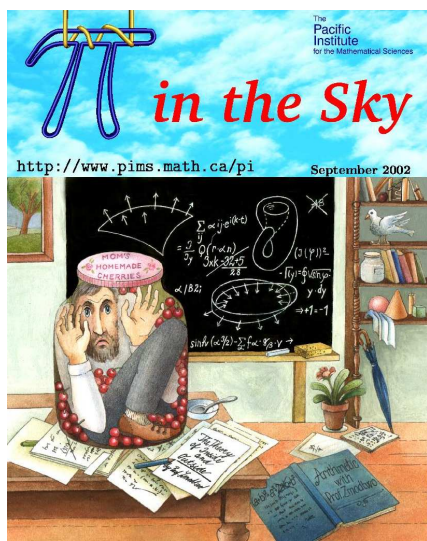
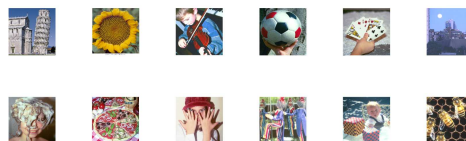


VII. COMMUNICATION OF THE MATHEMATICAL SCIENCES

Calendar 2001

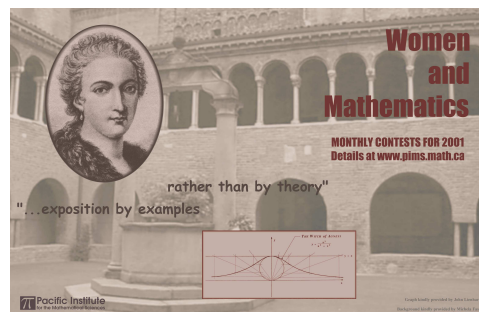
The 2001 PIMS Calendar which featured the *Mathematics is Everywhere* posters.



While studying the work of Möbius, Prof. Zmodtwo discovers the importance of signs.

The fifth issue of *Pi in the Sky* magazine. The cover was specially created by Czech artist Gabriela Novakova according to an original idea by George Peschke, and the meaning of the scene is explained in the article "Oops!!! Just what happened to Prof. Zmodtwo?"

The December poster in the 2001 *Women and Mathematics* campaign featuring Maria Gaetana Agnes.



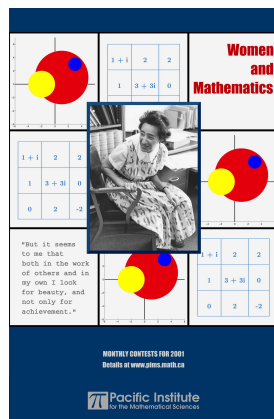
Women & Mathematics

Coordinators: Krisztina Vásárhelyi and Heather Jenkins (PIMS).



PIMS Calendar for 2002 which features the *Women and Mathematics* posters.

Building on the momentum of the *Mathematics is Everywhere* poster campaign, PIMS continued the project in 2001 with a new theme and format. Klaus Hoechsmann's innovative poster series has demonstrated that given the right approach, it is possible to rouse interest in the "terminally unpopular".



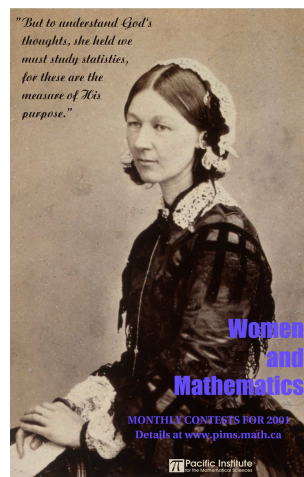
Olga Taussky-Todd from April.

of the mathematical sciences.

Mathematics is expanding rapidly beyond its traditional domains. With the growth of information technologies in all fields, the demand for mathematically trained individuals in the work force will continue to rise. Ironically, mathematics still suffers from a bad reputation. Fear and loathing of

the subject is firmly established already at the elementary school level. The attitude that mathematics is a career obstacle continues to influence education choices. Girls are especially susceptible to rejecting a course of study which favours mathematical content. The "smart girl" stigma among teenagers can be a powerful deterrent.

The Women and Mathematics campaign presented an alternative, much more positive, image of mathematics in the lives of women. Mathematics can involve lifelong dedicated research, it can be an enjoyable pursuit and it can represent a valuable tool in a variety of endeavours. The last point is aptly illustrated by the



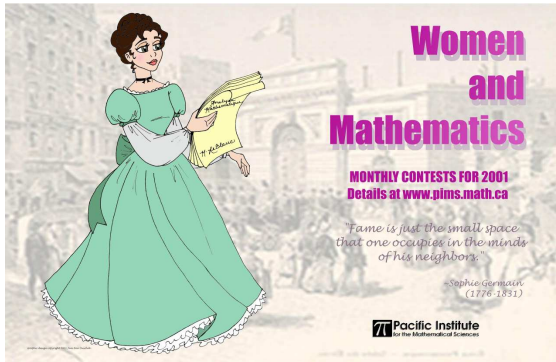
Florence Nightingale from July.

case of Florence Nightingale. She is a prominent figure and role model, widely acknowledged for her achievements in the fields of nursing and public health. Yet her perhaps less well known contributions to statistics have been pivotal to her other accomplishments.

