



***2003***

*Annual Report to Members*

June 13, 2004

## Table of Contents

---

President's Report . . . . .	.2
Forum 2003 Report . . . . .	.4
Executive Director's report . . . . .	.6
Treasurer's Report . . . . .	.8
Committee Reports	
Advancement of Mathematics . . . . .	.14
Education . . . . .	.16
Electronic Services . . . . .	.17
Endowment Grants . . . . .	.18
Finance Committee . . . . .	.19
International Affairs . . . . .	.20
Mathematical Competitions . . . . .	.21
Nominating . . . . .	.23
Publications . . . . .	.24
Research . . . . .	.25
Student . . . . .	.27
Women in Mathematics . . . . .	.29
Editorial Board . . . . .	.30
Contributors . . . . .	.31
Executive Committee . . . . .	.32
Board of Directors . . . . .	.32
Executive Office . . . . .	.33

## President's Report

### *Christiane Rousseau (University of Montreal)*

#### **2003, a splendid year for mathematics in Canada**

2003 was an exciting year for mathematics in Canada. In March there was the inauguration of Banff International Research Station (BIRS). BIRS provides mathematicians with an exceptional facility to concentrate on research and exchange ideas in a splendid environment. In May the Canadian School Mathematics Forum took place in Montreal: it raised a lot of enthusiasm for mathematics education in Canada and follow-up activities are taking place across Canada. We received more nominations for our prizes than in the previous years, including our new Excellence in Teaching Award. The high quality of these nominations reflects the quality of mathematics and mathematics education in Canada. Our regular activities flourish more than ever, as acknowledged by the reports from all our committees: large numbers of participants in both our semi-annual meetings, prizes and awards, an active publication programme, high school mathematics competitions, Math Camps (there were 13 in 2003 with at least one camp in every province), electronic services for the community, and the Endowment Grants Competition. Further, for the second consecutive year the problems in *Crux Mathematicorum with Mathematical Mayhem* are available in both official languages.

#### **The CMS Summer meeting (University of Alberta)**

There were thirteen symposia on various themes at this meeting including one on education besides contributed papers, five plenary talks, a public lecture, and two prize lectures. The Jeffery-Williams Lecture was given by Ram Murty (Queen's) who was the 1988 Coxeter-James Lecturer. The Krieger-Nelson Lecture was given by Leah Keshet (UBC). The five distinguished plenary speakers were Ingrid Daubechies (Princeton University), Roland Glowinski (University of Houston), Gerhard Huisken (Tuebingen/Albert Einstein Institute), James Lepowsky (Rutgers University), and Dennis Shasha (Courant Institute). A public lecture "Tilings: An evening excursion to the zoo" was delivered by Robert Moody (University of Alberta). For the first time the CMS Summer Meeting was preceded by the conference "Connecting Women in Mathematics across Canada" intended for women graduate students in Canada organized jointly by the CMS Committee for Women in Mathematics and the Pacific Institute of Mathematical Sciences. The CMS Summer Meeting was also preceded by the second NExTMAC workshop ("New Experiences in Teaching Mathematics Across Canada"), intended for relatively new Mathematics/Statistics faculty with goals to assist junior faculty to become better and more effective teachers. The meeting was followed by the Fourth Geoffrey J. Butler Memorial Conference on June 17-21 which was also held at the University of Alberta.

#### **The CMS Winter meeting (Simon Fraser University)**

Two special features of this meeting were: a short-course in Cryptography, two lectures on subjects bordering mathematics and theoretical computer science and a plenary lecture in history of mathematics. The Coxeter-James Lecture was given by Jingyi Chen (UBC) and the Doctoral Prize Lecture by Alina Carmen Cojocaru (Queen's University). Other plenary lecturers were by Thomas Archibald (Acadia University), the duo Hyman Bass and Deborah Ball (University of Michigan), Robert Calderbank (AT&T Laboratories), Andrew Granville (University of Montreal), Anand Pillay (University of Illinois at Urbana-Champaign) and Mahdu Sudan (MIT). The

presence of Mahdu Sudan reminded us of the time when we honoured him at the Canadian Embassy in Beijing as the recipient of the Nevanlinna Prize during ICM 2002. The participants also had their choice among fourteen diverse symposia including one in Education and one in History of Mathematics. At the banquet we honoured our four prize winners: Andy Liu, winner of the 2003 Adrien Pouliot Prize in mathematical education, James Arthur, winner of the G. de B. Robinson Prize for the best article "A Note on the Automorphic Langlands Group" in the *Canadian Mathematical Bulletin*, 2001-2002, Jingyi Chen, winner of the 2003 Coxeter-James Prize and Alina Carmen Cojocaru, winner of the CMS 2003 Doctoral Prize.

#### **Canada School Mathematics Forum**

148 delegates attended the Canada School Mathematics Forum at UQAM, May 16-18 2003. The Forum provided an opportunity to compare issues and best practices across the country and to forge links across the different levels of education and across the traditional provincial boundaries. Working groups have identified issues on which subgroups will prepare more detailed findings to be presented at the second Forum in 2005. On behalf of all delegates to the Forum and of all those who think that mathematical education is an important issue in Canada, I thank the members of the scientific committee and the local organizers, especially Louis Charbonneau from UQAM.

Discussions at the Forum were concerned with the following:

- Mathematical education for aboriginal students.
- Elementary school teachers and their development.
- Maintaining the momentum of the Forum with the provincial associations and with the ministries of education.
- Leadership role for CMS in mathematical education in the country at different levels.
- Need of networking good educational material.

More details can be found on the separate Forum report (see p.4)

#### **Math in Moscow**

The winners of the spring competition were Thomas Zamojski (McGill) and Kristin Shaw (UBC) who spent the fall 2003 in Moscow. The Math in Moscow programme has been renewed for a second year. The winner of the fall competition was Sébastien Labbé, from the Université de Sherbrooke. He will spend the winter 2004 at the Moscow Independent University. The deadline of the next competition was April 15, 2004 and two scholarships will be awarded.

#### **CMS Excellence in Teaching Award**

The new CMS Excellence in Teaching Award supported by Nelson & Brooks/Cole was announced during the Summer Meeting in presence of Janet Piper from Nelson Thompson Learning. The prize recognizes sustained and distinguished contributions at the level of post-secondary undergraduate teaching. The deadline of the first competition was November 15 and the committee received very strong nominations, thus showing the importance and quality of undergraduate teaching in many departments throughout the country.

## President's Report

---

### ICM 2010

As mentioned in my report last year, we had approached the International Mathematical Union (IMU) and National Research Council (NRC) about a possible bid from Canada to host the International Congress of Mathematicians in Montreal in 2010 (ICM 2010). We are now conducting a feasibility study, particularly regarding the financial requirements, with the NRC and with the Palais des Congrès in Montreal. It is hoped to reach a final decision concerning this initiative by May 2004.

### Coxeter Commemorative Events

The CMS will be jointly hosting the following events: a conference in the honour of Coxeter at the University of Toronto in May 2004 and the Renaissance Banff in July 2005. The Banff Renaissance Conference will be part of the International Bridges Conferences on Mathematical Connections in Art, Music and Science. It is an initiative of Robert Moody with collaborative effort from PIMS, the Banff International Research Centre, the CMS and the Bridges Conferences. The last day of the event will be a Coxeter Day in commemoration of the life and mathematical art connections of Donald Coxeter. The proceedings will be published and distributed across country. We hope that many Canadians will decide to participate and propose to give a lecture or organize a workshop session.

### First Canada-France Meeting

We are only a few months away from the Canada-France Toulouse meeting. I am very happy to announce the program of students and post-doc travel awards sponsored by the three Institutes (CRM, The Fields Institute and PIMS), together with the SSC (Statistical Society of Canada), CAIMS (Canadian Applied and Industrial Mathematical Society) and the CMS. Fifteen travel awards of \$500 each will be given to students and post-docs making a poster presentation. Details regarding applications for travel support can be found at:

[www.cms.math.ca/Events/Toulouse2004/announce.e#grad\\_travel](http://www.cms.math.ca/Events/Toulouse2004/announce.e#grad_travel)

### Joint Meetings in Halifax

The CMS/CAIMS Summer Meeting in 2004 is a joint event with the participation of the Canadian Symposium on Fluid Dynamics and the Canadian Society for the History and Philosophy of Mathematics. This joint meeting will take place immediately after the MITACS 2004 Annual Meeting and just before the 2004 Canadian Undergraduate Mathematics Conference. We hope this will encourage the participation of many students, post-docs and applied mathematicians.

### CMS Office

An Executive Office task force was formed in June 2003 to look into the future of CMS in view of:

- the increasing number of activities and the possible new responsibilities of CMS;
- the workload of the office;
- the space problem in the current building; and
- the possible departure of Graham Wright in 2005.

The Task Force comprised Eddy Campbell, President-Elect, Christiane Rousseau: President, and Arthur Sherk, Treasurer. They visited the CMS Office for two days in August 2003. During the fall of 2003 it became evident that the Task Force should also address the financial situation facing the CMS, which is expected to continue for the next few years. The Report of the Task Force was submitted in January 2004. The Report recommended a new structure for the Executive Office which should enable the CMS to consider new revenue generating projects. The Executive Director's Report provides further details on the space problem for the Executive Office.

### Financial difficulties of the CMS

The financial situation of the CMS is no longer rosy. A big part of the deficit for 2003 is due to the low American dollar and to the fact that non-Canadian libraries pay their subscriptions in American dollars. As the Canadian dollar is expected to remain high compared to the American dollar, this situation is likely to continue for the next few years. The CMS will have no choice but to either increase revenues or cut expenses. The Executive Committee is working hard to raise additional revenues. Eddy Campbell is working towards a major professional fundraising drive.

### Challenges

The CMS is facing many challenges for the next year: balancing the budget and generating new revenues so that we can maintain our activities, making sure that the newly hired faculty join the CMS and become volunteers for our activities, increasing the visibility of mathematics everywhere in the country and working so that mathematics becomes more popular in our schools. I would ask each of you to consider doing some recruiting in your own institution: the Executive Office can help you by sending you a brochure on the benefits of membership: [mpdesk@cms.math.ca](mailto:mpdesk@cms.math.ca).

### Thanks

We are extremely grateful to all the volunteers who work throughout the country bringing success to our activities: scientific and local organizers of meetings, members of our committees, organizers of our educational activities, editors of our journals, contributors to our publications. Special thanks go to the members of the staff of the Executive Office: each new activity brings fresh work to the Office (for example, the 2003 Forum and the 2004 Canada-France Meeting in Toulouse). Moreover, due to the unforeseen absence of Monique Bouchard during the preparations for the 2003 Winter Meeting, the remaining staff had to take on additional demands. I also wish to thank the retiring members of the Executive Committee, Board of Directors and committee members, with particular thanks for Jonathan Borwein who, in June 2003, ended a four year term as President-Elect, President and Past President.

## 2003 Report of the Canada School Mathematics Forum

### *Christiane Rousseau (University of Montreal)*

From May 16 to 18, 2003, 148 delegates attended the Canada School Mathematics Forum in UQAM (Montreal), including school teachers, university faculty in mathematics and education, school board administrators, people working in provincial ministries, delegates from provincial associations of math teachers, a few delegates from industry, research councils and media. Pierre Reid, Minister of Education of Quebec, was Honorary President of the event.

The Forum provided an opportunity for comparing issues and best practices across the country and making links across the different levels of education and across the traditional provincial boundaries. Working groups identified issues on which subgroups will prepare detailed findings to be presented at the second meeting. The proceedings will be published both electronically and in print and will be widely distributed.

The plenary activities covered a wide spectrum of subjects. The lecture of Frederick Leung addressed the question why Asian students succeed so well. His study pointed out that Asian school teachers have a very strong training in mathematics. A panel of participants then presented the situation in different regions of the country indicating at the same time the similarity between many problems in mathematical education in all regions of the country and the success of some special initiatives. The plenary lecture of Jean-Pierre Kahane illustrated how mathematical education in schools enables students to function and innovate in the modern world. Alan Bernardi (Bell) referred, in his response, to a wide spectrum of activities at Bell that require sophisticated mathematical techniques. Benoît Saint-Pierre, Director of Engineering at Alcan sent a written message on the importance of mathematical education.

