



SIUE Hosts Educator's Workshops for 2015 Botball Tournament

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Southern Illinois University Edwardsville will host 16 teams during the Botball® Educator's Workshop set for February 21-22 in the Morris University Center (MUC) Conference Center. This year marks the 18th season for Botball® and the 13th year SIUE has hosted the Greater St Louis regional tournament. Teams of middle and high school students from Illinois, Missouri, Indiana and Arkansas are participating.

Dr. Gary Mayer, an assistant professor of computer science at SIUE, is leading the workshop. The purpose of the workshop is to provide team mentors and students with basic programming knowledge, a familiarity with this year's tournament rules, and tips on building and programming their robots to perform various tasks at the regional tournament. The tournament, which is open to the public, will also be hosted by SIUE on Saturday, April 25.

"Getting young people involved in the Botball program helps develop critical thinking skills that can be applied to any career field," said Mayer. "In Botball, students need to devise solutions and implement them by building robots and programming their robots' behaviors. Additionally, they learn about team work."

Mayer describes the tasks in the tournament as never having a single solution. The workshop teaches the basics of the C programming language and the use of various sensors found in the robotic kits. It emphasizes a hands-on approach for mentors and students, whereby concepts are discussed, and the attendees immediately try to implement them. At least six student volunteers from the SIUE School of Engineering will also be in attendance to assist the mentors and students.

The theme of this year's tournament is robotic prospectors. The students are building autonomous robots that will travel around a board game attempting to conduct geological surveys for minerals found in the mountains of the Southwestern United States. Some items must be moved from their start locations, and others must be carried to lab locations on the board.

The teams receive a kit with two robot controllers and hundreds of parts such as sensors, motors and structural pieces. Students are free to be as inventive with the kit components as possible. The result is a fleet of unique robots that allow the students to see the strengths and weaknesses of different approaches, especially in head-to-head competition. Additionally, the curriculum provided at the workshop is extended with online content and can be used by the educators for in-class and after-school exercises.

The Botball® Educational Robotics Program is produced by the KISS Institute for Practical Robotics (KIPR) of Norman, Okla. There are over 8,000 middle and high school students participating around the world, and there is a Junior Botball® Challenge Program that targets elementary-aged students. The curriculum is standards-based and provides educators with the framework for teaching students to write code, solve mathematics problems, practice engineering design, and learn computer science concepts.

“The Botball Education Robotics Program is an outlet for creative minds, an opportunity to meet others with similar interests in science and engineering, and a way for the community to get involved with the students’ successes,” Mayer said.

The entire Botball® season ends July 6-11 at the International Botball® tournament hosted by the Global Conference on Educational Robotics (GCER) in Albuquerque, New Mexico. Teams of students from across the U.S., as well as China, Austria, Africa and other regions will come together to be a part of the international showcase.

Belleville East High School is the defending champion. Local teams such as Bond County Community #2, Collinsville High School, Liberty Middle School, Lincoln Middle School, the SIUE East Saint Louis Charter High School and St. Mary’s School of Edwardsville are among the teams seeking to unseat the reigning champ.

[The SIUE School of Engineering](#) offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master’s degrees and a cooperative doctoral program, all housed in a state-of-the-art facility. Students learn from expert faculty, perform cutting-edge research, and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities, which often turn into permanent employment. All undergraduate programs are accredited by their respective accreditation agencies.

*Photo: *Gary Mayer, PhD and an assistant professor of computer science at SIUE.