The target audience for this project included students in elementary and secondary schools as well as the general public of any age or gender. However, by focusing on women we want to draw attention to the problem of low female participation in the mathematical sciences.

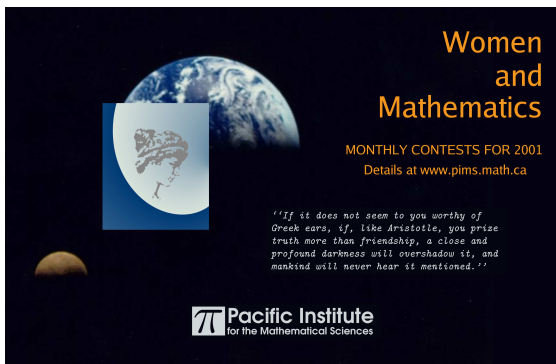
The contest itself promoted internet-based biographical research in addition to problem-solving. A set of quiz questions will be posted on the contest website. One of the questions was a mathematics problem, highlighting the field of involvement of the featured individual. Answers to the remaining biographical questions can be found by searching the web. This approach encourages contestants to read and learn about women in mathematical pursuits. Posters have been distributed to schools in BC and Alberta to encourage initiatives for class projects.

The posters have also appeared in public libraries as well as in universities across North America and internationally.

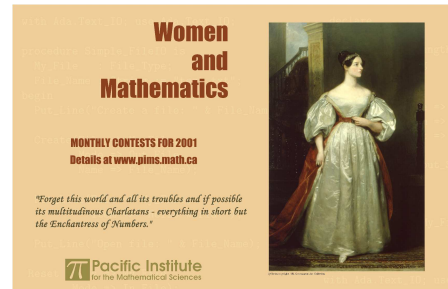


The May poster designed by Jeni Rae Duschak.

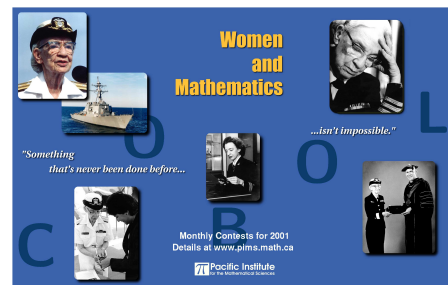
Her life might have been the subject of a storybook: **Sophie Germain** dressed up as a man to be admitted to the École Polytechnique where her mathematical genius was discovered, and she was the secret saviour of Gauss, whose life was threatened during Napoleon's invasion. In May, PIMS was treated to a special poster-presentation of Sophie Germain. **Jeni Rae Duschak**, a young American artist who studied mathematics and liberal arts, generously donated her time to produce a beautiful poster for the contest. Jeni Rae has a website about Sophie's life which includes a biography that she tells as a story illustrated with her drawings. Our discovery of her site led to an enjoyable collaboration which resulted in the special poster.



The February poster featuring Hypatia of Alexandria, last of the Alexandrian scholars.



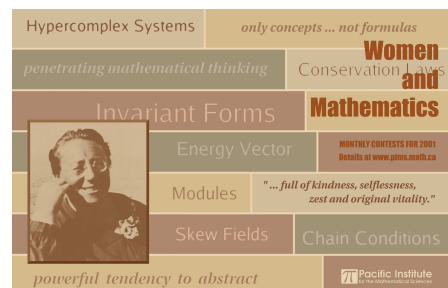
Ada Lovelace, namesake of the computer language Ada from March.



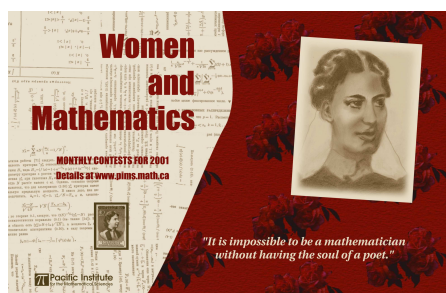
Grace Hopper developed the computer language COBOL and featured on the June poster.



Nobel Prize winning theoretical physicist Maria Goeppert-Mayer in August.



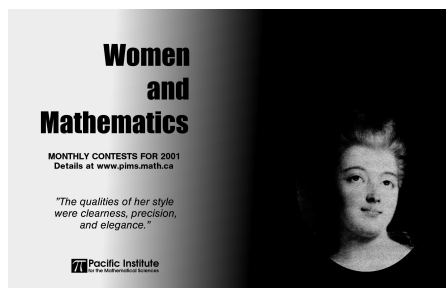
Emmy Noether one of the great mathematical minds of this century featured in September.



October's poster featuring Sofia Kovalevskaya.



Observational astronomer Caroline Herschel featured in November.



Emilie de Breteuil who featured in January 2002.

