WE Bots takes second place in the 2008 University of Waterloo Autonomous Racing Challenge

By Eugen Porter and Gerrit Aartsen

Western Engineering's Robotics club (WE Bots) finished in 2nd place in this years Autonomous Racing Challenge held on Saturday, April 26. Eight teams competed from across the country including groups from Quebec and as far away as British Columbia.

In the three components WE Bots placed 1st in the static judging of engineering design, complexity, execution, and audience appeal. It placed 3rd in the 30 meter drag race, and finished 2nd in the four lap head-to-head autonomous circuit challenge. Overall WE Bots took 2nd place.

At the core of WE Bots entry was a new design that was based on a heavily modified chassis from a high-end RC racer. The modifications included a redesigned and custom machined chassis to house two electrically-synchronized 1HP brushless motors, six lithium-polymer battery packs with shutdown and overcurrent protection and a sophisticated control system involving 9 microcontrollers all working together to handle all of the various sensory input, navigation and motor control duties.

"Overall, the vehicle is very impressive and is a strong, fast and a precision machine. It is a huge improvement over our previous design which needed constant corrections to maintain a straight line. Time restraints in programming prevented the vehicle from performing to its full potential, being set at speeds in the competition far below its performance capability. Nevertheless we were very pleased this year and are excited to show it off at its full potential in future" says club president Nathan Newport.

The aim of the club is to promote a positive Engineering experience for its members and promote intellectual growth for the long-term benefit of the club, its' members, the Engineering Faculty and Western as a whole. If you are interested in participation in the robotics group, or if you just want to contribute ideas, send emails to webots@eng.uwo.ca.