

"Mathematics is part of almost every human enterprise - from global warming to medical research, internet security to marketing, space research to architecture, engineering to commerce, or from music to video games. As market and employment conditions change, a background in Mathematics provides flexibility for almost any career opportunity. The art and science of Mathematics plays a vital role in today's global technology and in Canada's economic competitiveness."



Dr. Graham Wright  
Executive Director  
Canadian  
Mathematical Society  
and Affiliate  
Professor University  
of Ottawa

### Michael Lamoureux

Professor  
Mathematics  
University of Calgary

I am co-author of a MITACS project at the University of Calgary called "POTSI" or "Pseudo-differential Operator

Theory & Seismic Imaging." POTSI brings together mathematicians and geophysicists to create better ways of making images of the earth's subsurface, to help us find oil and gas. We can "see" what is underground by exploding dynamite on the surface, and observing the echoes of seismic waves that bounce off structures underground. We place geophones on the earth's surface to record the tail end of the echoes.



We then use mathematics to estimate what those seismic waves are doing inside earth.

### Brigitte Jaumard

Professor  
Concordia Institute for Information  
Systems Engineering  
Concordia University

For me, Mathematics is a working tool in the same way computers are tools. Mathematics allows me to explore new domains with which I am less familiar, provided that the problem stated is clear and understandable.

This approach has led me to multidisciplinary research to answer challenging questions in telecommunications, chemical engineering, artificial intelligence, health management, etc.



### Florence Glanfield

Associate professor  
Faculty of Education  
University of Alberta

I teach undergraduate and graduate courses in mathematics education. I also work with inservice teachers and am a researcher in the area of teachers' mathematical understanding.

Although I was not directly aware of the way in which my mathematics degree affected the way I thought about my teaching in a high school setting, my colleagues always told me that I saw the ideas differently and was able to make connections that they had not thought about.



Meet more mathematicians and read about their diverse careers on our quilt at [www.careers.math.ca](http://www.careers.math.ca)



The Mathematicians@Work pamphlet and poster are part of **Mathematics with a Human Face**, a joint initiative of the Canadian Mathematical Society and Math Central.

# MATHEMATICIANS @WORK! MORE THAN JUST NUMBERS

## MORE THAN JUST NUMBERS



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### Anil Gupta

Director  
Microsimulation Modelling and  
Data Analysis (MSDAD)  
Health Policy Branch  
Health Canada

The mandate of my division is to create a centre of excellence that would provide the much needed evidence base in health policy making through the creation of innovative databases, forecasting models and in-depth analysis of key issues in health human resources, pharmaceuticals and other topical areas.

To achieve this, we have a team of researchers/analysts, with backgrounds in economics, mathematics, and statistics but one common thread is a strong foundation in mathematics.

### Michele Hengen

Actuary  
Enterprise Risk Management  
Co-operators Life Insurance Company

Unlike Tom Cruise in the 80s movie Risky Business, actuary Michele Hengen calculates the risk before she makes the next move. As an Asset Liability Management Actuary, Michele manages the relationship between the company's assets and liabilities in order to maximize competing business goals.

Insurers are risk-takers, but they need to ensure that they are not taking more risks than the company can tolerate. That's where actuaries like Michele come in.

*You never know what possibilities are out there.  
If you love math, then go for it.*



### Richard Hoshino

Senior Project Officer  
Canada Border Services Agency

I am a Senior Project Officer for the Canada Border Services Agency, where my job is to use mathematics to improve the security and efficiency of the Canadian border. I investigate policy problems from a mathematical perspective, such as improving port security and reducing waiting times at border crossings.

Mathematics can be used to inform key policy decisions relating to the Canadian border. This is a dream position where I can combine two of my greatest passions: mathematics and public policy.



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