"I come from a large family. My father introduced all the children to the old mathematics in his own way through Pythagoras and Bernoulli. At the end I was the only taker who pushed it beyond that. My love for mathematics grew so intense that during my graduate studies in Algebra, I was so fascinated by the concept of monic polynomials that I decided right then to name my future daughter Monic. Monic is my only child and her interest in Mathematics far exceeds my own."

## **Anil Gupta**



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

In a world of limited resources and competing demands, policy makers need tools, and mathematics plays a very important role in building those tools.

## **Power of Math**

Math brings you credibility no matter where you go or work in life. It equips you with an analytical mind, problem solving skills, and a logical mind to check for internal consistencies of systems (math itself is made of that). It develops your faculties more than any other discipline.

Mathematics at my school was taught with the pride that India substantially contributed to this fascinating, fundamental area of human curiosity. My fascination for mathematics grew stronger everyday after that.

I obtained my Bachelors (Honors) and **Masters in Mathematics from Delhi** University. I was then selected to represent Delhi University at an Indo-**British Summer Institute for Meritorious Post Graduate Students in** India where I won the best participant prize. When I was 22, I won a Lectureship at a college in Delhi. My father valued education as the single most important asset in our lives and even with his meager resources he encouraged me to earn a Ph.D. in mathematics from abroad and arranged the necessary funds for me to come to Canada. I did my Ph.D. (combined with M.Sc.) in Algebra (Ring Theory) from the University of Calgary but found that I had a desire to do mathematics that I could apply immediately.

After teaching for a year in India I returned to Canada and did another Master in System Science from the University of Ottawa. Systems Science is a multidisciplinary degree with contents from Mathematics, Economics, Electrical Engineering, Computers and Business Administration.

MSDAD is a Research and Analysis group within the Health Policy Branch of Health Canada. As you know, there are shortages of physicians and nurses in Canada and the government is quite concerned that the right policies and initiatives are in place so that Canadians continue to enjoy one of the best health care systems in the world. 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.

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