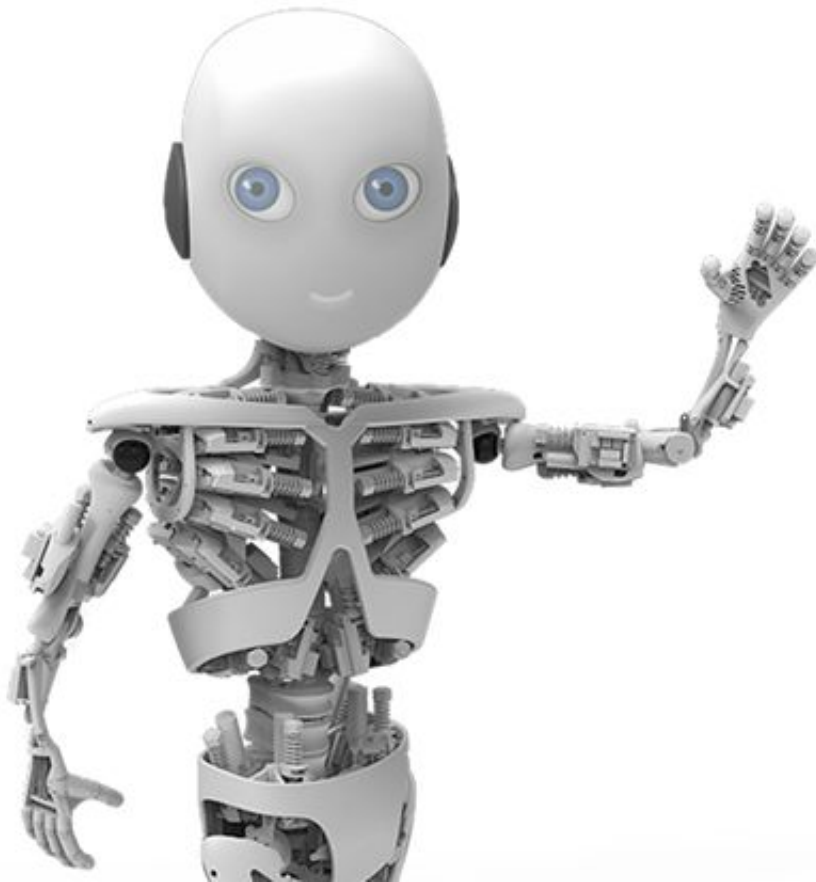


# Zurich AI team plans March delivery for humanoid Roboy (w/ Video)

December 31 2012, by Nancy Owano

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(Phys.org)—The University of Zurich's Artificial Intelligence Lab is

leading the way to the delivery of Roboy, an advanced humanoid, which has a due date for saying Hello World in March. Similar to the Japanese initiative of developing robots that can assist people in daily living, this robot is designed to emulate humans and help out in daily environments. Roboy is the work of engineers at the University of Zurich's Artificial Intelligence Lab, according to design principles developed by Prof. Dr. Rolf Pfeifer, who is the lab director, and assisted by other development partners.

The project has involved engineers and scientists. The team members and partners share a commitment toward continued research in "soft robotics." They would like to see Roboy become a blueprint for service robots working with humans, supporting elderly people, for example, to remain in independent living situations, similar to the initiatives of robot research in Japan that are focused on the needs of the aging there.

The 1.20m tall Roboy bears a distinguishing feature of having a tendon-driven locomotion system, in that Roboy is built based on tendon-controlled [motor technology](#). In attempting to closely replicate the functions of human [tendons](#), the team has been working on "radical artificial tendons" that can make Roboy move in a human fashion. A tendon is the flexible cord of strong fibrous collagen tissue attaching muscle to bone. Muscles move joints; when a muscle contracts, it pulls on a bone. The tendon structure transmits the force from muscle to the bone for joint movements.

The researchers in turn view Roboy in a bigger picture as a potential marker in [robotics research](#). "A robotics platform is being created to investigate and further develop the principles of tendon-driven [drive technology](#) in robotics. Regardless of whether the service robots of the future resemble humans or not, the principles applied such as tendon-driven movement will be put to use," according to a Roboy press release.

Roboy will be unveiled at the Robots on Tour event in Zurich in March, along with documentation on its development. The Robots on Tour event carries an ambitious subtitle of "World Congress and Exhibition of Robots, Humanoids, Cyborgs and more." The event is being held on the occasion of the 25th anniversary of the University of Zurich's AI Lab.

The robot is still in construction phase. The timeline for development has involved torso completion, leg development, CAD model of Roboy in its entirety, assembly, and Roboy learning to move.

As of mid-December, the team's press release said that Roboy "is getting a new face and can already move his arms." Later in the project Roboy will be covered with "soft skin" to make the robot more comfortable to the touch.

Supporting the race to introduce robot in March is the group's financing model. They are attempting to raise funds for producing the Roboy by selling logo space on its body, where names or company logos will be engraved onto the Roboy. In addition to partner support, the AI Lab is turning to crowd-[funding](#).

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