



Chair for Women in  
Science and Engineering  
BC and Yukon Region



Lead Sponsors:



**Teck**



Dr. Ken Spencer

Henry F. Man



Westcoast Women in  
Engineering, Science  
& Technology

**Presentation to BCIT**

Wednesday, February 8, 2012



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

 WVU EST The “Ask” for this talk

- Info on Chair
- “State of the Union”
- What its like ... and some advice



# WVU EST About the Chair

**Mission:** To advance engineering and science as welcoming careers that serve our world through holistic understanding and creative, appropriate and sustainable solutions

**Goals:**

- Awareness and Outreach
- Recruitment
- Retention and Industry Support



# About the Chairholder

- NSERC Chair for Women in Science and Engineering for the British Columbia and Yukon Region
- University of British Columbia Mechanical Engineering Professor
- Research centered around human-robot interaction
- Founded UBC's Women in Engineering (WIE) program and launched UBC Engineering's Mentoring program





# WWEST The WWEST Program

WWEST in Academe

WWEST in the Classroom

WWEST in the Community

WWEST at Work

WWEST Partners

**WWEST.CA**



# WWEST in the Classroom

- **Mech 2 – CSL in a day**
  - 128 second year students participated in one-day CSL activities with local community partners: Think Geek, Terra Nova Sharing Farm, Richmond Nature Park, and the Great Canadian Shoreline Cleanup
- **Mech 410E – Global Engineering Leadership**
  - A technical elective open to all engineering students who have completed second year, with a goal of helping students understand the role of engineering leadership through a socially responsible, global perspective
- **Mech 410P – GEL Practicum in Mexico**
  - Students who complete Mech 410E can continue into a 7 week placement with a community partner in Mexico and earn their Impact of Technology on Society credits.



# WWEST Partners

The WWEST Partners program provides funding and training for community organizations for:

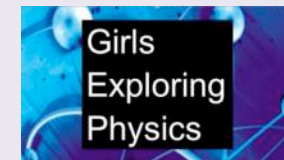
- Promoting outreach
- Recruitment
- Retention





# WVWEST Outreach Programs

- **UBC Girlsmarts**  
Computer Science workshops for Grade 6 girls
- **Girls Exploring Physics, SFU**  
Grade 9 & 10 Outreach
- **GEERing Up! UBC Engineering & Science for Kids**  
Workshops and Camps, grades 2 - 10
- **IEEE WIE Affinity Group, Vancouver: STAR**  
High school outreach
- **UBC Department of Physics and Astronomy, Outreach Program**  
Workshops for grade 6-8







# Professional Development Groups

- **Women in Science and Engineering (UBC Okanagan)**  
Workshops for Undergrad and Grad students
- **Women in Engineering, Vancouver Region**  
Networking and Professional Development post-graduation
- **The Society for Canadian Women in Science and Technology (SCWIST)**  
Workshops for students and professionals





# Conferences and Collaboration

- **Canadian Undergraduate Math Conference**

Dinner for women participants

- **BC Young Women in Physics Canada Conference**



- **Girl Guides of Canada – BC – SOAR 2011 Enviro-STEM**

Science activities at a province-wide camp

- **BC WIE and SFU WEG, Enhancing Collaboration Initiative**

Networking and Workshops

- **SFU Women in Engineering Group (WEC) and SFU Women in Computing Science (WICS)**

Networking events and company visits



- Find us on [LinkedIn](#), [Facebook](#), and [Twitter](#)



Subscribe to **WWEST Networks Digest**  
semi-monthly newsletter by emailing:

