

The  
**Pacific  
Institute**

*Newsletter*

for the Mathematical Sciences

<http://www.pims.math.ca>  
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May 1998  
Vol. 2 Issue 2

## **Alberta Government Supports PIMS Industry and Educational Programs**

The Alberta Government, through the Alberta Science & Research Authority, has committed \$110K for the 1998-99 PIMS industrial and educational programs. The announcement was made by Dr. Lorne Taylor, Minister Responsible for Science, Research and Information Technology, and highlights the increased support that PIMS is receiving to develop its research infrastructure. The funds will be used to further the mission of PIMS as an organization that promotes the integration of the mathematical sciences between the research, industrial and educational communities. PIMS is already receiving financial support from the BC Government through the Information, Science and Technology Agency, the Natural Sciences and Engineering Research Council, the member universities, as well as various contributions from its industrial partners.

### **BC Government Renews its Support for PIMS Industrial Program**

In his speech during the inaugural ceremony of the PIMS sponsored UBC-SunSITE, Stuart Culbertson, BC Advanced Education, Training and Technology Deputy Minister, emphasized the BC government's desire to promote partnerships between academic scholarship and industrial enterprise, of which PIMS is a notable example. He praised the PIMS efforts in this direction and re-confirmed the government's financial support for PIMS industrial outreach programs.

### **NCE: PIMS Plays a Pivotal Role in Formulating the Vision of the MITACS Network**

On May 1, 1998 the three major Canadian mathematical sciences institutes (PIMS, CRM, and Fields) jointly submitted a proposal for a new Network of Centres of Excellence (NCE) in **Mathematics of Information Technology and Complex Systems (MITACS)**. The proposal is ambitious in scope encompassing research themes focusing on

### **NSERC's President on "Mathematics and PIMS"**

**"Much more recently mathematicians at UBC, SFU and UVic joined forces to create PIMS, the Pacific Institute for the Mathematical Sciences. They were joined by the two major universities in Alberta. I think that PIMS will become a very important institution, with an influence that extends far beyond the first-class mathematical research done by its members.**

**Mathematics has been called the language of high technology. It is part of the mission of PIMS to extend literacy in that language to business and industry in all sectors of the economy, and in that way to help them use the most modern tools in solving their problems. The organizers of PIMS have received NSERC support to try doing this, and based on their success to date I think that PIMS has the potential to raise by a couple of notches the level of technical competence in all sectors of business and industry in western Canada...."**

---Tom Brzustowski's speech at the Vancouver Board of Trade, April 16, 1998. The whole transcript can be read on the PIMS webpage in the section "what's new" at:

<http://www.pims.math.ca>

applications of the mathematical sciences in five sectors that were deemed important for the Canadian economy, including bio-medical technology, manufacturing, information technology, the financial sector, and the industrial commercial sector. Planning for MITACS began in October 1997. In November, the institutes submitted a letter of intent for the MITACS network; this was one of 74 letters received by the NCE program. At the end of January 1998, the NCE directorate announced that MITACS was one of 11 groups whose letter was selected to proceed towards a full application. With a total \$9M available, 3-5 new networks would be funded.

The three math institutes made a national call for letters of interest by Canadian scientists. There was an overwhelming response. . . . (Cont'd on page 7)

# Director's Notes:

*Nassif Ghossoub*

PIMS continues to progress in its commitment toward "making a difference" within the mathematical, industrial and educational sectors in the West and throughout the whole of Canada. It has been a busy few months; a lot has transpired and for this I have a great many words of appreciation for those individuals who have helped maintain a standard of energy and excellence within our young institute. I would like to take this opportunity to extend a warm gratitude to those of you that helped along the way:

- In the last few months, PIMS put forth two major funding proposals. These exercises are not merely "requests for money". They can also provide great opportunities to reflect and formulate the much needed long term visions.

The **PIMS Proposal** to NSERC's research grant program was completed on April 1. Many thanks to D. Austin, D. Rolfsen, A. Gupta, C. Laflamme, B. Alspach and A. Rhemtulla for their help in the development and formulation of the PIMS vision and plans over the next four years.

