



OLIN'S ROBOTICS LAB FACT SHEET

In less than 5 years, Olin College of Engineering's Robotics Research Lab has burst on the scene:

- 2nd place for rookie team in the 2012 International Regatta Sailbot Competition.
- 4th place for the 2007 DARPA Urban Challenge Race in partnership with MIT (beating out Ford Motor's professional engineering team).
- R-Gator vehicle built for use by U.S. Special Forces through Draper Labs.
- Developed Navy robotic tuna sub with Boston Engineering in 2009
- Currently Prototyping a "snotbot" in collaboration with the National Ocean Alliance to collect valuable samples from whales
- Building the first unmanned transatlantic sail boat for launch in 2015.
- Collaborations to develop robots with the Army Research Laboratory, Draper Laboratories, Aurora Flight Sciences.
- Estimated involvement in \$100 million of robotic projects.
- Olin graduates are working all over the world at robotics, including Bluefin, iRobot, National Instruments, Swiss Federal Institute, Hydroid, Liquid Robotics, Auris Surgical, and the Institute for Human and Machine and Cognition.
- Others have entered top graduate schools to further their study of robots, including MIT, Carnegie Mellon and Harvard.
- \$2 million in dedicated robotics equipment, including extensive computing hardware and software licenses, cameras, motors, sensors and high resolution GPS systems. Test beds, including pools and the largest robotic test area on the east coast. Access to extensive resources at Olin, including design studios, machine shops, rapid prototype facilities, a large projects building and specialized laboratories.
- A specialized Robotics and Bioinspiration Lab approaches to the design, fabrication, and control of small scale robots and mechanisms drawing inspiration from biological systems and materials.

In 8-weeks, teams of undergraduate engineering students are building unmanned vehicles for air, sea and land as well as for consumer, industrial, agricultural and medical use. Olin's enterprising faculty and empowered students are achieving results in build times thought impossible by many professional engineers

OLIN + ROBOTS = PERFECT MATCH

Olin College of Engineering officially opened its doors to students in 2002 and has quickly become one of the nation's top engineering colleges. Olin is a small college with a big vision - to transform engineering education and to ignite the innovation needed to solve the global challenges of the future.

With no departments, a "can do" attitude and do-learn approach, a heavy emphasis on designing for people's needs, and a multidisciplinary collaborative zeal, Olin has become a hotbed for robotics in the world.

WHY ROBOTICS? NEXT GENERATION OF DISRUPTIVE TECHNOLOGY

Beyond the "cool" factor and being a great way to learn engineering from all angles, why is robotics important? On the heels of the current biotech revolution is the rapidly accelerating robotics revolution. Based on history, robotics promises to transform the way we live our lives, from how we eat and travel to our work lives and national security. In the next decade, the robotics industry is expected to increase by four to nine times in size.

Robotics industry 2013: \$50 billion

Projected Robotics Industry 2024: \$240-\$470 billion

That's 150,000 new high paying jobs for the properly trained engineering innovators of tomorrow.

45% of Olin's student body participates in robotics either through classes, independent studies, clubs, competitions, research, or SCOPE, where companies and technology clients invest \$50,000 per team to engage Olin seniors in

Robotics future impact:

- *95% of commercial aircraft flight;*
- *45% of major surgery;*
- *30% of land military missions;*
- *50% of factory work;*
- *50% of all military air and undersea operations;*
- *25% of all toys and consumer products;*
- *47% of all gas filed work; 75% of police and fire stations;*
- *65% of agricultural work.*