Davidson Heath

I was born in Halifax, N.S. in 1977, but grew up and went to school in the Salmon Capital of the World - Campbell River, B.C. I went to UBC for my undergrad. There, I really took to heart the assertion of my hero Richard Feynman that

if you investigate any subject in the world with interest and vigour, it will turn out to be fascinating!

Five years and about 200 credits later, I finished with a B.Sc. in Math and Biochemistry. Along the way I was fortunate to work in marine physiology labs both at UBC and in Okinawa, Japan, and to travel to South Africa where I worked for six months supervising an abalone farm. Stranger than fiction. However the most formative experience of my undergraduate career was easily Math 320 and 321, Real Analysis with Dr. Phil Loewen. This was my first exposure to heavy duty mathematics, taught by a fantastic prof and as they say in movies from the '60s, it "**freaked me out**." The experience led me to my M.Sc. Math studies at Queen's, where I was able to leverage my biology knowledge to do some interesting work in Math Biology under the great Peter Taylor.

I'm responsible for oversight and vetting of all risk management policy and models related to Commodities options and futures at BMO. More and more the financial sector is recognizing that risk management and risk modelling is a fundamental element of modern business and an enormously powerful strategic tool. BMO Group (and most other corporations) are essentially in the business of allocating capital(money, people, time, equipment) to business strategies and/or market positions with different risk profiles. This leads to some interesting applications of probability and stochastics well as applied math and computing aimed at the problem of analyzing the exposure of thousands of strategies, options, positions, assets liabilities (current and proposed) to thousands of risk factors. These risk factors are typically things like stock prices, interest rates, foreign exchange rates, cash flows and others. In the case of some commodities (options and positions on crude oil, natural gas, electricity) you may be interested in the risk profile relative to population behaviour, or even the weather forecast.

INNER ARTIST

I studied at Queen's University in Kingston, Ontario. Kingston is a lovely town, and there I was able to indulge my "inner artist." I spent time writing, playing guitar and singing in bars, and I spent one summer with a touring Shakespearian theatrical group.

Good math (and by extension good math courses) are nothing more or less than a crash course in how to think clearly and beautifully, and learning to never, ever 'sweep things under the rug'. The kind of clarity and intellectual 'integrity' that is the hallmark of all good math papers will serve you well wherever you go in life.

After a number of stochastic mathematics and financial math courses piqued my interest, I typed up and honed my resume and interview skills and hit Bay Street in Toronto. To my everlasting amazement, I landed a job with the Risk Management group at BMO, where I reside today, having defended my Master's project in January 2002.

Math, to me, is a field more creative and imaginative than any other. It's a shame that the only real math courses many students see - in their last years of high school and first years of college or university - are a bit dull, boring and repetitive. I speak from experience, having failed first-year math my first time around at UBC and gone on to teach it years later at Queen's. Setting up an undergraduate Biology curriculum, would you force the students to spend their first two years learning the microscope top to bottom, without actually looking at any weird and wonderful organisms? Well, I had to wait until third year to see my first real theorem. So to those of you who have found something to love in your current Math curriculum: Congratulations! And if you haven't - don't give up. It gets exponentially more interesting from here.