

Fill in the paragraphs with the right missing words.

Swarm Robotics

[1] Swarm robotics and microrobotics are a new type of technology. This technology has produced a new _____ of robots whose design is directly influenced and inspired by _____. Experts have _____ that there is a lot to learn from the animal kingdom's _____ system of co-operation.

[2] Scientists studied the _____ behaviour of ants. Ants join together to solve problems and they do this for the benefit of their community. Ants have _____ on the planet for much longer than _____ and have had millions of _____ of practice living in large _____.

[3] The _____ thing is that an ant doesn't stand out as an individual. It has _____ eyesight and little ability to think on its own. Together, however, ants show off higher-order _____. This is also true of bees, _____ of birds and _____ of fish.

[4] Following examples from nature, robotics designers have tried to _____ collective and swarm behaviour. They've _____ ways to divide technology and capabilities among different robots. The intention is to _____ a group of robots that is able to swarm, or join together, to solve problems. One robot on its own won't be able to _____ a problem, but it won't need to!

[5] Swarm robotics has many _____ uses. Robotic bees, for example, can help farmers with crop _____. Flying robots can search through a _____ during disasters to look for and locate _____. They have also been used to map the environment in Kenya. This has allowed environmentalists _____ the behaviour of animals such as baboons, and the impact of pests such as locusts, on vegetation for hundreds of miles.

[6] Right now, teams of biologists, scientists and engineers are trying to work out how to make space and ocean floor exploration possible using this new technology. What's more, all this expert teamwork shows that, _____ insects have been co-operating for millions of years, humans can do it, _____! Ants are an example to us all!

2022 © Nizar A. Aziz