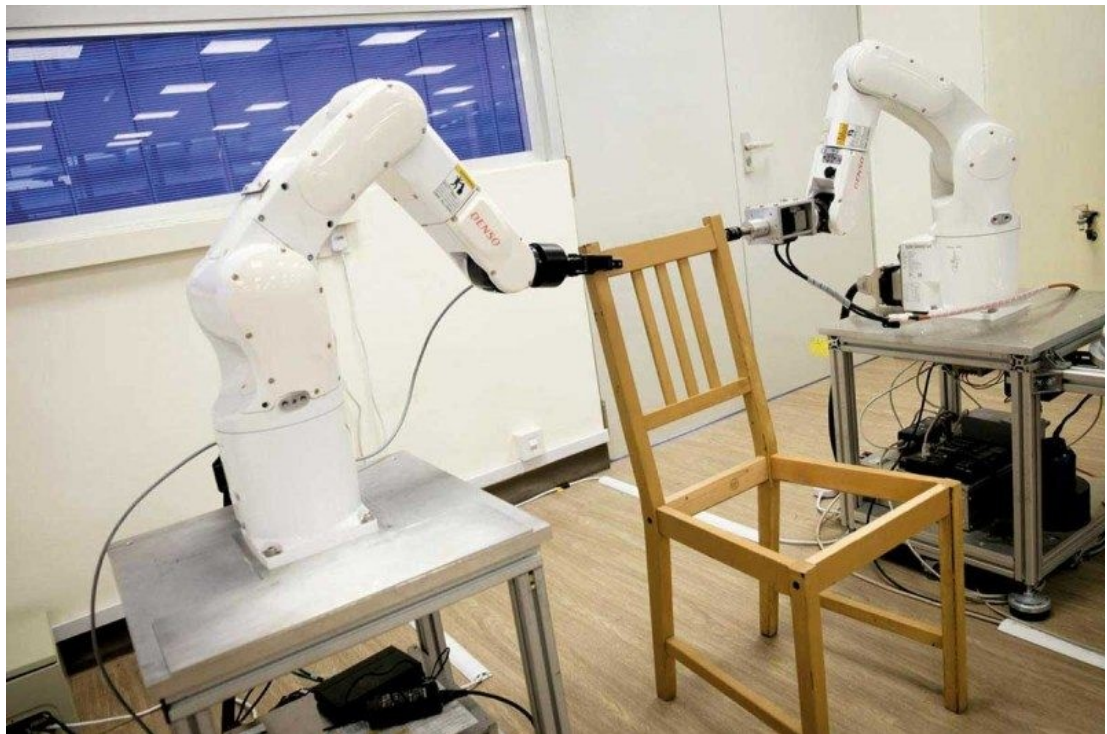


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Watch robots assemble a flat-pack IKEA chair in just 9 minutes



Francisco Suárez-Ruiz and Quang-Cuong Pham, Nanyang Technological University, Singapore

PUTTING together flat-pack furniture can be arduous and frustrating. So why not let robots do it instead? A pair of robot arms can now assemble an IKEA chair in just a few minutes, and without arguing too.

The setup consists of two robot arms with grippers and force sensors, all watched over by a 3D camera. Once the parts of an IKEA STEFAN chair are placed in front of the arms, the camera takes a snapshot of the scene and relays each piece's location.

The robots were pre-programmed with information about how the parts fit together and in what order, but besides that they determined their movements

automatically, using the force sensors to make sure nothing was broken.

The robot arms take 20 minutes to put together the STEFAN chair (*Science Robotics*, doi.org/cnm8), although it isn't quite usable at the end of the process. "There are a few steps that we have not completed, such as putting in the screws," says Quang-Cuong Pham at Nanyang Technological University in Singapore. But who hasn't found a few unused screws after a day of assembling IKEA furniture?

This article appeared in print under the headline "Robots assemble an IKEA chair"

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