

Mprime Network recognizes Canada's leading math sciences researchers, students

August 11, 2011, Vancouver – Canada's leading mathematical sciences research organization, Mprime Network, has announced the recipients of its annual awards.

- **Dr. Ian Frigaard**, a Professor of Mathematics and Mechanical Engineering at the University of British Columbia, was awarded the **2011 CAIMS-Mprime Industrial Mathematics Prize**. Recognizing exceptional research in any branch of industrial mathematics, Dr. Frigaard received the award for his work which falls at the intersection of industrial research on the mathematical modeling of oil well construction and academic research on the dynamics of non-Newtonian fluids in general. While his work is firmly grounded in applied mathematics, he also runs an experimental program in the Laboratory for Complex Fluids which he established at the University of British Columbia. He is not only inspired by industrial research problems, but also contributes to progress in industry through frequent and continuing collaborations with industrial partners. Dr. Frigaard is an outstanding researcher and a leading example for the industrial mathematics community in Canada.
- **Dr. Michael Brudno**, Associate Professor of Computer Science at the University of Toronto and Canada Research Chair in Computational Biology, was awarded the **Mprime Award for Excellence in Mentorship** in recognition of outstanding achievements of academic supervisors in Mprime research projects. Dr. Brudno was recognized for having excelled in his role as a mentor to students and has been an outstanding positive influence on many young researchers in computational biology. He is known as a supportive and accessible research supervisor. He has consistently acted as a role model, and he has encouraged students to develop their own ideas and identities as researchers. His former graduate and undergraduate research students speak fondly of his "open-door" policy that encourages students to approach him to discuss research problems. He has shown a genuine interest in both the intellectual and professional development of his students. Finally, he has inspired the love of research in his students, and has developed their excitement for science.

In addition, Mprime recognized the following graduate students:

- **Guillaume Duclos-Cianci** from the Université de Sherbrooke received the award for "**Best Student Paper for Mprime-related Research**" for his paper with David Poulin, entitled "Fast Decoders for Topological Codes", published in *Physical Review Letters* (2010). This work makes novel use of methods in theoretical physics and information theory, and achieves an algorithm that is exponentially faster than previously available algorithms. Mr. Duclos-Cianci has been invited to several international conferences to present this work.
- **Mohammad Chehreghani Bozchalui**, a PhD candidate at the University of Waterloo received the award for "**Best Novel Use of Mathematics in Technology Transfer**" for the development of a novel and comprehensive mathematical optimization model of residential energy hubs for energy management applications. In his Ph.D. research, he developed practical mathematical models for energy systems, and used novel mathematical techniques to solve these models in real time. Mr. Bozchalui's Ph.D. work has attracted much attention from industry, and has been recognized for its importance to the development of energy hub management systems in the context of Smart Grids, and its strong potential for commercialization.

Mprime, a national network, brings together academia, industry and the public sector to develop cutting edge mathematical tools vital to our knowledge-based economy. For more information about Mprime Network, visit www.mprime.ca.