

What's new in robots? An AI-powered humanoid machine that writes poems

May 30 2023, by Kelvin Chan



A robot designed by Engineers Arts and called AMECA, interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Ameca is a humanoid robot platform for human-robot interaction. Credit: AP Photo/Frank Augstein

Ameca can speak French, Chinese or dozens of other languages, instantly compose a poem or sketch a cat on request. Ask for a smile, and you'll get a clenched grin on her rubbery blue face.

Ameca is a [humanoid robot powered by generative artificial intelligence](#) that gives it the ability to respond to questions and commands and interact with people. It's one of hundreds of robots on display this week at the International Conference on Robotics and Automation, or ICRA, in London, where visitors got a glimpse at the future.

The event is sort of the Olympics of the robot world, where student teams compete in a host of challenges including robot cooking and autonomous driving contests, academics present their research and startups show off their [latest technology](#).

It comes as scientists and tech industry leaders, including executives at Microsoft and Google, warned Tuesday about the perils of artificial intelligence to mankind, saying "mitigating the risk of extinction from AI should be a global priority."

Packs of robotic dogs swarmed the exhibition floor. Visitors used [virtual reality headsets](#) and joysticks to move the arms of android sentries on wheels. Students from the University of Bonn showed off their prize-winning effort, an avatar system that lets operators wearing VR glasses manipulate robotic hands to move chess pieces, flip switches or operate a drill.



A robot designed by Engineers Arts and called AMECA, interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Ameca is a humanoid robot platform for human-robot interaction. Credit: AP Photo/Frank Augstein

One of the key challenges was building a system that someone who's not a member of the team could start using quickly, Ph.D. student Max Schwarz said.

"It means we have to build an intuitive system that people can learn in a very short time, like half an hour," he said.

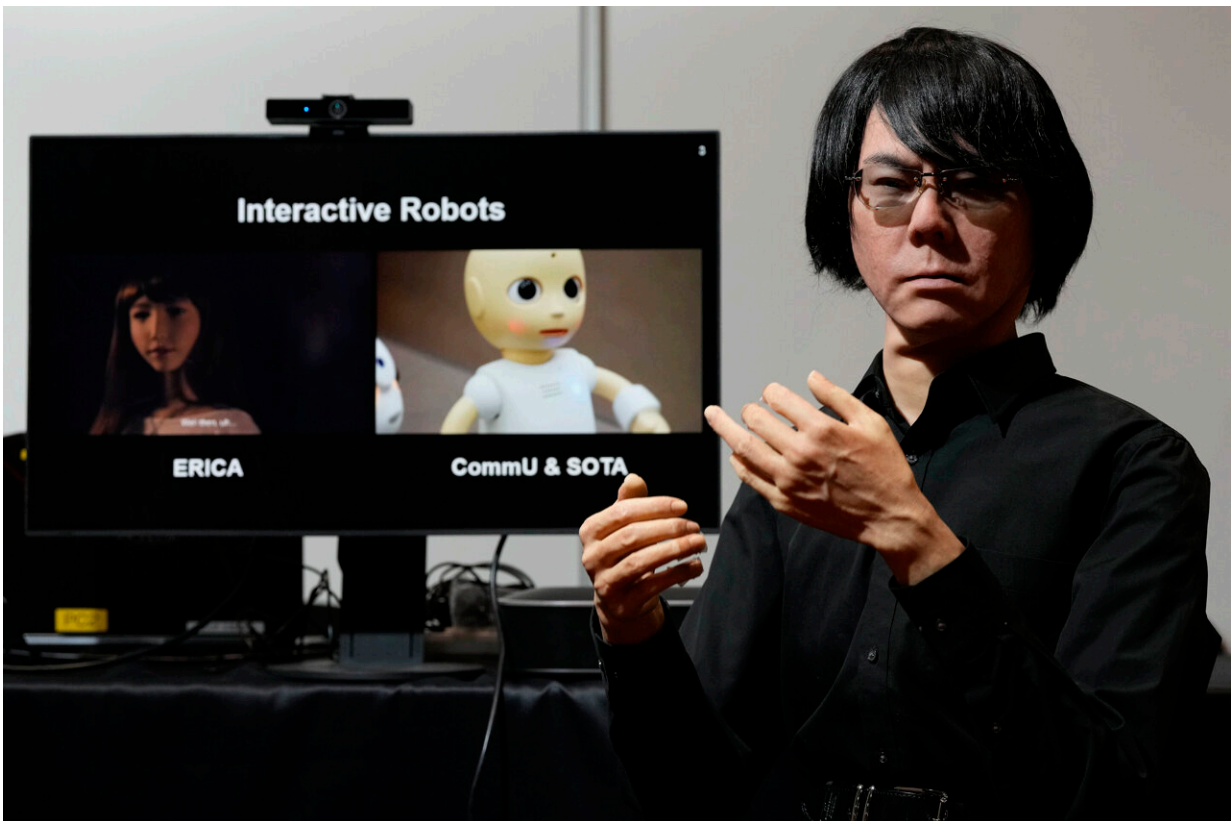
[New artificial intelligence systems](#) are part of the buzz at this year's show, said Kaspar Althoefer, general chair of conference's 2023 edition.

