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**Division for the Advancement  
of Women in  
Engineering & Geoscience**

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## **The EDGE Newsletter – April 2008 Issue**

*\* Equity and Diversity in Geoscience & Engineering \**

Dear DAWEG Members,

We are delighted to announce that DAWEG is undergoing some changes, the most noticeable of which is a new website hosted on APEGBC server, with the same format as other association branches and divisions. Email correspondence with our members will also be through APEGBC from now on.

*DAWEG Board*

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## BOARD NEWS

### 1. April Board Meeting Brief

Some of you may have read a letter to the Editor of Innovation published last month that not only questioned the benefit of an organization such as DAWEG but implied that its existence does a big disservice to both the female gender and the profession of engineering. Such sentiment was up for discussion at the annual advisory council dinner where we wished we had the writer's ear for a short while. To that individual specifically I would like to point out how much effort has gone into making the changes that she points to as evidence that all is well and equitable. We welcome those that see positive changes and embrace them as a reason to keep the ball rolling. The division is also open to change and must adapt to be relevant and of interest to the members. With good times come much fortune and power, but it is with slower economic times that challenges are more evident. And lastly, wisdom and hindsight go hand in hand. Without doubt we would all write a different letter at each passing stage of our lives. As an official response to Innovation, two letters have been prepared. It is our hope that they will be published as responses in upcoming issues of the magazine. The letters are included in this newsletter (in case they are not published). The first from the DAWEG board is below. The latter written by a founding member of DAWEG, and co-signed by fellow members of the DAWEG Advisory Council can be found in section 11, at the end of the newsletter. We would also like to hear from you, if this discussion prompts you to share your thought with DAWEG board, send a reply to [daweg.chair@gmail.com](mailto:daweg.chair@gmail.com).

#### Submission 'Letter to the Editor' APEGBC's Innovation Magazine

Innovation readers may be aware of 'DAWEG' but not what the APEGBC division actually does and why it exists. The Division for the Advancement of Women in Engineering and Geoscience does NOT aim to advance special status of women or encourage segregation by gender. DAWEG supporters and volunteers are proud of their professions, so proud in fact that we devote time and energy to attract high caliber qualified individuals of all backgrounds and both genders to choose this career field. DAWEG offers junior and senior level BC Science Fair awards in four regions across BC, providing not only funds but also judges and award presenters. Serving in the community raises visibility of women in the professions and positions us as role models for young people. DAWEG's role in career awareness/promotion and mentoring programs has a beneficial outcome for the whole profession.

Perhaps it is news to some, that DAWEG members are male and female – and that our events are open to all. By joining the division, an option you can select when paying your yearly association dues, you are simply offering financial support for on-going programs. For more information, pls. check out our new APEGBC hosted website – <http://www.apeg.bc.ca/services/divisions/daweg/index.html>

In addition to outreach activities, DAWEG focuses its resources on a limited number of annual events. By attending an event you are applauding the time and effort of your peers in organizing a networking opportunity. On Dec 6th, DAWEG holds a memorial and social, which is well received by men and women; a chance to collectively reflect on our career choice. We encourage lots of APEGBC members to register as proceeds go the Canadian Engineering Memorial Fund.

DAWEG encourages involvement within APEGBC and offers training for roles within the association. DAWEG board provides a supportive, progressive forum for members to get organizational experience and develop their leadership ability. DAWEG also makes a contribution to the professional development of engineers/geoscientists by organizing a stream and arranging speakers at APEGBC's Annual Conference.

It is important to regard that while 'any one particular woman' doesn't need or may not even support the existence of such a group, 'Advancement of Women' is simply a title that reflects the vision of group dedicated to getting this far. The focus of DAWEG has evolved over the years, possibly so should the name change. But let's not abandon our efforts to in favour of an 'each for her/his own' attitude!

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**Core Values** - *Professionalism · Equity · Inclusiveness*

**Mission** - *To promote, enhance and facilitate opportunities for women to succeed in engineering and geoscience.*

## UPCOMING EVENTS

### 2. Women in Engineering in Vancouver Region Speaker Event - Thurs., May 15<sup>th</sup>

Date: Thursday May 15, 2008

Time: 6 - 9pm

Details: Organized by the Women in Engineering (Vancouver Region)

Catherine Roome, P. Eng., Chief Operating Officer BC Safety Authority and the recipient of the 2008 Influential Women in Business Award, will be giving an engaging presentation highlighting the success she has achieved with her career as an engineer and Chief Operating Officer. She will also lead us into an in-depth view of the career path she has pursued along with the influential people she has encountered at various turning point points in her career.

Beverages, snacks, and sandwiches will be provided. There will be door prizes as well as an opportunity to network.