Jean-Marie de Koninck, who gave a popular lecture on *le plaisir des mathématiques* was introduced by Pierre Reid, Minister of Education of Quebec.

A panel was devoted to several goals and challenges in the modern school: enrichment (Ravi Vakil), mathematics education for aboriginal students (Corinne Jetté), teaching after the reform (André Deschênes), making math class interesting and improving numeracy (Kanwal Neel). Hyman Bass and Deborah Ball spoke on the theme of teacher education and development and on the level of skills elementary teachers must possess in order to teach mathematics effectively. Panels on the last day addressed the question of 'vision of the future'. The first panel (The Second Forum: how to increase the collaboration of mathematics educators across educational and across provincial boundaries?) examined the following questions: "Should we consider a Canadian subcommission for ICMI?" (Bernard Hodgson), "How to have closer connections between universities and school teachers?" (John Grant McLoughlin), "How teachers associations of teachers could collaborate more closely?" (Stewart Craven), How far has the 1995 Forum in Quebec contributed to make mathematics education in B.C. more dynamic in the succeeding years?" (Malgorzata Dubiel).

The second panel was concerned with "How to publicize the ideas of the forum? How to raise awareness of the importance of learning mathematics in schools?" The panelists were: Isabelle Blain, Vice-President, NSERC, Ivar

Ekeland, Professor at UBC and science writer, Véronique Morin, Radio-Canada, President of Canadian Association of Science Writers and Heather Sokoloff from The National Post.

The participants divided themselves into sixteen working groups covering a broad spectrum of issues in mathematical education:

1. Teaching geometry effectively with software
2. Mathematics for active citizenship
3. Popularization of mathematics
4. Learning in technological environment
5. Making school interesting
6. Mathematics and intuition
7. Education of elementary school teachers: goals and challenges
8. The needs of industry and mathematics education
9. Educating secondary mathematics teachers
10. Teacher training, algebra, and teacher shortages
11. Teaching mathematics to aboriginal students: the importance of acknowledging cultural differences
12. Inservice secondary teachers
13. Rethinking mathematics in secondary classes
14. The visual: heart of mathematics
15. Teaching mathematics at the college level
16. Preparation for university engineering and science courses

### SOME RESULTS

#### **Mathematical education for aboriginal communities**

The Forum discussed the question of mathematics education for aboriginal communities recognizing its importance as a national issue in the coming years, as evidenced by the demographic increase of these communities. This was the first attempt of bringing this issue on an equal footing with the other issues in mathematical education in the country. The aboriginal communities have a lot of young members. They realize that education is crucial in order to create jobs in their communities. On the other hand the level is too high for aboriginal students in our schools if no effort is made to adapt the teaching suitable to their culture and make school interesting to them. There will be a follow-up on this item at the level of the education activities of the CMS in collaboration with people working in the aboriginal communities.

#### **Elementary school teacher education and development**

Too many elementary school teachers have little or no background in mathematics and in science. It is necessary to bring the message that students must have courses with math content and methodology. We should also address the problem that the courses, quite often, do not inspire people to become teachers. The CMS will consider creating a task force to examine these issues. We need more specialists.

#### **Tough curriculum**

There is a feeling that the curriculum is tough. The schools have the impression that the universities "control" the curriculum. There is no time available in schools for special activities: developing intuition, use of

---

## 2003 Report of the Canada School Mathematics Forum

---

software to develop geometric visualization, introduction to the concept of proof, discussion of modern applications of mathematics, activities that create interest in mathematics, etc. The CMS envisages taking on a leading role in providing important guidelines to high schools.

### **Inservice teacher education**

This issue is common to all regions of the country. There is a need for serious discussions on inservice teachers, for developing new models of inservice teacher education.

### **Sharing resources**

Several working groups have recognized the need for sharing resources and creating 'centers' containing quality material. A task force must be created to work on:

- Identifying the resources;
- Putting together proposals and raising funds for the project;
- Making sure that there is a quality control mechanism in place;
- Ensuring that the group is sufficiently represented;
- Building a viable structure.
- Maintaining the momentum of the Forum.

The Forum has been helpful in attracting attention and enthusiasm throughout the country on mathematics education. We will work collectively to maintain the momentum: in particular to keep up contacts with ministries, with provincial associations, etc.

### **Linking provincial associations of teachers**

In the past provincial associations used to meet at NCTM annual meetings in the USA. The format of this meeting does not permit joint discussions on mathematics education matters in Canada. The work of this Forum is appreciated and several provincial associations (under the leadership of Donna Chanasyk, Alberta) are already planning to participate at the next Forum. A long term goal of the CMS is to consider playing a role in linking the provincial associations in Canada and also providing webspace to facilitate contacts (Eric Muller of Brock University, has volunteered to work on this).

### **Changing attitudes**

This old issue remains a central one in mathematical education. We should unite our energies to change attitudes by all means: show the applications of mathematics, explain its power and some of the problems it can solve, make visible its universality in science and technology, show that it is beautiful and that it can be fun.

### **The next Forum**

Starting action of some of the issues outlined above is part of the preparation for the next Forum. Efforts will also be made to attract more teachers at the next Forum.

The proceedings can be found at:

[www.cms.math.ca/Events/CSMF2003/proceedings/](http://www.cms.math.ca/Events/CSMF2003/proceedings/)

## Executive Director's Report – *Opportunities for the Future*

**Graham P. Wright (University of Ottawa)**

### Executive Office

The past year has seen quite a lot of activity in the Executive Office.

Nathalie Blanchard joined the CMS Staff in January 2003 as the Assistant to the Executive Director. In addition to her other responsibilities, as Editorial Assistant for the *CMS Notes*, Nathalie has brought about significant changes to the production of the *CMS Notes*. The *Notes*, which were produced using LaTeX style files, are now produced using QuarkXpress software; and this transition was accomplished in an almost seamless manner. Not only does the use of this software make it easier to compile the *Notes*, it offers other advantages and savings, both in preparation time and printing costs.

Yvette Roberts replaced Diane Ellis as the CMS Accountant in June 2004, and Yvette quickly assumed the necessary duties. With her assistance, and with help from the other Executive Office staff, the preliminary budget documents were prepared in a manner that enabled the Treasurer and me to devote more time to reviewing and analyzing the 2004 Budget Proposal.

I also wish to acknowledge and commend Alan Kelm (Web Services Manager), Liliane Sousa (Membership and Publications Agent) and Suzanne Lalonde (Administrative Clerk) as well as the part-time staff (Yann Bernard, Jean-Francois Simard, Anthony Selles and Sany Sam) for their important contributions during the past year.

In June 2003, an Ad-hoc Committee comprising Christiane Rousseau (President), Eddy Campbell (President Elect) and Arthur Sherk (Treasurer) was formed to consider the work-load on the CMS Executive Office and what steps the Society should take to take account of future demands. This was a difficult exercise and changes have been approved that will be implemented in 2004.

### Publications

In 2003, Craig Platt took over responsibility of the Society's Publications Office from Michael Doob. The transition was accomplished very smoothly and Michael continues his involvement as the Technical Consultant.

The editors-in-chief of the Canadian Journal of Mathematics (Henri Darmon and Niky Kamran), and the Canadian Mathematical Bulletin (James Lewis, Arturo Pianzola, and Noriko Yui) as well as Swami Swaminathan, Associate Technical Editor, Laura Kirkland, Administrative Assistant, Shelley Ames, Technical Assistant, and Judi Borwein, Digital Assistant, all help to ensure the quality of our printed and web-based publications.

The Publications Office and Executive Office staff has also provided production assistance for the Canadian Applied Mathematics Quarterly and for the Royal Society publication — *Comptes Rendus*. Some changes in the staff of the Publications Office are envisaged for 2004 but it is hoped these changes can be accomplished with a minimal impact on the delivery of the Society's journals and on the other services provided by this Office.

The past year also saw a change in the responsibilities of *CRUX with MAYHEM*. Jim Totten (University College of the Cariboo) took over from Bruce Shawyer (MUN) as the Editor-in Chief. I wish to acknowledge the considerable support from Memorial University of Newfoundland during Bruce Shawyer's term. Thanks are also due to Jim Totten and to the University College of the Cariboo for efficient and effective transfer of the *CRUX with MAYHEM* editorial responsibilities.

The CMS Book Series, published in cooperation with Springer-Verlag, now has 25 books in print, in production, or under contract. Jonathan Borwein and Peter Borwein are to be congratulated on the considerable success of this series.

### Meetings

The first meeting in 2003 was the highly successful Canadian School Mathematics Forum (May 16-18). This was followed by the Summer Meeting hosted by the University of Alberta and the Winter Meeting hosted by Simon Fraser University. Both of these meetings were very successful from various standpoints. They each featured a large number of plenary, prize and special session speakers and both attracted a large number of delegates (440 for the Summer Meeting and 435 for the Winter Meeting).

An increase in the number and size of our meetings put additional demands on not only the Executive Office Staff but also on all those who volunteer with these meetings — the meeting directors, the local arrangement chairs and the session organizers. The Society is indebted to all of those who contributed to the success of the 2003 Forum, the 2003 CMS Summer Meeting and the 2003 CMS Winter Meeting.

For the past several years, all abstracts for our meetings have been processed with the assistance of Shelley Ames from the Publications Office. The large number of abstracts and the difficulties associating them with the correct session were resulting in more and more time being devoted to this project. Thanks to Alan Kelm and other Executive Office staff, in 2003, a new system was introduced for handling meeting abstracts. All abstracts are now submitted using a web-based form and only speakers associated with a particular session can submit abstracts. This new system has considerably reduced the time to process the abstracts and make them available on the meeting web pages.

### Financial Limitations

Unfortunately, due to major decreases in revenue resulting from a significantly stronger Canadian dollar and the Devine/RoweCom bankruptcy, which negatively impacted journal revenues in 2003, the CMS is facing a significant budget deficit for 2003. Although every attempt was made to produce a 2004 Budget which forecasted a surplus, this was not possible. The 2004 Budget approved by the Board of Directors in December projects a deficit of \$24,000. The Executive and Finance Committees are very concerned with the current situation and are investigating ways to increase revenues or decrease expenditures.

## Executive Director's Report – *Opportunities for the Future*

---

### Future Opportunities

Combining a large team of volunteers and ensuring our administrative operations are as efficient as possible, results in a wide array of activities delivered very cost effectively. The Society's existing activities are getting larger in scope and the CMS is also being asked to undertake new initiatives and support other groups. Additional resources must be found if the CMS wants to be able to positively respond to such requests.

Publications revenues, particularly from periodicals, have supported our other activities in the past. It is unlikely this can continue unless additional publication revenues can be generated. A number of new publication initiatives are being considered that it is hoped will bring about a greater revenue stream. In addition, some streamlining of our subscription services are being investigated that should provide benefits not only for our periodicals but also afford the CMS the opportunity to offer such services to other societies and agencies.

Space in the current Executive Office building on the campus of the University of Ottawa cannot be increased and discussions are underway with the University to explore new or other facilities that would better meet the needs of the CMS in the future.

Both 2004 and 2005 will feature impressive meetings programs. Of particular note is the joint CMS/CAIMS Meeting in Halifax in June 2004, the Canada-France meeting in Toulouse in July 2004, involving the participation of three Canadian and three French societies, the Second Canada School Mathematics Forum, hosted by the Fields Institute in May 2005, and Renaissance Banff in July 2005. The 2004 Winter Meeting will be hosted by McGill University, the 2005 Summer Meeting will take place at the University of Waterloo and the 2005 Winter Meeting will see the CMS returning to Victoria.

In 2004, negotiations will continue for a new location for the Executive Office as will discussions with other societies for the CMS to provide administrative and other services.

