

## News & Comments

# World Tiniest robotic crab

*Khalid Ul Islam*

Engineers at Northwestern University engineers are proud of creating the tiniest, cutest remote-controlled walking robot ever made - and it's in the form of a cute, little creepy crawly crab.

A tiny half-millimetre wide crab is capable of bending, twisting, crawling, walking, turning, and even jumping. In addition, a millimetre-sized robotic insect, similar to an inchworm, was developed by the researchers. At this point, the researchers' research is exploratory, but they believe it could advance the field toward micro-sized robots that can operate in tightly constrained areas.

According to Yonggang Huang, who led the theoretical work, "our technology can walk at half its body length per second and has a variety of controlled motion modalities." It is extremely challenging to achieve such a feat on such a small scale.

There is no complex hardware, hydraulics, or electricity powering the crab, which is smaller than a flea. As a result, its body is elastic and resilient, which gives it its power. Heat transforms a shape-memory alloy substance into its "remembered" form.

The Northwestern team could produce robots of varying sizes and shapes with this manufacturing method. "We can build walking robots in almost any size or shape using these assembly techniques and materials concepts," Rogers said. It was the sideways crawling motions of tiny crabs that inspired and amused the students. According to Rogers, "The idea came to me out of the blue."

### KEYWORDS

Robotics, a tiny robot, crabs, engineering, technology, memory alloy, tiny crab, robot