Location: YWCA, Welch room 1, 535 Hornby Street, Vancouver

Information: More details can be found on the website [www.sfu.ca/~mlahaye/wie\\_vr.html](http://www.sfu.ca/~mlahaye/wie_vr.html)

Contact: Cost: Free, but space is limited

Registration is not required; however DAWEG members are requested to RSVP by email to [engineeringwomen@gmail.com](mailto:engineeringwomen@gmail.com)

### 3. PMC-Sierra 9th Annual 5K Science Fair Fun Run – Sunday, May 25<sup>th</sup>

Come and Join us for a day of fun and excitement at

PMC-Sierra Science Fair Fun Run

The Race Day Sunday May 25, 2008 , 7:30- 11:00 am

To register for the PMC- Sierra Science Fair Fun Run visit [www.sciencefairs.ca/funrun/](http://www.sciencefairs.ca/funrun/)

Under Registration Click on register online, click on register now in front of corporate team registration. On the next page if you don't have login name just click on continue. Remember on the form, choose DAWEG as your team and put down Paris H.Tehrani as a captain.

Participants and their families get free entrance into Science World for the day.

### 4. Vancouver Women in Mining Wine & Cheese Reception - Wednesday, May 14<sup>th</sup>

As part of Mining week in Vancouver, the Vancouver Chapter of Women in Mining will be hosting a Wine and Cheese reception.

Date: Wednesday, May 14, 2008 Time: 4:00 - 6:00 pm

Location: Hyatt Regency Hotel, Stanley Room (34th floor), 655 Burrard St, Vancouver

You are invited to attend this great networking event celebrating women who are involved in or affiliated with the mining resource sector.

Entry fee: \$20 per person will be collected at the door. Cash only please.

(students get in free by showing their student card.)

Tickets will include one complimentary glass of wine.

Partial proceeds from this event will be donated to charity campaign.

RSVP by May 12th to Allison Robertson: 604 691-7382 or email: [rsvp@national.ca](mailto:rsvp@national.ca)

Further information about Mining Week 2008 in Vancouver

[http://www.mining.bc.ca/news\\_events/Events/miningweek08vancouver.htm](http://www.mining.bc.ca/news_events/Events/miningweek08vancouver.htm)

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## 5. Women in Architecture Proudly Presents: Manufactured Landscapes - a feature documentary by Jennifer Baichwal - Tuesday, May 27<sup>th</sup>

Edward Burtynsky is internationally acclaimed for his large-scale photographs of nature transformed by industry. Manufactured Landscapes – a stunning documentary by award winning director Jennifer Baichwal – follows Burtynsky to China, as he captures the effects of the country's massive industrial revolution. This remarkable film leads us to meditate on human endeavour and its impact on the planet.

*Best Documentary – 2007 Genie Awards*

*Best Canadian Film – Toronto International Film Festival*

LOCATION: PACIFIC CINEMATHEQUE (1131 Howe St)

TUESDAY MAY 27 AT 7:00 pm.

TICKETS: \$15.00 per person \$10.00 student / senior / low income (limited amount).

Tickets at the door – pre-registration is required by email [atlarpiainen@hcma.ca](mailto:atlarpiainen@hcma.ca)

Register early to ensure a ticket! The screening is open to all. Please arrive to claim tickets by 6:45 pm.

Director JENNIFER BAICHWAL will attend the screening.

## 6. DAWEG ITE Coffee Talk

DAWEG Evening Coffee Talk - Network event for engineers looking for work, including Internationally Trained Engineers (ITE)

What about an opportunity to mingle with other peers? A great way to improve your professional network!

Event objectives:

- ✓ build a supportive and informative network for engineers looking for work
- ✓ create a forum for discussing and sharing ITE-related information
- ✓ promote inclusiveness in the engineering community in BC.

Are you interested? Then email [Daweg.ITE@gmail.com](mailto:Daweg.ITE@gmail.com) to let us know.

We will provide details soon, based on the responses received. Thank you for your support!

## 7. CCWESTT Conference - Building On Success, May 29<sup>th</sup> – 31<sup>st</sup>

The Canadian Coalition of Women in Engineering, Science, Trades and Technology - CCWESTT is a national coalition of groups that aims to promote women in science, engineering, trades and technology, celebrate their contribution and apply new vision to these fields.

There is still time to register for this conference. A delegation will be attending from DAWEG and WIE @ UBC. Women from these groups are presenting on the following topics;

Paper E-1 : Building Communities Symposium '07 : Designing a Network for Women In Engineering in BC

Paper E-3 : Report on the Engineering Climate Survey Conducted at UBC

Presentation M-1 : Professional Women Are Succeeding in Engineering, Division for Advancement of Women Is Adapting

## 8. Awards and Recognition

DAWEG is pleased to inform our Members and Sponsors that in March of this year, Bernadette Currie, EIT, DAWEG Chair, was the recipient of the "Celebrating Women and Spirit of the Crane's" Gold Award in Science and Technology presented by the Burns Bog Conservation Society.