The **MITACS Proposal** to the NCE program was completed on May 1. Many thanks to the 80 participants from PIMS' affiliated universities for their contributions in fleshing out their teams projects. Special thanks to L. Keshet, and A. Peirce for their help in formulating the global vision in their respective theme of interest, H. Huang, for his excellent industry liaison effort, D. Rygiel for her efficient organizational work and of course, A. Gupta for his leading role in coordinating the PIMS teams. I will always be grateful to Alan Mackworth who came early on to our rescue, when we were facing an accepted LOI and a complete ignorance of the task ahead. His valuable advice and information -- based on his extensive experience with the IRIS NCE -- were very helpful in the development of the MITACS proposal.

- Substantial financial support was provided by B. Bressler (VP-Research, UBC), B. Clayman (VP-Research, SFU), R. Marteniuk (Dean of Applied Sciences, SFU) and C. Jones (Dean of Science, SFU) for the development of the MITACS letter of intent and of the proposal itself. We are very grateful for their continuing support.

- Thanks to H. Morris (Chair of Board, Eldorado Gold and of PIMS), S. Hossein (VP-Marketing, BC Tel) and D. Glassco (President and CEO, FinancialCad) for agreeing to be on the Board of Directors of MITACS.

- Thanks to M. Margolis (Chief trader, Powerex) and J. Kenna (Ballard Powersystems) for agreeing to serve on the MITACS Research Management Committee.

- Thanks to B. McBride (VP-Academic and Provost, UBC) and F. Granot (Dean of Graduate Studies, UBC) for providing PIMS with adequate space for its administrative center.

- PIMS has received many letters expressing both gratitude and pleasure from the students who visited UBC and SFU for the *Graduate Student Weekend*. It was a great success due to the commitment and efforts of L. Keshet, K. Promislow, A. Gupta, and many others.

... (More on the Grad Weekend page 3)

- A special thank you to P. Hagen for her efforts in developing the *Math Unplugged* Workshop Series and to M. Dubiel, K. Heinrich, and E. Perkins for their contributions to the success of the *Changing the Culture* Workshop.

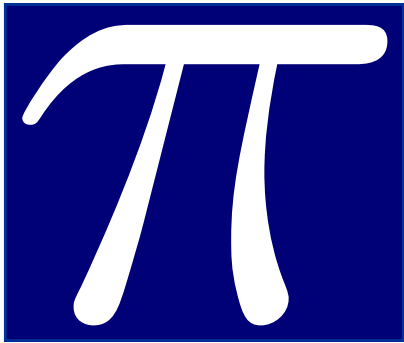
... (More on Educational Workshops on page 4).

## PIMS Preprint Series

We are in the process of establishing a PIMS Preprint Series for papers in the mathematical sciences. Contributions will be accepted from mathematical scientists at each of the PIMS institutions. In addition, we will distribute papers presented at PIMS events as well as our conferences and workshops proceedings.

The preprints will be distributed in both paper and electronic format. Paper copies will be distributed to all PIMS sites and mathematical institutes worldwide. We are in the process of establishing reciprocal preprint exchange agreements with a number of other institutes. Electronic copies of all of the preprints will be available from a preprint server, which will be accessed through our web page.

Contributions should be in LaTeX format and submitted by electronic mail. The preprint series will be in full operation by September. A more detailed announcement of the procedure for submitting papers will be made in July.



The  
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*Programs*

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## **Gala Opening of SunSITE at UBC**

An innovative website, the Living Mathematics SunSITE, was officially inaugurated on April 23, 1998. PIMS is proud to be a co-sponsor of this project, along with Sun Microsystems. In a festive celebration held at UBC, the site, originally proposed by Bill Casselman and Djun Kim of the UBC Mathematics Department, is the 57th such installation sponsored by Sun around the world, and the only one which is dedicated to mathematics.

*(Cont'd on page 6)*

## **PIMS Awards 26 PostDoctoral Fellowships**

Following its mandate of supporting young scientists, PIMS offered 26 Postdoctoral Fellowships, including five renewals, for the 1998-99 academic year. Chosen from over forty highly-qualified applicants, there were so many outstanding candidates that the Director of PIMS decided to offer more fellowships than originally budgeted, saying he was willing to "gamble in the name of science" that sufficient funding would be available.