Another important project that will be considered in 2004 is the possibility of obtaining professional fundraising services. It is also hoped this could result in significant new revenues for the Society and its Endowment Fund. It is going to be a busy year!



## Treasurer's Report

---

### *Arthur Sherk (University of Toronto)*

As explained in the Report of the Executive Director, the financial report for the year ending December 31, 2003 reflects a policy change with regard to revenue from foreign exchange. Most of such revenues come from periodical subscription paid in US funds, but heretofore has been recorded as income for the year in which it was received. The new policy is that such income should be reported as unearned, similar to the way in which the actual subscription revenue is reported. Both the 2003 statements and the comparative 2002 figures reflect this change in policy.

In light of this policy change, the Society's Operations Fund is in a reasonably satisfactory position for 2003, although the change has resulted in a cumulative deficit in the Operations Fund of just over \$28,000. The adverse effect of the stronger Canadian dollar will be felt in the 2004 financial statements.

As usual, there are some danger signals in the 2003 statements. The office staff and committee chairs have been very good at working within their budgets, and we are grateful for that. However, some anticipated revenues have not materialized. We need to continue to seek new ways of generating revenue if we are to adequately support our growing program of activities.

Much attention is being paid to our Restricted Funds at the moment. We are happy to see some favourable turnaround in the performance of the investments, after some lean years. The Executive Committee is exploring ways of establishing a true Endowment Fund, separate from a portion of the investment funds that will be reserved for operational contingencies. With the help of professional fundraisers, it may be possible to radically increase the Endowment Fund, and thus provide for various future projects from the revenue earned.

## Balance Sheet as at December 31, 2003

	Operations Fund \$	Designated Activities Fund \$	Endowment Fund \$	Mathematical Olympiads Fund \$	2003 \$	2002 \$
<b>ASSETS</b>						
<b>Current Assets</b>						
Cash	106,821	—	—	—	106,821	159,913
Temporary investments	2,508	—	—	—	2,508	62,284
Accounts receivable and accrued interest	346,152	—	12,000	—	358,152	400,339
Budget advances	20,910	—	—	—	20,910	56,000
Prepaid expenses	69,987	—	—	—	69,987	24,562
Interfund receivable (payable)	63,442	705	(64,791)	644	—	—
	609,820	705	(52,791)	644	558,378	703,098
<b>Investments</b>	—	3,561	1,591,543	185,146	1,780,250	1,778,521
<b>Capital assets</b>	26,092	—	—	—	26,092	32,613
	635,912	4,266	1,538,752	185,790	2,364,720	2,514,232
<b>CURRENT LIABILITIES</b>						
Accounts payable and accrued liabilities	231,302	—	—	—	231,302	201,695
Deferred contributions	378,518	—	—	—	378,518	555,594
	609,820	—	—	—	609,820	757,289
<b>FUND BALANCES</b>						
Investment in capital assets	26,092	—	—	—	26,092	32,613
Restricted	—	4,266	1,538,752	185,790	1,728,808	1,790,311
Unrestricted	—	—	—	—	—	(65,981)
	26,092	4,266	1,538,752	185,790	1,754,900	1,756,943
	635,912	4,266	1,538,752	185,790	2,364,720	2,514,232

## Statement of Revenue and expenditures as at December 31, 2003

<b>OPERATIONS FUND</b>	General Division	Publishing Division	Research Division	Education Division	<b>2003</b>	2002
REVENUE	\$	\$	\$	\$	\$	\$
Grants	30,000	2,500	27,000	126,769	<b>186,269</b>	127,665
Donations	3,806	1,354	1,448	60,973	<b>67,581</b>	49,925
Membership fees	100,394	-	-	-	<b>100,394</b>	94,852
Registration fees and other sales	20	-	141,290	90,160	<b>231,470</b>	197,037
Subscriptions and publications	40	812,374	120	-	<b>812,534</b>	855,697
Advertising and promotional sales	15,525	28,228	4,660	275	<b>48,688</b>	40,878
Sundry	(803)	(1,264)	(1,248)	(1,245)	<b>(4,560)</b>	4,130
	<u>148,982</u>	<u>843,192</u>	<u>173,270</u>	<u>276,932</u>	<b><u>1,442,376</u></b>	<u>1,374,065</u>
<b>EXPENDITURES</b>						
National projects	32,554	-	-	149,392	<b>181,946</b>	188,032
Speakers and prizes	335	119	47,554	30,269	<b>78,277</b>	64,616
Production	-	116,153	2,987	13	<b>119,153</b>	129,523
Promotional material	1,373	1,551	4,642	8,800	<b>16,366</b>	14,944
Salaries and benefits	101,314	289,881	107,613	101,314	<b>600,122</b>	568,716
Board and Committees	34,197	69,442	113	3,501	<b>107,253</b>	120,942
Legal and audit	2,193	2,193	2,193	2,193	<b>8,772</b>	11,280
General administration	38,213	64,274	107,754	73,660	<b>283,901</b>	247,763
Amortization of capital assets	3,801	3,801	3,801	3,801	<b>15,204</b>	10,756
	<u>213,980</u>	<u>547,414</u>	<u>276,657</u>	<u>372,943</u>	<b><u>1,410,994</u></b>	<u>1,356,572</u>
Excess (Deficiency) of Revenue over expenditures	<u>(64,998)</u>	<u>295,778</u>	<u>(103,387)</u>	<u>(96,011)</u>	<b><u>31,382</u></b>	<u>17,493</u>
<b>RESTRICTED FUND</b>						
		Designated Activity Fund	Endowment Fund	Mathematical Olympiad Fund	<b>Total 2003</b>	Total 2002
REVENUE		\$	\$	\$	\$	\$
Donations		-	820	561	<b>1,381</b>	2,691
Membership fees		-	12,000	-	<b>12,000</b>	18,000
Dividend, interest and other income		73	32,926	3,810	<b>36,809</b>	62,773
Gain (loss) on disposal of investment		7	2,763	322	<b>3,092</b>	(7,668)
		<u>80</u>	<u>48,509</u>	<u>4,693</u>	<b><u>53,282</u></b>	<u>75,796</u>
<b>EXPENDITURES</b>						
Lifetime membership fees annual transfer		-	17,152	-	<b>17,152</b>	15,730
Projects		-	54,545	-	<b>54,545</b>	34,502
Mathematical Olympiad annual transfer		-	-	5,000	<b>5,000</b>	6,000
Commissions		20	8,964	1,026	<b>10,010</b>	10,000
		<u>20</u>	<u>80,661</u>	<u>6,026</u>	<b><u>86,707</u></b>	<u>66,232</u>
Excess (deficiency) of revenue over expenditures		<u>60</u>	<u>(32,152)</u>	<u>(1,333)</u>	<b><u>(33,425)</u></b>	<u>9,564</u>
Fund balances, beginning of year		4,206	1,598,982	187,123	<b>1,790,311</b>	1,780,747
Transfer to Operations Fund		-	(28,078)	-	<b>(28,078)</b>	-
Fund balances, end of year		<u>4,266</u>	<u>1,538,752</u>	<u>185,790</u>	<b><u>1,728,808</u></b>	<u>1,790,311</u>

## Budgets - Operations Fund Summary

<b>DIVISION GRAND SUMMARY</b>	Actuals 2002 \$	<b>Budget 2003 \$</b>	Budget 2004 \$
<b>GENERAL</b>			
Total Revenue	125,279	<b>151,375</b>	184,705
Total expenditure	198,699	<b>234,536</b>	242,171
<b>NET REVENUE/EXPENDITURE</b>	<b>(73,420)</b>	<b>(83,161)</b>	<b>(57,466)</b>
<b>EDUCATION</b>			
Total Revenue	184,207	<b>437,325</b>	209,991
Total Expenditure	330,707	<b>537,657</b>	359,660
<b>NET REVENUE/EXPENDITURE</b>	<b>(146,500)</b>	<b>(100,332)</b>	<b>(149,669)</b>
<b>RESEARCH</b>			
Total Revenue	180,915	<b>191,405</b>	224,522
Total Expenditure	282,310	<b>320,730</b>	358,144
<b>NET REVENUE/EXPENDITURE</b>	<b>(101,396)</b>	<b>(129,325)</b>	<b>(133,622)</b>
<b>PUBLISHING</b>			
Total Revenue	927,791	897,634	917,966
Total Expenditure	544,857	<b>583,500</b>	604,793
<b>NET REVENUE/EXPENDITURE</b>	<b>382,934</b>	<b>314,134</b>	<b>313,173</b>
<b>OPERATIONS FUND</b>			
Total Revenue	1,418,192	<b>1,677,739</b>	1,537,184
Total Expenditure	1,356,574	<b>1,676,423</b>	1,564,768
<b>NET REVENUE/EXPENDITURE</b>	<b>61,618</b>	<b>1,316</b>	<b>(27,585)</b>

## Budgets - General and Education Divisions

	Actuals 2002 \$	Budget 2003 \$	Budget 2004 \$
<b>GENERAL - SUMMARY</b>			
<b>REVENUE</b>			
Administration	13,945	<b>16,575</b>	34,675
Members	99,121	<b>103,800</b>	113,530
Projects	12,212	<b>31,000</b>	36,500
TOTAL REVENUE	<u>125,279</u>	<u><b>151,375</b></u>	<u>184,705</u>
<b>EXPENDITURE</b>			
Administration	175,896	<b>192,340</b>	188,986
Members	2,380	<b>2,396</b>	1,635
Projects	20,423	<b>39,800</b>	51,550
TOTAL EXPENDITURE	<u>198,699</u>	<u><b>234,536</b></u>	<u>242,171</u>
NET REVENUE/EXPENDITURE	<u>(73,420)</u>	<u><b>(83,161)</b></u>	<u>(57,466)</u>

## EDUCATION - SUMMARY

<b>REVENUE</b>			
Administration	10,459	<b>14,325</b>	11,425
Competitions	106,398	<b>131,000</b>	104,100
Forum	0	<b>202,500</b>	0
Math Camps	55,350	<b>63,500</b>	59,800
Projects	12,000	<b>26,000</b>	34,666
TOTAL REVENUE	<u>184,207</u>	<u><b>437,325</b></u>	<u>209,991</u>
<b>EXPENDITURE</b>			
Administration	146,525	<b>156,690</b>	157,460
Competitions	124,696	<b>122,930</b>	123,750
Forum	0	<b>189,877</b>	0
Math Camps	40,887	<b>49,860</b>	51,150
Projects	18,600	<b>18,300</b>	27,300
TOTAL EXPENDITURE	<u>330,707</u>	<u><b>537,657</b></u>	<u>359,660</u>
NET REVENUE/EXPENDITURE	<u>(146,500)</u>	<u><b>(100,332)</b></u>	<u>(149,669)</u>

## Budgets - Research and Publications Divisions

	Actuals 2002 \$	Budget 2003 \$	Budget 2004 \$
<b>RESEARCH - SUMMARY</b>			
REVENUE			
Administration	1,672	<b>3,925</b>	2,425
Meetings	179,243	<b>187,480</b>	222,097
Projects	0	<b>0</b>	0
<b>TOTAL REVENUE</b>	<b>180,915</b>	<b>191,405</b>	224,522
EXPENDITURE			
Administration	135,837	<b>147,640</b>	150,251
Meetings	144,903	<b>171,490</b>	206,493
Projects	1,571	<b>1,600</b>	1,400
<b>TOTAL EXPENDITURE</b>	<b>282,310</b>	<b>320,730</b>	358,144
<b>NET REVENUE/EXPENDITURE</b>	<b>(101,396)</b>	<b>(129,325)</b>	(133,622)

## PUBLISHING - SUMMARY

	Actuals 2002 \$	Budget 2003 \$	Budget 2004 \$
REVENUE			
Administration	14,274	<b>15,125</b>	12,725
Journal	588,753	<b>557,163</b>	569,349
Bulletin	199,924	<b>190,830</b>	190,349
Notes	11,576	<b>18,910</b>	17,194
Electronic Services	56,684	<b>57,581</b>	62,951
Crux	51,598	<b>47,425</b>	48,524
Other Publications	4,983	<b>10,600</b>	16,875
Projects	0	<b>0</b>	0
<b>TOTAL REVENUE</b>	<b>927,791</b>	<b>897,634</b>	917,966
EXPENDITURE			
Administration	138,863	<b>268,273</b>	281,601
Journal	133,089	<b>75,050</b>	76,495
Bulletin	78,357	<b>44,770</b>	44,825
Notes	32,548	<b>33,000</b>	36,200
Electronic Services	121,540	<b>111,657</b>	114,723
Crux	34,126	<b>43,650</b>	40,550
Other Publications	6,030	<b>6,900</b>	10,200
Projects	303	<b>200</b>	200
<b>TOTAL EXPENDITURE</b>	<b>544,857</b>	<b>583,500</b>	604,793
<b>NET REVENUE/EXPENDITURE</b>	<b>382,934</b>	<b>314,134</b>	313,173

## Advancement of Mathematics Committee Report

**Christiane Rousseau (Université de Montréal), Chair**

Jonathan Borwein (SFU) (to June 2003)  
Jean-Marie De Koninck (Montreal)  
Arthur Sherk (Toronto)  
John H.M. Whitfield (Lakehead)

E.R. Williams (Memorial)  
Robert E. Woodrow (Calgary)  
Graham P. Wright (Ottawa)  
H.E.A. Eddy Campbell (Queen's) (from July 2003)

The Advancement of Mathematics Committee (AMC) (which, since July 2001, includes the Fundraising Committee as a sub-committee) has been very active during the past year.

