Newsletter *Autumn 2009*

CAIMS*SCMAI Annual Meeting

July 17-20, 2010, Department of Mathematics and Statistics, Memorial University of Newfoundland

The 2010 Annual Meeting of the Canadian Applied Mathematical and Industrial Society will be hosted by the Department of Mathematics and Statistics at Memorial University, in St. John's, Newfoundland, Canada on July 17-20, 2010. The themes of this meeting are

> Dynamical Systems
> Fluid Dynamics (CSFD-2010)
> Mathematical Biology and Medicine
> Mathematical and Theoretical Physics
> Nonlinear Dynamics and Control
> Ocean Modeling and Technology
> Scientific Computing
> Statistical and Population Genetics

There will be eight plenary lectures and numerous invited talks (20 minutes) on the above themes, and two special invited lectures.Plenary Speakers:

Anthony Bloch (University of Michigan)
Marianna Braza (L'Institut de Mcanique des Fluides de Toulouse)
William F. Langford (University of Guelph)
Robert M. Miura (New Jersey Institute of Technology)
Bernard Molin (Ecole Centrale Marseille)
Bruno Nachtergaele (University of California at Davis)
Robert D. Russell (Simon Fraser University)
Elizabeth A. Thompson (University of Washington, Seattle)
Michael J. Ward (University of British Columbia)

In addition to these, we also call for minisymposia on any topics in applied mathematics with a deadline being May 1, 2010. If you wish to organize a Minisymposium, please send the name of the organizer(s) and participants, their affiliation and e-mail contact information and titles of the talks to one of the co-chairwomen of the CAIMS*SCMAI 2010 Scientific Program by the address given below.

There will also be several contributed sessions, as well as a poster session for graduate students to present their research results.

In the meeting, the annual CAIMS*SCMAI Research Prizes and CAIMS Doctoral Dissertation Award will be presented to the recipients. In addition, student poster prizes will also be selected and awarded.

For more information about this meeting, please visit the website: www.caims2010.ca which will be updated in a timely fashion, or contact one of theco-chairwomen of the CAIMS*SCMAI 2010 Scientific Program Serpil Kocabiyik (serpil@mun.ca), Sharene Bungay (sharene@mun.ca)

AARMS Call for Proposals

We encourage mathematicians in Atlantic Canada to suggest programmes or themes for future AARMS activities in the region (workshops, conferences, periods of specialization and exceptional opportunities). Proposals for short workshops with total requests for AARMS funding less than $5,000 are evaluated by the executive while more extensive proposals are referred to the Scientific Review Panel and responses will be given as quickly as possible. Proposals are usually expected to show a detailed program with a significant number of confirmed speakers. Next Deadline for submission: January 15, 2010

News

The AARMS Postdoctoral Fellowship Program

AARMS postdoctoral fellowships are awarded, on the recommendation of its Scientific Review Panel (SRP), to beginning researchers who received their PhD no more than four years before applying. Applications will be considered from those who anticipate receiving their PhD before the proposed start time of the fellowship, however the PhD must be in hand before actually beginning the fellowship.

It is typically expected that the proposed supervisor will not be the same person as the applicant's PhD supervisor, and that the proposed Postdoctoral Fellowship will be at a different university than the one at which the PhD was awarded. The proposed supervisor must be a full-time tenure track or tenured faculty member at a university in Atlantic Canada.

The duration is normally two years. Funding for the second year is dependent upon satisfactory performance demonstrated in the detailed progress report submitted by the supervisor(s).

Applications should be made by the candidate through the PDF Application page on our website. After registering on the system, applicants should send their username to their proposed supervisor(s). This enables the supervisor(s) to make their contributions to the application. The application should include: a CV (in pdf format) and a Research Proposal: a detailed description of the research area and the research to be carried out during the tenure of the fellowship as well as a description of how the candidate would interact with the supervisor(s). (also in pdf format). After the applicant has registered online each intended supervisor(s) should contribute, through the AARMS online page the following: 1) A written reference (to be typed directly into the relevant web form). 2) A list of the exact sources of matching funding (NSERC or other grant(s), department(s), ...); to be typed directly into the web form provided. If there are more than one intended supervisors only one needs to submit this financial information.

The applicant should also arrange for two letters of reference to be submitted to the online system by persons who are familiar with the candidate's work and can comment on their suitability for an AARMS postdoctoral fellowship. The candidate will need to send their username to the external referee to enable them to make this contribution. These letters are to be typed by the referee directly into the web form provided for this purpose.

Applications will be reviewed by the Scientific Review Panel, who will make a recommendation to the Director.

Timetable:
December 15 - Application deadline.

February 1 - Final decision is made on applications. The department/university hosting a successful AARMS PDF applicant is requested to provide (to the Director of AARMS) a signed "funding package", showing the annual contributions by the supervisor (s), the department, and the university. Their amount has at least to match the AARMS contribution of $17,500 and may require that the fellowship holder teach up to one class each term (including spring/summer sessions).

