

Engineering Students Showcase Nextgen Robots During Research Expo

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UCSD engineering students will unveil the new iFling, a remote-controlled robot that can pick up and throw ping pong balls, during Research Expo April 15.

(PhysOrg.com) -- In the UCSD Coordinated Robotics Lab, mechanical engineering professor Tom Bewley and his students, have just released the latest generation of their Switchblade family of agile treaded vehicles.

As featured in the film *Hurt Locker*, small robotic vehicles already play a key role in the safe disposal of improvised explosive devices in modern urban warfare. As the military and industry work together to improve the performance of such existing robots, engineers at UC San Diego are exploring new roles for small robotic systems in combat. The families of

agile, autonomous robotic systems they are developing are also expected to have significant roles in homeland security, border patrol, search and rescue, and planetary exploration.

In the UCSD Coordinated Robotics Lab, mechanical engineering professor Tom Bewley and his students, have just released the latest generation of their Switchblade family of agile treaded vehicles. Switchblade can pop wheelies, climb stairs and rubble, and carry substantial payloads such as real-time video; Light Detection And Ranging (LIDAR), an optical remote sensing technology; chemical, radiation and biological sensors; and GPS. The [robot](#) can also, literally, run circles around other treaded vehicles in its class, and can be produced for a fraction of the cost, according to the engineers.

“The focus of our lab is on an application of robotics that is today much less developed — the deployment of multiple inexpensive robots for the exploration of dangerous and confined environments, such as buildings, caves, mines, and tunnels,” Bewley said.

The mechanical engineering students will showcase Switchblade, along with four other student-designed robots during the Jacobs School’s annual Research Expo April 15. One of the robots that will make its debut at Research Expo is the new and improved iFling, a fun, remote-controlled vehicle that can, among other tasks, pick up and throw ping pong balls. iFling, which was designed using a new 3D printer, has potential commercial use as a toy, Bewley said.

The mechanical [engineering students](#) will be among more than 250 UCSD graduates students who will be presenting posters at Research Expo.

Provided by Jacobs School of Engineering

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