

THE WORLD OF ROBOTICISTS

Roboticists are scientists who design and build robots – machines that can do tasks on their own without a human controlling them. As technology becomes more advanced, roboticists are able to build robots that can do more things than ever before!

Roboticist
(row-BOT-uh-sist)



*Roboticists work with lots of different kinds of tools. When helping to build a robot's hardware, roboticists' tools include screwdrivers, **pliers**, and **soldering irons**. When creating the **software**, they use **computers**, **laptops**, and **tablets**.*

WHAT DO ROBOTICISTS DO?

Roboticists play a key role in designing robots that can help to shape Earth's future. But they don't work alone!

LAB WORK

Roboticists spend most of their time in the lab, working alongside **engineers** and **computer scientists** to build their robots. The engineers build the physical parts of the robot, including its body, motors, and sensors. The computer scientists, on the other hand, create the software that tells the robot how to act and respond to its **environment**.



FIELDWORK

Once the robot has been designed and built, it needs to be tested to make sure that it can do the job it was designed to do. Parts of the robot can be tested individually in the lab, but the most important bits of fieldwork are when the robot is tested as a complete unit in a “real-world environment”. It needs to be **reliable!**

WHO DO ROBOTICISTS WORK FOR?

Most roboticists work for private companies, like tech, healthcare, or **aerospace** institutions. Others work for university research laboratories, as well as for governments and the military.

FAMOUS DISCOVERIES

Roboticians have made many amazing discoveries and creations that have changed our understanding of what robots are capable of. Here's just a few of the biggest and best!

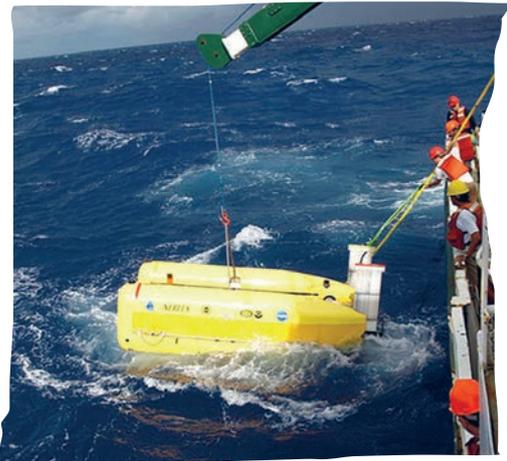


LUNOKHOD 1

In 1970, Lunokhod 1 became the first robotic **rover** to successfully land on the Moon. It took over 20,000 pictures that it sent back to scientists on Earth, and did 500 tests of the Moon's soil.

NEREUS

Nereus was one of the world's most advanced **autonomous** underwater vehicles. In 2009 it dived all the way to the bottom of the Mariana Trench, the deepest point on Earth!



SOJOURNER

Sojourner was the first robotic **rover** to land on another planet. It touched down on Mars in 1997. It wasn't supposed to last for more than seven days before breaking down – but it actually managed an amazing 83 days!

Roboticians are always designing exciting new robots; who knows what they might create next!

FAMOUS ROBOTICISTS

There have been so many clever roboticists over the years. Here's just a few of the most famous.



JOSEPH ENGELBERGER

Joseph Engelberger has been described as the “father of robotics”. He was an American engineer who developed “Unimate”, the world’s first **industrial** robot. Joseph proved that robots could be used to handle tricky or dangerous tasks!

CYNTHIA BREAZEAL

Cynthia is a roboticist and **AI researcher**. Her work explores interactions between robots and humans, and how robots can support humans in fields like medicine and education. As robots become more common in our daily lives, Cynthia’s research becomes more important!



TAKEO KANADE

Takeo is a Japanese robot researcher. His research into “computer vision” has led to huge developments in things like medical robots and autonomous vehicles. The more a robot can “see”, the more information it can take in and the more precise it can be.



These are just a few of the many scientists who have made a huge difference to the study of robots.

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