Pi in the Sky

Pi in the Sky is a mathematical magazine targeted at the Junior and Senior High School students and educators, Pi in the sky is produced by mathematicians at the University of Alberta, for distribution across the BC, Alberta and Washington State. This popular semi-annual publication promotes all aspects of the mathematical sciences. The first 5 issues are available online through the PIMS website. The Editors in Chief are Nassif Ghoussoub (PIMS Director) and

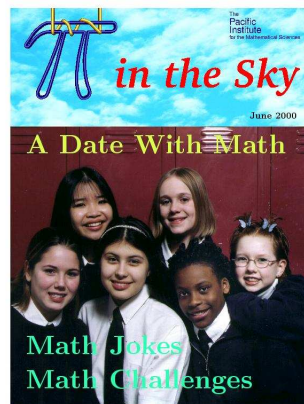
Wieslaw Krawcewicz (U. Alberta). John Bowman, also from U. Alberta, is the Associate Editor. The rest of the editorial Board consists of Peter Borwein (SFU), Florin Diacu (U. Victoria), Klaus Hoechsmann (UBC), Michael Lamoureux (U. Calgary) and Ted Lewis (U. Alberta).

The purpose of Pi in the Sky is to promote mathematics, establish direct contact with teachers and students, increase the involvement of high school students in mathematical activities, and promote careers in the mathematical sciences.

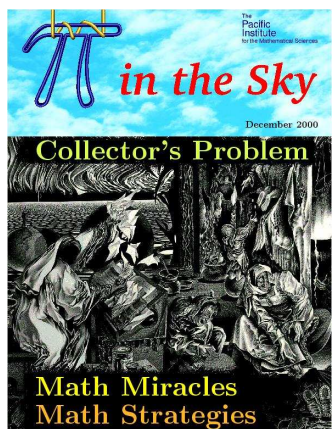
This journal, aimed at an average student, has the following objectives:

- to promote meaningful and exciting mathematics;
- to inform students and teachers about mathematical sciences;
- to increase participation of students in math related activities;
- to encourage girls to get involved in mathematical sciences;
- to establish a dialog between students, teachers and academics;
- to promote new and/or innovative teaching methods;
- to change any negative stereotype image of math.

The first issue of Pi in the Sky includes the articles *The Perfect Education System for an Affluent Society* by Andy Liu, *Solving Problems can be Fun* by Ambikeshwar Sharma, and *How do I love thee? Let me count the ways!* by Laurent W. Marcoux. The cover features students from the Nellie McClung Girls' Junior High Program at Oliver School in Edmonton.



The first issue of *Pi in the Sky*.



The second issue of *Pi in the Sky*.

The cover shows a fragment of a painting by prominent Russian mathematician Anatoly T. Fomenko which was inspired by mathematical ideas.

The June 2001 and third issue of *Pi in the Sky* includes *We've Got Your Number* by Ted Lewis, *Have You Used Illegal Drugs Lately? or How to Ask Sensitive Questions* by Carl Schwarz, and *Constructing Fractals in Geometer's SketchPad* by Michael Lamoureux. These articles explain how visa card companies, for example, determine whether or not you have entered a valid number, the ideas behind randomized response surveys, and how to build fractals using Geometer's SketchPad software.

The fourth issue of the *Pi in the Sky* features students from Tempo School in Edmonton on the cover. These students were visited by five University of Alberta mathematicians in October 2001. The students were shown how mathematics can be fun and interesting at the same time. They also learned all about

In the second issue of *Pi in the Sky* Akbur Rhemtulla writes about *Counting with Base Two and the Game of Num*, and Byron Schmuland about the *Collector's Problem*. Readers learn about π in *The Number π and the Earth's Circumference*

by Wieslaw

the *Pi in the Sky* magazine. This issue also includes the game *Tic-Tetris-Toe* by Andy Liu, a biography of Karl Weierstraß by Volker Rundle, insight into *Life and Travel in 4D* by Tomasz Kaczynski, an explanation of *Shark Attacks and the Poisson*

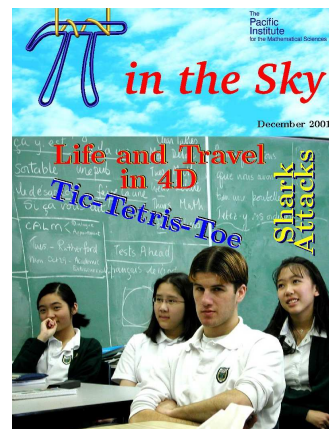
Approximation by Bryron Schmuland, and *The Rose and the Nautilus: A Geometric Mystery Story* by Klaus Hoechsmann. There is also the usual wealth of math jokes and challenges.

The fifth issue of the *Pi in the Sky* came out in September 2002. The Math & Astronomy section features *Solar Eclipses: Geometry, Frequency, Cycles* by Hermann Koenig. Read a biography of female mathematician *Emmy Noether* by Volker Runde. *From Rabbits to Roses: A Geometric Mystery Story* by Klaus Hoechsmann is the continuation of the mystery series *The Rose and the Nautilus*. Other article include *Student's Workshop: Polyhedra with Six Vertices* by Richie Ng, *Mathematics of the Past* by Garry Kasparov, and *Decoding Dates from Ancient Horoscopes* by Wieslaw Krawcewicz. Another article is about *Gibbon, Malthus, and the Ancients*.