The PDF selection committee consisted of David Boyd (Chair), Pauline van den Dreissche (UVic), Pavol Hell (SFU), Robert Moody (UA), Nick Pippenger (UBC) and Rex Wesbrook (Calgary). Each candidate had been nominated by a scientist at one of the PIMS universities. PIMS contributes a \$10,000 stipend for each candidate, the sponsor is responsible for assembling additional support for the year. PIMS also provides an allowance of up to \$500 per candidate for scientific visits to other PIMS sites. See the complete list of PIMS PDFs on Page 6. The following were offered PIMS PDF's but accepted positions elsewhere: Effrat A., Nevins M., Kurganov A., Shi J., Lewis T. and Yuan, L.

## **PIMS Graduate Weekend: Enhancing Graduate Opportunities for Students**

From February 19 to 22, PIMS hosted the first PIMS Graduate Weekend on the campuses of the University of British Columbia and Simon Fraser University. Representing more than 20 universities from all regions of the country, PIMS sponsored 45 of the best fourth year undergraduates to spend three days with PIMS scientists learning about the many research opportunities available at graduate departments at the five founding PIMS universities.

The event kicked off with a party at Green College, UBC. The students had a chance to meet each other and many of the research faculty at UBC and SFU. On Friday, February 20 the students heard about research opportunities at UBC, UVic, and UAlberta. In the afternoon they had a chance to interact one-on-one with individual faculty in Math, Applied Math, Computer Science, and Statistics.

The students spent Saturday February 21 on the SFU campus where they heard about research initiatives at both SFU and UCalgary. They also had a chance to tour labs, discuss research possibilities with faculty and interact with graduate students. The weekend closed with a dinner at the Diamond University Club, SFU.

This year's event attracted an additional ten students to the PIMS universities. PIMS worked closely with the Faculty of Graduate Studies, the Department of Mathematics at UBC, the School of Graduate Studies, and the School of Computing Science at SFU to make the weekend possible. PIMS provided much of the logistic and financial support for the event. Currently, plans call for the second grad weekend to be held in Alberta.

*... (Cont'd on page 6)*

**PIMS 1998-99 PostDoctoral Fellowships . . . Page 6**

## Math Education: Forging Closer Connections

PIMS Education Panel is continuing to bring members of the scientific community and the community at large closer together through an increasing number and variety of events. Events have continued during the 1997/98 academic year in both BC and Alberta.

- The hugely successful *Alternative Math Education* nights have continued in Victoria taking place at Hillcrest Elementary on October 2nd, 1997 and Cloverdale Elementary on March 3rd, 1998. PIMS members involved in these events are K. Choo, M. Dubiel, R. Illner, D. Leeming, M. Fellows, I. Putnam as well as other staff.

Students and members of the math community were also working together in Alberta at Strathmore High School on April 22nd, 1998. At this very successful math night, students on a series of maps in order to engage their problem solving skills. PIMS will continue to work in this manner with students at Strathmore and other schools in Alberta. Organizers were S. Carlson, I. Lagu of Mount Royal College, C. Laflamme, and N. Morrison. These events bring students and parents together to enjoy and broader understanding of mathematics.

- *The First Annual Math Exhibition* for the Victoria region also took place earlier this year on February 24th, 1998, at Lambrick Park Secondary School, SD#61. This event was targeted at students in G8-12 and involved the students demonstrating unique methods of solving problems related to mathematics. PIMS members worked with teachers Wendy Swonnell and Duncan McDougall as well as staff from Camosun College and U. Vic.

- *The PIMS-CMS Education Session* in Victoria, from December 14-17, 1998 has been viewed as one of the most successful education sessions in recent years. Organized by M. Dubiel and M. Fellows, participants were able to hear from PIMS members about the mutual benefits of having students and those involved in the math community brought together to work on meaningful and exciting mathematics.

- The first annual *Changing the Culture conference* of the PIMS Education Panel took place at the SFU Harbour Centre from February 20-21, 1998. Talks by Peter Taylor (Queens University) and Bruce Shawyer (Memorial University) set an engaging tone for the Conference. The small group discussions that followed looked at lowering the barriers of more meaningful mathematics. Through this conference doors have been opened to bring closer ties between math teachers, members of the math community, and students.

- PIMS Education Panel's direct involvement with students and schools has continued at Westwood Elementary in Port Coquitlam. The second student math conference, *Mathematics Unplugged II*, was held on April 22nd, 1998 at Westwood and was coordinated by P. Hagen and the staff of Westwood Elementary. Maria Klawe gave the keynote address to students, staff and parents before the full day of math activities began. Students were able to make prior selection of workshops to attend from the 18 available choices. PIMS participants included M. Dubiel, C. Koe and Maria Klawe, as well as R. Froese from UBC's Math Department. There has been a definite growth in math awareness for both presenters and students involved Westwood's event.

