

Walking robots: it's all in the hips, say Japan researchers

October 22 2013



Robot researchers in Japan have proved what entertainers from Elvis Presley to Miley Cyrus knew all along: the secret is in the hips.

But where Elvis "The Pelvis" gyrated his way to 1950s fame and one-time child star Cyrus attained instant Internet notoriety with her recent awards show "twerking", the engineers just wanted to make their robots walk more naturally.

A team of researchers at Waseda University's Humanoid Robotics Institute, near Tokyo, spent hours analysing how the waist was used to give humans their easy gait.

They then tried to mimic this in their creations.

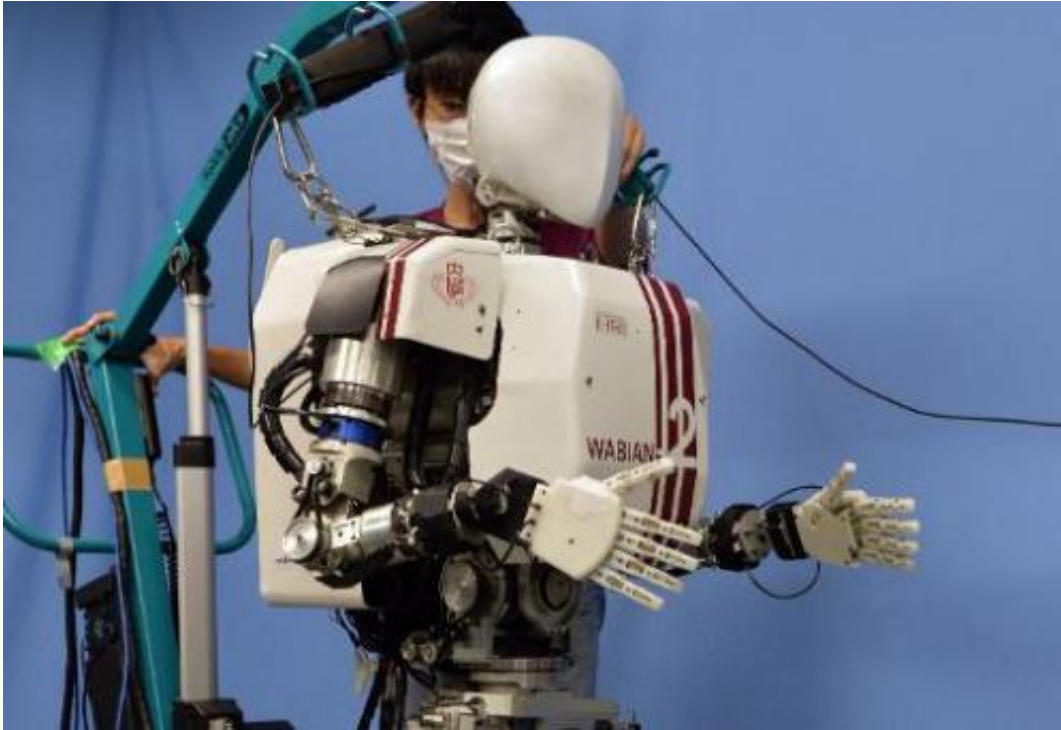
"Most [humanoid robots](#) don't have waist motions... so must bend their knees," giving them an awkward and stilted walk, assistant professor Kenji Hashimoto told reporters Tuesday.

The team's Wabian-2 has flexible hips that allow each leg to rotate and mean the robot can walk in a way that closely mimics humans.

"The waist is rolling, and the robot can stretch its knees," he said. The pelvis also twists and moves up and down just as its human counterpart does, he added.

While the Wabian-2 may be some way off grinding its robot booty on stage, it might help researchers learn more about people.

"In the case of Wabian-2, we want to mimic the human body," said Hashimoto. "The purpose of developing a [humanoid robot](#) is to understand humans."



A humanoid robot "Wabian-2R", developed by Japan's Waseda University professor Atsuo Takanishi walks for a demonstration at Takanishi's laboratory in Tokyo on October 22, 2013



More information: [www.takanishi.mech.waseda.ac.j...
top/research/wabian/](http://www.takanishi.mech.waseda.ac.jp/top/research/wabian/)

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