



The 2017 WIE International Leadership Conference

- IEEE Canada members bring home ideas and inspiration

By Vawn Himmelsbach



Women in STEM fields have always faced unique challenges. They're often far outnumbered by men, may handle work situations differently than their male counterparts, and have historically been viewed as less gifted in these fields, sometimes resulting in fewer career opportunities. And they're often underrepresented in leadership roles.

A 2014 global study of leadership in the private sector put some hard numbers to the problem. Surveying 22,000 firms, the Peterson Institute for International Economics found that almost 60 percent had no female board members. Half had no female C-suite executives and

fewer than five percent had a female CEO. The situation is exacerbated for women in STEM fields; the survey found female representation on boards and in corporate leadership positions at technology-related firms was lower than other industries such as healthcare and finance. However, firms that include women in leadership roles tend to be more profitable, according to the research, and diversity in general is likely linked to higher performance.

Helping to develop the next generation of female leaders was front and centre at the 2017 IEEE Women in Engineering (WIE) International Leadership Conference (ILC), held May 22-23 in San Jose, Calif. IEEE WIE was founded in 1994 to promote the advancement of women in IEEE fields of interest, as well as encourage girls to pursue careers in science and engineering. The ILC, which attracted 1,500 global attendees this year, was launched in 2014.

WIE ILC helps to inspire, engage and advance women in engineering by featuring female speakers in senior leadership positions, and offers numerous tracks exploring various aspects of leadership skills. It's also an excellent means for women to network and learn first-hand what opportunities exist in various WIE committees and sub-committees, says IEEE WIE Canada Regional Coordinator, Elena Uchiteleva.

This year's attendees had access to keynote sessions and tracks on leadership, innovation, empowerment, disruptive technology and entrepreneurship, as well as transforming technical talks and workshops on topics ranging from conquering stress to breaking through bias. They also had access to a career fair, pitch boot-camp and networking reception at the San Jose Tech Museum. Numerous industry reps were on hand looking to recruit a diverse workforce and discuss emerging technologies.



“As an executive volunteer, these sessions helped me to define and to shape my leadership style, to understand what leadership means, and to become a better leader,” says Uchiteleva. “It’s also interesting to see the obstacles that other leaders face and learn how they overcome them.”

Elena Uchiteleva, Chair, WIE Canada Committee, IEEE Canada, Group Committee Chair, Member Services

“For me personally, the executive leadership track was the most relevant and most important,” says Uchiteleva, a Ph.D. candidate in wireless communications at the University of Western Ontario. “This track is aimed at helping to develop stronger female leaders in engineering specifically, and consisted of multiple inspiring and insightful talks.”

One message that stood out for Uchiteleva is that leadership is a choice; nobody is born a leader - you choose to become one. Candy Barone, CEO and founder of You Empowered Strong, explained in her presentation that successful leaders see opportunities rather than obligations. She also spoke about emotional intelligence — how to turn fears into motivation and how to shift from time-management to focus-management.

Another notable session was a panel on “Defining Leadership” with five speakers who hold management roles in Google, Texas Instruments, Qualcomm, Applied Materials, Inc. and the U.S. Army Reserve. The panel discussed what leadership means to them, their leadership style, how to influence people, how to handle stressful situations and how to achieve challenging goals.

“As an executive volunteer at the IEEE, these sessions helped me to define and shape my leadership style, to acquire more profound understanding of what leadership means, and to eventually become a better leader,” says Uchiteleva.

Some would say Uchiteleva already has a leadership track record quite firmly established: she is the recipient of the 2017 IEEE Canada Women in Engineering Prize and the 2017 Claudette MacKay-Lassonde Graduate Engineering Ambassador Award from the Canadian Engineering Memorial Foundation. But, there

is always more to discover, she notes. “At WIE ILC I saw difficulties other leaders faced and how they overcame them.”

Aside from personal and professional development, WIE ILC provided an opportunity for WIE volunteers to build links with their peers and share insights.

“This conference is all about networking — it’s a great platform for meeting other IEEE WIE members and volunteers from all over the world. With some of them I’ve communicated only by email, and finally got to meet those people in person,” Uchiteleva says.

