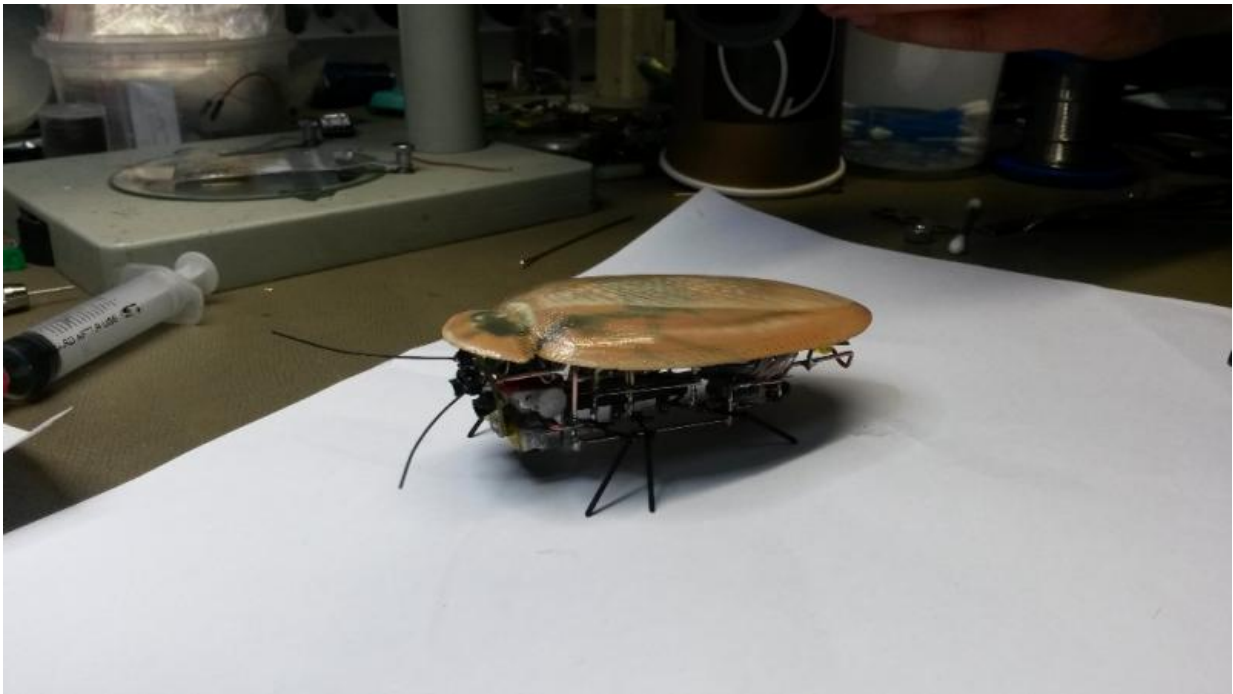


# Robot mimics cockroach in Russian research initiative

September 29 2015, by Nancy Owano

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From cheetahs to birds to insects, animals have complex systems which enable them to avoid and survive obstacles; scientists and engineers who work with robots study their movements and behavior and then strive to emulate their systems with man-made machines.

Robot researchers in Russia are now making news in their focus on the

cockroach. A Russian team from the Immanuel Kant Baltic Federal University have created a small robot that looks and behaves as a cockroach and have showed their prototype. It is under 10cm [long](#) and it moves with a speed of 30cm per second.

The team gave their roach robot light sensors and non-contact probes; they can move without bumping into things. A report in *Sputnik* said that the robot can be managed using a standard application on the phone.

Roaches in general have an advantage of thriving in tight, narrow spaces, even in [places](#) where surfaces are touching both sides of their bodies, said science reporter Robert Ferris, *CNBC*.

According to *Sputnik*, creation of the robot cockroach took seven months. They spent the first two months studying the cockroach: its habits, its characteristics of movement. Then they turned to the robot's design and [construction](#).

