



Jan13

[Michelle](#)

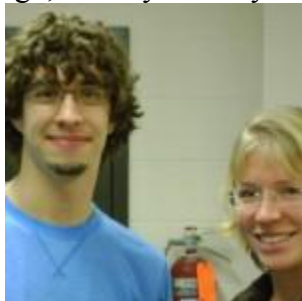
[FIRST Robotics: New teams, new mentors for Breakaway](#)

[FIRST Robotics](#) crosses many technical boundaries, but also interpersonal communications boundaries. Getting the [new game](#), called **Breakaway**, means that participants have to not only build a robot to certain specifications, but also train team members, drivers and coaches in how they will communicate during the competition. There are numerous veteran teams in the regional competition, but every year there are a few new teams that come on the scene and have to be able to negotiate the playing field, avoid bumping other robots and move into range—in this case to [‘kick’ a soccer ball into a goal](#) using a rolling robot.

This year Rochester School for the Deaf joins the regional competition line up. David Monahan, a graduate mechanical engineering student in the Kate Gleason College of Engineering, will mentor the team. Adult mentors of robotics team often were on teams in their high school years. This is true of Monahan who brings skills, experience and enthusiasm to this FIRST venture.

“My high school had a team; I thought it might be cool to do this,” he says. “I joined and had no idea what I was getting myself into.” Since that time, he has participated on teams and volunteered at regional events in Rochester and Philadelphia. He’s taken on the challenge of helping develop a new team to the Rochester regional and thinks that the youngsters at Rochester School for the Deaf are ready to put into action their many ideas in the next six weeks—the time they must assemble the robot kit they received last Saturday into a formidable robot for the competition in March.

“The team is curious and they don’t know what they are getting into – just like I was not too long ago,” he says. “They are excited and are starting to get their hands dirty.”



They are currently discovering what it is like to work in a machine shop, a new experience for many of the younger students. That’s where the mentors come in, Monahan explained.

Bausch & Lomb, one of the team supporters, will provide engineers to help build the team's robot. All B&L employees are hearing, Monahan says. There are inherent challenges in this new working relationship for both the deaf students and hearing mentors, but Monahan says that he's encouraged the students to ask lots of questions "because the mentors have so much knowledge and experience."

They will also have the advantage of having interpreters present at all meetings to build the robot. And the interpreters also bring an equally interesting layer to the communications challenges.

"There are professional, experienced interpreters participating with the team and there are some apprentice interpreters," says Kate Leipold, instructor in the mechanical engineering department (shown, with Monahan). The new interpreters are learning to master both American Sign Language and to interpret complex subject matter, in this case engineering design.

Monahan, being an experienced FIRST participant, has been working with his team to find the best way to communicate to robot drivers and alliance members, especially those who do not sign. The school-district team has brainstormed using computers, videocams or even new hand signals that all can recognize, he says, and will just have to wait to see their solutions at the same time they roll out their new robot at the March competition.

FIRST Robotics has become a part of many national organizations intent on inspiring young people to get involved in the creativity of science and technology. Most recently the organization announced working relationships with the [Society of Women Engineers](#), Time Warner Cable and its [Connect a Million Minds](#) program and the [Gearing Up Project](#).



Dean Kamen announced the 2010 game, Breakaway at the recent FIRST Robotics Kick Off. More than 500 participants from the Finger Lakes Region heard his remarks and picked up their robot kits.