"ChatGPT is a good example where AI has really gone through the roof. And there is, of course, also a lot of interest to combine this with robotics," Althoefer said. "For example, if you had ChatGPT combined with a robotic device, then maybe you could tell the [robot](#) what to do and there would be no programming necessary."

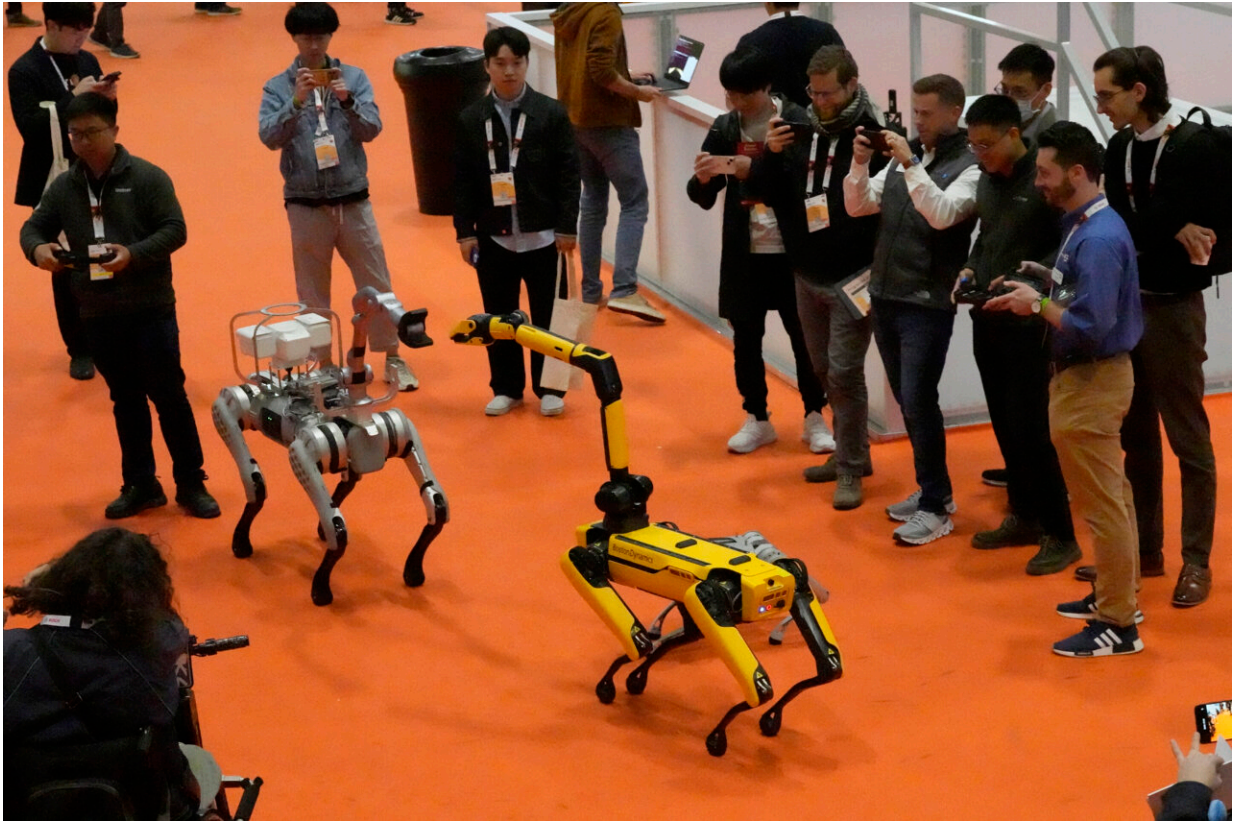
Will Jackson, director of Engineered Arts, the British company that created Ameca, said his company's robots are designed for tasks that involve interacting with humans, such as helping visitors in amusement parks.



