



## **\$1.1M funding to enable worldwide math teams to tackle research challenges**

Vancouver, BC - Canada's top mathematicians will work more closely with their international colleagues to address key global issues, due to new funding of \$1.1 million.

The funding awarded by Industry Canada via the federal Network of Centres of Excellence (NCE) program and the International Research Development Centre (IDRC) to Burnaby-based MITACS - the Mathematics of Information Technology and Complex Systems - which will apply the funds towards establishing international partnerships.

The funding will enable Canada's math experts to collaborate with the world's best mathematical minds on such topics as the spread of avian flu and SARS, the development of new drugs for Alzheimer's and other diseases, terrorist threats and managing financial risk.

"International challenges require coordinated, international responses," says Dr Arvind Gupta, scientific director of 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. "The universality of mathematics as the language of science and technology will foster the exchange of ideas and strategies to combat some of the most challenging issues of our time."

A joint US and Canadian collaboration will see MITACS researchers working closely with the Institute for Pure and Applied Mathematics (IPAM) at UCLA to improve the security of public buildings and spaces. By integrating computer-based information and control systems with physical components, the researchers will mathematically model roads and buildings to help identify mechanisms that could be used to attack these infrastructures and then develop methods to prevent such attacks.

Canadian mathematicians will also work with research teams from the Mathematical Centre of the Chinese Ministry of Education. This group will develop models that simulate the outbreak and control of infectious diseases such as SARS and a flu pandemic, and devise solutions for their prevention. These mathematical models for infectious disease would ultimately be used by public health officials to gain insight into the most effective ways to deal with outbreaks, including disease containment and controlling their spread from person to person.

Other math organizations participating in the international initiative include the BioSim Network of Excellence (European Union), MATHEON (Germany) and MASCOS (Australia).