



REAL STUDENTS EXCEL AT ARTIFICIAL INTELLIGENCE

UNDERGRADUATE COMPUTER-SCIENCE TEAM REACHES WORLD FINALS IN PROGRAMMING CONTEST.

BY SHERRI MILES

A major challenge in artificial intelligence (AI) is to develop new technologies that allow autonomous robots—capable of making decisions without human assistance—to act appropriately in unforeseen situations and in real-time and dynamic environments. Toward that end, the RoboCanes, a virtual soccer team developed by the AI & Games group of UM's Department of Computer Science, plays in the 3D soccer-simulation league at RoboCup—a series of international robotics competitions.

In April 2011, the RoboCanes were undefeated at the RoboCup German Open in Magdeburg—a competition of 10 teams from seven countries. Research Associate Professor and RoboCanes coach Ubbo Visser pointed out this strong performance followed a successful appearance at the World Championships held in June 2010 in Singapore, where the team made it to the quarterfinals. In the RoboCanes' most recent major competition, at this year's World Championships held in July in Istanbul, Turkey, it defeated the former world-champion team from China to secure fifth place among 22 teams.

Members of the RoboCanes include doctoral students Saminda Abeyruwan, Andreas Seekircher, and Justin Stoecker, with their coach as "the driving force behind the team," according to Hüseyin Koçak, professor and chair of the Department of Computer Science. "Professor Visser's technical leadership and boundless enthusiasm has inspired the students."

In addition to these achievements at the graduate level, undergraduate computer-science students are competing against and beating software teams from some of the world's most highly



Ubbo Visser, associate professor of computer science, and students (from left) Andreas Seekircher and Justin Stoecker.

ranked universities. For example, an undergrad software team consisting of Frank Rodriguez '12 (Computer Science/Engineering), Juan Bustos '10 (Math/Computer Science), and Andy Mok '12 (Computer Science/Math) represented UM at the ACM Southeastern Regional Computer Programming Contest held in November 2010 at the Florida Institute of Technology in Melbourne. The team finished in first place among 74 teams from 29 schools, and this victory earned it one of only 105 spots—a prestigious distinction in a total field of 8,000 regional teams—to compete in the 2011 ACM International Collegiate Programming Contest World Finals. In that event, held in May

in Orlando, Florida, the UM team placed 69th in the world and ranked sixth among the American universities that competed.

In another impressive performance this year, at the IEEE SoutheastCon 2011 Software Contest held in March in Nashville, Tennessee, the UM team of Rodriguez, Mok, and Oscar Sanchez '12 (Computer Science/Math) beat 18 out of 19 teams to finish in second place. The competition challenged teams of three students each to use their analytical abilities and programming skills to solve assigned problems within three hours using only the laptops and software provided.

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