

## **Math Students from Around the Globe Meet in Burnaby for First-of-its-Kind “Numbers” Boot Camp**

**Burnaby, BC - July 14, 2008** – A formula for summer fun has new meaning for 30 top math students from around the world who are meeting in Burnaby for a first-of-its kind “numbers” boot camp of sorts.

Starting today, the students -- undergrads from Canada, the United States, Hong Kong, China, Germany and Mexico -- will spend four weeks at Simon Fraser University at the Industrial Math Summer School developing solutions to real-life issues being experienced by Canadian companies.

From developing new tools to detect explosive devices in conflict areas to improving underwater sensors for tracking fish and modelling energy consumption of high-rise buildings to improve efficiencies, the participants of the workshop – organized by Burnaby-based MITACS, a national math research network that brings together researchers and companies in a collaborative effort to solve problems of key importance to society and industry – were selected from more than 95 applicants worldwide based on their academic record and keen interest in industrial mathematics.

The applicants came from such universities as McGill, Harvard, the Technical University of Berlin, University of British Columbia, University of Toronto, University of California at Berkeley, Peking University, University of Ottawa, California Institute of Technology and the National Autonomous University of Mexico.

As part of the summer school, which runs through to August 8, the students will be divided into teams with each group tasked to solve a research challenge submitted by a B.C. company. Examples of some of these challenges include:

- **Sky Research, Inc. of Vancouver** – Up to 20 per cent of explosive devices deployed in conflict areas and military training grounds do not explode upon impact, creating a public hazard that can persist for many years. The student team will develop a model to help the company better understand the shock experienced by a projectile when it strikes the ground without exploding. With knowledge of the resultant stress on the device, the team will be able to verify methods to determine which buried metal objects are hazardous to humans and which are not.
- **Kintama Research Corp. of Nanaimo** – The student team will be investigating ways to improve the company’s underwater marine sensors for use in the Pacific Ocean Shelf Tracking Project, which seeks to track the movements and survival of marine animals along the West Coast.

The goal of the program is to help students see mathematical research from a business perspective, says Dr. J.F. Williams, Assistant Professor of Mathematics at Simon Fraser University and organizer of the summer school. “For the majority of the students, this workshop will be the first time when they get hands-on experience applying their math skills to actual company challenges to develop solutions that will likely be implemented by the different businesses. This workshop takes math out of the lab and into the real-world.”

“Training the next generation of mathematical sciences researchers is of critical importance to Canada as their skills can be applied readily to virtually any economic or social challenge,” said Dr. Arvind Gupta, MITACS Scientific Director.

“As a math major, I am often asked what I can possibly do with a math degree; these industry problems answer that question,” said Natasha Richardson, a math undergraduate student from Simon Fraser University who is participating in the summer school. “I look forward to learning how the pure mathematics which I am taught in my undergraduate coursework can be applied to real-world industry problems.”

The summer school is funded by the Ministry of Advanced Education of the Government of British Columbia through ACCELERATE BC and Industry Canada through the International Partnership Initiative.

### **About MITACS**

MITACS ([www.mitacs.ca](http://www.mitacs.ca)) is a Network of Centres of Excellence (NCE) for the mathematical sciences hosted by Simon Fraser University in Burnaby, B.C. The only Canadian organization of its kind, it focuses on developing mathematical solutions in five of the economy’s fastest growing sectors: biomedical and health, environment and natural resources, information processing, risk and finance and communication, networks and security. Each MITACS research project partners academic scientists and their graduate students from universities across the country with Canadian organizations. For more information about the ACCELERATE Canada, Canada’s Graduate Research Internship Program, visit [www.acceleratecanada.ca](http://www.acceleratecanada.ca).

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