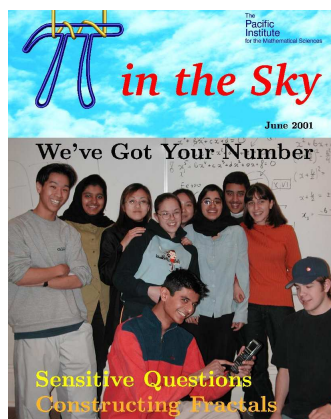
The PIMS Math Fair Booklet

PIMS published the math fair booklet by Ted Lewis (PIMS Education Coordinator, U. Alberta) in the Spring. This is a major new resource for teachers and others interested in math fairs for schools. It is based on the experience of the author and his colleagues over the past few years. It is a rich source of guidelines to organizing math fairs, and to finding suitable problems puzzles and challenges.

The booklet is available for free download in pdf format suitable for laser printing. Hard copies may



The fourth issue of *Pi in the Sky*.



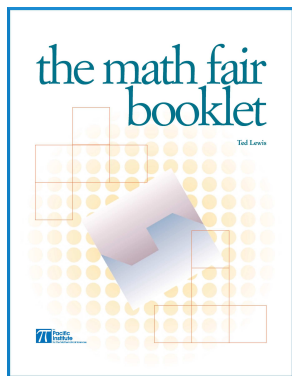
The third issue of *Pi in the Sky*.

be purchased from PIMS University of Alberta for a nominal fee (US\$10.00 for shipping and handling in North America, US\$15.00 elsewhere).

From the Introduction: the math fair booklet by Ted Lewis

Everybody knows what a science fair is. Students find projects to work on, they prepare posters and demonstrations, the public is invited to come and see what they have done, and a panel of judges awards prizes for projects that are deemed to be the best.

A math fair is similar, but two important differences set our concept apart. Although mathematics is extremely diverse, our math fairs concentrate on just one aspect of the subject, namely problem solving, and our fairs are officially non-competitive, so there are no awards or prizes. We have chosen to focus on problem solving for several reasons. It is one activity that is common to most of mathematics, it is frequently an explicit part of the mathematics curriculum and it encourages skills in students that can be applied in all areas of their lives.



The problems in this booklet are ones that young students can solve and truly understand with a reasonable amount of work. They will not need a broad educational background, but the problems are not simple and most will have to think before solving them.

The same is true about the people who visit the math fair even though they may be adults or students from higher grades. When the participants present their problems, they will discover that the visitors need help to work through the solutions, and the presenters will gain the satisfaction and confidence that comes from helping more talented or older persons.

The interaction between the participants and the viewers at a problem-based math fair can have a profound effect on the poise, confidence, communication skills and patience of the participants. The rea-

son for our second difference, that the math fair be officially non-competitive, is so that all students are encouraged to participate and benefit. If some students feel they have little chance of winning they may decline to join in or not put in a full effort.

Even if a math fair is officially non-competitive, informal competition does occur. The participants quickly recognize who among them are good problem solvers, who can explain things well, whose presentations have the best artwork, and which displays attract the most visitors. But this sort of competition is friendly and constructive, and frequently leads to co-operative efforts among the participants. The focus on problem solving and the lack of formal awards are the key parts to our concept of a math fair for children, but otherwise there are many opportunities to creatively adapt the concept to a particular situation. We hope you will find this booklet useful in organizing your own math fair and are looking forward to hearing from you about your experiences.

The PIMS Newsletter/Magazine

Scientific Articles that have appeared in the PIMS Newsletter

- Volume 4.2: *A Brief Survey of Braid Groups* by **Bert Wiest** (PIMS PDF)
- Volume 4.3: *Constructing Fractals in Geometer's SketchPad™* by **Michael Lamoureux** (PIMS Deputy Director and Site Director U. Calgary)
- Volume 5.1: *Strings and D-branes* by **K. Zarembo** (PIMS-PDF)
- Volume 5.1: *The Mathematics of Voting* by **Florin Diacu** (PIMS Site Director, U. Victoria)
- Volume 5.1: *The Amazing Number π* by **Peter Borwein** (SFU)
- Volume 5.2: *The Fascinating Predator-Prey Equation and Development of HIV/AIDS in Canada* by **B. D. Aggarwala** (U. Calgary)
- Volume 6.1: *Computing Free Boundary Problems in Moving Fluids* by **Michael Shelley** (Courant)
- Volume 6.2: *Is Economic Theory True?* by **Ivar Ekeland** (U. Paris-Dauphine)

Pacific Institute for the Mathematical Sciences Newsletter

A VISION OF PROPOSED INITIATIVE

A Morning In the Life, 1999

of the Pacific Institute for the Mathematical Sciences

The proposed Pacific Institute for the Mathematical Sciences (PIMS) will primarily be a research institute in the mathematical sciences. The founding Universities of Western Canada will be the main contributors to the research...