### *Watch For:*

- developments in the discussions between the PIMS Education Panel and SD#43 Coquitlam towards establishing a formal link between both parties to begin in the 1998/99 school year. This would be a first in the province for both parties.

- closer interaction between the PIMS Education Panel and the BCAMT. Former President Carryl Koe has been asked to act as liaison between the two parties.

- *Dynamics for High School Students* (I. Putnam - UVic) A series of lectures and hands-on lab experience at UVic for high schools students involving dynamics on the real line and complex plane.

- *Math Olympiad Training Camp*, June 30 - July 13, University of Calgary, (B. Sands - UC, T. Lewis and A. Liu - UA). A PIMS sponsored training camp for students involved with the International Mathematical Olympiad to be held in Taiwan.

*A Special Thank You to the Students at Westwood Elementary for the Wonderful Posters that !*



## Timetable for Applications to PIMS Scientific Review Panel

Applications for funding of scientific projects and events may now be submitted bi-annually. The deadlines are September 1 and March 1. For the September 1 deadline, the decisions of the Scientific Review Panel will be announced on October 15 and for the March 1 deadline, the decisions of the Scientific Review Panel will be announced on April 15.

The deadline for nomination of PIMS Postdoctoral Fellows, PIMS Industrial Fellows, PIMS Fellows and PIMS Visiting Fellows is February 1. The decisions of the Scientific Review Panel will be announced on March 1.

The guidelines for submitting proposals and nominations are available from:

<http://www.pims.math.ca/sections/opportunities/>

### PIMS Industrial Fellows 1998-99

- **P. Marechal**, *Medical Imaging*  
Industrial partner: Siemens  
Supervisor: J. Borwein (SFU)
- **D. Li**, *Multiple Target Tracking*  
Industrial Partner: Lockheed Martin  
Supervisor: M. Kouritzin (U.Alberta)
- **C. Jessop**, *Multi-surface Geological Modelling*  
Industrial Partner: Geological Survey of Canada  
Supervisor: R. Blais (Calgary)
- **Dan Calistrate**, *Computational Methods in Finance*  
Industrial partner: PanCanadian Petroleum Ltd.  
Supervisor: C. Laflamme (U.Calgary)
- **Petr Lisonek**, *Symbolic Analysis*  
Industrial Partner, Maple Software  
Supervisor: M. Monagan (SFU)
- **David Maxwell**, *Java-Based Interactive Modules*  
Industrial Partner: Sun Microsystems  
Supervisor: W. Casselman (UBC)

## PIMS Second Annual Industrial Problem Solving Workshop

Following the success of the first workshop in Vancouver, in August 1997, the *Second PIMS Industrial Problem Solving Workshop* will be held in Calgary, June 1-5, 1998. The organizing committee consists of D. Calistrate (PIMS & Calgary), H. Huang (PIMS), M. Paulhus (PIMS & Calgary) and R. Westbrook (Calgary). This year's industrial sponsors and participants are: **the Boeing Company (Seattle), the Computer Modeling Group (Calgary), The Geomechanics Project (Petro-Canada, PanCanadian, Talisman and Western Atlas, all from Calgary), Itres Research (Calgary), Powertech Labs (Vancouver) and VisionSmart (Edmonton)**. They will present six problems for the workshop, which deal with: optimal strategy for maintaining Boeing's excess capacity, modeling an underground petroleum reservoir for the Computer Modeling Group, exploration seismology for the Geomech Project, image processing for Itres, predicting power cable torsion for Powertech and characterizing egg shell structure for VisionSmart.

About fifty faculty, postdoctoral fellows and graduate students from PIMS universities, other Canadian universities and universities in the United States and the United Kingdom have already registered for the workshop.

