



Pre-Engineering Newsletter



Kent School girls who participated in the Pre-E Engineering IBM Fieldtrip

Winter 2010-11

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Engineering Doctorates to Women Double

"In 2009, 21.2 percent of the 9,083 engineering doctorates awarded went to women. This is a 33 percent increase from the 15.9 percent mark posted in 2000. Total engineering doctorates grew by over 3,000 during this time, as well. This translates into a substantial raw growth in female Ph.D. recipients. More than twice as many women received engineering doctorates in 2009 (1,928) than in 2000 (954)."

Year	Total Doctorates Awarded to Women	Percentage of Ph.D.s Awarded to Women
2009	1,928	21.20%
2008	1,913	21.10%
2007	1,877	20.80%
2006	1,690	20.20%
2005	1,345	18.30%
2004	1,176	17.80%
2003	1,018	17.40%
2002	1,004	17.40%
2001	1,021	16.90%
2000	954	15.90%

Other data trends can be viewed at www.asee.org/colleges.

Kent School Pre-Engineering Program-IBM facility Fieldtrip

On December 10th, 27 students and three faculty members took a long awaited fieldtrip to the IBM facility in Poughkeepsie, NY. The three and half hour tour consisted of a visit to the Green Data Center and the Manufacturing Floor. The students also observed three panels: New Hire panel, Master the Mainframe Contest Team panel, and the Master Inventor panel.



Master Inventors panel and Master the Mainframe Contest Team panel

Kent Robotics Team picks up its KOP (Kit of Parts) at Local Kickoff Event

Despite heavy snow fall the day before, the 2011 FRC Connecticut kickoff and event went on as planned on Saturday January 8th, 2011 at Farmington High School. Team members and mentors from thirty high school robotics teams from around the state gathered to find out what the game competition will be for this year. Each team in attendance received from FIRST a basic kit of parts to help build the robot for this year's game. The host team, #178, coordinated the distribution of the kits and held informational workshops for other teams. The game is kept secret until the kick-off, after which each team has six weeks to create and build its own robot. Kent School students will be among over 1,500 high school students competing in New England's largest FIRST Robotics Competition, The Northeast Utilities FIRST Connecticut Regional. It will be held in downtown Hartford at the Connecticut Convention Center between March 31st and April 2, 2011. The National Competition will take place in St. Louis, MO on April 27-30, 2011.

Schedule of events:

When	What
Thursday March 31, 2011	8:00a - 5:00p Load-in and Practice Day
Friday April 1, 2011	9:00a - 4:00p Competition Day 1 - Qualification Matches
Saturday April 2, 2011	9:00a - 12:00p Morning: Competition Day 2 - Qualification Matches
	12:30p - 4:00p Afternoon: Elimination Matches

Kent Robotics Team Receives More Grants.

Congratulations to Mr. Austin, to Mr. Heslop, and to the Kent School Robotics team for receiving two grants to participate in the 2010 FIRST Robotics Competition. The grants amount to \$3,000 from United Technologies (UTC) and \$1,000 from Parametric Technology Corporation (TPC). Another grant is in progress.

“Higher education hasn't done a good job of helping two big groups succeed in the fields of science, technology, engineering and math (known colloquially as STEM): Women and members of racial or ethnic minorities. These are the schools that are getting it right.”

Best Colleges for Women in STEM

1	Westminster College	New Wilmington	PA
2	Colby College	Waterville	ME
3	SUNY College of Environmental Science and Forestry	Syracuse	NY
4	Harvey Mudd College	Claremont	CA
5	Williams College	Williamstown	MA
6	Tuskegee University	Tuskegee	AL
7	Polytechnic Institute of New York University	Brooklyn	NY
8	California Institute of Technology	Pasadena	CA
9	US Coast Guard Academy	New London	CT
10	Colorado School of Mines	Golden	CO
11	Worcester Polytechnic Institute	Worcester	MA
12	Earlham College	Richmond	IN
13	Embry Riddle Aeronautical University	Daytona Beach	FL
14	Wofford College	Spartanburg	SC
15	St Marys University	San Antonio	TX
16	Albion College	Albion	MI
17	Colorado College	Colorado Springs	CO
18	MIT	Cambridge	MA
19	St Lawrence University	Canton	NY
20	Stevens Institute of Technology	Hoboken	NJ

Read The Full Story: [Best Colleges For Women And Minorities In STEM](#)

Upcoming Visit in April 2011 by Dr. Stacy Klein-Gardner, Professor at Vanderbilt University's School of Engineering and Director of K-12 STEM outreach

Agenda:

1. A talk with our Robotics Team
2. A visit to our “Engineering Design” Pre-E course.
3. A lecture open to all students and faculty
4. A meeting with faculty and staff interested in Pre-E engineering (issues: Kent school Pre-E certificate, program expansion, new courses (manufacturing is proposed to start next year.)
5. Meeting with admissions and college officers.

Project 10¹⁰⁰ Winners:

Google Inc. has chosen five organizations out of 150,000 contestants worldwide as winners of the \$10 million prize for its Project 10¹⁰⁰ contest

Idea #1: Make educational content available online for free

Project funded: “[The Khan Academy](#) is a non-profit educational organization that provides high-quality, free education to anyone, anywhere via an online library of more than 1,600 teaching videos. We are providing \$2 million to support the creation of more courses and to enable the Khan Academy to translate their core library into the world’s most widely spoken languages.”

Idea #2: Enhance science and engineering education

Project funded: “[FIRST](#) is a non-profit organization that promotes science and math education around the world through team competition. Its mission is to inspire young people to be science and technology leaders by giving them real world experience working with professional engineers and scientists. Goggle inc. is providing \$3 million to develop and jump start new student-driven robotics team fundraising programs that will empower more student teams to participate in FIRST.”

Idea #3: Make government more transparent

Project funded: “[Public.Resource.Org](#) is a non-profit organization focused on enabling online access to public government documents in the United States. Goggle inc. is providing \$2 million to [Public.Resource.Org](#) to support the Law.Gov initiative, which aims to make all primary legal materials in the United States available to all.”

Idea #4: Drive innovation in public transport

Project funded: “[Shweeb](#) is a concept for short to medium distance, urban personal transport, using human-powered vehicles on a monorail. Goggle inc. is providing \$1 million to fund research and development to test Shweeb’s technology for an urban setting.”

Idea #4: Drive innovation in public transport

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Idea #5: Provide quality education to African students

Project funded: “The [African Institute for Mathematical Sciences](#) (AIMS) is a center for math and science education and research in Cape Town, South Africa. AIMS’ primary focus is a one-year bridge program for recent university graduates that helps build skills and knowledge prior to Masters and PhD study. \$2 million is provided to fund the opening of additional AIMS centers to promote graduate level math and science study in Africa.”

Contact me If you have any questions or if you need more information.

Dr. Nadire

Wentz Pre-Engineering Program Director

Kent School