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Dr. Elizabeth Croft is a full professor with tenure in Mechanical Engineering at UBC and the founding director of the Collaborative Advanced Robotics and Intelligent Systems (CARIS) Laboratory, an internationally respected research group that specializes in Human Centred Robotics Technologies. As the NSERC Chair for Women in Science and Engineering, BC & Yukon (2010-2015), she also serves as the Chair for the NSERC Chairs for Women in Science and Engineering Network. Prior to becoming NSERC Chair she was Associate Head, External (2007-2010), for the Department of Mechanical Engineering at UBC. She is a founding instructor of the MECH2 program, which won the 2005 ASME Curriculum development award, the 2007 UBC Alfred Scow award and the 2008 Alan Blizzard Award. Moreover, Dr. Croft is a registered Professional Engineer, and a member of ASME and IEEE.

As director of the CARIS Lab, Dr. Croft oversees an interdisciplinary research group including three other faculty members, from Mechanical Engineering, Computer Science, and Human Kinetics. Her engineering research program is funded by General Motors, Hyundai Heavy Industries, the Canada Foundation for Innovation, and NSERC.

Dr. Croft currently leads a ~\$1M NSERC Collaborative Research and Development (CRD) Grant (2011-2014) with four Co-Principal Investigators at three institutions and an industry partner. This research project exploits an emerging paradigm-shift for manufacturing systems, which relies on the use of intelligent robotic assistants that can collaborate both directly and physically with human co-workers in their assembly tasks as part of the production team. The project aims to advance methods for interacting with robotic assistants through developments in the perception, communication, control, and safe interaction technologies and techniques centered on supporting workers performing complex manufacturing tasks.

Dr. Croft has been a member of the Division for Advancement of Women in Engineering and Geoscience (DAWEG) of the Association of Professional Engineers of BC (APEGBC) since 1995. She has served in many positions with this group including Co-Chair (98/99) and is currently on the Advisory Board. Dr. Croft has given numerous talks and educational sessions to promote women in engineering from elementary school through graduate studies, academe and industry careers. For her many activities promoting women in engineering, she received the APEGBC Professional Service Award in 2005, the Award for the Support of Women in the Engineering Profession, Canadian Council of Professional Engineers in 2006, and was made a Fellow of Engineers Canada in 2008 and of the American Society of Mechanical Engineers in 2009.

In 2010, as NSERC Chair, Croft founded Westcoast Women in Engineering, Science, and Technology (WWEST) in order to: attract, recruit, and retain women in engineering and science. WWEST works at national, regional, and local levels with organizations engaged in increasing the number of women in science, engineering, and technology (SET) disciplines through multilateral partnerships spanning community, academic, and private sector partners. WWEST serves as the premier hub for activity and dialogue about meaningful inclusion and increased participation of women in SET disciplines on Canada's west coast.

WWEST has engaged with 16 organizations through the WWEST Partners grant program to foster exciting new initiatives that promote the outreach, recruitment, and retention of girls, young women, and industry professionals in science, engineering, and technology.

Serving as a role model for women in Science in Engineering, Dr. Croft participates in a many profile-raising events and activities. She is frequently featured in the media, speaks regularly at community events, and has been featured in both a local museum exhibit as an inventor and as a BC Year of Science Featured Scientist. She has been a keynote speaker for events like the SCWIST 2011 Gala, the Association of Professional Engineers and Geoscientists of Alberta 2011 Mentoring Conference, and the 2012 WISEST Lectureship at the University of Alberta.

Q. Who inspired you to become a Mechanical Engineer?

A. Dr. Phil Hill, a professor of mechanical engineering at UBC and Mr. E. Hart, my high school physics teacher. Both of these very kind gentlemen gave me great encouragement to pursue a career in engineering, and Dr. Hill particularly encouraged me to pursue mechanical engineering.

Dr. Hill showed me drawing for the Boeing 767 just at the time that it was being developed. I was amazed and inspired by the idea of designing something like that, and I absolutely loved poring over the engineering drawings.

Q. Who (other than family members) do you admire most?

A. From recent history: The famous 5 (Emily Murphy, Henrietta Muir Edwards, Louise McKinney, Nellie McClung, Irene Parlby) – who fought for Canadian Women to be declared “persons”.

Professor Ursula Franklin, first female professor of engineering at the University of Toronto, pacifist and feminist, author of the “Real World of Technology” and holder of the Governor General’s Award in Commemoration of the Persons Case, and the Pearson Medal of Peace.

Margaret Ann Armour, another holder of the Governor General’s Award in Commemoration of the Persons Case, President of the Canadian Centre for Women in Science, Engineering, Trades and Technology, and a tireless campaigner for encouraging and including women in Science, Engineering, Trades and Technology careers.

Q. What do you feel has been your most important professional accomplishment to date?

A. This is a hard question. There are a number of things I am very pleased with but all involve the contributions and collaborations with many others – for example the highly successful and award-winning MECH 2 program at UBC; the establishment of the UBC Engineering Tri-mentoring program; the establishment of, and research coming out of, the CARIS lab at UBC (which has received some great international recognition) are a few of the things I feel very good about. I don’t think it is possible to put my finger on one “crowning” achievement but perhaps I’m not there yet...

Q. What’s one piece of advice you would give to Women in Engineering?

A. Be true to yourself and to your own values! Stay strong and be clear about who you are and want to be, make sure you communicate your values and aspirations, and work with others to make the profession a wider, more accepting and more diverse place. In this way you will be creating a profession that is better for everyone.

