

# Gail Atkinson

## Introduction to Geotechnique?

My introduction to geotechnique was entirely accidental. As a first-year science student I took geology to avoid biology. That led me into earth sciences. A part-time job as a research assistant led me into the field of earthquake hazards, where I discovered the interface between science and engineering that I have been exploring ever since.

## Other women in your classes?

There were very few, less than 10%, women in my earth science classes.

## Difficulty getting your first job?

Not at all, I did not even have to look for a job. As I was finishing my MEngSc program, I was contacted by Klohn Leonoff Ltd. (now Klohn Crippen Berger Ltd.). I think this arose from a fortuitous conversation between Alan Davenport (my thesis supervisor) and Robin Charlwood of Klohn Leonoff. They flew me to Vancouver for an interview and that was it. I was hired.

## Career focus?

I have focused my career on the interface between seismology and engineering, in particular on ground motions and seismic hazard. A recent consulting project which was both fascinating and deeply disturbing was an investigation into the potential role of small earthquakes related to the Fundao tailings dam failure in Brazil. In recent years, I have been fascinated with the role of induced seismicity and in better understanding the potential ground motions from small-to-moderate induced events and their damage potential. I believe that induced seismicity has the potential to revolutionize our understanding of earthquakes in a way not seen since the development of plate tectonics.

## Involvement with CGS and other organizations?

I have been actively involved in the executives of the Seismological Society of America (SSA) and the Canadian Geophysical Union. I have served as President of both organizations, and was particularly proud to have been the first woman, and the first non-American, to be President of SSA.

## Education

- 1978 BSc from Carleton University; Physics and Geology
- 1980 MEngSc from Western University; Civil Engineering
- 1993 PhD from Western University; Geophysics
- My theses have all been related to seismic hazards

## Employment

- 1980-1995 I worked with Klohn Leonoff Ltd. (Vancouver) and Acres International Ltd. (Toronto), and held research fellowships with the University of British Columbia (Vancouver) and the Geological Survey of Canada (Ottawa)
- 1995-2006 Carleton University; Professor, Earth Sciences
- 2007-present Western University; Professor and Industrial Research Chair, Earth Sciences
- whilst at Carleton and Western, I've continued consulting to geotechnical and civil engineering firms

## Notable Achievements

- My most notable honour was being made a Fellow of the Royal Society of Canada in 2014
- I have been President of both the Seismological Society of America (2001-2003) and the Canadian Geophysical Union (2011-2013).
- I was the first woman, and the first non-American, to be President of Seismological Society of America.

## Who were your mentors?

As an undergraduate, my mentors at Carleton were two wonderful professors: Giorgio Ranalli and Richard Brown. As a graduate student at Western, I was also fortunate to have fabulous mentors: first Alan Davenport then later Bob Mereu.

Robin Charlwood at Klohn Leonoff was my professional mentor and champion, bringing opportunities my way and sticking up for me. Had it not been for Robin's integrity, I probably would have lost my job over an opinion that was, in the early 1980s, considered radical—that a large-magnitude subduction earthquake could occur in southwestern BC. Though widely accepted today and incorporated into building codes and standard practice, this was considered heresy by some of our major clients at that time.

Liam Finn at UBC was also an important mentor and over the years we enjoyed many fine exchanges of ideas, and even the occasional game of tennis!

My most important mentor, and colleague over most of my career, has been David Boore (USGS in Menlo Park). We developed a very rewarding professional collaboration in the early 1980's that resulted in a lasting and treasured friendship. Over three decades, we co-authored dozens of papers on ground motions for seismic hazard applications. These have been widely used in practice and building code applications.

## On being a woman in a man-dominated profession?

That's hard to say, since I have no other experience to compare it with. I chose not to view being a woman as a disadvantage. If you are a minority, people are more likely to notice and remember you. What you do with that is up to you.

Over my career, I've had the opportunity to work with some amazing female colleagues: Susan Hough (USGS) Christine Goulet (University of Southern California) and Kristy Tiampo (Western).

## Advice to other women?

Science and engineering are great fields to chart a career across. Don't stress too much about what path you choose; it is almost impossible to predict where it will lead. Along the way, try to think of any apparent disadvantage that you encounter as a potential advantage in disguise. And don't forget to stop and smell the roses from time to time.

## Photographs



Gail (right) with colleague Kristy Tiampo In 2010



Gail in 2018