

## Motion capture system to speed up physiotherapy visits



Researchers at NTU Singapore have developed a motion capture technology which would aid doctors and physiotherapists in their consultations and diagnoses for patients in need of rehabilitation after an injury or recovering from an illness. Compared to conventional motion capture (mocap) labs that involve a lengthy setup process with technicians and a physiotherapist, the NTU-developed tech would allow patients to start consultations within minutes. As it streamlines the analysis of subjects' movements by removing the need for marker placement and data post-processing, consultations would also take an hour less on average.

Through capturing and analysing the movements of over 150 subjects with machine learning, the technology has also been shown to be more accurate than marker-less motion capture systems available in the market.

Traditionally, to capture human motion, most labs use a marker-based system. By attaching reflective markers to a subject's body, cameras reconstruct the movement in 3D by observing the movements of the markers. The new system eliminates the need for these markers, as it has 'learned' where the markers would be placed through machine learning.

The made-in-NTU marker-less motion capture system has already received interest in being adopted by several Singapore-based companies. A patent application for the coating has also been filed.