## PIMS Inaugural Industrial Mathematics Modeling Workshop, SFU

In order to prepare graduate students for the Calgary industrial problem solving workshop, PIMS has organized a one-week graduate workshop to be held at Simon Fraser University May 25-19, 1998. The organizers are A. Gupta (PIMS & SFU), H. Huang (PIMS) and K. Promislow (Chair, SFU). Five mentors (L. Goddyn, SFU; R. Kuske, Minnesota; Y.-X. Li, UBC; C. Please, Southampton and D. Ross, Eastman Kodak) are invited. These mentors will impose problems arising from industrial, engineering or life science applications and will guide their teams of graduate students from a modeling phase to a complete resolution. The projects being proposed include optimal policies for queueing systems/networks, computing two graph invariants, air impact moulding, gelation and intracellular calcium oscillations. L. Scovell (Simons International Corporation) and A. Peirce (UBC) are also invited to give presentations on solving industrial problems. Many students have applied and about thirty seven of them from PIMS universities and other Canadian universities have been accepted to attend the workshop.

## SunSITE Ceremony

... (Cont'd from page 3)

Congratulations and encouragement for this unique program were given by UBC Provost Barry McBride, also a member of the PIMS Board of Directors. Mrs. Niki Gonzalez of Sun Microsystems outlined the purpose of the SunSITE program, a worldwide system of high-quality internet sites -- the acronym stands for Software and Information Technology Exchange. According to Dale Rolfsen, UBC site director of the Pacific Institute, the program keeps with PIMS' mandate of fostering technology-based mathematics communication by representing a constructive collaboration with industry. Support for the SITE includes a significant equipment grant from Sun, salary and infrastructure provided through PIMS, with expertise and additional support from the UBC Mathematics Department and other sectors of the academic community.

The official inauguration was symbolized by a ribbon-cutting ceremony led by Maria Klawe, UBC vice-president for Student and Academic Services, who praised the potential of the SITE in providing members of the university community and the general public with access and tools through information technology. Stuart Culbertson, BC Advanced Education, Training and Technology Deputy Minister, emphasized the government's desire to promote partnerships between academic scholarship and industrial enterprise, of which the SunSITE is a notable example.

B. Casselman and D. Kim demonstrated some of the proposed features of the SITE, including the Electronic Mathematician journal, a unique facility for publications which require electronic media. They have already begun to provide online access to the complete works of noted mathematician Robert Langlands (a UBC graduate), a unique 19th century English edition of Euclid's elements, and access to instructional software being developed by UBC faculty members, called the Living Mathematics Project. A sample demonstration was a prize-winning Java applet, written by UBC graduate student Jim Morey, which gives an animated proof of the Pythagorean Theorem.

Among the other fifty celebrants were Galen Greer and Calvin Shantz of the BC Information, Science and Technology Branch, a number of local industrialists, UBC vice-president of Research, Bernie Bressler, and CICSR Director Rabab Ward. Acting Dean of Science David Measday served as Master of Ceremonies.

## PIMS Postdoctoral Fellow for 1998-99, with their host departments

<b>Abdesselam, Malek:</b> Math, UBC <i>Sponsor: J. Feldman</i>
<b>Bolle, Philippe:</b> Math, UBC <i>Sponsor: N. Ghoussoub</i>
<b>Busawon, Krishna:</b> Eng.Sci, SFU <i>Sponsor: M. Saif</i>
<b>Centore, Paul:</b> Math.Sci, UA <i>Sponsor: P. Antonelli</i>
<b>Choi, Stephen:</b> Math, UBC/SFU <i>Sponsor: P. Borwein, D. Boyd</i>
<b>Fulman, Igor:</b> Math, UC <i>Sponsor: B. Brenken, M. Lamoureux</i>
<b>Gavrilova, Marina:</b> Comp.Sci, UC <i>Sponsor: J. Rockne</i>
<b>Guo, Chun-Hua:</b> Math.Stats, UC <i>Sponsor: P. Lancaster</i>
<b>Hebber, Eldad:</b> Comp.Sci., UBC <i>Sponsor: U Ascher</i>
<b>Kallel, Sadok:</b> Math, UBC <i>Sponsor: D. Sjerve</i>
<b>Lewis, Geraint:</b> Physics Astr., UVic <i>Sponsor: A. Babul</i>
<b>Lucet, Yves:</b> SFU/ UA/ UVic <i>Sponsor: J. Borwein, Poliquin, Ye</i>
<b>Ma, Chunsheng:</b> Stats, UBC <i>Sponsor: H. Joe</i>
<b>Murray, Rua:</b> Math, UVic <i>Sponsor: C. Bose</i>
<b>Schlottmann, Martin:</b> Math, UA <i>Sponsor: R. Moody</i>
<b>Stevens, Brett:</b> Comp.Sci, SFU <i>Sponsor: P. Hell</i>
<b>Stockie, Michael:</b> Math & Stats, SFU <i>Sponsor: R. Russell</i>
<b>Vartanian, Arthur:</b> Math, UA <i>Sponsor: M. Kovalyov</i>
<b>Watmough, James:</b> Math. Stats UVic, Math UBC <i>Sponsor: P. v d Driessche, L Keshet</i>
<b>Watson, Bruce:</b> Math. Stats, UC <i>Sponsor: P. Binding</i>

