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Video: MIT researchers create self-assembling robots

Posted by Matt Rocheleau October 7, 2013 02:42 PM

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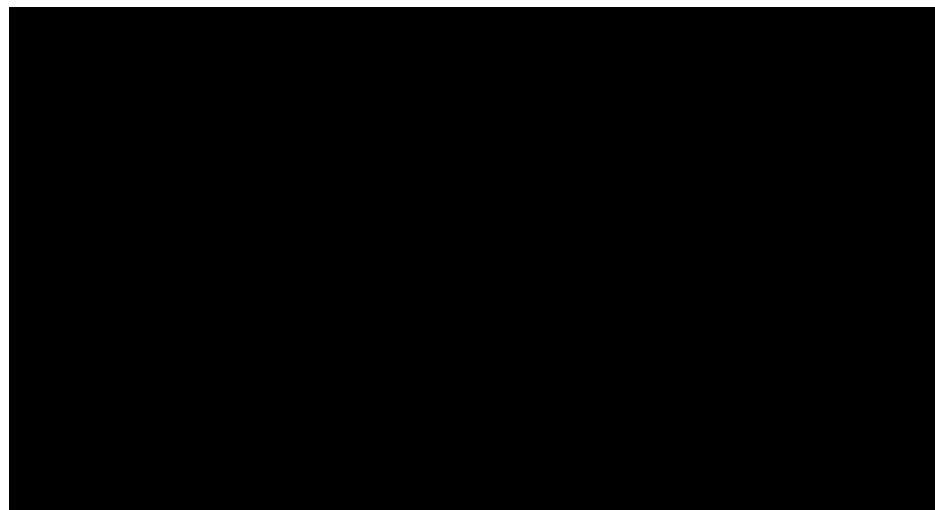
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By Matt Rocheleau, Town Correspondent

Researchers at MIT have created small cube-shaped robots that can self-assemble.

The team of scientists from MIT's Computer Science and Artificial Intelligence Laboratory are now working to build an army of 100 cubes and designing algorithms to guide each of them in any direction, [according to the institute](#).

"We want hundreds of cubes, scattered randomly across the floor, to be able to identify each other, coalesce, and autonomously transform into a chair, or a ladder, or a desk, on demand," John Romanishin said in a statement from the institute's news office.

Romanishin, Daniela Rus and Kyle Gilpin created the self-assembling robots and will describe their project in a paper they plan to present next month at the IEEE/RSJ International Conference on Intelligent Robots and Systems in Japan, MIT officials said.

The team invented what it calls "M-Blocks" – small cubes which feature no external moving parts, but instead use fast-spinning, quick-braking internal flywheels to create momentum to propel themselves forward, leap on top of, roll across and climb over and around each other and, using magnets, snap together to form arbitrary shapes.

"It's one of these things that the [modular-robotics] community has been trying to do for a long time," said a statement from Rus. "We just needed a creative insight and

somebody who was passionate enough to keep coming at it — despite being discouraged.”

The researchers said that armies of mobile cubes could someday prove useful in a number of ways, including: temporarily repairing bridges or building during emergencies; raising and reconfiguring scaffolding; assembling into various types of furniture or heavy equipment; transporting special equipment – like cameras, lights or battery packs; and they could even venture into environments and places that humans cannot, identify problems and reorganize themselves to provide solutions, according to MIT.

Matt Rocheleau can be reached at mjrochele@gmail.com. Looking for more coverage of area colleges and universities? Go to our [Your Campus pages](#).

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