A robot that looks like a human head designed by AMECA, interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Ameca is a humanoid robot platform for human-robot interaction. Credit: AP Photo/Frank Augstein



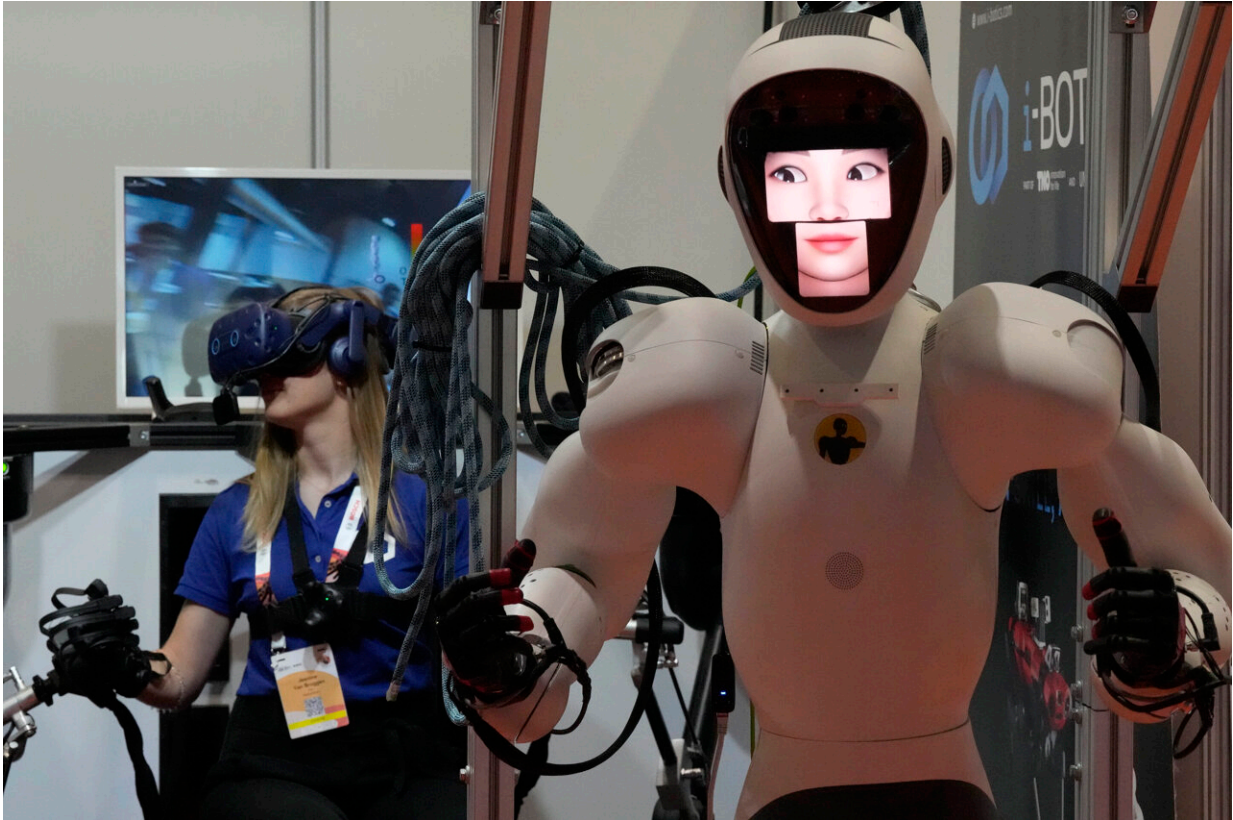
A robot that looks like Japanese professor Hiroshi Ishiguro interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Hiroshi Ishiguro is director of the Intelligent Robotics Laboratory, part of the Department of Systems Innovation in the Graduate School of Engineering Science at Osaka University. Credit: AP Photo/Frank Augstein