## Graduate Opportunities

... (Cont'd from page 3)

The Graduate Weekend is just one of many PIMS' events geared towards enhancing graduate studies at the PIMS universities. Starting May 24, PIMS will be hosting the first Graduate Industrial Modeling Workshop at SFU. More than 35 Canadian graduate students will be exposed to industrial mathematical modeling techniques. PIMS is also committed to sponsoring graduate student travel to all PIMS activities, in particular the thematic events, and provides explicit funding for this purpose. For example, the students participating in the industrial modeling workshop will also be sponsored to take part in the second PIMS Industrial Problem Solving Workshop at UCalgary from June 1 to 5.

## PIMS plays a pivotal role in the MITACS NCE

... (Cont'd from page 1)

- in a short three weeks, 85 groups of scientists organized themselves into teams and answered the call. Many of these groups were pan-Canadian, multi-disciplinary, and had already contacted potential business partners.
- After a rigorous evaluation process, 21 of these teams were chosen to take part in the MITACS proposal. These teams represent more than 200 scientists in 22 universities and 50 companies from all regions of the country. Among them are scientists of outstanding international stature, including 9 named or industrial Chairholders, 16 Fellows of the Royal Society of Canada, 6 Steacie and Killam fellows and 11 winners of other major prizes. Recognizing the value of this team-based approach to solving extremely hard problems, the corporate partners committed more than \$700,000 in cash and \$2,200,000 in-kind to the projects.
- PIMS scientists played a key role through this process. Nine of the 21 projects are centered at PIMS universities (see box). More than 80 PIMS scientists and 25 PIMS affiliated companies are participating in the NCE. These companies committed over \$400,000 in cash and \$1,000,000 in-kind to the initiative. PIMS scientists helped write much of the proposal, and will be central to the administration of MITACS. Should MITACS be funded, PIMS will be one of three administrative centres and will provide logistic and technical support for all projects with a Western component.

### The PIMS based MITACS Projects are:

1. Facility Location Optimization  
(Project leader: B. Bhattacharya, SFU)
2. Symbolic Analysis (Project leader: P. Borwein, SFU)
3. Mathematics of Resource Allocation and Scheduling  
(Project leader: P. Hell, SFU)
4. Modeling, Trading, and Risk in the Market  
(Project leader: U. Haussmann, UBC)
5. Mathematical Methods for Modeling, Verification and Testing in Information Technology  
(Project leader: B. Kapron, UVic)
6. Biomedical Models of Cellular and Physiological Systems in Health and Disease  
(Project leader: L. Keshet, UBC)
7. Prediction in Interacting Systems  
(Project leader: M. Kouritzin, UAlberta)
8. Probabilistic Mathematical Models for Complex Industrial Systems (Project leader: M. Puterman, UBC)
9. Mathematical Modeling and Scientific Computation  
(Project leader: B. Wetton, UBC)

## PIMS Welcomes . . . .

### PIMS Alberta:

### Two New Industrial Coordinators

• The new industrial coordinator at the University of Alberta is **Mr. John Vardalas**. Mr. Vardalas has focused his efforts on those faculty members who showed the most willingness to reach out to industry. Currently, the PIMS industrial coordinator is pursuing collaborative opportunities on five fronts. He arranged a meeting between IPL officials and Gordon Swaters, Bruce Sutherland, and Sherm Riemenshieder. He arranged some contacts between Sam Shen and the Geological Survey of Alberta. Dr. Bachu of the GSA will be speaking to department members on Friday, May 22. Another project with the Edmonton Space and Science Centre is also being pursued. The faculty participating are Jim Timourian, George Peschke and Andrew Liu. He is also pursuing an opportunity for participation in the European Union's Fifth Framework R&D program. This opportunity stems from a Memorandum of Understanding that was signed between Canada and the EU. Subsequent discussions with the EU's delegate to Canada confirms these opportunities. Mike Kouritzin is eager to pursue this option.