Also in March, past Finance Director for DAWEG, Caroline Andrewes, P.Eng., was successfully nominated to the APEGBC Standing Awards Committee. And in April, Anja Lanz, Lead Coordinator of the 2007 Building Communities Symposium was awarded the UBC Faculty of Science Achievement Award for Service for her significant contribution in recruiting and enhancing the environment for female undergraduate students in Engineering Physics, Physics and Astronomy. As well, this winter, Maggie Wojtarowicz, P.Eng., DAWEG Past Chair, was published by IEEE Canadian Review Magazine for the "Engineers Can Help Stop E-Waste Generation" article (<http://ewh.ieee.org/reg/7/canrev/cr56/index.htm>). We celebrate your successes with you!

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### 9. BC Science Fair Photos and Awards

Spring is science fair time in the province, DAWEG is honoured to sponsor nine awards at the junior and senior level. Our executive board directors act as judges and award presenters. Serving in this role is inspiring and enlightening, to see young people with some dedication to studies, such intelligent and enthusiasm for science and the world around them. This is a volunteer role that could easily be filled by any member of DAWEG or the engineering community, right in your community. Next year, we hope to be flooded with offers to volunteer at the various fairs in the following regions. Here is a brief summary of some of the project and winners. Congratulations to them.



Fraser Valley – Abbotsford  
– March 4<sup>th</sup>

Breanna Chelsley & Marissa Litjens (Grade 7) Project:  
“Feel the Shaking” included a  
homemade “seismograph”,  
that showed skills and  
knowledge in the sciences &  
engineering field.



Vancouver Island – U Vic –  
April 7<sup>th</sup> (University of Victoria)

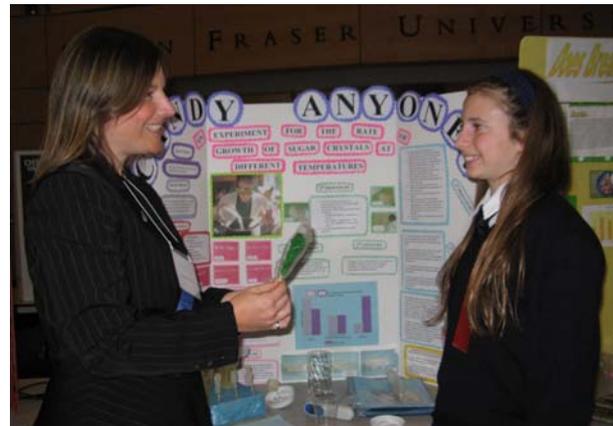
Junior winner - Monica Whitney-Brown (grade 8)  
Project: Raindrops of Rotors

Senior winner - Alice Jourmel (grade 11)  
Project: Dynamic Testing of Strength and Vibration Properties  
of Hardwoods

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Surrey/Delta – April 4<sup>th</sup> (SFU Surrey)

Winner: Hydroelectricity and Wind Power, Shivika Sharma, Grade 10, Sullivan Heights Secondary

Candy Anyone? An Experiment for the Rate of Growth of Sugar Crystals at Different Temperatures: Alayna Witzel, Grade 7, Pacific Academy. Selected to represent South Fraser at the Canada Wide Science Fair in Ottawa, May 10 - 18th.

## 10. Full Length Version of DAWEG Advisory Council's Letter to the Editor of Innovation Magazine (APEGBC Journal)

*Editor,*

*Recent comments in Innovation have suggested that there is no longer a need for "antiquated" organizations such as DAWEG, which advocate for fuller participation of women in the engineering profession. We wish it were so.*

*The basis for spending time and money to advocate for increased participation of women in our profession is supported by recent statistical data collected from various sources, including APEGBC.*

### *1. Enrollment*

*Nationwide efforts of the early to mid 90's to increase enrollment of women into engineering resulted in increases from 14% in the early 1990's to a peak of 21% in early 2000's (CCPE 2005). This number has been slowly dropping and is now at 19% (18% in BC). Women make up more than 50% of the population of Canadian university campuses, and are represented in comparative numbers in*

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the faculties of Science, Law, Commerce and Medicine. Clearly they have the necessary interest and capacity to complete challenging professional programs. So why not engineering? Quite frankly, engineering has a poor reputation as a profession with women, and with the public in general (e.g., the parents of students entering university). Improving the profession's reputation as a positive place for women to invest their educational and career capital can only have a beneficial outcome for the whole profession.

