



Faculty of Applied Science

[Home Page](#)

Applied Science News

Fast Moving Toboggans!
MME Prof New ASME Fellow
ECE Grad carries Torch
You could win!
OPE Award to Civil Prof
Are you on MuchMusic?
Frosh Week is Here!
Congrats Jessica Steeves!

[Past Newsletters](#)

Site Links

[Strategic Plan \(.pdf\)](#)
[News & Events](#)
[Speakers Series](#)
[Current Students](#)
[Prospective Students](#)
[Alumni & Friends](#)
[Internship/Employment](#)
[Integrated Learning Centre](#)
[Research & Graduate Studies](#)
[Teaching & Learning](#)
[Calendar/Governance](#)
[Programs](#)
[About the Faculty](#)
[K-12 Outreach](#)

[Print-friendly](#)

Queen's Engineering Students Create "Fantastic Learning Experience" for Local Kingston Students

Thursday, April 16 – 2009

Nine current Queen's students approached Kingston Collegiate Vocational Institute (KCVI), a local Kingston high school this year with a great idea: they wanted them to compete in the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition, all competition alumni themselves.

FIRST was founded by inventor Dean Kamen in 1989 in order to develop ways to inspire students in engineering and technology fields. The FIRST Robotics Competition (FRC) is designed to motivate high school students to become engineers by giving them real world experience working with professional engineers to develop a robot. FIRST seeks to promote a philosophy of teamwork and collaboration among engineers and encourages competing teams to remain friendly, helping each other out when necessary. The Greater Toronto Regional competition hosted 59 teams from across Canada and the northern United States.

The Queen's students approached KCVI Computer Science teacher Kevin Wood about the idea. Wood said he had heard of the competition but had never had access to the resources necessary to make it possible for a team of high school students. With funding help from Queen's Sci '78 and Sci '82, the students spent much of their spare time lending their expertise and technical resources to the team in the form of mentors. The mentors from Queen's included Stu Bacon (1st year Applied Science), Drew Curie (2nd year Mechanical Engineering), Peter Diakow (3rd year Mechanical Engineering), Michelle Moore (2nd year Mining Engineering), Jonathan Norris (2nd year Mechanical Engineering), Remi Ojo (1st year Applied Science), Michael Yan (4th



Team Participants at the 2009 FIRST Robotics Competition



year Applied Mathematics) as well as two Science students, Michael Martin–Evans (5th year Geography) and Kate Mathers (2nd year Biology).

The 2009 Competition Robot

Details of the game are released on the first Saturday in January, and the teams are given six weeks to construct a robot that can accomplish the game's tasks. The robots weigh around 120 lb (54 kg) can be about 5 ft (1.5 m) tall. The challenge this year, titled "Lunacy", was to create a robot which grabbed and launched balls into trailers towed by opposing robots. To simulate a moon-like environment and add an extra challenge, the robots were required to move on a low-friction floor. Starting on March 29th, the team, "K-Botics", composed of 15 KCVI students from grades 9–12 began their competition in Mississauga.

The K-Botics team got off to an impressive start on Friday, winning their first four matches of the round robin play. After leading in the fifth match, the robot lost power halfway through and the shorthanded alliance couldn't hold the lead. After some quick repairs, they won the next match and ended the day in 5th place. At the end of the second round-robin, after some tough competition, the K-Botics found themselves in 17th place. Final alliances are selected by team captains based on their round robin standings, and the K-Botics were selected 4th, indicating the value others saw in their team. The team finished in the quarter-finals and won the "Rookie All-Star Award", granting them the opportunity to compete in the World Championships in Atlanta Georgia from April 16th–18th.

"It was an amazing experience to see how the students from KCVI accepted the challenge and stepped up and performed like a team that had been competing for 10 years. I am very excited to bring this great group of students down to Atlanta to experience the World Championships!" said Queen's engineering student mentor Jonathan Norris.

The team was proud of their accomplishments and was a "fantastic learning experience" according to KCVI teacher Kevin Wood.

Good luck in Georgia!

For more information about FIRST see: <http://www.usfirst.org>

For more information about K-Botics see: <http://kbotics.ca>

– written by Sara Soubliere with contributions from Jonathan Norris

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