### ICM 2010

A feasibility study to see if Canada should bid to host the International Congress of Mathematicians in Montreal in 2010 has been started with the National Research Council and the Palais des Congrès in Montreal. The financial implications are being considered and it is hoped to determine if the project is viable by April 2004.

### Fund Raising Campaign

The Imperial Oil Foundation continues to be the Title Sponsor of the National and Regional Math Camps. Sun Life Financial also continues as the Major Sponsor for the Canadian Mathematical Olympiad. Approaches have been made to provincial ministries of education to support our wide array of education activities. The NSERC PromoScience grant has been renewed for 3 years in support of our Math Camps program and the CMS has been invited to put another application in support of the Canadian Math Trail and the Mathematics Career Posters in September 2004. Significant fundraising efforts were directed to the 2003 Forum which generated revenues of \$83,500. Part of the surplus from the first Forum will be used to support the 2005 Forum.

The possibility of engaging a professional fundraising company is being investigated by Eddy Campbell. It is hoped to obtain several proposals by June 2004. The Society will need to identify: key priorities, what companies are familiar with the CMS and some particular projects. To identify the projects, all CMS Committees will be contacted. For every priority identified, it is necessary to find a champion who could help with fundraising. Some possible projects for a large fundraising campaign are:

- A CMS Building Fund
- Endowment of all Society prizes
- Endowment of the Fields Medal

### New positions

Terms of Reference for a Math Camps Coordinator have been developed and Daryl Tingley (UNB-Fredericton) was appointed to this position. Terms of Reference for an Awards Officer also have been developed and Richard Kane (Western) was appointed to the position by the Board of Directors. Revised terms of reference have been written and accepted by the Board for the CMS Publisher but the position is still vacant.

### Membership Drive

Letters, signed by Eddy Campbell and Christiane Rousseau, highlighting the advantages of being a CMS member have been sent to all Board members. It is hoped that each director can convince three of their colleagues to become members. Another initiative being considered is to have each vice-president visit departments to promote the CMS. A source of potential new members is researchers in theoretical computer science as they have no home society in Canada. Plenary lectures and sessions with such a focus could be featured at our semi-annual meetings.

### Toulouse 2004

Sponsored by the three research institutes, the CMS, the Statistical Society of Canada, and the Canadian Applied and Industrial Mathematics Society, there will be 15 student and post-doc travel awards of \$500 each. A CMS member has generously offered to sponsor one or two additional travel awards.

### 2003 Canada School Mathematics Forum

The first Forum, hosted by UQAM, took place from May 16-18 and welcomed 148 delegates. The Forum was a great success and proceedings are available at:

[www.cms.math.ca/Events/CSMF2003/proceedings/.e](http://www.cms.math.ca/Events/CSMF2003/proceedings/.e) (english version).

Among the main avenues of action identified for the next Forum were: mathematics education for aboriginal students, establishing standards for teacher education at the elementary level, the need of good sources of enrichment material for teachers, and the need for a Canadian association of mathematics teachers or at least the need for the provincial associations to have closer links.

Planning for the 2005 Forum, hosted by the Fields Institute, has already started with the three co-chairs; Glanfield (University of Saskatchewan), Bradd Hart (McMaster University) and Frédéric Gourdeau (Université Laval). Several members of the program committee met during the CMS Winter Meeting in Vancouver to discuss the main themes of the 2005 Forum.

Many provincial associations of mathematics teachers wish to stay in closer contact and to further develop the links established through the 2003 Forum. The Advancement of Mathematics Committee considers that the tradition of Fora on mathematical education bringing together all partners in mathematics education in Canada should be continued beyond the 2005 Forum. With Fora taking place every three or four years,

---

## Advancement of Mathematics Committee Report

---

this would maintain the momentum created at each Forum. PIMS is a possible host for a future forum and the impact upon the Executive Office of on-going Fora needs to be considered.

### Poster on Careers in Mathematics

There has been intensive work by Judith McDonald and Harley Weston to develop "Math with a Human Face" at Math Central and to prepare a new poster with the theme "Math @ Work".

### Banff Renaissance

The Committee has recommended that the Society be a partner in the Renaissance Banff Conference in July 2005. The Banff Renaissance Conference will be part of the International Bridges Conferences on Mathematical Connections in Art, Music and Science. The Conference is an initiative of Robert Moody and a collaborative effort by PIMS, the Banff Centre, the CMS, and the Bridges Conferences. The last day of the event will be a special Coxeter Day in commemoration of the life and mathematics arts connections of Donald Coxeter. The possibility of linking the event to mathematics promotion, mathematical education and the 2005 Forum are being considered. The Proceedings will be published and the CMS may be responsible for the distribution of the proceedings in Canada. The CMS will assist with advertising the event so that as many Canadians as possible participate and consider giving a lecture or organizing a workshop session. Information on the Bridges Conferences can be found at: [www.sckans.edul-bridges](http://www.sckans.edul-bridges).

### Math in Moscow

The joint NSERC-CMS Math in Moscow Scholarships Program has been renewed for a second year. The Math in Moscow Program allows for three undergraduate or beginning graduate students at a Canadian University to spend a semester at the Moscow Independent University.

### CMS Excellence in Teaching Prize

The first competition was held in November 2003 and the Committee received very strong nominations. The first recipient is Leo Jonker from Queen's University who will receive the award at the CMS/CAIMS 2004 Summer in Halifax.

### Posting of CMS Journals on Springer Link

The Society is investigating the possibility of posting our journals on "Springer Link". This could result in significantly increased visibility and marketing for our journals and consequently increased revenues. The Executive has voted to study the feasibility of such an initiative and has expressed the wish that we also maintain the delivery of our journals on our website.



## Education Committee Report

**Richard J. Caron (Windsor), Chair**

Malgorzata Dubiel (SFU)  
 Kathryn E. Hare (Waterloo) (from July 2003)  
 Bernard R. Hodgson (Laval) (to June 2003)  
 Wieslaw Z. Krawcewicz (Alberta)  
 Neal Madras (York)  
 Judith J. McDonald (Washington State)  
 Grace G. Orzech (Queen's)  
 Daryl W. Tingley (Memorial) (from July 2003)  
 Ross D. Willard (Waterloo)

### Sub-Committee - Camel

Richard J. Caron (Windsor) - Chair  
 Judith J. McDonald (Washington State)

### Sub-Committee - Provincial Competitions

Edward J. Barbeau (Toronto) - Chair  
 Bernard R. Hodgson (Laval)  
 Wieslaw Z. Krawcewicz (Alberta)

The Education Committee met at the 2003 Summer Meeting and the 2003 Winter Meeting. The Summer Meeting was dominated by discussions related to the 2003 Mathematical Education Forum. At the Winter Meeting, the Committee was updated on activities related to the planning of the follow-up Forum to be held in 2005. In addition, the meetings were occupied with reports on activities taking place throughout the year.

As the Adrien Pouliot Award was not awarded in 2002, we were delighted to receive two excellent applications in 2003. The winner was Dr. Andy Liu of the University of Alberta and he received the award at the 2003 Winter Meeting. The other nomination is being held for reconsideration in 2004.

The Chair acted as one of four referees for the first CMS Teaching Excellence Award. There were six superb nominations. The winner is Dr. Leo B. Jonker of Queen's University who will receive the award in Halifax in June 2004.

The Committee awarded grants to all 6 applicants for support of provincial contests. The total awarded was \$3,500. The applicants were from P.E.I., Newfoundland, Québec, Ontario, Manitoba, and Alberta. Over 3000 students participate in the supported contests, with about 46% being female.

The Education sessions at the Edmonton Summer Meeting were organized by Ted Lewis. The sessions attracted a good audience, were of very good quality, and enjoyed good post-talk discussions. Malgorzata Dubiel organized the Education Sessions for the Vancouver Winter Meeting. There was one session with three talks and a panel discussion. The panel discussion topic was "School Mathematics Curriculum: Is there any hope left for 'Less is More' ". This continued one of the themes raised at the 2003 Forum, and is expected to be revisited in 2005. Richard Hoshino and John Grant McLoughlin will be organizing the Education Sessions for the Summer 2004 Meeting.

The Committee selected judges for the 2003 Canada Wide Science Fair in Calgary. Thanks go to the Chief Judge Dr. Bill Sands and his team members; Dr. Robert Woodrow, Dr. Michael Lamoureux, D. Elena Braverman, Dr. Thi Dinh, and Dr. Renate Scheilder, all of the University of Calgary.

The winners were Malcolm Stagg, Calgary, Alberta (Junior, \$200 cash & certificate) "Evaluation of 3D Object Recognition Methods"; Gregory Duggan, Greater Vancouver, British Columbia (Intermediate, \$300 cash & certificate) "Prime Suspect"; Adrian Maler, United Counties, Ontario (Senior \$500 cash & certificate) "We Got Rhythm."

The Chair of the Education Committee is also a referee for the Math in Moscow competition. The winners selected in 2003 were Ms. Kristin Shaw, Vancouver and Mr. Thomas Zamojski (Montreal), for Fall 2003, and Mr. Sébastien Labbé (Sherbrooke), for Winter 2004.

We were pleased to have our budget proposal approved allowing the Committee to operate as in previous years. In addition to our usual items of business, in the coming year we hope to become more involved in the following aspects of our mandate.

With the addition of Harley Weston of the University of Regina and his expertise with Math Central we expect to be able to make some progress regarding the Education Materials on Camel. As an outcome of the Forum, there is a renewed interest in the creation of a national mathematics educators group or association. Bradd Hart's membership on the committee, together with his role at the Fields Institute and his role as a co-chair of the 2005 Forum make this an opportune time to move ahead. We also expect to become deeply involved in the planning and implementation of the next forum.

## Electronic Services Committee Report

**David L. Rogers (Michigan), Chair**

Peter Borwein (Simon Fraser)  
Jacques Carette (Waterloo Maple)  
Jason I. Brown (Dalhousie)

Tomasz Kaczynski (Sherbrooke)  
Eric Woolgar (Alberta)  
Samuel S.P. Shen (Alberta) (from July 2003)  
Jonathan Borwein (Simon Fraser) (to June 2003)

The Electronic Services Committee (ESC) conducted a review of services provided by, and the operations of the Web Services Office (Ottawa) and Publications Office (Manitoba) with the following outcomes:

### Web Services Office

- Operations have been overhauled as the result of introducing a resource allocation scheme for prioritizing and tracking work requests;
- Staff meet bi-weekly to review status, priority, and schedule issues;
- Modest reduction in incomplete work and strong focus on the high impact tasks;
- Significantly reduced SPAM traffic.