**[wwest@mech.ubc.ca](mailto:wwest@mech.ubc.ca)**

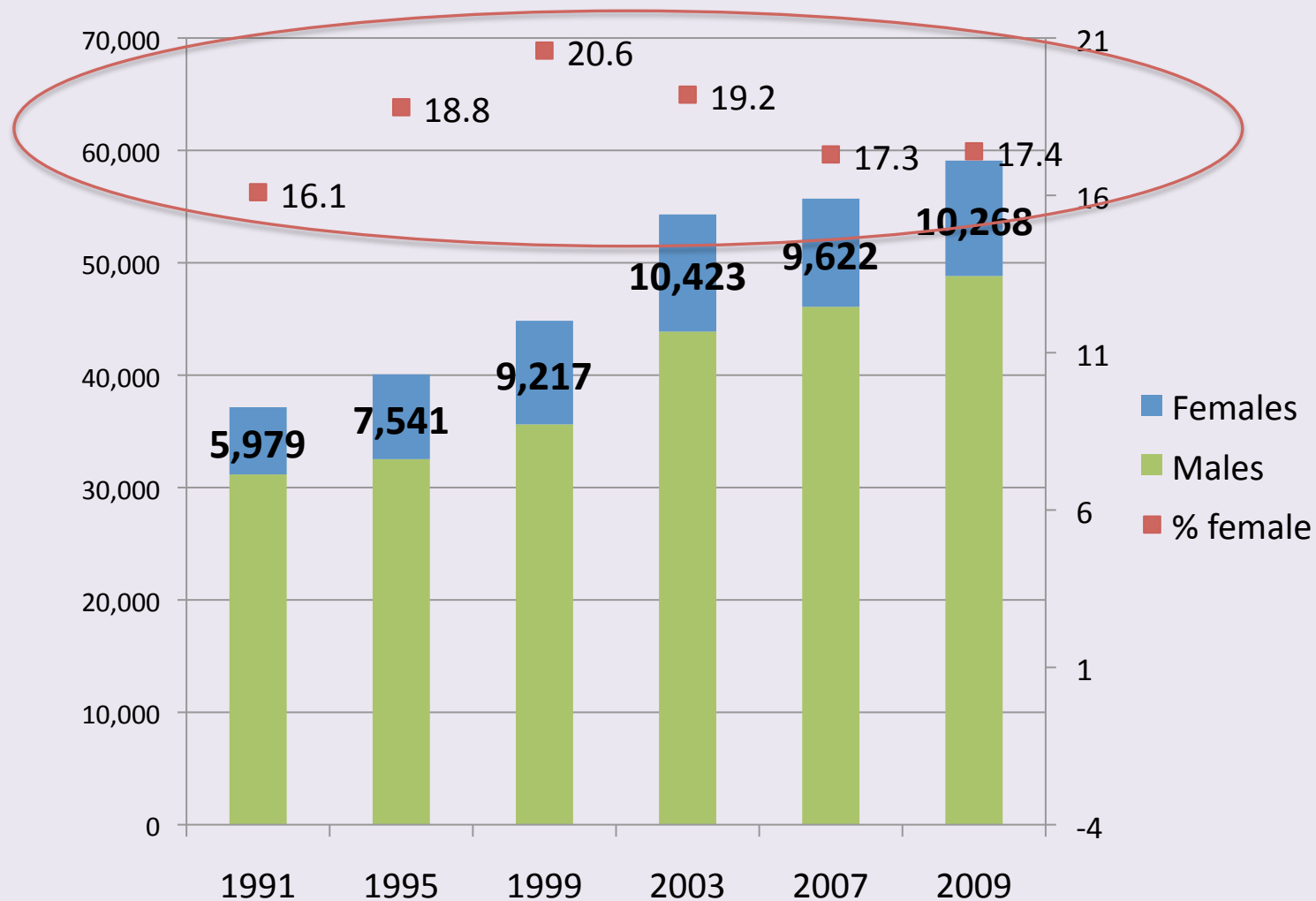


“State of the Union”



