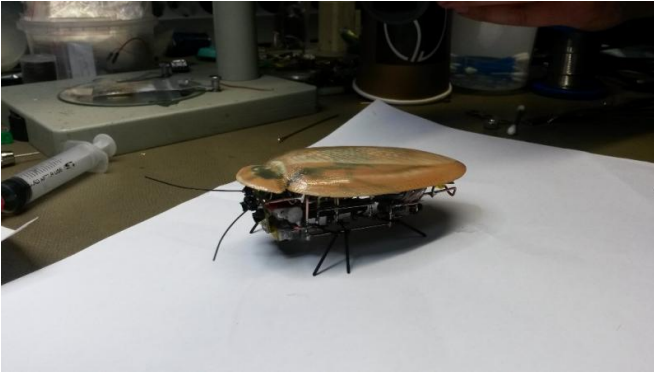


# Robot mimics cockroach in Russian research initiative

29 September 2015, by Nancy Owano



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](#).

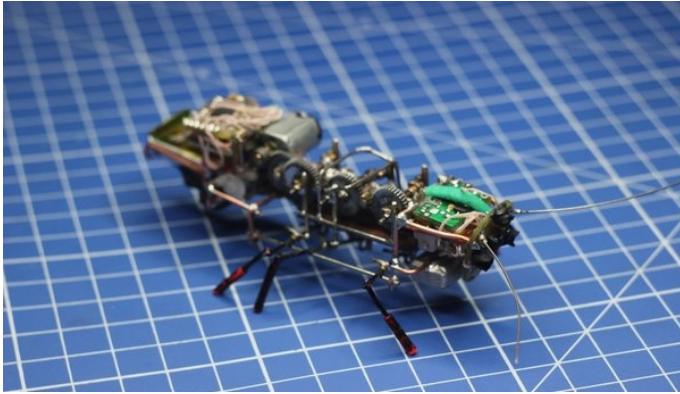
For their prototype they chose the *Blaberus craniifer*, commonly known as 'death head' because of the skull-like pattern on its head.

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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