### Publications Office

- A review led to re-engineered scripts that implement best coding/documentation practices for CMS publications;
- Neither capacity nor stability pose significant short-term issues for the CMS computing environment;
- Progress towards getting MathSciNet reviews to link to CMS journals;
- Adopted the metadata scheme proposed by Zbl and AMS, with CMS implementation under the leadership of the Publications Office.

The Electronic Services Committee will be working with the President in developing a bid for producing the proceedings for ICM 2010 as part of the CMS effort to bring the congress to Canada.

In addition, the Electronic Services Committee approved the following:

- Implementing mechanisms for automated posting and updating lists of participants for CMS sponsored/supported events;
- Moving ahead with allowing Google to crawl the Journals web site and point surfers to the subscriptions page;
- Sponsorship as the preferred mechanism by which commercial organizations are recognized for supporting the CMS or its activities;
- Identifying a successor to Nathalie Sinclair for the KaBol web site;
- Exploring a subscription-based model for access to *CRUX* problem sets.

The Committee will review capital budget request placeholders for 2005, 2006, and 2007, based on nominal replacement cycles, and develop a formal purchasing recommendation.

The Committee welcomes Samuel Shen (Alberta), David Wehlau (RMC), and Jeremie Rostand to the Committee and thank Peter Borwein, Jason Brown and Jonathan Borwein for their terms of service just completed. The Committee recognizes excellent, ongoing work by Alan Kelm (Ottawa), Craig Platt (Manitoba), Judi Borwein (Dalhousie), Michael Doob (Manitoba), and Graham Wright (Ottawa).

The Electronic Services Committee will be expanded by up to three volunteer consultants with rotating 2-year terms to provide the CMS with the benefit of industry-based expertise.

## Endowment Grants Committee Report

---

***Kathryn Hare, (Waterloo) Chair (to June 2003) and Thomas J. Ransford (Laval) Chair (from July 2003)***

---

Karl Dilcher (Dalhousie)  
Imin Chen (SFU)  
David A. Pike (Memorial)

---

The main task of the Endowment Grants Committee is to adjudicate proposals for projects that are requesting financial support from the CMS Endowment Grants Competition. Projects which are funded must contribute to the goals of the CMS and to the broader good of the mathematical community.

The committee was allocated \$30,000 for the 2003 competition. Seven applications were received. Four of these were funded and a total of \$17,000 was awarded. All applicants have been notified by the CMS Executive Office in Ottawa.

The successful applications included a project for "combinatorics institutes", supporting secondary school teachers in Atlantic Canada, science fairs in British Columbia, and an IMO training seminar to be held

at York University, and support for the formation of a Canadian Mathematics Teacher Society. The details of the successful applications can be viewed on the CMS web site: [www.cms.math.ca/Grants/EGC/](http://www.cms.math.ca/Grants/EGC/)

Reports on projects funded in the past can also be found at this site.

Because of the poor performance of the stock market over the last few years, we anticipate that the money available for the 2004 competition may be somewhat reduced. It was decided at the December meeting of the CMS Board of Directors that, given the serious state of the Endowment Fund, a minimum amount of \$20,000 be allocated from the Endowment Fund for the 2004 Endowment Grants Competition, and that this amount be subject to review in April 2004.

---

## Finance Committee Report

---

### *Michael Lamoureux (Calgary) Chair*

---

Tim Appelt (Structured Analytics)  
David Bates (Maritime Life)  
Jonathan Borwein (Simon Fraser) (to June 2003)  
Murray R. Bremner (Saskatchewan)  
Ian Goulden (Waterloo)

H.E.A. Eddy Campbell (Queen's) (from July 2003)  
Akbar Rhemtula (Alberta)  
Christiane Rousseau (Montreal)  
Arthur Sherk (Toronto)  
Graham Wright (Ottawa)

---

With assets of over \$2 million, and a wide range of activities across the country entailing expenditures of over \$1.5 million per year, the Society is involved in a rather large financial operation. The Finance Committee is responsible for overseeing the financial activities of the Canadian Mathematical Society, including the annual budget and the Restricted Investment Funds, the Endowment Fund, the Mathematical Olympiad Fund and the Designated Activities Fund.

The Committee meets twice a year, in April and October, to discuss the Budget and to make recommendations on financial matters to the Executive Committee and to the Board of Directors. Due to certain unexpected events during the year, a significant deficit for 2003 was projected which was a concern for the Committee. The Treasurer's Report provides details of the 2003 financial year and the 2004 Budget.

The Finance Committee includes among its members the Treasurer, the Executive Director, the President, and the Past-President or the President-Elect. Dr. Murray Bremner (Saskatchewan) joined the committee as a new member in 2003, and Dr. James Mingo (Queens) will be joining in 2004. I will be completing my term as Chair and will be succeeded as Chair by Dr. Akbar Rhemtula (Alberta).

The Society's Restricted Investment Funds continues to be managed by Toronto Dominion Quantitative Capital (TDQC), wholly in indexed funds. As such, no decisions on individual equities are required and only the mix of

fund weightings is re-considered from time to time to meet the needs of the Society. In 2001, the asset mix was set to 10% Canadian Equities, 40% Bonds, and 50% Global Equities. The Committee recently recommended that the Bond weighting include exposure to real return bonds.

Proceeds from the Restricted Funds are used to finance certain activities of the Society, including the Endowment Grants Competition. The Society has been greatly helped in discussions concerning the maintenance and use of the Funds by our two consultants, Tim Appelt and David Bates, as well as the staff at TDQC. We are exploring mechanisms to establish the Restricted Funds as a true Endowment Fund, which would facilitate significant fund raising activities of the Society.

With the fluctuating market situation, there is less money available for some activities funded through proceeds from the Restricted Investment Funds. In particular, this year, only a smaller amount could be guaranteed for the 2004 Endowment Grants Competition. The Society is also exploring whether an investment could be effectively used to secure long-term office space for the operations of the CMS, in a cooperative construction venture with the University of Ottawa.

---

## International Affairs Committee Report

---

### *Cameron L. Stewart (Waterloo) Chair*

---

Yuri Bahturin (Memorial)  
Malgorzata Dubiel (SFU)  
Bernard R. Hodgson (Laval) (to June 2003)  
Niky Kamran (McGill)

Reg R.J. Kulperger (Western)  
Edwin A. Perkins (UBC)  
Samuel S.P. Shen (Alberta) (from July 2003)  
Catherine Sulem (Toronto)

---

The International Affairs Committee was concerned with two main issues in 2003.

The first concerns a possible bid by Canada to host the the International Congress of Mathematicians in 2010. It is anticipated that the Congress would be held in 2010 and that the General Assembly would take place in Toronto. The CMS President, Christiane Rousseau, has made some preliminary steps towards this end but some significant financial hurdles remain to be overcome before a bid can proceed.

The second issue concerns Canadian speakers at the next International Congress to be held in Madrid in 2006. The Committee hopes to prepare a short list of mathematicians from Canada who have done ground breaking work in the last 6 to 8 years. These names would be submitted to the Chair of the Program Committee for ICM 2006 in the hope to increase the number of Canadian speakers at the Congress.

## Mathematical Competitions Committee Report

**Peter Cass (UWO), Chair**

Edward J. Barbeau (Toronto)  
George W. Bluman (UBC)  
Yin Chen (Lakehead)  
Peter Crippin (Waterloo)  
Matthieu Dufour (UQAM)  
Richard J. Nowakowski (Dalhousie)  
Bill Sands (Calgary)  
Jon H. Thompson (UNB) (from July 2003)  
Daryl W. Tingley (UNB)  
Terry I. Visentin (Winnipeg)  
Graham P. Wright (Ottawa)

### Asian Pacific Mathematics Olympiad

Bill Sands (Calgary) - Chair  
Richard Hoshino (Dalhousie)  
Andy C.F. Liu (Alberta)  
Christopher G. Small (Waterloo)  
Edward T.H. Wang (Wilfrid Laurier)

### International Mathematical Olympiad

Bill Sands (Calgary) - Chair  
Arthur Baragar (Nevada-Las Vegas) (to August 2003)  
Edward J. Barbeau (Toronto)  
F. Peter Cass (UWO)  
Andy C.F. Liu (Alberta)  
Richard J. Nowakowski (Dalhousie)  
Christopher G. Small (Waterloo)

### Canadian Mathematical Olympiad

Terry I. Visentin (Winnipeg) - Chair  
Jeff Babb (Winnipeg)  
Robert W. Craigen (Manitoba)  
James Currie (Winnipeg)  
Robert J.M. Dawson (St. Mary's)  
J. Chris Fisher (Regina)  
Rolland J. Gaudet (Coll. Univ. Saint-Boniface)  
Luis A. Goddyn (SFU) (to August 2003)  
J.P. Grossman (MIT)  
Richard Hoshino (Dalhousie) (as of September 2003)  
Kirill A. Kopotun (Manitoba)  
Ortrud R Oellermann (Winnipeg)  
Felix Recio (Toronto)  
Naoki Sato (William M. Mercer)  
Anna Stokke (Winnipeg) (as of September 2003)  
Daryl W. Tingley (UNB)

### Canadian Open Mathematics Challenge

Peter Crippin (Waterloo) - Chair  
George W. Bluman (UBCC) (as of September 2003)  
Daryl W. Tingley (UNB)  
Ian VanderBurgh (Waterloo)

### Correspondence Training Program

Edward J. Barbeau (Toronto) - Coordinator

## Introduction

The Mathematical Competitions Committee (MCC) is responsible for overseeing activities associated with the Society's involvement in mathematics contests. Two contests, the Canadian Open Mathematics Challenge (COMC) and the Canadian Mathematical Olympiad (CMO) are sponsored and run by the Society. The MCC is also responsible for Canada's participation in the Asian Pacific Mathematics Olympiad (APMO) and the International Mathematical Olympiad (IMO). Other activities of the MCC include the Mathematical Olympiads' Correspondence Programme and Math Camps.

Much of the work of the MCC is done by its four subcommittees and the Correspondence Coordinator. Further information, including press releases, on most of the topics in this report can be found through the CMS Competitions web page: [www.cms.math.ca/Competitions/](http://www.cms.math.ca/Competitions/).

### The Canadian Mathematical Olympiad

The 35th Canadian Mathematical Olympiad (CMO) was held on March 26th, 2003. There were 85 competitors from 55 schools in nine provinces. There were 5 more competitors, 8 more schools and 1 more province that took part in 2003 compared to 2002.

The top winners in the 35<sup>th</sup> Canadian Mathematical Olympiad were:

**FIRST PRIZE** and the Sun Life Financial Cup went to **János Kramár**, University of Toronto Schools, Toronto, Ontario. **SECOND PRIZE** went to **Tianyi (David) Han**, Woburn Collegiate Institute Toronto, Ontario. **THIRD PRIZE** went to **Robert Barrington Leigh**, Old Scona Academic High School, Edmonton, Alberta. **HONORABLE MENTIONS** were awarded to: **Olena Bormashenko**, Don Mills Collegiate Institute, Toronto, Ontario; **Ali Feizmohammadi**, Northview Heights Secondary School, North York, Ontario; **Ralph Furmaniak**, A.B. Lucas Secondary School, London, Ontario; **Oleg Ivrii**, Don Mills Collegiate Institute, Don Mills, Ontario; **Andrew Mao**, A.B. Lucas Secondary School, London, Ontario; **Jacob Tsimerman**, University of Toronto Schools, Toronto, Ontario.

There is a detailed report on the 2003 CMO, including the exam paper, solutions to the problems, and graders' reports available at: [www.cms.math.ca/Competitions/CMO/](http://www.cms.math.ca/Competitions/CMO/)

### The Asian Pacific Mathematics Olympiad

The 15th Asian Pacific Mathematics Olympiad (APMO) was written in March, 2003.

