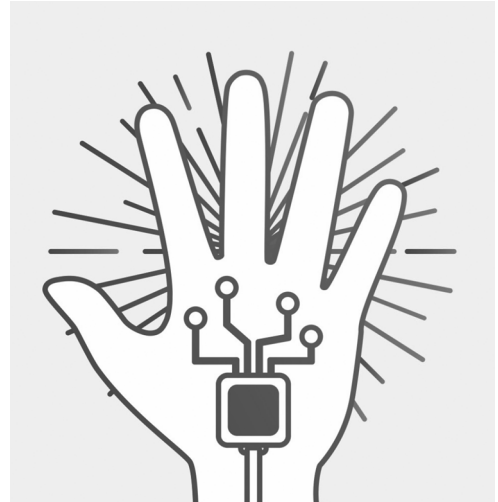


Wearable tech-glove translates sign language

- 1 UCLA bioengineers have designed a glove-like device that can translate American Sign Language into English speech in real time through a smartphone app. “Our hope is that this opens up an easy way for people who use sign language to communicate directly with non-signers without needing someone else to translate for them,” said Jun Chen, an assistant professor of bioengineering at the UCLA Samueli School of Engineering and the principal investigator on the research. “ 36 , we hope it can help more people learn sign language themselves.”



- 2 The system includes a pair of gloves with thin, stretchable sensors that run the length of each of the five fingers. These sensors, made from electrically conducting yarns, pick up hand motions and finger placements that stand for individual letters, numbers, words and phrases.
- 3 The device then turns the finger movements into electrical signals, which are sent to a dollar-coin-sized circuit board worn on the wrist. The board transmits those signals wirelessly to a smartphone that translates them into spoken words at the rate of about one word per second.
- 4 Previous wearable systems that offered translation from American Sign Language were limited by bulky and heavy device designs or were unpleasant to wear, Chen said. The device developed by the UCLA team is made from lightweight and inexpensive but long-lasting, stretchable polymers. The electronic sensors are also very flexible and inexpensive.

sciencedaily.com, 2020