1 Victoria, B.C.; 2 S.F.U., Prince George, Columbia; 3 UBC; 4 The Fields Institute, Toronto; 5 The Centre for Dynamical Systems and Complex Systems (CDSCS), Simon Fraser University, Burnaby, B.C.; 6 The University of Alberta; 7 The University of British Columbia; 8 The University of Saskatchewan; 9 The University of Waterloo; 10 The University of Toronto; 11 The University of Western Ontario; 12 The University of Windsor; 13 The University of Regina; 14 The University of Northern British Columbia; 15 The University of Northern Iowa; 16 The University of Northern Iowa; 17 The University of Northern Iowa; 18 The University of Northern Iowa; 19 The University of Northern Iowa; 20 The University of Northern Iowa.

THE PACIFIC INSTITUTE FOR THE MATHEMATICAL SCIENCES

Pacific Institute Newsletter for the Mathematical Sciences

February 1998 Vol. 2, Issue 1

PIMS, Fields and the CRM invited to develop NCE in the mathematical sciences

Canada's three mathematical sciences centres have cleared the first hurdle in their application to the proposed National Centre of Excellence programs. Their letter of intent was one of only three selected, among 72 submitted nationwide, to be reviewed by a panel of 12 members of the NCE program...

PIMS Graduate Week-end

In a new initiative, the Pacific Institute for the Mathematical Sciences will be sponsoring the PIMS Graduate Week-end in Vancouver on the campus of UBC and SFU, Feb. 19-21. The goal is to give prominent Canadian undergraduates a chance to learn more about the mathematical sciences graduate programs at the first PIMS universities in Alberta and B.C.

PIMS and CIRS launch the Industrial Working Seminar Series

As a part of PIMS and CIRS (Centre for Research in Computer Systems Research) industrial activities, the Industrial Working Seminar Series is being initiated. The series will feature a local speaker on a continuous basis. Once a month, an industry representative will be invited to present a mathematical problem that is relevant to his or her company in an accessible format.

Dr. Hugh Morris, FRS, New Chair of PIMS Board of Directors (Page 2)

The Pacific Institute for the Mathematical Sciences, Feb. 1998

Pacific Institute Newsletter for the Mathematical Sciences

March 1999 Vol. 2, Issue 4

PIMS: Base Funding From NSERC For 1999-2003

The Mathematics of Information Technology and Complex Systems Network (MITACS), a new Canadian mathematical network, will benefit from a federal investment of close to \$4.5 million over the next four years. The network was established through a national competition in the Network of Centres of Excellence Program. MITACS will be administered by the CRM in Montreal, The Fields Institute in Toronto, and the Pacific Institute for the Mathematical Sciences in B.C. and Alberta.

BC and Alberta math NSERC's funding for PIMS

NSERC's \$800K annual support for PIMS will be matched by a cash contribution of PIMS per year from B.C. and Alberta. This was made possible thanks to a memorandum of understanding between the BC and Alberta governments, the B.C. Government through the Information, Science and Technology Agency and the Alberta Government through the Alberta Science Research Authority. This contribution comes in addition to the substantial in-kind support (infrastructure, space) that the five major universities in B.C. and Alberta continue to provide for PIMS.

The Pacific Institute for the Mathematical Sciences, December 1990

Pacific Institute Newsletter for the Mathematical Sciences

June 1997 Vol. 1, Issue 1

NSERC Supports PIMS Outreach Activities

PIMS received \$400,000 of funding for the next two years from NSERC's Research Partnerships Program under the University-Industry Collaborative Activities component. This activity is designed to continue carrying on the important scientific activities compatible with a vision of outreach to other disciplines and sectors. The funds will be used to further the mission of PIMS as an organization that promotes the integration of the math community between the research, industrial and educational communities.

PIMS Organises Oxford Study Program

PIMS will be holding an Oxford study program in the summer of 1997 to develop a study program model in Canada based on the highly acclaimed Oxford model. For bringing mathematical scientists and industrial problems together, it is a very active and productive forum. This initiative is part of the PIMS industrial strategy to establish ongoing contacts and collaborations between PIMS academic and industrial members.

The coordinator of the program, Dr. Gordon Simons (Physics, UBC), invited Dr. David Tim Myers of Cranfield University in the UK and Dr. Barbara van der Fleet of the University of London, both members of the PIMS Industrial Group, to come to BC and Alberta to act as consultants in putting together a study program. Dr. Cranfield and van der Fleet will be collaborating with Dr. Doug Brown and Dan (continued on page 3)

THE PACIFIC INSTITUTE FOR THE MATHEMATICAL SCIENCES NEWSLETTER

Pacific Institute Newsletter for the Mathematical Sciences

May 1998 Vol. 2, Issue 2

Alberta Government Supports PIMS Industry and Educational Programs

The Alberta Government, through the Education and Training and Technology (ETT) Ministry, has announced a \$1.0M for the 1998-99 fiscal year. The funding will support the PIMS Outreach Program. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

BC Government Renews Its Support for PIMS Industrial Program

The BC government has renewed its support for the PIMS Industrial Program. The funding will be used to support the PIMS Industrial Program, which is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Industrial Program, which is designed to provide a bridge between industry and academia.

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 a vision of a new network of mathematical sciences focusing on...

