



Summer 2011 Project Update

It has been an eventful year for the NSERC Chair for Women in Science and Engineering, BC and Yukon.

Our mission is to advance engineering and science as welcoming careers that serve our world through holistic understanding and creative, appropriate and sustainable solutions, and we have made a strong start towards this goal.

Since our formal launch on September 28, 2010 we have been featured in local and national media, presented in a variety of venues, and hosted a number of events and initiatives - in the classroom, at work, in the community, and in academe. This update includes information about many of them.

Thank you to our sponsors, supporters, and advisors - this would not be possible without your contributions and feedback. In the words of John Lennon, "A dream you dream alone is only a dream. A dream you dream together is reality."

Thank you for dreaming with us,

Dr. Elizabeth Croft, P.Eng., FEC, FASME
Chairholder

Jennifer Pelletier
Manager

Heather Gerrits
Program Assistant

Leadership Development Workshops for Women in Industry Successfully Piloted



On March 28 and 29, 2011, WVWEST joined with the WinSETT Centre and two local companies to offer "Becoming Leaders: An Introduction to Leadership Skills and Strategies for Women Engineers and Technologists." Two slightly different approaches were taken: the first workshop was mainly participants from the host company, with a few participants from one other company included. The second workshop saw about half of the spaces filled by the host company, with the other participants coming from a variety of companies.


The workshops were very successful - the host companies were happy with the outcomes, the participants gave positive reviews, and data from an occupational self-efficacy scale completed by participants indicated improvements in self-efficacy.

"Discussing these topics with other women increased my confidence and inspires me to continue developing leadership skills," one participant shared.

Following this successful pilot, WVWEST is seeking new partner companies to bring more workshops to more women in engineering across BC and the Yukon.

Excerpt from Survey Results:

Going forward, I feel...	Company 1	Company 2
Q1: ...I will remain calm when facing difficulties in my job because I can rely on my abilities.	+ 7.5%	+ 18.4 %
Q3: ...whatever comes my way in my job, I will usually handle it.	+ 1.25 %	+ 15.5 %
Q5: ...I will meet the goals that I set for myself in my job.	+ 12.5 %	+ 18.2 %

 Statistically significant (p=0.05) difference between pre- and post- survey.

Survey adapted from: Rigotti, Schyns & Mohr, *Occupational Self-Efficacy Scale: Structural and Construct Validity Across 5 Countries* (2008)



WWEST in Academe

During the first year of the Chair, WWEST has been focused on establishing relationships and building connections. Roundtable discussions have been held at UBC Vancouver for instructors and professors to meet, share their concerns, and network. Formal visits have been made to both UBC Okanagan and the University of Victoria, with plans to visit other campuses underway.

Other activities included:

- Participating in an Innovation Roundtable with The Governor General of Canada, His Excellency the Right Honourable David L. Johnston
- Hosting a “Women in Biomechanics” workshop at the Northwest Biomechanics Symposium
- Introducing the Moderator at the UBC Focus on Women in Computer Science Imposter Panel

WWEST in the Classroom



A major initiative of the Chair was the piloting of Community Service Learning (CSL) activities in the engineering curriculum. The goal of CSL is to show students how they, as engineers, impact society and change the lives of the people around them.

In September, 128 second year mechanical engineering students participated in a one-day CSL activity at one of four partners: Richmond Nature Park, Terra Nova Sharing Farm, Free Geek, or Great Canadian Shoreline Cleanup. The CSL activities, and related reflection debriefing, helped students frame the upcoming year of classes with a social-responsibility perspective.

This summer, students completing their second and third years in engineering are being given the opportunity to take a unique technical elective – Mech 410E, Global Engineering Leadership. This technical elective has been designed to help students understand the role of engineering leadership through a socially responsible, global perspective, and utilizes a variety of guest speakers to bring multiple viewpoints to the classroom. Students also have the opportunity to continue the course into MECH 410P, a practicum course in international service learning at a partner community group in Mexico.

Dr. Croft was also featured as a:

- Panelist at Celebrate Learning Event – Applied Learning Through Service (UBC)
- Panelist at SFU Women in Engineering Group “Mix and Mingle”
- Guest Speaker at Langara College Career Seminar
- Speaker at APEGBC / UBC Salary Seminar
- Keynote Speaker at UBC Women in Science and Engineering 2011
- Speaker at UBC December 6 Memorial Service

WWEST Partners

The WWEST Partners program provides funding and training for community organizations that are undertaking activities to promote outreach, recruitment and retention for girls, young women and industry professionals. Grants are intended to provide seed or expansion funding, and Partners are encouraged to develop plans to transition to other sustaining funding sources. Grants are single- or multi-year, and may be for up to six thousand dollars.

The 2011 WWEST Partners are:

- GEERing Up! UBC Engineering & Science for Kids: Workshops for Girl Guides units and Girls Only! Day camps
- Girl Guides of Canada – SOAR: STEM activities at an international camp for girls aged 11-18
- IEEE WIE Affinity Group Vancouver: STAR (Student, Teachers, and Research) program for grade 8-10 students to increase awareness about careers in science and engineering
- SFU Girls Exploring Physics: Workshops to introduce girls in grades 9 and 10 to physics
- UBC GIRLsmarts: Computer science workshops for grade 6 girls
- UBC Okanagan Women in Science: Workshops, seminars, and mentoring for undergraduate women

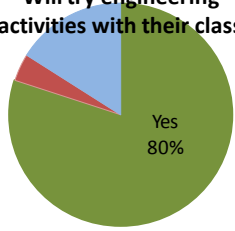


- UBC Women in Science and Engineering: Annual networking event for students and industry professionals (*above*)
- Women in Engineering (Vancouver Region): Networking and professional development groups for women in industry, back-to-work, and immigrant women

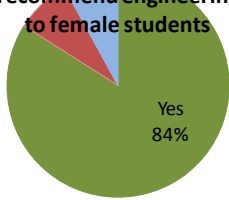
The next WWEST Partners event will take place on September 23, 2011. New groups will be invited to attend and submit proposals.

