
Mathematics Education
L'éducation mathématique
(Org: **Abba Gumel** (Manitoba) and/et **Randall Pyke** (SFU))

DHAVIDE ARULIAH, University of Ontario Institute of Technology
Mathematics Learning Objects in Undergraduate Math Education

Maplets are simple applications implemented with the Maple computer algebra system that have graphical user interfaces for ease of use. We present a few Maplets developed for teaching elementary linear algebra and multivariable calculus at the University of Ontario Institute of Technology (UOIT). Our primary goal is to provide a visualisation tool to assist students in internalising geometrical notions in three dimensions that are traditionally stumbling blocks in these courses. We present some preliminary results of our attempts to integrate these tools into our courses and discuss some of the pedagogical implications. This is joint work with Pietro-Luciano Buono, Jannilyn Caoile, Greg Lewis, Bill Muirhead, and Jennifer Percival.

JIM BROOKES, MITACS, Simon Fraser University
Internship opportunities for grad students and post docs

The MITACS Internship program provides graduate students and post docs with funding opportunities to do research projects with partner organizations from industry, government and not for profit organizations. The research conducted during these internships typically contribute to graduate students thesis work and have been found to have an important impact on future job opportunities.

Internships are broadly available across Canada and both Canadian and international students are eligible. A staff of business development personnel is available to assist with making research connections with partner organizations.

REBECCA MARSH AND HONG MIAO, Alberta and Calgary

PANEL DISCUSSION,
Panelists

Jim Brookes (MITACS), J. F. Williams (SFU), Dhavide Aruliah (UOIT), Hong Miao (Calgary) and Rebecca Marsh (Alberta).

RANDALL PYKE, SFU

J. F. WILLIAMS, SFU
On the hows, wheres and whys of Industrial Mathematics Education

In this talk I will discuss several different models for industrial math education as practiced around the world, each with its own aims and outcomes. Industrial math is a way to convince students, their parents and national employers of the utility of a

mathematical education. In this country there is a feeling amongst too many people that mathematicians are overly abstract and that a math degree is only marginally more useful than one in philosophy.

As mathematicians we need to do scientific outreach in order to gain experience, develop contacts and also foster a certain relationship with industry as a whole about the power of mathematics and mathematical training. I will describe several ways in which faculty can be involved and the benefits for both the discipline and our future students.