The Pacific Institute for the Mathematical Sciences, May 1998

Pacific Institute Newsletter for the Mathematical Sciences

March 1999 Vol. 3, Issue 1

Alberta Science and Research Authority Awards \$800K to PIMS

On December 23, the Alberta Science and Research Authority (ASRA) announced it is awarding \$800K to PIMS program. This funding will support the PIMS Outreach Program. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

UBC and SFU Provide Research Facilities for PIMS and MITACS

Through the support of Barry McBride (VP Academic and Provost, UBC), the PIMS Outreach Office has provided with a \$400 K. It will allow the PIMS Outreach Office to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

PIMS Sponsors Education Expert Wins National Award

The Canadian Teachers' Association has awarded a 1998 F. B. I. National Teaching Award to Mathematics Educator, an annual award presented by the Canadian Teachers' Association. The award is presented to a teacher who has made a significant contribution to the field of education. The award is presented to a teacher who has made a significant contribution to the field of education.

MITACS Board Approves 21 Projects

The MITACS (Mathematics of Information Technology and Complex Systems) Network Agreement has been signed by the participating institutions. The agreement is a vision of a new network of mathematical sciences focusing on... The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

The Pacific Institute for the Mathematical Sciences

Pacific Institute Newsletter for the Mathematical Sciences

December 1997 Vol. 1, Issue 2

BC Government Supports PIMS Industry Liaison Programs

The BC Government has provided \$200,000 for each of the next two years, the BC government provided to assist PIMS Outreach Program. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

PIMS Forum on industrial mathematics, SFU-UC

Following on the heels of its highly successful Industrial Problem Solving Workshop (PIMS) has recently announced an annual Forum on Industrial Mathematics to be held in May 2000. The forum is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

PIMS thematic summer 1998: Math Economics and Finance

PIMS is planning a series of activities dealing with mathematical problems arising in economics and finance for the summer 1998. The program is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

The Pacific Institute for the Mathematical Sciences Newsletter, Dec. 1997

Pacific Institute Newsletter for the Mathematical Sciences

Sept. 1998 Vol. 2, Issue 3

PIMS 1999 Thematic Programs: Math Biology & Experimental Mathematics

Reflecting the overwhelming enthusiasm and success of the last two thematic programs, PIMS is now announcing its 1999 thematic programs. The programs are designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

NSERC Visits PIMS on September 14

The NSERC representative will be visiting PIMS on September 14. The visit is designed to provide a bridge between industry and academia. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

What's Inside...

• Schedule of PIMS events (Page 4-5)
• Donors' news (Page 2)
• Industrial Working Seminar Series (Page 3)
• Report on recent scientific activities (Page 6)
• PIMS Outreach Program (Page 7)
• PIMS Outreach Program (Page 8)
• PIMS Outreach Program (Page 9)

The Pacific Institute for the Mathematical Sciences, Sept. 1998

Pacific Institute Newsletter for the Mathematical Sciences

Spring 1999 Vol. 3, Issue 2

NSERC's President Leads 60 Canadian Mathematicians to China

More than 60 Canadian mathematical scientists will participate in the First 3rd Canada-China Mathematics Congress which will be held August 21-28 on the campus of Tsinghua University in Beijing, China. The congress is a vision of a new network of mathematical sciences focusing on... The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

Third Annual PIMS Industrial Problem Solving Workshop: A Continuing Success

The Pacific Institute for the Mathematical Sciences is pleased to host its third annual Industrial Problem Solving Workshop on the campus of the University of Victoria. The workshop is a vision of a new network of mathematical sciences focusing on... The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

PIMS Central Office Moves to New Facilities at UBC

The PIMS central office has been provided with a 4,000 sq. ft. research facility on the UBC campus. The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

CRM-Fields PIMS Announce National Committee

The three Canadian Institutes in the Mathematical Sciences, Centre for Mathematical Sciences (CRM), The Fields Institute for the Mathematical Sciences (Fields), and the Pacific Institute for the Mathematical Sciences (PIMS) have announced a National Committee. The committee is a vision of a new network of mathematical sciences focusing on... The funding will be used to support the PIMS Outreach Program, which is designed to provide a bridge between industry and academia.

The Pacific Institute for the Mathematical Sciences

PIMS Offers Lectures via Streaming Video over the Internet

PIMS now has over 2002 lectures available over the internet using on-demand streaming video and audio. The lectures are available at www.pims.math.ca/video. There are both videos of the lectures in Realvideo format and high resolution JPEG images of the speaker's slides, when possible. MP3 files are also available for listening to for many of the lectures. The library is divided into five main sections:

Ceremonies and Meetings
Seminar Series and Distinguished Lectures
Thematic Programmes, Conferences and Workshops
Minicourses
Educational Activities

Ceremonies and Meetings

PIMS Awards Ceremony 2001, Vancouver, BC, December 1, 2001

The ceremony where the three PIMS prizes for research, education and industrial outreach were awarded.

Announcement Ceremony for BIRS, The Banff Centre, Alberta and The NSF, Washington, DC, September 24, 2001

This ceremony includes speeches by: **Rita Colwell** (Director, NSF), **Tom Brzustowski** (President, NSERC), **Robert Church** (Chair of Board, Alberta Science and Research Agency), **Philippe Tondeur** (Director of Division for the Mathematical Sciences, NSF), **Hon. Cindy Ady** (MLA for Calgary Shaw), **Mary Hofstetter** (President and CEO of The Banff Centre) and **Raul E. Chavera** (US Consul General in Calgary).