• The new industrial coordinator at the University of Calgary is Doctoral student **Marc Paulhus**. Mark is replacing **Dan Calistrate** who is now a PIMS industrial postdoctoral fellow. Mark used to be Dan's assistant and they are currently coordinating jointly the organizational efforts for the second PIMS Industrial Problem Solving Workshop at Calgary.

### SANDY RUTHERFORD APPOINTED SCIENTIFIC COORDINATOR

A new position of Scientific Coordinator has been created to ensure the success of the many scientific programs sponsored by the Pacific Institute. Director Nassif Ghoussoub announced the appointment of Alexander (Sandy) Rutherford to the job. Sandy is uniquely qualified, with a PhD in Physics, a background as computer systems administrator for the Swiss Federal Institute of Technology (ETH) and experience teaching university-level mathematics. Sandy has accepted the position on a part-time basis, so that he can continue to pursue his interest in research in mathematical physics

... (cont'd page 8)

# Upcoming

## PIMS scientific events

- The 1998 Canadian Operator Theory and Operator Algebras Symposium, U. Alberta, Edmonton, May 21-May 25, 1998. Contact: tlau@math.ualberta.ca (A. Lau, B. Marcoux)
- Industrial Mathematical Modeling Workshop for Graduate Students, Simon Fraser University, May 25-29 1998. Contact: kpromisl@cs.sfu.ca (K. Promislow)
- Workshop on Network and Computer Security, Banff, Alberta, May 27-29, 1998. Contact: cleve@cpsc.ucalgary.ca (R. Cleve)
- Annual meeting of CAMS and Canadian Symposium on Fluid Dynamics, SFU Harbour center, May 28-31, 1998. Contact: gac@cs.sfu.ca (C. Graham)
- Second PIMS Industrial Problem Solving Workshop, June 1-5, 1998. Contact: calistra@math.ucalgary.ca (D. Calistrate)
- Computation, Statistics and Visualization in Petroleum Industry, Calgary, June 8-10, 1998. Contact: shen@cake.math.ualberta.ca (S. Shen)
- Pacific Rim Geometry Conference, UBC, Vancouver, June 28 - July 2, 1998. Contact: daustin@math.ubc.ca (D. Austin)
- Fifth International Workshop on Mathematical Aspects of Fluid and Plasma Dynamics, Wailea, Maui, Hawaii, June 28- July 3rd, 1998. Contact: rillner@math.uvic.ca (R. Illner)
- Canadian Undergraduate Mathematics Conference, UBC, July 9-12, 1998. Contact: kozdron@unixg.ubc.ca (M. Kozdron)
- Western Canada Linear Algebra Meeting (W-CLAM), University of Victoria, July 30-31, 1998. Contact: pvdd@math.uvic.ca (P. van den Driessche)
- Workshop on Coding Theory, Cryptography, and Computer Security, Lethbridge, Alberta, August 3-7, 1998. Contact: hadi@cs.uleth.ca (H. Kharagani)
- Microstructural Models of Rock Fracture, UBC, Aug. 10-12, 1998. Contact: peirce@math.ubc.ca (A. Peirce)

### **PIMS Thematic Summer 1998:**

### ***Mathematical Economics and Finance*** **at UBC**

**Contact: PIMS Central Office**

## Rutherford, scientific coordinator

... (Cont'd from page 7)

The responsibilities of the scientific coordinator include working with organizers of scientific events on all aspects of the programs, from the proposal stage to the publicity, planning and running of the meeting and the preparation of a follow-up report. In addition, he will be responsible for scientific publications. The PIMS postdoctoral fellowship program will also be overseen by the scientific coordinator. His work will parallel that of the industrial facilitators, and it is expected that they will work together in areas of overlapping responsibility. This addition to the PIMS management structure will alleviate some of the supervisory burden of the director and site directors, as well as the project organizers, so they can concentrate on scientific aspects of their programs. Having a working scientist in the position will ensure high-quality coordination of PIMS activities.

## PIMS Contact List

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Admin. Asst: Patti MacDonald  
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Fax : 403-492-6826  
e-mail: pims-ua@math.ualberta.ca

UC-site Director: C. Laflamme (Maths & Stats.)  
Admin. Asst: Joanne Longworth  
Phone: 403-220-5203  
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