June 30 - Deadline for reports from supervisors of renewing PDFs. The supervisor must submit a detailed progress report, outlining the research work and listing publications, talks, etc. Electronic copies of all publications must be submitted to AARMS for archival purposes. The PDF is also expected to acknowledge the support of AARMS in their publications.

August 31 - Latest possible termination date for the second year of a PDF.

September 1 - Start time for the fellowship. AARMS will transfer $8,750 (first half of the annual amount) during the month when the PDF starts his programme, and the same amount six months later. This is done upon receipt of a formal invoice from the hosting department/university. It is acceptable for the start of a fellowship to be delayed up until December 1, but funding will be reduced proportionate to the delay. This reduction will be reconciled in the second year of funding.

People

Congratulations to Dr. Phil Cox

Dr. Phil Cox, from the Faculty of Computer Science at Dalhousie, was recently awarded the "Most Influential Paper Award for important influences on VL/HCC research or commerce over the last 20 years" for his work on the paper:

Cox, P.T., Giles, F.R., Pietrzykowski, T., "Prograph: a step towards liberating programming from textual conditioning", Proc. IEEE Workshop in Visual Languages, 1989.

Although researchers were building sophisticated graphics applications as early as 1963 (e.g. Ivan Sutherland's "Sketchpad"), the computers on which they ran were expensive and very large. With the arrival of the Macintosh in 1984, however, high-quality graphics became cheap and readily accessible, making research into and development of anything requiring good graphics much more feasible.

Prograph was conceived a couple of years before the advent of the Mac, as a means to make sense of clever but devilishly opaque programs written in the functional language FP. It soon became obvious, however, that a properly defined diagrammatic notation, like the dataflow-based Prograph, could be a programming language capable of replacing textual equivalents.

Three prototypes of Prograph were developed, on a Three Rivers PERQ graphics station, an IBM PC with added graphics hardware, and on a VAX with a Tektronix CAD terminal. It was the arrival of the Mac, however, that spurred commercial development of a Prograph-based IDE. The first product, introduced at OOPSLA in 1989, won the MacUser Magazine Editors' Choice Award for Best Programming Tool, and a Canadian Information Processing Society Award for Innovation in Software Technology. With the addition of a compiler in 1990, it began to compete with IDEs based on traditional languages.

Prograph CPX, introduced in 1993, included a complete application framework, equivalent to the most comprehensive contemporary frameworks, together with user-extendible framework editors written in Prograph. At its peak, Prograph CPX had over 12,000 customers, including Apple Computer, Renault and Boeing.

While there are many computational models for visual programming languages, data flow is considered to be one of the most significant. Hence, data flow is a recurring theme in the literature, which frequently references Prograph as one of the earliest and most fully developed visual languages of this type.

People on the move

With the recent appointment of new Directors to the The Fields Institute and Centre de Recherches Mathématiques, we are pleased to welcome **Edward Bierstone** and **Peter Russell** to our Board of Directors and our Scientific Review Panel. We're also welcoming **Hermann Brunner**, a past Director of AARMS, back to the Board. At the same time we offer a big thanks to **Richard Nowakowski** who is stepping down from the Board at the end of his term. We are also pleased to announce a new committee for the AARMS Distinguished Lecturer Program. **Robert Milson** (Dal), **Hugh Thomas** (UNB) and **Serpil Kocabiyik** (MUN) will be working together to help us bring Distinguished Lecturers to our region.

Bits and Pieces

A famous mathematician was to give a keynote speech at a conference. Asked for an advance summary, he said he would present a proof of Fermat's Last Theorem -- but they should keep it under their hats. When he arrived, though, he spoke on a much more prosaic topic. Afterwards the conference organizers asked why he said he'd talk about the theorem and then didn't. He replied this was his standard practice, just in case he was killed on the way to the conference.

A graduate student from Trinity
Computed the cube of infinity;
But it gave him the fidgets
To write down all those digits,
So he dropped math and took up divinity.

Recent and Upcoming Events

Coast to Coast Seminar Series
Autumn Theme: Artificial Intelligence

Jonathan Schaeffer, University of Alberta
> October 6, 2009

Geoffrey Hinton, University of Toronto
> October 20, 2009

Simon Haykin, McMaster University
> November 3, 2009

Richard Vaughan, Simon Fraser University
> November 17, 2009

Thomas Trappenberg, Dalhousie University
> December 1, 2009

Speakers and audiences are distributed across Canada and the United States and connected by audio visual technology and AccessGrid software. The Coast to Coast Seminar Series is organized by AARMS and IRMACS and is made possible by the support of ACE-net, Sharcnet and Westgrid. For further details visit www.aarms.math.ca/events/c2c.html For connection details ask the technician of your videoconferencing facility to contact Scott Wilson (Scott.Wilson@Dal.ca)

Key Dates

for the AARMS Postdoctoral Fellowship Program

November 15	Online application system opens
December 15	Deadline for applications
February 1	Final decision on applications
June 30	Mid term reports due from Supervisors
September 1	Start time for the fellowship

I can calculate the motion of heavenly bodies, but not the madness of people.

- Isaac Newton