



NYU-Poly Mentors Cheer On FIRST LEGO Competitors

For Carlo Yuvienco '10 '12BmE, January 9 was a preview of parenthood. "I feel like one of those parents outside a high school waiting for kids to come out of their tests and asking afterward, 'How'd you do,' and feeling that sense of pride," he said, as he high-fived students he coached at PS 11 for the borough-wide qualifier of the FIRST LEGO League, a competition that uses robots to conquer real-world engineering challenges.

Yuvienco should be proud. Since last fall, he and 12 other NYU-Poly students have lent their services to middle schools in Brooklyn as part of the Applying Mechatronics to Promote Science (AMPS) and the Central Brooklyn Robotics Initiative (CBRI) programs, initiatives funded in part by the National Science Foundation, the Brooklyn Community Foundation, and a Motorola Innovation Generation Grant. Noel Kriftcher, executive director of NYU-Poly's David Packard Center for Technology and Educational Alliances, as well as Associate Professors Vikram Kapila, Mechanical and Aerospace Engineering, and Maged Iskander, Civil Engineering, guided their activities, which aligned with the center's mission to train and support teachers interested in weaving advanced technologies into their curricula.

"If you study to be a science teacher, you don't necessarily study engineering," Kriftcher explained. "You certainly don't study robotics or



A grammar school student uses LEGO MindStorm software to program her LEGO robot, controlled through a USB interface.



With tension so thick it's palpable, students put their robotic cars through the final paces of competition to a chorus of cheers from classmates, parents and teachers.

mechatronics, and if teachers lack information—through no fault of their own—students get shortchanged.”

Say what?

Each week for 10-15 hours Yuvienco and his peers visit a local classroom and share what they know about the STEM—science, technology, engineering and mathematic—disciplines. Doing so cultivates a skill Kriftcher believes is paramount to the successful promotion of the sciences: presentation skills. “With a lay audience, you have to have fluency. You have to break complex ideas into simple steps,” he said.

Peter Baker ‘13BmE, a second-year veteran of the AMPS program, agrees. Talking about his interactions with schoolchildren, he said, “When I have to explain to them what I do, it helps me figure out ways to explain my science to other people.”

Baker believes the experience will help him professionally. “If I go into a boardroom for funding and talk about all these weird enzymes and weird chemistry, it’s going to go over some people’s heads,” he said. “But if I can define my research in a way that’s easily relatable, it’s going to open doors.”

Doors may have opened for Baker and his NYU-Poly peers, but hearts and minds have opened for Brooklyn middle school students. Said Natalie Sinclair, a fifth grader at PS 11, “our coaches are very, very encouraging.” Her classmate and FIRST LEGO League team member, Shyanne Hall, seconds the opinion. “They are our inspiration in robotics and in life,” she says. “When we ask for something, they help us problem solve. That’s fun.”



NYU-Poly student mentors and student competitors make last minute preparations for the competition.