### 2. Compensation

A review of the APEGBC compensation survey data (1994-2006) indicates that women are consistently paid less than their male counterparts when compared by both year of graduation and by responsibility point. In the most recent survey, the difference in median salary between men and women just graduating from university was over 5%. Furthermore, in the lower responsibility categories (less than 425 points – where the bulk of women in the profession are), women are paid up to 11% less per responsibility point than men. These statistics are almost identical to those collected in 1994. The salary gap is not closing.

### 3. Attrition

Recent data indicates that women students leave engineering programs at a rate 25% higher than men. Another survey (Lanz 2008) found that as women students progressed through the program, more senior women students reported awareness of “some or many barriers” to women pursuing engineering careers (60% senior women vs. 53% junior women).

Attrition is also apparent in industry, but less studied. The number of women in engineering in any workplace in BC is typically so small that women often feel alone and isolated. This feeling of isolation tends to increase as women progress through their career and often leads to attrition (Ramdin, 1998). There is little workplace support for women entering into the mid-level phase of their career often with the competing responsibilities of aging parents, young children, and a demanding career path<sup>1</sup>. It is not surprising that women facing such challenges leave the profession for alternate careers where their skills are valued and their needs accommodated.

### 4. Promotion

Recent surveys by Human Resources and Social Development Canada (HRSDC) show a very small percentage of women engineers in senior management positions. It has been argued previously that there have not been sufficient numbers of qualified senior women engineers for such positions. The reality is that, in many organizations, the corporate policies and requirements for senior management positions make it difficult for women to take on such positions while also balancing family requirements and other life priorities.

We believe that while issues for women engineers have and are continuing to change, there is still a compelling need for groups such as DAWEG to advocate for improvements to our profession that will ultimately benefit both women and men.

Sincerely,

Elizabeth A. Croft, Ph.D., P.Eng.

Associate Professor, Assistant Head, Department of Mechanical Engineering, UBC

#### References:

Canadian Council of Professional Engineers, "Canadian Engineers for Tomorrow," Ottawa, ON CANADA, 2005.

Lanz, A. et al., "Women in engineering at UBC: A case for support of networking activities" Accepted to the 12th CCWESTT Conference, May 29-31, 2008.

Ramdin, T. "Identification of factors which facilitate and hinder the career adjustment of women engineers." Master's thesis. University of British Columbia, Vancouver, British Columbia, 1998

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## 11. Summary of DAWEG Stream at APEGBC Annual Conference

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(1) Mark Dance

"Creating Value: Connecting Applied Science and Entrepreneurship"

"The Speaker's history in BC High Technology has exposed him to the tremendous synergy that exists between applying scientific principles and training and the entrepreneurial steps of Creating, Capturing and Sustaining Value. To a large extent the speaker believes that the Definition and Objective of professions which apply science, such as Engineering, should be recast in these terms thereby creating practitioners focused more on the end than the means. It is the speaker's contention that exposure to and application of these basic concepts - usually considered the domain of business or economics - will more fully leverage the full value that Engineering can and should bring to the world. The first step, however, is to understand the motivations of people..."

(2) Catherine Roome, P.Eng.

"In Our Own Way - Building Community While Building Career"

Part of career development is building relationships and giving back. We can sometimes look back and wonder where did the time go, and did I take the time to ensure that my leadership is more than my career? This seminar looks at using that unique brilliance we all have - our values and our particular skills and interests - to CREATE MORE, and have a powerful effect on your business. Linking our personal joy and fulfillment into our businesses, ends up creating sustaining networks and communities. This seminar will discuss how to bring your personal interests into your business and really capitalize on your leadership - some tools for your personal tool-kit, using humour and fun!

(3) Sandy Chernoff

Effective Leadership....the Key to a Successful High Performance Team

This interactive workshop will examine the traits so essential to effective leadership, quantify your leadership IQ, identify how others see you in a supervisory role, explore the art of delegation and relate it all to the successful management of the high performance team. Participants will have the opportunity to discuss their view of leadership, examine their own style, discover their strengths and weaknesses, and then employ strategies to enhance their abilities. Paradigm shifts in approach will become possibilities when these strategies are utilized

(4) Susan Miletic

DEVELOPING EFFECTIVE COMMUNICATION SKILLS

Communication is critical to an organization's success. This is because effective communication skills maximize team performance, build solid client relationships and increases efficiency. Effective listening, self awareness and assertiveness skills are more important to the process than we might realize. In this seminar we will explore these key elements.

PARTICIPANTS WILL...

- identify the communication process
- understand how perceptions affect communication
- recognize barriers to effective communication
- learn how to improve listening skills
- discover the difference between passive, aggressive and assertive behavior

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## 12. Sponsors

To support DAWEG or for further information please contact Svetlana Levitskaia, Finance Director at: daweg.sponsorship@gmail.com OR (604) 930-4592.

### Title Sponsor:



### Gold Sponsors:



### Silver Sponsors:



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