## Mathematical Competitions Committee Report

---

The security problems that plagued the 2001 and 2002 APMO competitions did not arise in 2003. The system of writing the contest on the afternoon of a Monday or the morning of the Tuesday immediately following was a success.

Canada had 10 students write officially and received 1 gold award, 2 silver awards, 4 bronze awards, and 3 honorable mentions.

Further details about the APMO are available at:  
[www.cms.math.ca/Competitions/APMO/](http://www.cms.math.ca/Competitions/APMO/)

### The International Mathematical Olympiad

The 44rd International Mathematical Olympiad was held in Tokyo, Japan July 5-19, 2003. The Canadian team placed 12th (tied with Kazakhstan) out of 82 countries with a team score of 119 (maximum 252). The members of the Canadian team were:

<b>Jacob Tsimerman</b> , University of Toronto Schools	<b>Gold</b>
<b>Olena Bormashenko</b> , Don Mills Collegiate Institute, Toronto	<b>Gold</b>
<b>Oleg Ivrii</b> , Don Mills Collegiate Institute, Toronto	<b>Bronze</b>
<b>Tianyi (David) Han</b> , Woburn Collegiate Institute, Toronto	<b>Bronze</b>
<b>Robert Barrington Leigh</b> , Old Scona, Edmonton	<b>Bronze</b>
<b>János Kramár</b> , University of Toronto Schools	

The 2003 team was accompanied by Andrew Liu (University of Alberta) Leader; Richard Hoshino (Dalhousie University) Deputy Leader; Robert Morewood (Burnaby Secondary School) Leader Observer.

The Canadian results for the 2003 IMO were outstanding. It was a young team and the results matched the best performance since Canada started competing at the IMO. Olena Bormashenko was the first female member of a Canadian team to win a gold medal and Jacob Tsimerman was the youngest member of a Canadian team to win a gold medal.

Further details are available at:  
[www.cms.math.ca/Competitions/IMO/](http://www.cms.math.ca/Competitions/IMO/)

### IMO Training Seminars

Two training camps are held each year to prepare students for the annual IMO. The Winter Training Seminar, which was held at York University in January 2003, is used to begin the training for the IMO and to let the team leaders meet those students who have a good chance of making the IMO team. The Summer IMO Training Seminar, which was held at the University of Calgary and at the Banff International Research Station in July 2003, is used for intensive training of the actual IMO team. Considerable thanks are due to the three host institutions and to all those who helped make the seminars very successful.

### Mathematical Olympiads' Correspondence Programme:

The Mathematical Olympiads' Correspondence Programme (MOCP) is a problems based correspondence programme. It is intended for Canadian (or permanent resident) high school students with exceptional

mathematical ability who are interested in mathematical problem solving at a high level or have ambitions to compete in Mathematical Olympiads. Dr. Edward Barbeau has been Coordinator of the MOCP for many years.

Further details are available at:  
[www.cms.math.ca/Competitions/MOCP/](http://www.cms.math.ca/Competitions/MOCP/)

### Math Camps

For the past several years the MCC has been responsible for the Esso/CMS Maths Camps Programme. In 2003, there were 13 Regional Camps, at least one in every province and one National Math Camp. This has been a highly successful programme supported by the Imperial Oil Foundation, NSERC PromoScience, CRM, Fields and PIMS, and a number of provincial governments. The support from each host university is also crucial to the success of the Math Camps. Daryl Tingley has been appointed the Math Camps Coordinator effective July 1, 2003 and responsibility will move from the MCC to him.

The National Math Camp is designed primarily for younger Canadian students with at least two years remaining in high school and with the potential to compete at the Mathematical Olympiad level. Participation in the camp is by invitation only. In 2003, students from grades 8 to 10 were invited. The initial selection (about 10 students) was made from the results in the Canadian Open Mathematics Challenge. Other students (about 15) were selected based on the Galois Contest. Other contest information, and recommendations from Regional Math Camp directors were also considered. Normally at most two students from a particular school may be invited. The National Math Camp was held at The University of Western Ontario from June 21-28, 2003. The camp was organized and run by Tom Griffiths, Marlene Griffiths, and Richard Hoshino.

Further details can be obtained at: [www.cms.math.ca/MathCamps/](http://www.cms.math.ca/MathCamps/)

### The Canadian Open Mathematics Challenge

The COMC is a contest written every year on the last Wednesday of November. The Open provides mathematical enrichment for a large number of students and serves as a qualifying paper for the Canadian Mathematical Olympiad (CMO). The results are also used in the selection of students for the Winter Training Seminar and for the National Math Camp held in the summer.

Further details can be obtained at:  
[www.cms.math.ca/Competitions/COMC/](http://www.cms.math.ca/Competitions/COMC/)

### Thanks

It is apparent that the Mathematical Competitions Committee and particularly its subcommittees are very active. I would like to thank all members for the enthusiasm and hard work in making everything run very smoothly. No small measure of thanks is also due to the staff at the CMS Executive Office and to the Executive Director, Graham Wright for their dedication.

---

## Nominating Committee Report

---

### *Anthony Lau (Alberta), Chair*

---

Line Baribeau (Laval)  
Jonathan M. Borwein (SFU) (to June 2003)  
H.E.A. Eddy Campbell (Queen's) (from July 2003)  
Bradd T. Hart (McMaster)

Claude Laflamme (Calgary)  
Barry R. Monson (UNB)  
Christiane Rousseau (Montreal)

---

The biggest challenge for the Nominating Committee for Year 2003 was the proposal of the slate for the Officers and members of the Board of Directors for various regions for the 2003 Election of the Canadian Mathematical Society. The committee also approved student representatives on the Board of Directors. In addition, the committee was busy filling chairs and memberships of the following committees:

- Endowment Grant Committee
- Electronic Service Committee
- Education Committee
- Women in Math Committee
- Finance Committee
- Publication Committee
- Research Committee
- Advancement of Mathematics Committee
- Mathematical Competitions Committee

The Committee worked very hard to maintain regional balance for the various committees. I am pleased to report that all positions that needed to be filled by December, 2003 were filled by that date.



---

## Publications Committee Report

---

### *Dana Schlomiuk (Montreal), Chair*

---

Michael Bennett (UBC)  
H.E.A. Eddy Campbell (Queen's) (from July 2003)  
Man-Duen Choi (Toronto)  
Edgar G. Goodaire (Memorial) (to June 2003)

Peter N. Hoffman (Waterloo)  
Robert D. Rosebrugh (Mount Allison)  
Keith F. Taylor (Dalhousie)

---

At the beginning of 2003, the Royal Society of Canada (RSC) made a proposal to the CMS that *Mathematical Reports / Comptes rendus* become a joint RSC/CMS publication. The Publications Committee discussed the proposal at length, including a conference between Christiane Rousseau, Dana Schlomiuk, James Mingo and Jonathan Borwein as well as meetings between Rousseau, Schlomiuk, Ram Murty (one of the Editors-in-Chief of the *Comptes rendus*), and Niky Kamran and Ken Davidson, representing the Royal Society of Canada.

The Publications Committee agreed to support the proposal in a basic form and financial and other details were referred to the Executive and Financial Committees. A written response to the proposal was sent to the Royal Society of Canada and it is presently under study by the members of the Academy of Sciences.

Three Associate Editors of the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin had their terms ending at the end of 2003. A call for nominations was made and the Publications Committee

received nine nominations. The Committee recommended, and the Board of Directors approved three new Associate Editors; namely Stephen Boyer from UQAM (topology), Pengfei Guan from McMaster (PDE) and Stephen Kudla from Maryland (representation theory).

At the June and December meetings of the Publications Committee, the editors-in-chief of the CMS periodicals and publications gave reports on the status of the publications. Reports were also received from the Technical Editor, the Web Services Manager and the Managing Editor. As no books have appeared in the "Tracts in Mathematics" series, the Committee agreed that the series should be discontinued.

The 2003 G. de B. Robinson Prize was awarded at the CMS Winter Meeting in Vancouver to James Arthur from Toronto for his article "A note on the Automorphic Langlands Group" which appeared in the *Canadian Mathematical Bulletin* 45 (4) (2002).

## Research Committee Report

### *Ragnar Olaf Buchweitz (Toronto), Chair*

Steven P. Boyer (UQAM) (from July 2003)  
 Henri Darmon (McGill)  
 Finnur Larusson (Western)  
 James A. Mingo (Queen's) (to June 2003)

Gordon D. Slade (UBC)  
 Douglas R. Stinson (Waterloo)  
 Jianhong Wu (York)

The 2003 Summer Meeting of the CMS was held in Edmonton on June 14-16, 2003, and welcomed 350 participants. The meeting was hosted by the University of Alberta with YanPing Lin as Meeting Director and Eric Woolgar as Chair, Local Arrangements.

The meeting began with Robert Moody (Alberta) delivering a Public Lecture entitled "Tilings: An Evening Excursion to the Zoo".

The plenary speakers were:

- Ingrid Daubechies (Princeton University),
- Roland Glowinski (University of Houston),
- Gerhard Huisken (Universitaet Tuebingen/Albert Einstein Institute),
- James Lepowsky (Rutgers University),
- Dennis Shasha (Courant Institute).

The CMS Jeffery-Williams Lecture was delivered by Ram Murty (Queen's University) and the CMS Krieger-Nelson Lecture by Leah Edelstein-Keshet (UBC).

There were 13 sessions as described below and a Contributed Paper Session organized by the Meeting Director.

- Algebraic and Geometric Topology (Organizers: George Peschke, University of Alberta, Laura Scull, UBC, and Peter Zvengrowski, University of Calgary)
- Approximation Theory and Applied Harmonic Analysis (Organizers: Bin Han and Rong-Qing Jia, University of Alberta)
- Computational and Analytical Techniques in Modern Applications (Organizers: Peter Minev, University of Alberta)
- Conformal Field Theory (Organizers: Terry Gannon, University of Alberta, and Mark Walton, University of Lethbridge)
- Design Theory and Coding Theory (Organizer: John van Rees, University of Manitoba)
- Discrete Mathematics (Organizer: Vaclav Linek, University of Winnipeg)
- Dynamical Systems (Organizer: Michael A. Radin, Rochester Institute of Technology)
- Industrial Mathematics (Organizers: Biao Huang, Yanping Lin and Shijie Liu, University of Alberta)
- Infinite Dimensional Dynamical Systems (Organizers: Thomas Hillen, University of Alberta, and XiaoQiang Zhao, Memorial University of Newfoundland)
- Mathematical and Computational Finance (Organizers: Tahir Choulli and Jie Xiong, University of Alberta)

- New and Successful Courses and Programmes in Mathematics (Organizer: Ted Lewis, University of Alberta)
- Physics and Geometry (Organizers: Maung Min-Oo, McMaster University, and Eric Woolgar, University of Alberta)
- Real Analysis (Organizer: Erik Talvila, University of Alberta)

Two related activities were organized separately from the meeting. The 2003 Project NExTMAC National Workshop and the Conference for Women Graduate Students in Mathematics. These events were very successful and their organizers and sponsors are to be congratulated.

The 2003 Winter Meeting of the CMS was held in Vancouver on December 6-8, 2003 with 435 participants. The meeting was hosted by Simon Fraser University with Norman Reilly as Meeting Director and Malgorzata Dubiel as Chair, Local Arrangements.

The meeting included a well received Short-course on Cryptography with lectures by:

- Doug Stinson (Waterloo) - Introduction to Cryptography
- Neal Koblitz (Washington) - Elliptic Curve Cryptography
- Hugh Williams (Calgary) - Algorithmic Number Theory
- Mike Mosca (Waterloo) - Quantum Computing and Quantum Cryptography

The plenary speakers were:

- Tom Archibald (Acadia University),
- Deborah Ball and Hyman Bass (University of Michigan),
- Robert Calderbank (AT&T Laboratories, NJ),
- Andrew Granville (University of Montreal),
- Anand Pillay (University of Illinois, Urbana-Champaign),
- Madhu Sudan (MIT).