# WV EST Past and Present Statistics

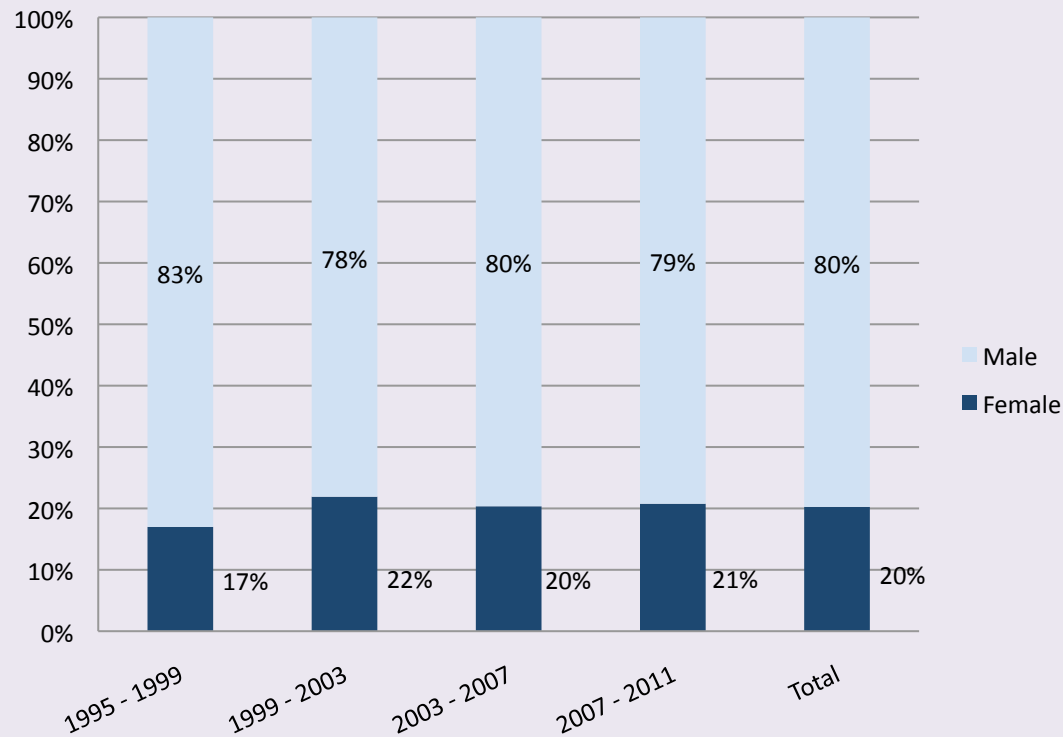
## Engineers Canada 1991-2009 Enrollment Report - Undergraduate