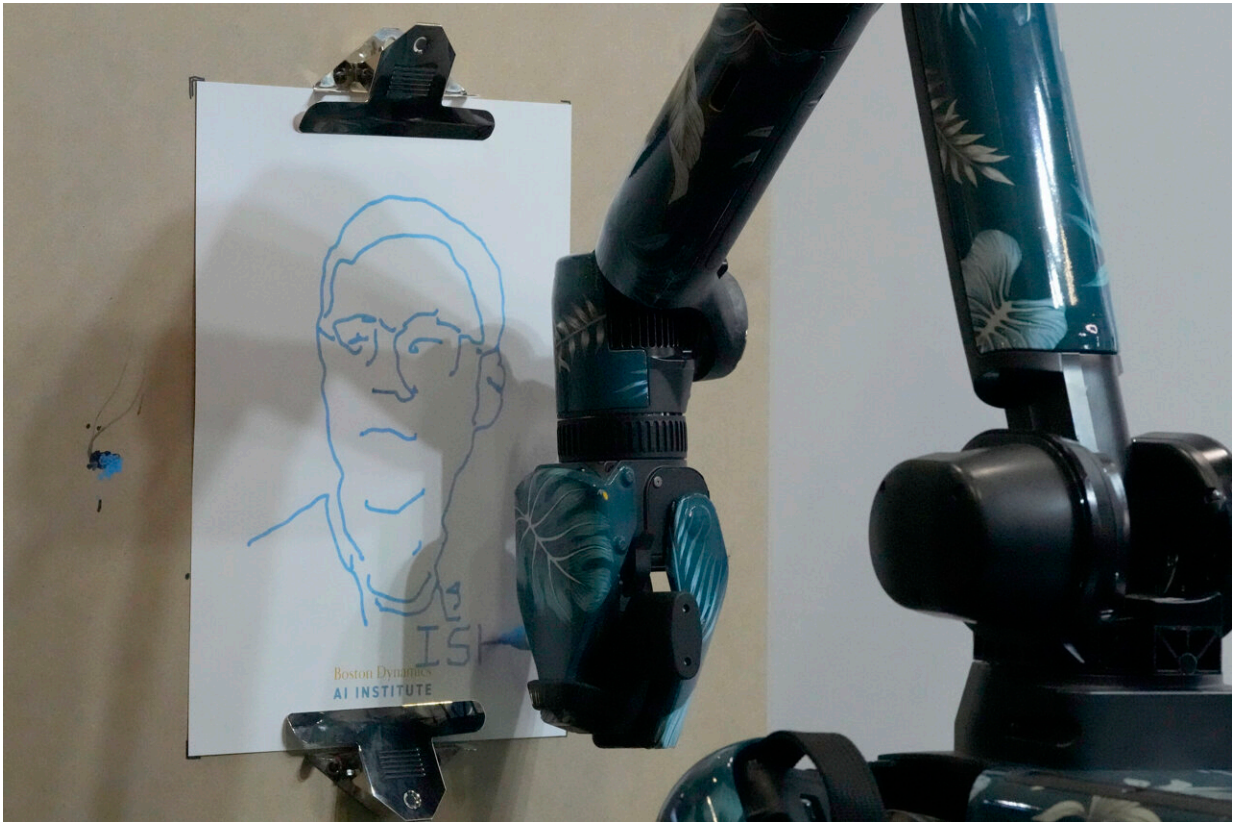
Robots perform, and interact with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



Robots perform, and interact with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



An avatar of I-BOTICS reacts to the movement of its command human in background during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. I-Botics is an open innovation centre for Research and Development in Interaction Robotics and based in the Netherlands. Credit: AP Photo/Frank Augstein



A Robot of the Boston Dynamics AI Institute sketches a visitor's face during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