The networking benefits are shared by all the WIE Canada volunteers that attend WIE ILC, according to Uchiteleva.

“Since they have a chance to talk to representatives from other regions and chairs of other groups, our volunteers can glean best practices, the most successful events that have been organized and what we can bring back here to Canada. They come away inspired to organize more impactful events, such as summits or workshops at other conferences.”

Attendance at international conferences has higher travel costs than participation in events mounted in Region 7 (R7), so this generally limits how many IEEE Canada volunteers can benefit from them. However, WIE volunteers can apply for travel grants to attend WIE ILC, up to US\$1,000. This year R7 also provided support for local chairs, with three grants of \$500.

“IEEE Canada is very supportive of WIE,” says Uchiteleva. She notes how current IEEE Canada President Dr. Witold Kinsner has emphasized integration of WIE activities into

planning of regional activities. President-Elect Dr. Maike Luiken, founder of London Section’s WIE group, has “never turned down an invitation” to speak at WIE Canada events Uchiteleva has organized.

The larger IEEE WIE community has also been very responsive to Uchiteleva’s requests. For the WIE Canada Congress in Mississauga in September 2016, she invited speakers such as current IEEE WIE Committee Chair Dr. Bozena Pasik-Duncan, past chair Nita Patel and WIE Committee member Jennifer Ng Ain Kin. Attending meant significant travel for some of them. But, they all showed up.

“Having these high-profile WIE volunteers talk about their experiences really boosted attendance,” Uchiteleva says gratefully. “We really appreciated the effort they made to come and present.”



“This really encourages me to be more passionate about what I’m doing. I need to do more, I need to inspire female students and younger generations ... The whole environment was really motivating, intelligent, powerful.”

Nasim Abdollahi,
Chair, WIE Winnipeg Section.

Nasim Abdollahi, from WIE Winnipeg Section, first heard about WIE ILC from Section past chair, Dr. Puyan Mojabi, who highly recommended attending. Then during the Mississauga WIE Congress, she met Nita Patel, chair of WIE

Dr. Ana Luisa Trejos

IEEE Women in Engineering Inspiring Member of the Year (Honourable Mention)

DR. ANA LUISA TREJOS (SMIEEE) from London Section received worldwide recognition through honourable mention for the IEEE Women in Engineering Inspiring Member of the Year Award. Her citation includes dedication to WIE, advocacy for women in STEM and outstanding achievements in engineering.

Since 2013, Dr. Trejos has been Assistant Professor at Western University and Associate Scientist at Lawson Health Research. Her research interests include devices for minimally invasive surgery and the development of systems for surgical



training and motor skills assessment. She owns four patents for surgical devices, has written 25 journal papers and 36 conference papers, and is a recipient of 19 awards, including the Alexander Graham Bell Canada Graduate Scholarship from the Natural Sciences and Engineering Research Council of Canada. She serves on multiple committees and is a sought-after speaker

at industry conferences.

Trejos has been a WIE member since 2009. As Vice-Chair of the WIE London AG, she has helped to revive the group, which had been inactive for many years; today, it’s one of the most active WIE groups in Canada.

Outside the IEEE, Trejos contributes to numerous community outreach programs that promote women in engineering, by developing outreach activities for elementary and high school girls and providing support to undergraduate female students through mentoring. Her approach is to share her passion about engineering and spark interest in this profession— all while diminishing stereotypes about the role of women in STEM. ■



“If we leave it to happen by itself, it won't! We need to have an active role in implementing gender equality in every aspect of our lives, and teach it to the next generation.”

Dr. Samira A. Rahimi, Chair, WIE Quebec Section

ILC. Her interest was piqued; she applied for volunteering and received a travel grant, allowing her to make the trip to San Jose. Abdollahi, who is completing her PhD at the University of Manitoba, is conducting research into microwave imaging for biomedical applications.

At WIE ILC, she learned about the latest research by tech giants like Apple, Microsoft, Intel and Google, which was eye-opening. It also inspired her.

“I met so many strong women; they have done so much to inspire young females to pursue engineering and science,” says Abdollahi.