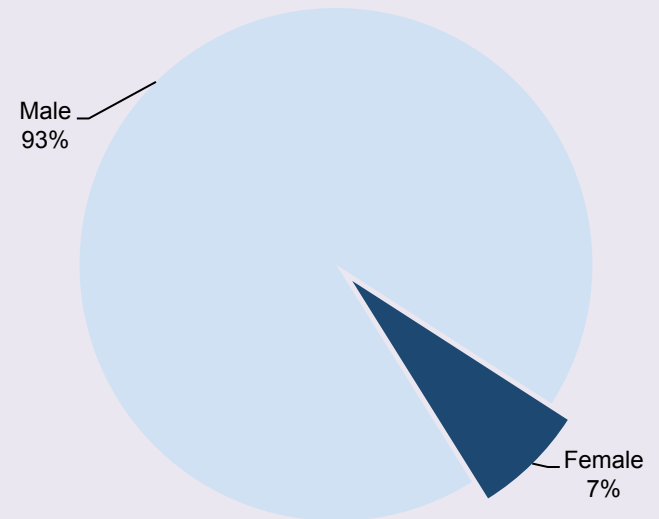


# WVVEST Local Snapshot

### Male vs. Female Registered as EITs in BC, 1995 to 2011



### Percentage of Women and Men Currently Registered as Professional Engineers In BC

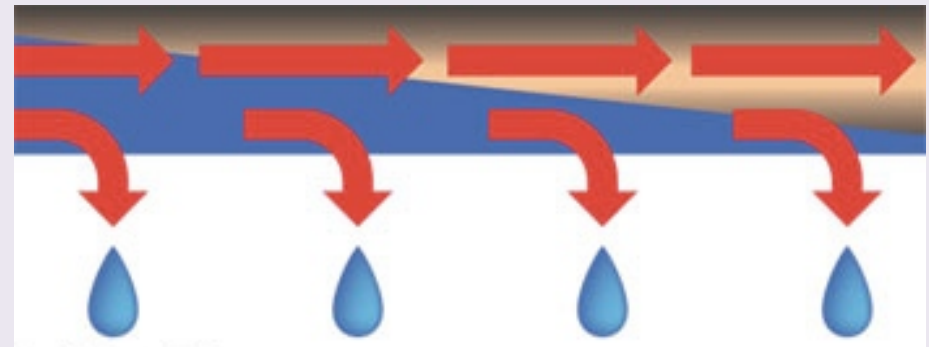




# WV EST The “Leaky Pipe” Issue

- 55%+ of people on university campuses are **women**
  - 48% of workforce
- 

- 40% of scientists
- 37% managers
- 26% VP, Senior execs
- 14% Board
- 11% Engineers
- 2-3% CEO (Fortune 500)







## Business Case for Women

- Access of employers to a broader **talent pool**
- Greater **return on human resource investment**
- Increased **innovation potential and market development**
- Stronger **financial performance**
- **Improved governance**
- Participation of women increases teamwork, professionalism, community engagement – and makes teams smarter



Living the adventure...  
...and a bit of advice.

# WV EST Question of Values

- Leadership
- Agility
- Relationships
- Performance



Values are the keywords that people turn to when they make decisions – therefore, they are **critical to the entire direction and success** of a **person**, a **company**, a government or any other entity.

Know what your Values are and use them to guide your career

# WV EST She Wins, You Win

- Great book by Gale Evans former Exec VP CNN
- For women to be successful in Engineering, there needs to be successful women engineers.



- Reach out, reach up and reach down.



# 10 Strategies for Success

- Follow your values. You can't do everything- prioritize what matters.
- Stay positive. Always expect the best, but have a plan B.
- Be mentored, and have a support group.
- Value others, and communicate your own value. When complimented on great work, say "Thank You."
- Keep your commitments – follow through.
- Build your network – know where to find knowledge.
- Practice leadership and public speaking
  - Volunteer in professional associations
  - Mentor juniors
- Be prepared to step up. Keep your resume ready. Know your strengths, and work on your challenges.
- Believe in yourself. Recognize your "personal imposter syndrome" and get over it 😊.
- Look after yourself.



# WVWEST Get Involved

## Attend a seminar or volunteer!

- **DAWEG** <http://www.apeg.bc.ca/services/divisions/daweg/index.html>
  - **Mission:** “To promote, enhance and facilitate opportunities for women to succeed in engineering and geosciences”.
- **SCWIST** <http://www.scwist.com>
  - A non-profit association that promotes, encourages and empowers women and girls in science, engineering and technology.
- **WIE Vancouver** <http://www.wievr.ca/>
  - **Mission:** “To provide a diverse group of women in engineering with networking events and skills enhancement workshops in a welcoming environment and to continuously build and maintain a network of strong relationships among women in engineering in the Vancouver Region”.
- **CCWEST** <http://www.cctestt.org/>
  - “Promoting women in science, engineering, trades and technology, and celebrating their contributions to these fields”.
- **APEGBC** <http://www.apeg.bc.ca>
  - **Mission:** “To serve the public interest through the regulation of the practices of engineering and geosciences in British Columbia and, where consistent with this duty, promote the professions and protect the interests of members”.
- **BCIT WIE GROUP** <http://sites.google.com/site/bcitwiengineering/home>
  - **Purpose:** “To promote engineering careers for women at BCIT and in the industry in general, and to provide a support group for women who are in school for engineering. Through participating and organizing community events, promoting at high schools, and organizing a mentoring program, the club hopes to see an increase in female engineering enrollment in BCIT, especially in the Mechanical and Electrical engineering programs”.



# WVVEST Questions