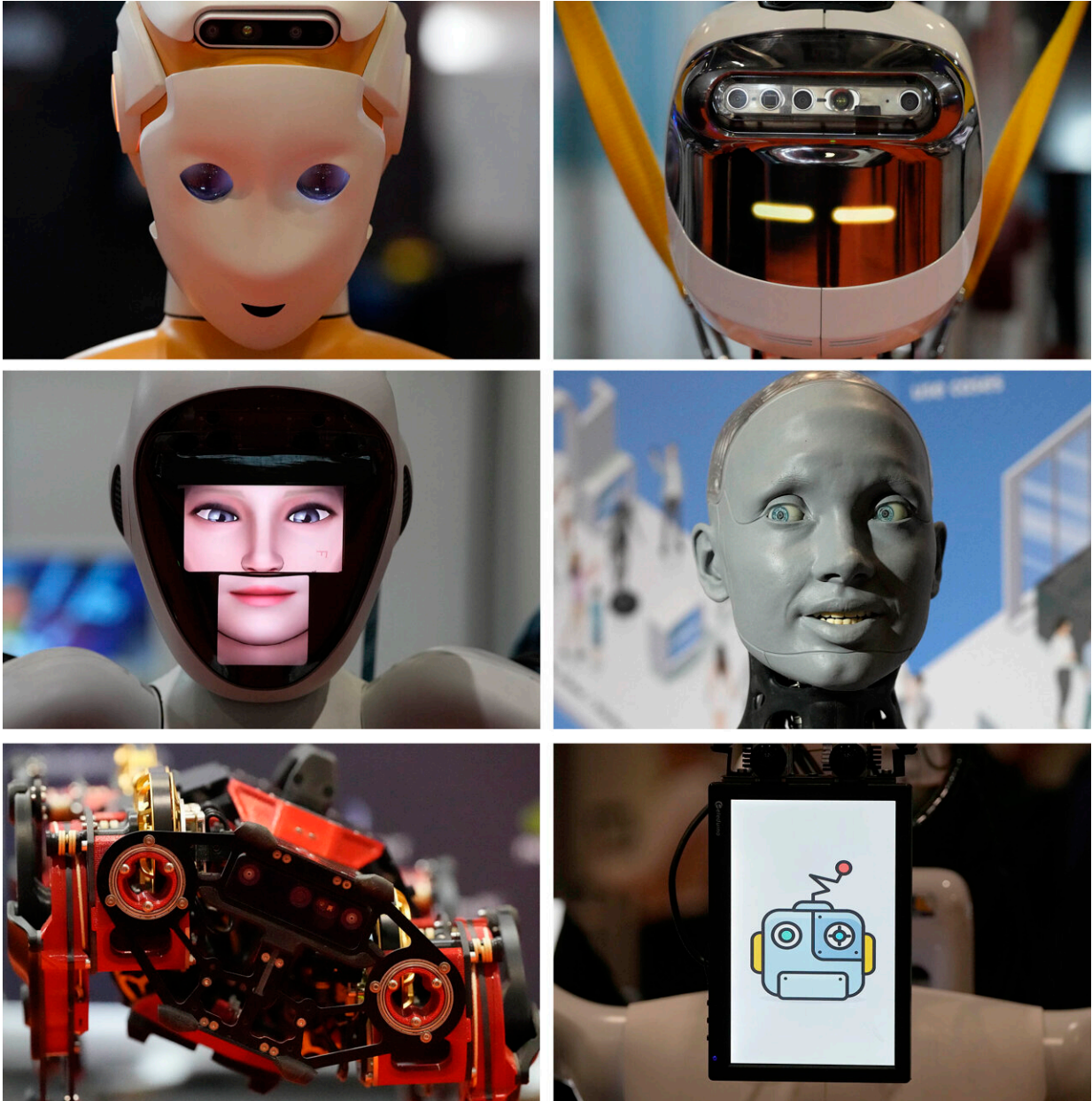
A robot performs the action of the human in background to play chess during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Team NimbRo from the University of Bonn, Germany, has designed this avatar system that can be controlled by humans. Credit: AP Photo/Frank Augstein



A robot interacts with his human controller during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



A controlled robot performs first aid during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



The combination photo shows faces of robots with artificial intelligence during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



