

Introduction to Geotechnique?

I was born in France and came to Montreal at the age of 10. In Montreal I attended Collège Marie de France where I had excellent teachers in mathematics and the physical sciences who gave me a good introduction to science. When I applied to study engineering at École Polytechnique de Montréal, I received a very positive reception.

My other interest was art, and I considered studying art. My father sensibly suggested to me that I could be an engineer and paint, but I could not be an artist and do engineering. His was a voice of reason. I took his suggestion and opted to study engineering. I have no regrets!

As an undergraduate civil engineering student, I was exposed to geotechnics during my summer jobs in Montreal.

Other women in your classes?

One reason I was welcomed at École Polytechnique was because, at that time, it was trying to attract more female engineering students. There were very few female engineering students when I was there.

Difficulty getting your first job?

When I graduated with my BEng, I immediately got a job with Hydro-Québec (as did about one half of my graduating class!). I initially worked in Montreal in the Contract Department because, at that time, women were not allowed to do field work. I had an interest in geology and geotechnics, and after a few years and with the encouragement of my boss, geologist Pierre Crépeau, I was awarded a Hydro-Québec scholarship to return to École Polytechnique to get my MEng. Hydro-Québec had reserved a position for me in the Geotechnical Department when I graduated. It was a great opportunity, and I'm glad I took it.

Career focus?

The focus of my career was entirely related to hydroelectric development. After working in the Contract Department and the Geotechnical Department, I became Head of the Geotechnical Department, Head of the Dam Performance Section, and then Director of Plant Engineering, the first female Director in Hydro-Québec. In this capacity, I also got involved in international work.

Education

- 1967 BEng from École Polytechnique de Montréal, Civil Engineering
- 1972 MEng from École Polytechnique de Montréal, Civil Engineering/Soil Mechanics. My thesis was associated with the stabilization of peat with different additives.

Employment

- 1967-1984 Hydro-Québec (HQ), various departments: Contracts, Geology and Geotechnics, Dam Behavior
- 1984-1986 Dir. of Central Engineering, HQ
- 1986-1988 Dir. of Construction, HQ
- 1988-1994 Dir. of Plant Rehabilitation and Modification, HQ
- 1995-1998 Executive Director of E7 International Network Secretariat (now Global Sustainable Electricity Partnership <https://www.globalelectricity.org>)

Notable Achievements

- Organization of monitoring programs, dam behavior studies, automation of instrumentation systems and crisis management
- Optimization of procurement activities and logistical support for construction sites
- Development and implementation of methodologies and expertise for the rehabilitation of old power plants
- For E7, organization of multicultural teams from member companies to promote sustainable development in the field of electricity in developing countries.
- 1975 First woman President of the Ordre des ingénieurs du Québec (OIQ)
- 1978 First woman President of the Canadian Council of Professional Engineers
- 2004 I retired and went back to the arts: painting

Involvement with CGS and other organizations?

I attended a number of CGS conferences in the early 1970s. I was also involved with the Association for Women in Science, a global network promoting gender equality in science, technology, engineering and mathematics, for a number of years.

I became involved with the Ordre des ingénieurs du Québec (OIQ) early in my career. Over the years, I got more involved and eventually became Secretary-Treasurer, Vice President and then President in 1975...the first female President. Three years later, I became the first female President of the Canadian Council of Professional Engineers (currently Engineers Canada).

Who were your mentors?

As an engineering student, my boss for my first summer job was Joseph Hode Keyser, an international expert on road materials, who shared his research work and enthusiasm with his student employees. My husband Pierre, who is also an engineer, always encouraged me. Within Hydro-Québec I was privileged to have managers and supervisors who supported and promoted my career and provided good advice.

On being a woman in a man-dominated profession?

Initially, I wasn't allowed to do field work because I was a woman. Over my career, thank goodness, that changed. When women got hired to work on Hydro-Québec construction sites, I was very pleased. I said "finally"!

During my career, I had a lot of support from my husband, my parents and my two children. You have to have support.

Advice to other women?

I do not believe in the principle that there should be a certain quota of female engineers. Do what you want to do...what you like to do...regardless of gender. Do not hesitate to do something, just because you are a woman. Trust yourself.

I've been quoted as saying "The more things you have to do, the more things you can do" (*Feminist History in Canada: New Essays on Women, Gender, Work, and Nation*, UBC Press, 2013). I still believe it, but I think we have to do what we feel capable and competent of doing, without putting too much pressure on ourselves.

Photographs



Danielle (right) with Melissa Ruel, the interviewer, in 2018



Danielle in 2005