

## **MIT Brings Engineering Career Workshops to Acton January 25 & 26, 2007**

There's a new breed of engineer out there, and your kid could be one of them! On Thursday, January 25 at RJ Grey Jr. High and Friday, January 26 at Acton-Boxborough High, four dynamic young students from the Massachusetts Institute of Technology Women's Initiative program debunked the myths that engineers have no interpersonal skills, wear pocket protectors, and prefer computers to people.

By improving the *image of engineers*, the MIT Women's Initiative encourages middle and high school students to pursue engineering through a series of career workshops. Each January, MIT's School of Engineering selects enthusiastic women who volunteer to speak to girls and boys at schools around the country about engineering careers. These young women were the stars of last week's presentation, answering basic questions, such as "What is Engineering?" and "Do I have to be a Math Major?" before progressing to hands-on activities, project demonstrations, and Q and A sessions. Their enthusiasm for engineering and contention that "you don't have to be great at everything" to be successful engineers energized the audience.

According to MIT presenters Vicki Loewer, Hanhan Wang, Lucy Wu, and Dawn Wendell, engineers like to solve problems, persevere, and have fun along the way. Think about Trinity from the Matrix instead of Dilbert! Vicki, Hanhan, Lucy, and Dawn offered a series of 60-minute seminars that portrayed engineering as a creative endeavor for those with design and communication skills. According to Vicki and Lucy, engineering schools want students who are diverse, curious, communicative, creative, imaginative, and motivated to study aerospace, biological, clinical, civil, computer, electrical, environmental, or materials engineering. Engineers still build bridges, but they also design video games, develop cures for cancer, discover new forms of energy, and create new materials. And the money isn't bad either. In a top 10 list of salaries for graduating college students, the top five go to engineers.

In their two-day sessions, the presenters paired off to deliver four seminars to two different audiences—male and female. The talks ranged from discussions of engineering colleges to the idea of engineering as a springboard to other professions,

such as, law, medicine, or business. The presenters also discussed real-world applications and their engineering specialties: Vicki is a chemical engineer working with nanotechnology, taking tiny pictures of cells to detect the recurrence of cancer; HanHan works with computers; Lucy is interested in fluid structures; and Dawn's research involves medical devices.

During the workshops, the presenters encouraged participation with candy rewards and interesting experiments. The boys' activity involved building a clay boat and experimenting with distributing the load. The girls' chemistry experiment involved pouring liquids and guessing the density of five different substances. In all cases, the presenters encouraged the classes to solve problems, think creatively, and have fun! As a follow-up, students were encouraged to visit the following student engineering Web sites, <http://www.usfirst.org/> and <http://esp.mit.edu/>.

The girls' session had the added component of women engineering statistics. In the United States, women comprise 51% of the population, 45% of the workforce, but less than 10% of the engineers. Engineering schools want women to apply, scholarships are available, and these MIT presenters are proof that engineering is an exciting, viable career for women.

All the presenters generously agreed to a follow-up session and reception at the Acton Congregational Church on Friday after school for those students who missed the school sessions.

The Engineering Career Workshops were sponsored by Acton PIP (Parent Involvement Project), funded by a community grant from IBM, and supported by the Acton-Boxborough Regional School District. Acton PIP is a coalition of parents, Acton-Boxborough schools, community members, and business partners who promote science, technology, engineering, and math (STEM) education. For more information on Acton PIP, visit the Web site at <http://www.actonpip.org>. The MIT Women's Initiative Web site is <http://scripts.mit.edu/~wi/home/index.php>. Special thanks to our MIT WI presenters, R.J. Grey Jr. High, A-B Regional High School, and the following members of Acton PIP: Latha Swaroop, Carlie Krakoff, and Karen Herther.



MIT WI Engineering Workshop at R.J. Grey Jr. High on January 25, 2007.  
From left to right: Emmy Cail, Vicki Loewer, Dani Cremmen, Victoria Gomez, Emily Foster. Picture by Deborah Bookis. Article by Janice and Jessie Ward.