The CMS Coxeter-James Lecture was presented by Jingyi Chen, UBC, and the CMS Doctoral Prize Lecture was given by Alina Carmen Cojocaru, who obtained her PhD. at Queen's University and is now at Princeton University.

There were 14 sessions as described below and a Contributed Paper Session organized by the Meeting Director.

- Combinatorics (Organizers: Petr Lisonek, Simon Fraser University, and Brett Stevens, Carleton University)
- Dynamical Systems, Celestial Mechanics (Organizer: Florin Diacu, University of Victoria)

## Research Committee Report

---

- Graphs and Matroids (Organizers: Luis Goddyn and Ladislav Stacho, Simon Fraser University)
- Harmonic Analysis (Organizers: Izabella Laba, UBC, and Alex Iosevich, University of Missouri, Columbia)
- History of Mathematics (Organizer: Len Berggren, Simon Fraser University)
- Mathematical Biology (Organizer: Leah Keshet, UBC)
- Mathematical Education (Organizer: Malgorzata Dubiel, Simon Fraser University)
- Model Theory and Recursion Theory (Organizers: Robert Woodrow, University of Calgary, Bradd Hart, Fields Institute, and John Baldwin, University of Illinois at Chicago)
- This Symposium was organized in honour of Alistair Lachlan on the occasion of his 65th birthday and to recognize his many contributions to Model Theory and Recursion Theory.
- Nonlinear Partial Differential Equations (Organizers: Rustum Choksi and Keith Promislow, Simon Fraser University)
- Number Theory (Organizers: Michael Bennett and David Boyd, UBC, Peter Borwein, Imin Chen, and Stephen Choi, Simon Fraser University)
- Operator Algebras (Organizers: Marcelo Laca and Ian Putnam, University of Victoria)
- Quantum Cohomology and Mirror Symmetry (Organizer: Kai Behrend, UBC)
- Representations of Associative Algebras and Related Topics (Organizers: Vlastimil Dlab, Carleton University, and Shiping Liu, Université de Sherbrooke)
- Universal Algebra and Lattice Theory (Organizer: Jennifer Hyndman, UNBC)

The next four meetings of the CMS will be held in Halifax (Dalhousie University, Summer 2004), Montreal (McGill University, Winter 2004), Waterloo (University of Waterloo, Summer 2005), and Victoria (University

of Victoria, Winter 2005). Summer 2004 will as well see a special joint conference of Canadian and French mathematical societies, the First Joint Canada-France Meeting of the Mathematical Sciences from July 12-15, 2004 in Toulouse, France.

The Research Committee chose Izabella Laba (UBC) as the 2004 Coxeter-James Prize Lecturer for the CMS Winter 2004 Meeting, Edward Bierstone and Pierre Milman (University of Toronto) jointly as the 2004 Jeffery-Williams Prize Lecturers, and Barbara Keyfitz as the 2004 Krieger-Nelson Prize Lecturer for the CMS Summer 2005 Meeting.

The pool of nominations for these prizes was very wide and deep this year, reflecting no doubt the massive faculty renewal under way at Canadian universities, as well as special research initiatives, such as the Canada Research Chair Program that bring very strong and talented researchers (back home) to Canada.

The Research Committee passed the following motions that are being submitted to the CMS Executive Committee and the Board of Directors for their consideration:

- that nominations for the Krieger-Nelson Prize be active for 3 years as is the case for the Jeffery-Williams Prize;
- that the call for nominations of all prizes includes solicitation of an up-to-date CV, where available", with the aim to provide more information on the nominees to the Research Committee;
- that the deadline for nominations for the Coxeter-James, Krieger-Nelson, and Jeffery-Williams Prize be moved forward to the end of June", to increase further the number of nominations, making the nomination deadline roughly parallel with those for other major Science awards in Canada, when people's minds are already or still in nomination mode.

## Student Committee Report

***Susan Cooper (Queen's) and Robert Juricevic (Waterloo), Co-Chairs***

Joy Abramson (York)  
Adriana T. Dawes (UBC) (from July 2003)  
Renato Dedic (Bishops) (to June 2003)  
Krista Michelle Galway (Memorial) (to October 2003)  
Antoine Khalil (Concordia)  
Duana Kipling (Saskatchewan) (from July 2003)

Youness Lamzouri (Montreal)  
Margaret-Ellen Messinger (Dalhousie)  
Gillman Payette (Dalhousie) (as of September 2003)  
Daniel G. Piché (Winnipeg) (to June 2003)  
Boris Reitman (Vancouver)  
Robert E. Woodrow (Calgary)  
Graham P. Wright (Ottawa)

This past year 2003 was a very productive and exciting year for the CMS Student Committee (often referred to as Studc, thanks to email!). Many other CMS committees, such as the Education Committee and the Advancement of Mathematics Committee, deal with some student related issues. The goal of Studc is to play a direct role in issues regarding students. Studc is a group of students whose mission is to foster the development of a vibrant and highly interactive community of Canadian post-secondary mathematics students that leads to the continued creation of important long-term bonds between individuals. More information on the goals of Studc and its membership can be found on the CMS web site: [www.cms.math.ca/Studc](http://www.cms.math.ca/Studc).

### Change of Membership

We thank all past members, in particular Renato Dedic who designed a fantastic Studc promotional poster, Krista Galway who worked on a project concerning teaching mathematics in Canadian elementary and high schools, and Dan Piché who was the founder and a terrific past chair of Studc.

The Committee is considering nominations for four vacancies for July 2004, including the newsletter editor position.

### Operations Manual for the Student Committee

Before leaving Studc, Dan Piché began work on an operations manual for Studc. The purpose of this manual is to describe the ongoing Studc activities. It is hoped that this manual will be continually updated and will ease the transition of membership. Dan left behind a wonderful start on this project. Duana Kipling is now working on updating the manual.

### Student Newsletter

One way in which Studc promotes the interaction between Canadian post-secondary mathematics students is through our newsletter. Studc has the goal of publishing and distributing two student newsletters a year, one in each of the fall and winter semesters. Antoine Khalil is currently the newsletter editor. Antoine will have overseen the publication of four very successful newsletters, two in 2002 and two in 2003, by the end of his term in June 2004. The fall 2003 newsletter was distributed in December.

### Graduate Student Events

As in past years, Studc organized a social event for graduate students at each of the CMS meetings in 2003. The events are becoming more popular and have been well enjoyed. The Committee hopes to continue organizing these events at which Studc and the CMS are promoted to mathematics students from across Canada.

The next graduate student event will be held in Halifax during the CMS/CAIMS 2004 Summer Meeting.

The graduate student socials are overseen by the Studc co-chairs, Susan Cooper and Robert Juricevic. We wish to thank the local organizers of the CMS meetings for their enthusiastic co-operation in planning these socials.

### Regional Conferences

Each year Studc has a goal of financially supporting four student activities, one in each of the four regions across Canada. In 2003 we supported three regional conferences: the APICS Conference, the AARMS Summer School, and the ISM Annual Graduate Conference. An amount of \$150 was given to each group. In exchange for the funding, Studc asks that its promotional poster (designed by Renato Dedic) be displayed at the activity funded, that Studc has provided support be acknowledged, and that photos and descriptions of the activity be given to Studc as that they can appear on the Studc web page.

Youness Lamzouri masterfully looked after this project in 2003. The Committee hopes to support four events in 2004, each at the amount of \$125. Youness Lamzouri and Adriana Dawes will jointly be spearheading this project.

### Teaching Math in Canadian Elementary and High Schools

The goal of Krista Galway's project was to collect data on the requirements to obtain various education degrees at many Canadian universities. Her goal was also to compare this data with her research on what school boards across Canada require their teachers to have. As part of her project, Krista attended the Canadian School Mathematics Forum which was held in Montreal in May 2003. This forum was very useful for Krista's project. Krista did a wonderful job at collecting her data and ended her term with Studc by writing up her findings. We hope that this worthwhile project will be continued by a new Studc member.

## Student Committee Report

---

### **Connecting Women in Math Across Canada Conference**

Susan Cooper was the graduate student representative on the organizing committee for the Connecting Women in Math Across Canada Conference. This conference was organized mainly by the CMS Women in Mathematics Committee and was held in June, just prior to the CMS 2003 Summer Meeting in Edmonton. The Conference concentrated on issues facing young women mathematicians as well as celebrated their energetic presence in Canada. The conference was well attended and was very successful. Studc looks forward to future joint projects with the CMS Women in Mathematics Committee.

### **Maintaining a Student Web Site**

Boris Reitman is the current webmaster. Boris masterfully set up a web design for Studc and also worked with the CUMC 2003 organizer on the CUMC web page, in particular on the registration page. A major goal of Studc this coming year is to update the web site.

### **Canadian Undergraduate Mathematics Conference (CUMC)**

CUMC 2003 was the 10th anniversary of CUMC! CUMC 2003 was held at York University from May 27 to June 1. The CUMC 2003 President was Joy Abramson who, with her committee, did a fantastic job! The conference was a huge success which was largely attended. Photos of the conference can be seen on the CUMC website. The CMS provided \$1,000 towards the 2003 CUMC.

A CUMC operations manual was developed by Dan Piché, Benoit Charbonneau, and the CUMC 2002 Committee. The goal of this manual is to aid in the continuity of the CUMC. The manual was used for the CUMC 2003 was very helpful.

CUMC 2004 will be held June 16 to June 20, immediately following the CMS/CAIMS 2004 Summer Meeting, at Dalhousie University in Halifax. See [www.cumc.math.ca](http://www.cumc.math.ca) for more details.

### **Future Studc Projects**

Studc is embarking on some very exciting new projects. Some of these include setting up student email lists in order to communicate with students from across Canada, further exploring how to promote the CMS to Canadian students, and fostering better communication between CUMC organizers and Studc. In addition to these projects we hope to initiate some joint work with the MITACS Student Advisory Committee (SAC) including the creation of a MITACS student representative position on Studc. We look forward to reporting on these projects in 2004!

---

## Women in Mathematics Committee Report

---

### *Malgorzata Dubiel (Simon Fraser), Chair*

---

George W. Bluman (UBC)  
Chantal David (Concordia)  
Leah Edelstein-Keshet (UBC)

Kathryn E. Hare (Waterloo)  
Judith J. McDonald (Washington State) (from July 2003)  
Dorette Pronk (Dalhousie)  
Mateja Sajna (Ottawa)

---

The Committee on Women in Mathematics is charged with monitoring the status of women within the Canadian mathematical community and the Society, recommending and initiating actions which will ensure equitable treatment of women, and with encouraging the participation of women in mathematics at all levels.

The Committee continues to maintain the Directory of Canadian Women in the Mathematical Sciences: a collection of web pages of Canadian women who are actively involved in research or studies in mathematics, or any other aspects of mathematical sciences. The Directory is a valuable source for information about Canadian women mathematicians.

The most important project of 2003 was the conference Connecting Women in Mathematics Across Canada (CWIMAC). The conference took place from June 11<sup>th</sup> to 13<sup>th</sup>, immediately prior to the CMS 2003 Summer Meeting. The Department of Mathematical and Statistical Sciences, University of Alberta was the host for this meeting which was also supported by the Pacific Institute for the Mathematical Sciences and Simon Fraser University.

Thirty women graduate students from Canadian universities attended the conference. They attended two plenary talks, given by Priscilla Greenwood (UBC and Arizona State University) and Christiane Rousseau (Montréal), and two panel discussions: "Balancing a Career and a Personal and Family Life", and "Career Strategies: How to Survive a Graduate School and Get a Job You Want". Both panels were followed by small group discussions. In addition, the participants presented papers on their research. Many participants remained in Edmonton for the CMS 2003 Summer Meeting.

The conference was very successful, and the Committee decided that it will attempt to make it a biannual event, and that the next conference will take place in 2005, possibly at the BIRS.