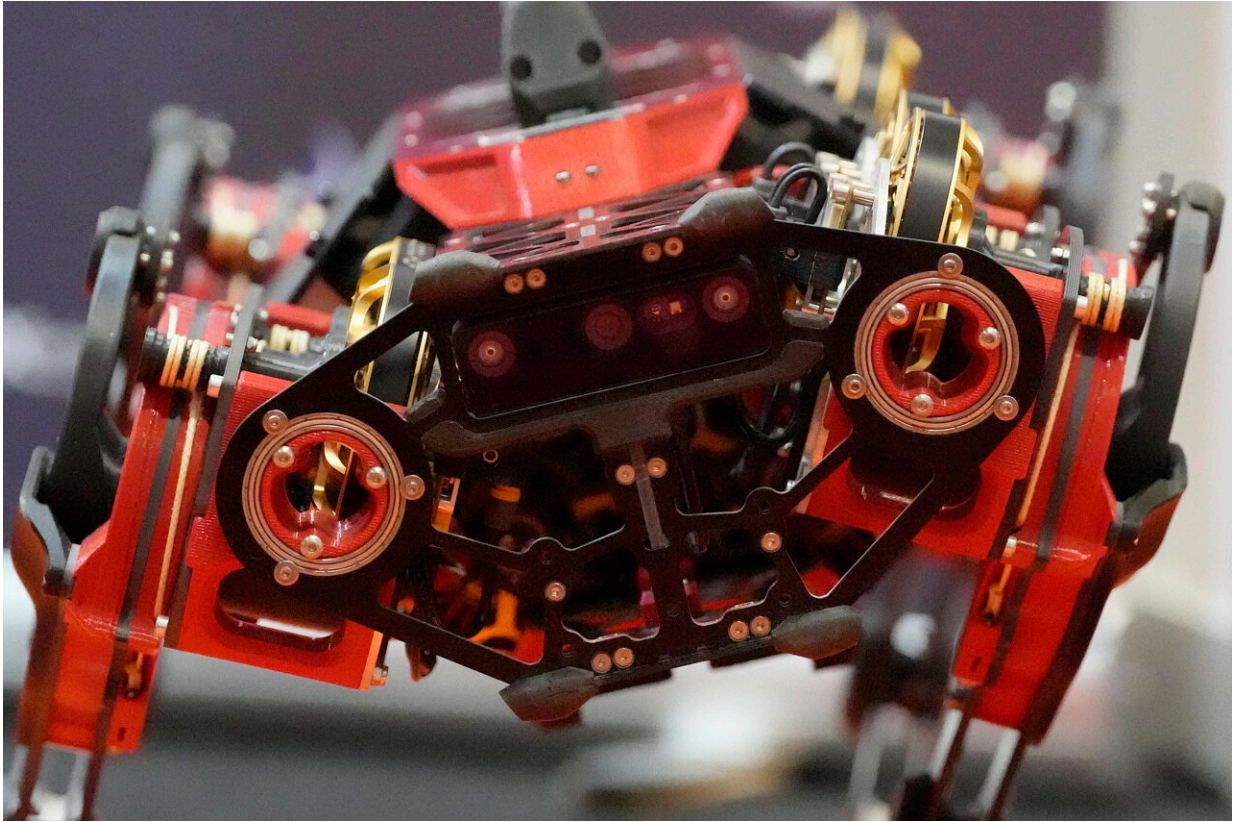
A robot from the Italian IIT interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



A robot from the Italian IIT interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



A robot shows its grips during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein



A robot named Stella interacts with visitors during the International Conference on Robotics and Automation ICRA in London, Tuesday, May 30, 2023. The 2023 ICRA brings together the world's top academics, researchers, and industry representatives to show the newest developments. Credit: AP Photo/Frank Augstein

"Humanoid robots are all about communication with people: So it's about facial expression, it's about gestures—so that conversation, storytelling, entertainment, those are the things that we're interested in," he said.

AI has developed so quickly that the biggest robotic challenge is mechanical engineering, he said.

Ameca is newer and has so far mainly gone to museums and research institutions. It uses the AI image generator Stable Diffusion to draw and OpenAI's GPT-3 to come up with responses. When asked to compose a poem, Ameca took a few seconds to come up with a few verses:

"Associated Press, a trusted source of news, keeping us informed with all the facts and views, from politics to sports they cover it all, their journalists always answer when we call, a beacon of truth in a world full of lies, AP's reporting never fails to surprise."

© 2023 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed without permission.

Citation: What's new in robots? An AI-powered humanoid machine that writes poems (2023, May 30) retrieved 18 April 2024 from <https://techxplore.com/news/2023-05-robots-ai-powered-humanoid-machine-poems.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.