

NC State Unveils New DARPA Urban Challenge Driverless Vehicle

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NC State will help refashion the Lotus Elise into a driverless vehicle that will compete in next year's DARPA Urban Challenge. Photo courtesy of Lotus Engineering.

In a race that can only be described as futuristic, the Insight Racing team will field a driverless Lotus Elise to compete in the 2007 DARPA Urban Challenge. The team will modify the sports car with sensors and on-board computers that have been programmed to autonomously maneuver it through an urban setting complete with traffic, intersections and traffic circles – the vehicle will even have to park itself – all without the help of a human.

The product of a collaboration among North Carolina State University, Insight Technologies Inc., Lotus Engineering Inc. and the Advanced

Vehicle Research Center (AVRC), the technology that will guide the Elise through city streets may one day revolutionize not only the way the military performs missions but also the way that commuters drive to work each day.

“The College of Engineering is excited about being a part of this event,” said Dr. Louis Martin-Vega, dean of the College of Engineering at NC State. “Our students will be able to use their engineering skills to solve real-world problems that will one day help save lives.”

Sponsored by the Defense Advanced Research Projects Agency (DARPA), the Grand Challenge competition was created to answer a congressional mandate to convert one-third of military vehicles to driverless, computer-driven mode by 2015. The objective of the competition is to have teams design a completely autonomous vehicle with no human assistance that can maneuver through an urban setting while avoiding obstacles. The technology developed for the race will help DARPA reach its goal of having the autonomous vehicles perform missions that currently put military personnel in harm’s way.

Today, the Insight Racing team announced that Lotus Engineering had provided a Lotus Elise to use in the competition and will modify the controls interface. The Elise represents a leap up from the 1987 Chevy Suburban used in the 2005 competition, which took an overall 12th place from an original field of 196 applicants.

“Lotus is happy to support Insight Racing in the Urban Challenge,” says Don Graunstadt, chief executive officer and president of Lotus Engineering. “We are impressed with Insight’s proven record and are looking forward to working together.”

“We are proud to have Lotus as a sponsor,” says Grayson Randall, Insight Racing founder. “Lotus Engineering’s leadership will certainly

contribute greatly to our efforts. The development of this smart vehicle technology has many applications and will ultimately change how we drive in the not too distant future.”

“It is exciting to think about the many ways this technology will change the automotive industry,” said Dick Dell, executive director of AVRC. “It is great to see North Carolina in a leadership position with this powerful Lotus-Insight partnership.”

Entered as one of the 78 Track B teams – and the only team representing North Carolina – in the 2007 Grand Challenge, the Insight Racing team will now face several elimination rounds to advance to the final Urban Challenge event in November 2007.

“We have a highly talented dynamic team that is composed of students from NC State University, members of the Triangle technical community and retired business executives,” Randall says. “The development of robotics technology will allow us to accomplish both human relief and military missions that pose a threat to our country’s personnel. We are thrilled to compete in this innovative race, which is moving autonomous driving ahead so rapidly.”

Source: NC State University

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