Opening Ceremonies and Banquet of the 2001 Canada-China Mathematics Congress, UBC, August 20, 2001

This initiative built on the success of the first Canada-China 3x3 Congress held at Tsinghua University in August 1999.

Opening Ceremonies of the 1999 Canada-China Mathematics Congress, Tsinghua University, Beijing, August 23–28, 1999

On August 23–28, 1999, **Tom Brzustowski** (President of NSERC) led a delegation of more than 60 Canadian mathematical scientists to Beijing who took part in a high-level Canadian-Chinese Mathematics Congress.

PIMS Opening Meeting, University of Victoria, October 4, 1996

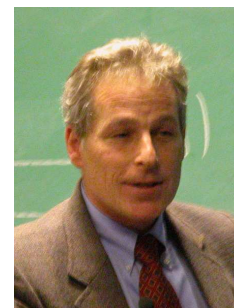
The following talks are available:

- **David Brillinger** (UC, Berkeley): *Studying the tracks of Elephant Seals*
- **Katherine Heinrich** (SFU): *PIMS and Mathematics Communication*
- **Richard Karp** (U. Washington): *Combinatorial Optimization as a Tool for Molecular Biology*
- **Donald Saari** (Northwestern): *The Chaotic Complexity of Economics and the Social Sciences*

Seminar Series and Distinguished Lectures

IAM-PIMS 2002–03 Joint Distinguished Colloquia, UBC

All the talks from this series will be taped. The talks by **Gordon E. Swaters** (U. Alberta), **David Chandler** (UC, Berkeley) and **Ulf Dieckmann** (International Institute for Applied Systems Analysis, Laxenburg) are available at the time of publication.



David Chandler
(UC, Berkeley)

MITACS Annual General Meeting, UBC, May 23–25, 2002

The talks by **Gilbert Strang** (MIT), **Ron Graham** (UC, San Diego) and **Anil K. Jain** (Michigan State U.) are available.

IAM-PIMS 2001–02 Joint Distinguished Colloquia, UBC



Eva Tardos (Cornell)

The six talks from this series were given by: **Eva Tardos** (Cornell University), **Adam Arkin** (UC, Berkeley), **Russel Caffisch** (UCLA), **Joel H. Ferziger** (Stanford University), **David Gottlieb** (Brown University) and **Philippe R. Spalart** (Boeing Corporation).

IAM-PIMS 2000–01 Joint Distinguished Colloquia, UBC

Talks by **Bengt Fornberg** (U. Colorado), **Gunther Uhlmann** (U. Washington), **David Baillie** (SFU) and **Linda Petzold** (UC, Santa Barbara) may be viewed.

PIMS-MITACS Seminars on Computational Statistics and Data Mining, UBC, 2001–01

John Rice (UC, Berkeley) and **R. Douglas Martin** (University of Washington) from the series can be watched.

Distinguished Lectures

Talks by the following people may be viewed:

- **Vaughan Jones** (UC, Berkeley): *Skein theory in knot theory and beyond*, UBC, November 4, 2002
- **Ivar Ekeland** (Université Paris-Dauphine): *Systems of Nonlinear PDEs arising in economic theory*, UBC, March 22, 2002
- **David Gillman** (UCLA): *Odd embeddings on lens spaces*, UBC, May 31, 2001
- **Douglas Arnold** (Director, IMA, Minnesota): *Colliding Black Holes and Gravity Waves: A new Computational Challenge*, UBC, May 16, 2001
- **David Eisenbud** (Director, MSRI): *Chow Forms and Resultants - old and new*, UBC, April 12, 2001

- **Tudor Ratiu** (École Polytechnique Fédérale de Lausanne): *Variational Principles, Groups and Hydrodynamics*, U. Victoria, January 12, 2001
- **Robert Devaney** (Boston University): *The Mandelbrot Set, the Farey Tree, and the Fibonacci Sequence*, U. Victoria, October 20, 2000
- **Beno Eckmann** (ETH Zürich): *Idempotents in Group Algebras, Traces, and Geometry of Groups*, U. Calgary, September 21, 2000
- **Beno Eckmann** (ETH Zürich): *Projections, Group Algebras, and Geometry of Groups*, UBC, September 14, 2000
- **Beno Eckmann** (ETH Zürich): *The Euler Characteristic - Some Variations and Ramifications*, UBC, September 13, 2000
- **Sir Christopher Zeeman**: *Geometric Unfoldings of a Difference Equation*, U. Victoria, March 21, 2000
- **Israel Gohberg** (Tel Aviv University): *Infinite Systems of Linear Equations*, U. Calgary, September 30, 1999
- **Richard Karp** (U. Washington): *The Design of Molecular Bar Codes: A Combinatorial Problem from Molecular Biology*, SFU, May 13, 1999
- **Mitchell Luskin** (U. Minnesota): *Modelling, analysis and computation of crystalline microstructures*, UBC, September 10, 1998
- **Avi Wigderson** (Hebrew University): *A Computational View of Randomness*, UBC, April 6, 1998



Ivar Ekeland (Université Paris-Dauphine) and Vaughan Jones (UC, Berkeley) who both gave talks as a PIMS Distinguished Lecturers in 2002.

