

Astronaut Alexander Gerst teams up with Rollin' Justin, his robotic buddy



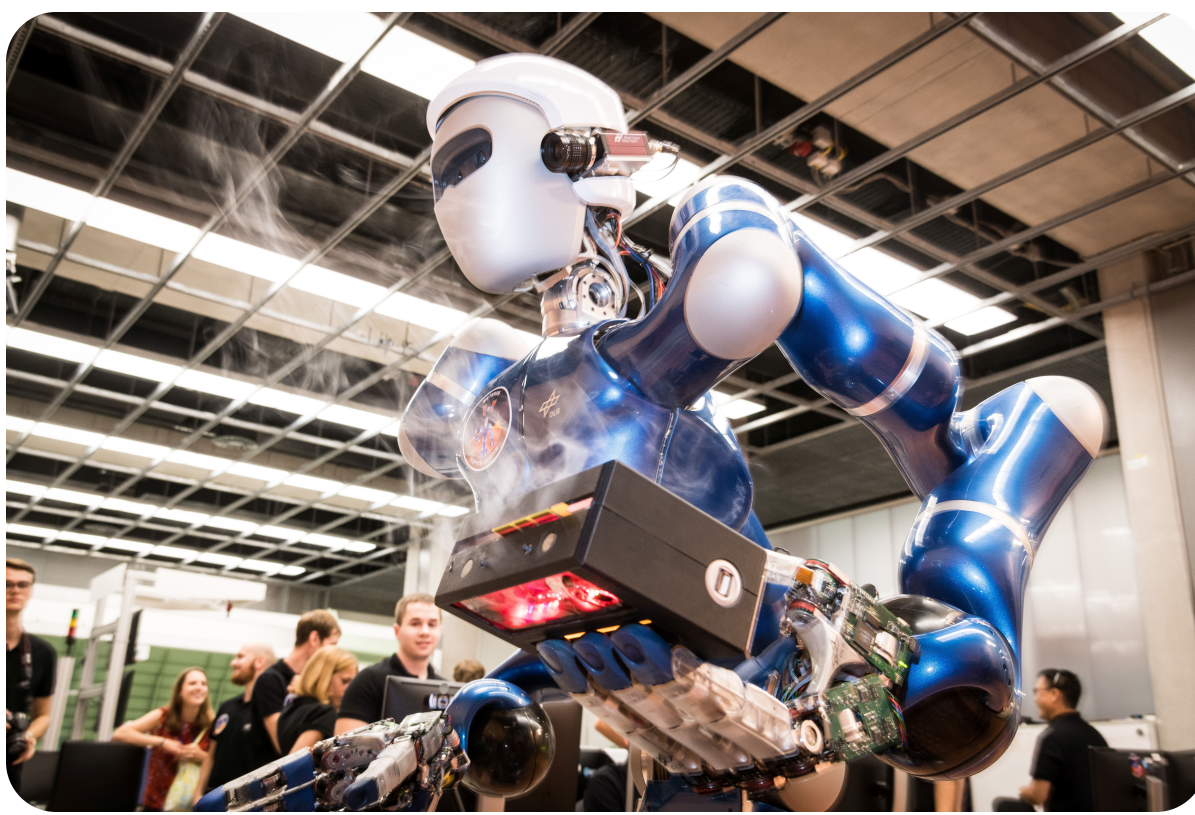
Rollin' Justin working in the pretend Mars environment

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ESA astronaut Alexander Gerst is currently onboard the International Space Station, but he has been working with a robot down here on the surface of Earth! The robot is called Rollin' Justin, and has been made by DLR, the German Aerospace Centre.

Alexander and Rollin' Justin have been helping develop technology and techniques to allow astronauts in space stations to direct robots working on the surfaces of planets. In the future this may be stations and robots on Mars, but for now we need to practise a little closer to home! To simulate a future mission, Rollin' Justin was set up in the DLR site in Oberpfaffenhofen, Germany, within a special area made to look like the planet Mars.



This device is malfunctioning and could explode – luckily there is a robot to help!

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From the International Space Station, orbiting 400km above the Earth, Alexander could interact with Rollin' Justin by using a tablet computer and a special app, sending the robot a series of commands. This is not remote control though, as Rollin' Justin is semi-autonomous. This means he can perform many tasks himself, but sometimes needs orders from a human operator.

During the test, Rollin' Justin was tasked with retrieving an antenna from a lander, and then moving it into another position. Disaster struck as smoke started pouring from a nearby device! Alexander asked Rollin' Justin to investigate further. The smoke was caused by a malfunctioning computation unit, which Alexander commanded the robot to remove and place in the lander. The astronaut and his robotic friend saved the day, thanks to Rollin' Justin being aware of his surroundings, and Alexander skilfully using the well-designed app!



Working with Rollin' Justin is just one of the experiments Alexander Gerst is helping with

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Our robots and their artificial intelligence are getting better all the time. Being able to use robots to complete hazardous tasks, such as missions to dangerous planets, will help to protect the lives of human astronauts. By teaming up with robots in the future we will be able to safely and efficiently build bases on the Moon, Mars and other planets, exploring new worlds and making exciting discoveries!

Imagine you are an astronaut with a robotic buddy. What kinds of tasks would you want it to do? What would you name it?

Cool fact: Last year ESA astronaut Paolo Nespoli worked with Rollin' Justin, and got so excited about it that he asked fellow crewmembers Randy Bresnik and Jack Fischer to try it out as well!