Chantal David (Concordia) ended her term on the Committee in December 2003 and my term as Chair of the Committee also ended. I will be remaining on the Committee as a member and Judith McDonald (Washington State), who joined the Committee in June 2003 as Chair-Elect, will take over as the new Chair in 2004.

## Editorial Board

---

### ATOM Editorial Board

Bruce L.R. Shawyer (Memorial) Editor-in-Chief

Edward J. Barbeau (Toronto)  
 Katherine Heinrich (Regina)  
 Richard J. Nowakowski (Dalhousie)  
 Anthony C. Thompson (Dalhousie)

Graham P. Wright (Ottawa) Managing Editor

### CJM/CMB Editorial Board

Henri Darmon and Niky Kamran (both McGill) Editors-in-Chief CJM

James D. Lewis, Arturo J. Pianzola (both Alberta)  
 and Noriko Yui (Queen's) Editor-in-Chief CMB

#### Associate Editors

Martin T. Barlow (UBC)  
 Peter B. Borwein (UBC)  
 Walter Craig (McMaster)  
 George A. Elliott (Toronto)  
 Anthony V. Geramita (Queen's)  
 Victor Kac (MIT)  
 François Lalonde (Montreal)  
 John Millson (Maryland)  
 M. Ram Murty (Queen's)  
 Nicholas Pippenger (UBC)  
 Freydoon Shahidi (Purdue)  
 Catherine Sulem (Toronto)  
 Maciej Zworski (Berkeley)

### CMS Books in Mathematics Editorial Board

Jonathan M. Borwein  
 and Peter B. Borwein (both SFU) Editors-in-Chief

### CMS Notes Editorial Board

Srinivasa Swaminathan (Dalhousie)  
 and Robert J.M. Dawson (St. Mary's) Editors-in-Chief

#### Contributing Editors

Edward J. Barbeau (Toronto) - Education  
 Monique L. Bouchard (CMS) - Meetings  
 Peter A. Fillmore (Dalhousie) - Book Reviews

Graham P. Wright (Ottawa) Managing Editor

### CMS Tracts in Mathematics Editorial Board

Kenneth R. Davidson  
 and Cameron L. Stewart (both Waterloo) Editors-in-Chief

### CRUX with MAYHEM Editorial Board

Jim Totten (Cariboo) Editor-in-Chief

Iliya Bluskov (UNBC) Problems Editor  
 Richard Brewster (Cariboo) Problems Editor

R. Bruce Crofoot (Cariboo) Associate Editor  
 J. Chris Fisher (Regina) Problems Editor  
 Edward T.H. Wang (Wilfrid Laurier) Problems Editor  
 Robert E. Woodrow (Calgary) Olympiad Editor  
 Bruce C. Gilligan (Regina) Articles  
 Shawn Godin (Cairine Wilson H.S.) Mayhem Editor  
 John F. Grant McLoughlin (UNB) Mayhem Assistant Editor  
 Richard K. Guy (Calgary) Editor at Large

Graham P. Wright (Ottawa) Managing Editor

## Contributors

The Canadian mathematical Society would like to acknowledge the following members, individuals, governments, foundations, institutes and corporations for their encouragement and support. The following have agreed to have their names listed. The CMS also thanks those who have contributed anonymously.

Noemi Adorjan	Dr. Katherine Heinrich	Prof. Bruce L.B. Richmond
Dr. Igor Babchine	Prof. James P. Henniger	Dr. Sherman D. Riemenschneider
Dr. Lennard F. Bakker	Mr. John G. Heuver	Mr. David L. Rodgers
Prof. B. Banaschewski	Prof. Bernard R. Hodgson	Prof. Patrick J. Ryan
Prof. Edward J. Barbeau	Imperial Oil Foundation	Prof. Gert O. Sabidussi
John / Iris Barrington-Leigh	Institut des sciences mathématiques (ISM)	Sergey Y. Sadov
Mr. Niels M. Bejlegaard	Prof. Victor Ivrii	Mr. Alexander P. Sampaleanu
Prof. Howard E. Bell	Prof. Wilfred Kaplan	Samuel Beatty Fund
Dr. Tibor T. Bisztriczky	Dr. Spiros Karigiannis	Dr. Bill Sands
Dr. J.A.R. Blais	Prof. Murray S. Klamkin	Dr. Bruce L.R. Shawyer
Dr. George W. Bluman	Dr. Zdislav V. Kovarik	Dr. Lloyd D. Simons
Dr. Wayne Broughton	Mr. Chikaya Kunihiko	Mr. Thomas Siraki
Miguel Cabrales	Dr. Marc Laforest	Mr. Shady Sleiman
Canadian Heritage	Mr. Mathieu Leduc	Dr. Christine E. Soteros
Ms. Denise Leung Yu Cheung	Dr. David J. Leeming	Statistical Society of Canada (SSC)
Prof. J.R. Choksi	Dr. Martin Légaré	Sun Life Financial
Dr. Simon L. Chua	Mrs. Ursula Lenk	Prof. M.A. Taylor
Prof. Albert John Coleman	Ms. Kathy Lewis	Telepresence Systems Inc.
Centre de recherches mathématiques (CRM)	Dr. Andy C.F. Liu	The Fields Institute for Research in Mathematical Sciences
Concordia University, Faculty of Arts and Science	Dr. M.S. Macphail	The Mathematics of Information Technology and Complex Systems (MITACS)
Dr. Helen F. Cullen	Dr. C.E. Mannix Jr.	The Pacific Institute for the Mathematical Sciences (PIMS)
Prof. Paolo Custodi	Pavlos Maragoudakis	Dr. Anthony C. Thompson
D. V. Clark	McGill University	Toronto District School Board
Prof. Chandler Davis	Prof. Samuel Melamed	Prof. Elmer M. Tory
Dr. Charles R. Diminnie	Dr. Robert F. Millar	Université de Montréal
Prof. Roy Dowling	Dr. Paul Milnes	University of British Columbia
Dr. Ivar Ekeland	Prof. Robert Milson	University of Calgary
Dr. Carl Faith	Mr. Zakaria Husein Mohamad	University of Lethbridge
Prof. J. Chris Fisher	Dr. Benjamin N. Moyls	University of Ottawa
Miss Alexandra R. Gall	National Council of Teachers of Mathematics (NCTM)	University of Waterloo
Prof. Keith O. Geddes	Nelson Thomson Learning	Wadsworth Publishing Company
Dr. Joan M. Geramita	Dr. Monica Nevins	Harry White
Dr. Allan A. Gibb	Prof. Louis Nirenberg	Prof. John H.M. Whitfield
Xavier Rodriguez Gil	Government of the Northwest Territories	Woburn C.I.
Dr. Edgar G. Goodaire	Dr. Richard J. Nowakowski	Dr. Robert E. Woodrow
Government of Alberta	National Science and Engineering Research Council (NSERC)	Prof. R. Grant Woods
Government of New Brunswick	NSERC - Promo Science	Dr. Graham P. Wright
Government of Ontario	Dr. Ellen O'Brien	Mr. A. Yadmand
Government of Saskatchewan	Old Scona Academic High School	York University - Bethune College
Irina Halpern	Pearson Education Canada	Prof. Noriko Yui
Qilong Han	Mr. J. Winfield Poole	Prof. Li Zhou
Mr. Zeljko Hanjs	Government of Prince Edward Island	
Prof. Ronald Harrop		
Dr. Bert L. Hartnell		



## CMS Executive Committee

---

<b>President</b>	Christiane Rousseau	Université de Montréal
<b>Past-President</b>	Jonathan Borwein	Simon Fraser University
<b>President-Elect</b>	H.E.A. Eddy Campbell (from July 2003)	Queen's University
<b>Vice-Presidents</b>	George W. Blumam (to June 2003)	University of British Columbia
	Edgar G. Goodaire (to June 2003)	Memorial University of Newfoundland
	Bernard R. Hodgson (to June 2003)	Université Laval
	James A. Mingo (to June 2003)	Queen's University
	Steven P. Boyer (from July 2003)	Université du Québec à Montréal
	Kathryn E. Hare (from July 2003)	University of Waterloo
	Samuel S.P. Shen (from July 2003)	University of Alberta
	Jon H. Thompson (from July 2003)	University of New Brunswick - Fredericton
<b>Executive Director and Secretary</b>	Graham P. Wright	University of Ottawa
<b>Treasurer</b>	F. Arthur Sherk	University of Toronto

## CMS Board of Directors

---

Thomas Archibald - Acadia University (to June 2003)	Lee Keener - University of Northern British Columbia (to June 2003)
David Bates - Maritime Life	Dan Kucerovsky - UNB (from July 2003)
George Bluman - University of British Columbia (to June 2003)	Gordon MacDonald - University of Prince Edward Island
Peter Booth - Memorial University of Newfoundland (to June 2003)	L.W. Marcoux - University of Waterloo
Jonathan Borwein - Simon Fraser University (to June 2003)	Judith McDonald - Washington State University (to June 2003)
Steven P. Boyer - Université du Québec à Montréal (from July 2003)	Tianxuan Miao - Lakehead (from July 2003)
Murray R. Bremner - Saskatchewan (from July 2003)	James Mingo - Queen's University (to June 2003)
H.E.A. Eddy Campbell - Queen's (from July 2003)	Michele Mosca - Waterloo (from July 2003)
Richard Caron - University of Windsor	Ortrud Oellermann - University of Winnipeg
Peter Cass - University of Western Ontario (to June 2003)	Michael Overton - New York University, Courant Institute
John Chadam - University of Pittsburgh (to June 2003)	Klaus Peters - A.K. Peters Ltd.
Susan Cooper - Queen's University (as of January 2003)	Abraham Punnen - University of New Brunswick - Saint John's
Galia Dafni - Concordia University	Thomas Ransford - Université Laval (to June 2003)
Henri Darmon - McGill University (to June 2003)	Christiane Rousseau - Université de Montréal
Matt Davison - Western (from July 2003)	Damien Roy - University of Ottawa
Malgorzata Dubiel - Simon Fraser University	Samuel S.P. Shen - Alberta (from July 2003)
Marlène Frigon - Montreal (from July 2003)	Juris Steprans (from July 2003)
Terry Gannon - Alberta (from July 2003)	Walter Stewart - SGI Canada
Fereidoun Ghahramani - University of Manitoba (to June 2003)	Jon H. Thompson - UNB (from July 2003)
Edgar Goodaire - Memorial University of Newfoundland (to June 2003)	John A. Toth - McGill (from July 2003)
Kathryn Hare - University of Waterloo	Stan Wagon - Macalester College (from July 2003)
Bernard Hodgson - Université Laval (to June 2003)	David Wehlau - Royal Military College (to June 2003)
Jeannette C.M. Janssen - Dalhousie (from July 2003)	Hugh C. Williams - Calgary (from July 2003)
Lisa Jeffrey - University of Toronto (to June 2003)	
Robert Juricevic - University of Waterloo	
Tomasz Kaczynski - Université de Sherbrooke	
Observers: Arthur Sherk - Toronto	
Graham Wright - University of Ottawa	

---

## CMS Executive Office Staff

---

Yann Bernard	Database Clerk
Nathalie Blanchard	Assistant to the Executive Director
Monique Bouchard	Operations Manager
Diane Ellis (to June 2003)	Accountant
Alan Kelm	Web Services Manager
Suzanne Lalonde	Administrative Clerk
Jason Lemieux	Web Technician
Yvette Roberts (from June 2003)	Accountant
Sany Sam	Database consultant
Anthony Selles	Web Technician
Jean-François Simard	Database Clerk
Liliane Sousa	Membership and Publications Agent
Graham Wright	Executive Director and Secretary

## CMS Executive Office

---

Canadian Mathematical Society  
577 King Edward  
Ottawa, Ontario K1N 6N5  
Telephone: (613) 562-5702  
Fax: (613) 565-1539  
*office@cms.math.ca*  
*www.cms.math.ca*