Thematic Programmes, Conferences and Workshops

Thematic Programme on Asymptotic Geometric Analysis, PIMS at UBC, July 1–August 15, 2002

110 lectures are available.

International Conference on Robust Statistics, UBC, May 13–17, 2002

23 lectures are available.

Pacific Northwest String Theory Seminar, PIMS at UBC, March 8–10, 2002

10 lectures are available.

Thematic Programme on Nonlinear Partial Differential Equations, PIMS at UBC, July–August, 2001

38 lectures are available.

Pacific Northwest String Theory Seminar, PIMS at UBC, March 17, 2001

5 lectures are available.

Conference on Biophysics and Biochemistry of Motor Proteins, Banff, AB, August 27–September 1, 2000

2 lectures are available.

Thematic Programme on Graph Theory and Combinatorial Optimization, PIMS at U. Victoria and SFU, June–July, 2000

9 lectures are available.

Thematic Programme on Mathematical Biology, PIMS at UBC, June–August, 1999

A lecture by **Sir Andrew Huxley** (Trinity College, Cambridge) is available.

Cascade Topology Seminar, PIMS at UBC, November 2–3, 2002

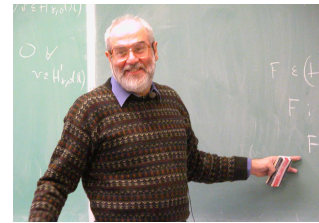
6 lectures are available.

Minicourses

Minicourses at the Thematic Programme on Nonlinear PDEs, PIMS-UBC, July–August, 2001

Minicourses given by **Gang Tian** (MIT), **Richard Schoen** (Stanford), **Eric Séré** (Université Paris IX), **Yann Brenier** (Université Paris VI), **Maria Esteban** (Paris-Dauphine), **Fang Hua Lin** (Courant), **Changfeng Gui** (UBC), **Wei-Ming Ni** (U. Minnesota), **Michael Struwe** (ETH Zurich), **Henri Berestycki** (Université Paris VI) and **Panagiotis Souganidis** (U. Texas, Austin). are available.

Minicourses by PIMS Distinguished Chairs



Gunther Uhlmann
(U. Washington)

- **Gunther Uhlmann** (U. Washington): PIMS Distinguished Chair, UBC, November, 2002. 3 lectures are available on *The Dirichlet to Neumann Map and Inverse Problems*.
- **Klaus Schmidt** (University of Vienna and Schrödinger Institute): PIMS Distinguished Chair, U. Victoria, November, 2002. 5 lectures are available on *Algebraic \mathbb{Z}^d -actions*.
- **Donald G. Saari** (UC, Irvine): PIMS Distinguished Chair, U. Victoria, September, 2002. 5 lectures are available with titles: *Mathematical Social Sciences, an oxymoron?*, *Singularity theory and departmental discussions*, *Evolutionary game theory; examples and dynamics*, *Chaotic dynamics of economics* and *Economic and Dynamics*.
- **Michael Shelley** (Courant Institute): PIMS Distinguished Chair, SFU, November–December, 2001. 5 lectures are available with titles: *Computing Free Boundary Problems in Moving Fluids*, *Computing with Surface Tension*, and *Discovering Singularities, Pattern Formation in Fluid Dynamics: Fluid Dynamics meets Materials Science*, *Why do Flags Flap?* and *Bending in the Wind: Elasticity and Drag Reduction*.

- **Vladimir Turaev** (National Center of Scientific Research, France): PIMS Distinguished Chair, U. Calgary, July–August, 2001. 5 lectures are available with titles: *Torsion of chain complexes*, *Mehler's Formula and the Renormalization Group*, *Euler structures and refined torsions*, *The torsion function of 3-manifolds* and *Properties of the torsion function*.
- **David Brydges** (University of Virginia): PIMS Distinguished Chair, UBC, September–October, 2000. 4 lectures are available on *Self-Interacting Walk and Functional Integration*.
- **Yuri Matiyasevich** (Steklov Institute of Mathematics): PIMS Distinguished Chair, U. Calgary, March 9, 2000. A lecture is available on *How to draw a tree correctly*.
- **Yuri Matiyasevich** (Steklov Institute of Mathematics): PIMS Distinguished Chair, U. Calgary, February, 2000. 5 lectures are available on *On Hilbert's Tenth Problem—What can we do with Diophantine Equations?*

Educational Activities

PIMS Changing the Culture 2002, SFU at Harbour Centre, April 26, 2002

Talks by **Ed Bareau** (U. Toronto) and **Brent Davis** (Faculty of Education, U. Alberta) were taped.



Ed Bareau (U. Toronto)

PIMS Changing the Culture 2002, SFU at Harbour Centre, May 11, 2001

John Mighton (Fields Institute) and **Brett Stevens** (PIMS, SFU) spoke at this conference and their talks are on the web page.

PIMS Changing the Culture 2002, SFU at Harbour Centre, April 28, 2000

A talk by **H.S.M Coxeter** (U. Toronto) is on-line.