



PUBLISHED 2 weeks ago

## Scientists develop system to control artificial hands just by thinking

[f](#) [t](#) [G+](#) [w](#) [0 comments](#)


Scientists have developed a system that can read brain signals to help users control an artificial hand just by thinking -- an advance that could help stroke patients regain the ability to move their fingers.

Spinal injuries or stroke often leaves a person partially paralysed. Such disabilities leave them disconnected from their families and community. But with the technology, they can fulfill basic needs, such as getting a glass of water or typing on the screen," said Dr. Haider Raza, from University of Birmingham in the UK, one of the scientists who worked on the system. The team, which includes researchers from the Indian Institute of Technology (IIT) Bombay, developed a brain-computer interface (BCI) that can 'read' a

person's brain waves and convert them to computer signals.

Their research was recently published in the Journal of Biomedical and Health Informatics, Transactions on Cognitive and Developmental systems, and Journal of Neuroscience Methods.

"BCI is technology by which we control the computer using the mind. My focus is on rehabilitation -- to treat those whose brain is injured," Raza told PTI. Currently, physiotherapists try to restore movement in patients physically moving the paralysed body parts, while asking the patients to 'imagine' making those movements.

"For example, if somebody just imagines moving their hands, a part of their brain gets activated. If we do this imagination exercise on a regular basis, there is a possibility of reactivating those regions," Raza said.

"However, just imagining is not enough -- active practice is also needed, which is what physiotherapists do," he said.

For this purpose the researchers designed an exoskeleton for the hand, which is connected with the computer.

"A stroke patient, who has lost his ability to move his hand, will imagine moving his hand. The BCI algorithm -- which reads the brain signals -- will detect that the patient is trying to move their hand," said Raza.

The command from the computer will move the robotic exoskeleton.

"This will give the patient both mental practice and physical practice," Raza said. "We have tested the system on 21 patients. Out of which, 14 patients have shown improvement," he said.

The team is now trying to improve the technology to build a complete exoskeleton.

Source: gadgetsnow.com

### Promoted stories



New Electric Cars 2019: It'll Be a Good Year!  
DrivingElectric



Calm returns to Bosomtwe NDC



Born Before 1964? Claim These 9 Senior Rebates Now  
Weekly Penny



You Should Never Shop On Amazon Without Using This  
Weekly Penny



Homeowners Who Took a Mortgage Between 1988 - 2011  
ThePPIFinder

Recommended by

Live Radio

Live

### Recommended News Articles



Betway Cup 2019: Liberty draw Ashantigold, Medeama face Aduana Stars



Everton join chase for Ghanaian forward Benjamin Tetteh



Great Olympics to play Hearts of Oak in President Cup on 6 March



Rabiu Mohammed set to leave Anzhi this January

### Most popular

### Most commented

- 1 Man eats girlfriends booty for the first time dies from E. Coli News
- 2 I'm a lesbian; I have attempted suicide twice, your insults don't bother me' - Lawyer
- 3 How To Possibly Save And Restore Your Eyesight With One Ingredient! | Home Remedy Videos News
- 4 "I'm not afraid of an arrest" - NAM1 tweets
- 5 'I won't go down alone; will expose some politicians' - NAM 1 threatens cohorts
- 6 12-year-old son of murdered top Manager of Ghana Ports speaks
- 7 Man eats girlfriends booty for the first time dies from E. Coli
- 8 Spreading Salt Around The House - Here's Why It's So Incredible! | Home Remedy Videos News
- 9 Benefits Of Eating Garlic On Empty Stomach | Telugu Health Tips | Home Remedies | Health Tips | Home Remedy Videos News
- 10 How to cure piles permanently at home in 3 days News

Comments

Please leave your comment below

Your name

Your comment

Post comment

dysoncyclone v10

35 day money-back guarantee

Pay monthly

Free scheduled delivery

Shop now