A keynote speaker that stood out for Abdollahi was Peggy Johnson, Executive Vice-President of Business Development with Microsoft, who spoke about the evolution of non-traditional career paths and staying true to your authentic self. At one point in her career, she was the only female engineer working for Qualcomm, which came with its challenges.

Abdollahi walked away from the conference with a new role model in Johnson.

Alise Wang

IEEE Women in Engineering Inspiring Student of the Year (Honourable Mention)

ALISE WANG (IEEE WIE University of Ottawa SBAG) received worldwide recognition through an honourable mention for the IEEE Women in Engineering Inspiring Student Member of the Year Award, for her leadership and contributions to the IEEE WIE and IEEE communities.

Though Wang is only in her third year as an undergraduate engineering student, she has been involved with the SB WIE uOttawa since 2015 and, as one of the most active executive members, was elected to fulfill the role of SB WIE uOttawa Chair in 2016.



Driven by her interest in humanitarian projects, Wang has helped to organize major Canadian IEEE conferences, such as IHTC and EPEC, as well as the WIE Canada Outreach & Networking Event at EPEC 2016. She also volunteered to run the WIE promotional booth at EPEC 2016 and EMBS ISC 2016, helping to increase WIE membership.

Wang advocates for women by volunteering as a workshop coordinator for ANCWT (Advancing New Canadian Women in Technology), a pilot program designed to assist women refugees and newcomers from Syria in gaining work experience. She has also contributed to several community outreach programs, including the uOttawa Kin Club, and is a member of Engineers Without Borders.

Wang is organizer of the WIE uOttawa Big Eng Little Eng Mentorship Program, a school-wide mentorship program involving more than 140 students to date — providing a vital support network for first-year female students and helping to increase the retention rate of women in engineering. ■

Dr. Samira A. Rahimi, from IEEE Quebec

Section, also attended WIE ILC through a travel grant. Dr. Rahimi called it “an inspirational event” where she strengthened her leadership and networking skills, as well as job-search skills.

A postdoctoral researcher at Université Laval's Faculty of Medicine, Rahimi has been focused on healthcare systems for years. With a background in industrial and system engineering, she tackles health-related decision-making problems and helps both health professionals and their patients to work together to make informed value-congruent decisions about patients' health. She is currently part of a prenatal screening study to detect chromosome abnormalities using maternal blood, aided by personalized genomics. Her specific research has to do with shared decision making in having the test performed.

Rahimi's research is interdisciplinary, and presenting engineering material can be challenging — particularly when trying to make it understandable and interesting to non-engineers. “These sessions helped me to learn skills on how to communicate engineering and technical terms to colleagues without my background,” she says.

At ILC, Rahimi learned about the latest in healthcare technologies and e-health initiatives, and had a chance to hone her soft skills, including improving her leadership capabilities. “I was thrilled by meeting many strong female leaders in different industries including healthcare — I've gained from their experiences.”

Rahimi is an active campaigner for gender equality and an active

advocate for women STEM students, professionals and entrepreneurs. She is founder and chair of IEEE WIE Quebec Section, and winner of the 2015 IEEE Canada Women in Engineering Prize.

“We cannot go further in gender equality unless we move to the action cycle,” Rahimi says. “If we leave it to happen by itself, it won't! We need to have an active role in implementing gender equality in every aspect of our lives, and teach it to the next generation.”



“Coming out of this conference, you make yourself a promise to do something.”

Janet Davis, IEEE Ottawa Section

Janet Davis, from IEEE Ottawa Section, attended WIE ILC for her second time. “It's good to re-inspire

you, to get you re-energized,” she says. A senior engineering manager at network strategy and technology company Ciena, Davis found the leadership track particularly useful, since it was focused specifically on women in engineering fields. “It dealt with different situations, focusing on how you as a woman would handle them,” she says.

One workshop that resonated with her was the Technical Women's Leadership Journey, a leadership development program for female engineers, developed by female engineers. This training program is a partnership between WIE and the Centre for Creative Leadership, designed to empower women to break through mid-career barriers and rise to senior technical and leadership roles. The program has been successfully piloted in Silicon Valley and is now available to WIE groups and companies globally.

"I came out of that saying, 'That's really cool and we should try to get that course here at work,'" says Davis. "Coming out of this conference, you make yourself a promise to do something."