WWEST in the Community

Will try engineering activities with their class



More likely to recommend engineering to female students



In October 2010, WWEST hosted a workshop within a Teacher's Conference hosted by the UBC Faculty of Applied Science. In the two-hour workshop, teachers were given the opportunity to try out four different activities they could use in or adapt for their classroom, all with ties to the provincial Prescribed Learning Outcomes for grades 8-10. They left the day with instructions for each activity and some of the materials required to execute them. The workshop was very well received, as the evaluation results show.

WWEST was also visible in the community at the UBC Engineering Open House, as well as at the APEGBC Vancouver Branch E-Fest, where we co-hosted a booth with DAWEG to increase awareness of women in engineering and challenged the public to answer trivia on how engineers help society.

Other activities included:

- Hosted Imposter Panel Discussion at UBC (in conjunction with the Launch of the Chair)
- Co-hosted a networking breakfast for all groups involved in the promotion of women in SET in BC and the Yukon
- Profiled in the "Mothers of Invention" exhibit at the Historic Stewart Farm, City of Surrey
- Featured as a Wonder Woman at the SCWIST XX Evening
- Participated in a province-wide Science Communicators meeting
- Hosted outreach robotics demonstration for CAGIS Vancouver



WWEST at Work

Beyond the Leadership Development Workshops described on the cover of the booklet, WWEST is interested in looking more closely at women in engineering in BC, and is planning to launch a case study in the fall. WWEST is excited to be collaborating with Dr. Ruby Heap (University of Ottawa) and Dr. Toni Schmader (UBC) for this initiative.

Affiliations

Dr. Croft is currently serving in the following roles and on the following committees:

- Engineers Canada, Women in Engineering Advisory Group
- Association of Professional Engineers and Geoscientists of BC, Division for the Advancement of Women in Engineering and Geoscience, Advisory Board
- International Network of Women in Engineering & Science, CCWE+20 Task Force
- UBC Faculty Association, Status of Women Committee
- UBC Faculty of Applied Science, Status of Women Faculty in Applied Science
- UBC Faculty of Applied Science, Women in Engineering Program Faculty Advisor
- UBC Faculty of Applied Science, Community Service Learning Committee

Media

Dr. Croft or WWEST were featured or quoted in the following local and national media stories:

- CBC radio syndicated story; Corner Brook, Gander, Sudbury, Ontario AM, Thunder Bay, Winnipeg, Yellowknife, Kelowna, Prince George/ Prince Rupert (2010-09-30)
- Innovation (magazine), APEGBC (Sept/Oct 2010 Issue)
- BCIT campus radio with Rick Chung (2010-10-06)
- Studio 4, Shaw TV with Franny Keifer (2010-10-15)
- The EDGE Newsletter (Winter 2011)
- Ingenuity (magazine), UBC Faculty of Applied Science (Fall/Winter 2010 Issue)
- "Today's Woman: Trades," Global TV (2011-02-02)
- Featured Scientist, BC Year of Science (2011-02-08)
- The World at Five, CBC Radio 1 (2011-03-08)
- Business in Vancouver (2011-03-08)

WWEST Networks

With only a small percentage of engineers and scientists being women in most classrooms and workplaces, forming networks is important. In addition to connecting to larger networks, such as the Chairs for Women in Science and Engineering network and the CCWE+20 group, WWEST has created opportunities to stay in touch for women in BC and the Yukon.

Keep in Touch with WWEST



The WWEST Digest Mailing List is a semi-monthly mailing list. Subscribe by emailing wwest@mech.ubc.ca.

Or, keep in touch through your favourite social media. Keyword: *wwest*



Information is also available through our blog and RSS, at www.wwest.ca.

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Upcoming Event:

Creating Connections 2.0:

A New Perspective

Refresh. Re-energize. Re-engineer your world.

On September 24, 2011, WWEST will welcome 150 women in engineering from all stages of their career - from undergraduates to senior industry professionals - to Creating Connections 2.0, a conference for women in engineering. Participants will **make connections** that provide support, networking, mentoring, and partnerships, and expand their opportunities to make positive contributions to the engineering community and to society. Our goal is to increase participants' belief in their ability to succeed in their careers – their career self-efficacy – and thereby increase retention rates in the profession.

Want to be involved?

- Encourage women engineers to register for the conference;
- Suggest registered participants who would make great Connect/Reconnect networking group facilitators;
- Suggest a women engineer who would make an outstanding moderator for a panel session;
- Consider providing promotional items for us to distribute

Interested? Please contact us - we would be very happy to discuss how you would like to be involved in Creating Connections 2.0.

WWEST

c/o UBC Mechanical Engineering
2054 - 6250 Applied Science Lane
Vancouver, BC V6T 1Z4

Office: CEME 1214

Phone: 604-822-6584

Fax: 604-822-2134

Email: wwest@mech.ubc.ca

Please contact us if you are interested in getting involved in any of our initiatives, including:

- Creating Connections 2.0
- Leadership Development Workshops
- Industry Working Committee
- Community Service Learning
- Website profiles of successful women in engineering

www.wwest.ca