



# WPI

Worcester Polytechnic Institute  
100 Institute Road  
Worcester, MA 01609  
www.wpi.edu

## WPI Blazing a Path in Robotics Boom

WORCESTER, Mass. – June 5, 2014 – Robotics is America’s next hot industry, and Worcester Polytechnic Institute (WPI) has become one of the nation’s leading players in collegiate-level robotics education, robotics K-12 outreach programs, and robotics research and development.

In 2007, Bill Gates wrote in *Scientific American* that the robotics industry was entering a period of explosive, exponential growth, similar to the PC boom of the mid-’70s. Robotics are poised to change almost every aspect of our lives – in the places we work, in our healthcare, even in our homes. As a result, the U.S. Department of Labor projects the need for robotics engineers will grow dramatically over the next five years.

### Academics

WPI was the first university in the nation to offer a BS in robotics engineering, was the first to offer BS, MS, and PhD programs simultaneously, and is still one of a handful of institutions to offer both graduate and undergraduate programs in robotics.

Because no single discipline sufficiently provides the scope and range of knowledge that is being increasingly demanded of robotics engineers, WPI’s undergraduate Robotics Engineering Program employs an interdisciplinary approach with the departments of Computer Science, Mechanical Engineering, and Electrical and Computer Engineering playing a key role in the education of tomorrow’s robotics engineer.

WPI’s graduate Robotics Engineering programs apply this interdisciplinary approach to finding solutions to some of our greatest challenges, including healthcare and robot-assisted surgery, defense and security, space exploration, and environmental monitoring.

### Research and Technology Development

WPI faculty and students are developing robots that can help surgeons operate inside an MRI scanner, help the elderly continue to live in their own homes, and work in disaster areas too dangerous for people, as well as “soft robotics” that aids in medical procedures. Several projects focus on human-robot interaction, including the development of robots that “learn” from their interactions with humans.

Professors and students developed a search-and-rescue robot that can identify and help save emergency first responders who are in danger, and are studying the ethical and social implications of robots in the home and the workplace. Recently, students and faculty in the Robotics Engineering program began to work on the development of humanoid robots that will aid in the diagnosis and treatment of autism.

### STEM Education

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As part of WPI's overall mission to improve science, technology, engineering, and math (STEM) education at all grade levels, WPI's Robotics Resource Center plays a leading role in exposing K-12 students to robotics, inspiring enthusiasm in STEM learning and providing hands-on opportunities for students to apply what they learn.

WPI faculty and students have played a leadership role in the development and expansion of FIRST Robotics Competitions, a nationwide program of robotics competitions involving thousands of junior high and high school students in hundreds of competitions every year. Additionally, WPI several years ago launched RoboKids, an after-school program for Worcester-area elementary and middle school students who experience STEM learning through robotics.

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*Journalists and media representatives seeking additional information should contact Andy Baron at 508-831-5916, [ajbaron@wpi.edu](mailto:ajbaron@wpi.edu), or Eileen Brangan Mell, 508-831-6785, [ebmell@wpi.edu](mailto:ebmell@wpi.edu).*