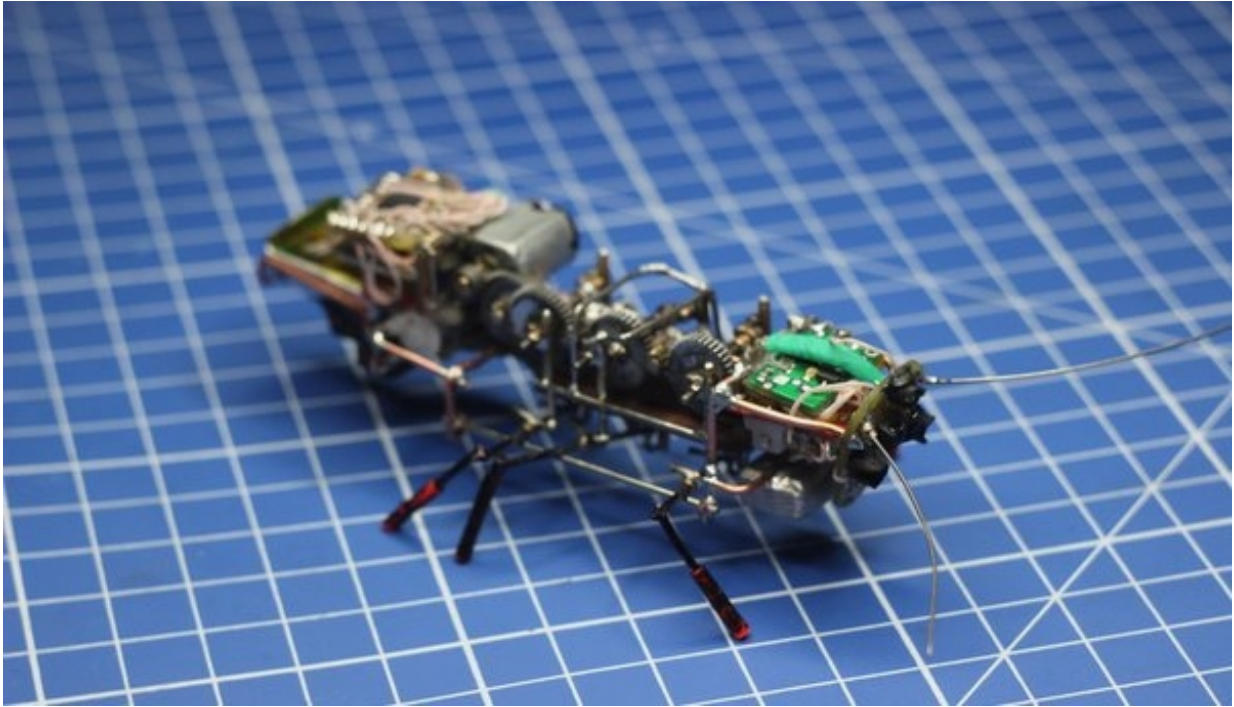
For their prototype they chose the *Blaberus craniifer*, commonly known as 'death head' because of the skull-like pattern on its head.

The initiative was in response to a company request, said *RT*, with three requirements in getting the job done. They wanted the robot to look and behave as a cockroach—and it had to be the right size. *RT* reported on work that remains. The to-do list includes stretching the time the robot can work. So far it can work autonomously for 20 [minutes](#).

The scientist will work to stretch that time. By the end of this year, they also plan to give the robot its own navigation system.

*RT* said this roach robot has applications in disaster areas where it can look for people trapped under debris and it can spy. The roach was developed for a company, but *RT* said the Russian military also has

expressed interest in the robot; it can carry a weight of up to 10 grams and could potentially carry portable cameras into enclosed spaces. Researchers reportedly intend to produce a camo version. The report from *Sputnik* said the scientists are set to present a sample of the robot cockroach in matte camouflage coloring.



Earlier this year, engineers in Texas worked on a robotic insect fusing a real cockroach with a miniature [computer](#) wired into the animal's nervous system, said *The Guardian*. At the push of a button, a human operator can control which way it scuttles.

Also earlier this year, the Institute of Physics reported how researchers

at University of California, Berkeley, took inspiration from the [cockroach](#) to create a [robot](#) that can use its [body](#) shape to move through a densely cluttered environment.

**More information:** Russian website: [roachfrombfu.ru/](http://roachfrombfu.ru/)

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