International WIE events like this one help to broaden the horizons of section volunteers towards opportunities for further involvement.



"When they're in university, a lot of younger women have career and moral support from friends, they create a club and do a lot of activities. Then afterward they go off to their new jobs where they're now a minority within a minority (of engineers). They no longer have a sisterhood connecting them — that's where we see there's a big gap."



"If you want to engage at a global level you need to meet the people. If members can attend these workshops or the local WIE summits, they can build their network. There's no better way to make contact than to be present."

Jennifer Ng Ain Kin, Ottawa Section; IEEE WIE Committee

Jennifer Ng Ain Kin, long-serving IEEE volunteer with Ottawa Section, was also a repeat attendee at ILC. "If you want to engage at a global level you need to meet the people," she says. "If members can attend these workshops or the local WIE summits, they can build their network. There's no better way to make contact than to be present."

As an IEEE WIE Committee member who works with volunteers at an international level, Ng Ain Kin knows a thing or two about building networks. She's also been doing it for 27 years with IEEE, starting out in 1990 and volunteering in myriad capacities over the years. Ng Ain Kin is currently responsible for regulatory affairs — advertising and promotion, for Abbott Vascular in California, a division of global healthcare company Abbott.

The WIE ILC conference has evolved, she says, from speakers at the CEO level to all other types of women's leadership. And this year there was a big focus on mentoring. "There was a lot of professional coaching, more than I have seen before," says Ng Ain Kin.

"Mentoring is something I've done for a long time; I've done it for my alma mater, McGill University, for almost a decade. Funny enough, most of my mentees are male," she says. Ng Ain Kin has also mentored for IEEE, whose mentorship program is now run through the IEEE Collaboratec online community. WIE doesn't currently have a mentorship program at the international level.

Ng Ain Kin never had a formal mentor herself. "I think it's something inherent in women — we might be shy to say we need help," she says. "I had professors that guided me. I recognized they were mentors, but I never actually signed up for a mentor."

Shortly after she moved back to Ottawa after working in New Hampshire, Ng Ain Kin mentored the WIE affinity group within Carleton University's IEEE student branch, helping to explore opportunities within the Teacher In-Service Program. There, she served as Ottawa Section WIE Chair, and helped to advance the profile of IEEE Ottawa Section members that were active in WIE.

In 2010, her mentoring work was recognized by the Canadian Advanced Technology Alliance WIT (Women in Technology) group through an award publicized in *Computer World* and the *IEEE Canadian Review*. She was active in several pre-university initiatives of the IEEE Educational Activities Board from 2011-2014, and in January 2015 joined the IEEE WIE committee, helping to promote WIE and its activities throughout the 10 Regions of IEEE.

Ng Ain Kin has created partnerships locally in Canada with groups such as Women In Science and Engineering and NSERC, and has also seen how IEEE WIE builds partnerships at an international level.

In many ways, she is representative of the way in which IEEE would like to move forward. She is not an academic; she's from industry, and meeting the needs of those who work in industry is increasingly recognized as a priority by IEEE. Many of Ng Ain Kin's mentees have been those interested in making a career move from academia to industry.

Ng Ain Kin's three-year WIE Committee term comes to an end this year. During her first two years, she contributed by creating an environment that has increased membership. "You can't just tell the plant to grow, you have to provide the right atmosphere and settings," she says.

One of the challenges is that women typically join WIE as a student, she says, but membership wanes after graduation. "When they're in university, a lot of younger women have career and moral support from friends, they create a club and do a lot of activities," says Ng Ain Kin. "Then afterward they go off to their new jobs where they're now a minority within a minority (of engineers). They no longer have a sisterhood connecting them — that's where we see there's a big gap."

"I have created and supported activities that I look back at and I'm very proud of. The newsletter is going well, membership is higher, engagement is there, we have a new website, we're up to date. Three years is the perfect term for this volunteer role ... if I cannot finish, my peers will continue on my work. La relève est là et prête ..."

And conferences such as WIE ILC give her peers plenty of ideas — and inspiration — on how to do just that. ■

Vawn Himmelsbach is a freelance writer who has written about business and technology for more than 20 years.