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IN BRIEF 31 May 2017

# Waltzing robot teaches beginners how to dance like a pro



## Follow my lead

System Robotics Laboratory

TWO left feet? Not to worry – now you can take lessons with a robotic instructor designed to teach humans how to dance.

The wheeled 1.8-metre-tall robot has an upper body that moves like that of a human dancer to gently guide novices through routines while adapting to their skill level. A force sensor and two laser rangefinders track the student's movements, which are compared with motion-capture data from professional dancers.

As students progress, the robot gradually reduces the force used to lead them, so they become less reliant on its guidance. Its face displays real-time feedback to

help pinpoint mistakes, as well as showing overall progress to provide encouragement.

In tests with volunteers who had never waltzed before, five out of six improved, according to results to be presented at the International Conference on Robotics and Automation in Singapore later this month. With another group, the robot was not programmed to adapt to students' progress, and four out of six showed no improvement.

Enabling robots to teach humans through physical interaction could be useful for physical rehabilitation or sports training, says the robot's creator Diego Felipe Paez Granados at Tohoku University in Japan.

*This article appeared in print under the headline "Waltzing bot gives dance lessons"*

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Want more? Read the extended version of this article.

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