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Conference will look at risk and finances

Research Mathematicians gather to examine retirement issues and pensions

Section B1, Dave MacLean

As the Baby Boomers begin to ease into retirement, many Canadians are realizing that their retirement nest egg is very dependent on the often volatile swings in the stock market.

In an effort to minimize the risk to investors, many banks and insurance companies have introduced investment products that aim to protect retirees from financial ruin in their golden years. What many investors don't realize is that these investment products are often creations of mathematicians who spend their days studying probabilities as they relate to the financial sector.

Tom Salisbury, a mathematics professor at York University in Toronto, is one of the experts helping create these new financial products.

Salisbury and many of his fellow math gurus from across the country are gathering at the University of New Brunswick in Fredericton this week for the 10th anniversary conference of MITACS, a federally funded national research network for the mathematical sciences.

"MITACS has a mandate to stimulate interaction between people in universities and industry/business," Salisbury said. "They also stimulate training - helping graduate students learn the skills the need to actually work in industry.

"The summer meeting is a networking opportunity to find out what other people are doing."

Salisbury is one of the speakers at the event and he will discuss risk and finance, particularly as it applies to retirement issues and pensions.

"I'll be talking about demographic changes in Canada and how that's affected the way people save for retirement," he said. "I'll talk a bit about some of the retirement savings instruments that industry has built for people."

Salisbury explained that the days of pensions with defined benefits are long gone and many workers are now fully in control of their retirement savings.

"People are exposed to market risk in their pensions more now than was ever the case, so they have to manage that risk and I will talk a bit about how the insurance industry has constructed new products

that help people manage the risk, what some of the mathematical issues are in trying to figure out how those products work, how people hedge them, how they should be priced.

"The talk is meant on the one hand to show the mathematicians that there's interesting work to be done in the field and on the other hand to show people from industry what mathematics has to offer, in terms of managing the risks."

While there are advantages to controlling one's own savings, Salisbury said many investors are simply ill-equipped to make financial decisions that have such long-term implications.

"Many people find themselves in the position of having to manage a portfolio or manage risks when that's not what they were trained to do, that's not what they have any interest in doing," he said. "Some of the products the industry has created to help people do that are complicated. People aren't always well-equipped to make decisions. We're trying to provide tools that help people understand the risk and analyses that help manage the risk that they're now responsible for.

"We're helping individuals figure out whether they should be buying these products, and if so, how much of their savings should be invested in these products.

"I'm going to give people a snapshot of what the pension and retirement savings landscape is in Canada and what some of the changes have been over the last few years."

The week-long conference is being held at the Wu Centre.

Other featured speakers include Anne Condon of the University of British Columbia (biomedical and health), Peter Glynn of Stanford University (communications, networks and security), Chris Jones of the University of North Carolina (environment and natural resources) and Pedro Domingos of the University of Washington (information processing).

Other conference highlights include a bilingual performance of Show Math, a live, multimedia stage show for high school students and a public lecture by Dr. Gerda de Vries of the University of Alberta, entitled 'Making Mathematics with Needle and thread: Quilts as Mathematical Objects.'