# 1999 <br> Canadian Mathematical Society 



## Annual Report to Members

January 15, 2001

## Table of Contents

A Word from the President ..... 1
Executive Director's Report ..... 4
Treasurer's Report ..... 6
Committee Reports
Education ..... 12
Electronic Services ..... 14
Endowment Grants ..... 16
Finance ..... 17
Fund Raising ..... 18
Human Rights ..... 20
International Affairs ..... 21
Mathematical Competitions ..... 22
Nominating ..... 27
Publications ..... 28
Research ..... 30
Students ..... 32
Women in Mathematics ..... 33
Editorial Boards ..... 34
Contributors ..... 35
CMS Executive Committee ..... 36
CMS Board of Directors ..... 36
CMS Executive Office ..... 37

## A Word From the President

In general, much of what happened within the CMS in 1999 could be described as a continued evolution in which existing trends were reinforced and planning was also undertaken for future developments. The future of the CMS was certainly a major topic in the CMS during 1999 and that will continue in 2000. A comprehensive review was set into motion two years ago with Board approval of a Strategic Planning document. By June of this year, eight separate task forces or associated committees will have submitted reports on various aspects of CMS operations. Beginning in the second half of this year, the Executive will consider all these reports and begin to develop an overall strategy for implementing the various recommendations. A final summary report on planning is due in the year 2001.

One report is already being implemented. A major review of Electronic Services and of the CMS website Camel took place during 1999. As a consequence of that review, the Electronic Services Committee was downsized and this more compact group has been mandated to prepare detailed policy statements, in the framework of the review report, regarding the functions and priorities of Camel and its administrative structure.

One exciting innovation of the past year has been the implementation of the Endowment Grants Program. During 1999 the first Endowment Grants Committee was formed and its first funding decisions were made. It is anticipated that when the Endowment Grants Program is fully operational the Endowment Fund will be providing at least $\$ 60,000$ in funding per year to help support a variety of mathematics projects across Canada.

A striking trend within the CMS is the continued expansion of our support of student activity at all levels. At the high school level, the already impressive CMS enrichment program is being augmented by a nation wide Math Camp Program partially sponsored by Imperial Oil, as well as by a new publication series ATOM. At the post-secondary level, a number of new links have been created or are on their way to being created. The CMS implemented a policy of free membership for all mathematics graduate students. A new focus on industrial training is emerging. The first CMS Job Fair occurred at the Winter Meeting in Montreal and another one will be taking place in Toronto in June. A new CMS Student Committee was formed in 1999. This committee is intended, in part, to serve as a liaison group between students and the CMS. Notably, it will support a national student newsletter and a student website.

Our two semi-annual meetings held during 1999 at St John's and Montreal were very successful with large attendance and a very broad range of sessions. The meetings of the past few years confirm the effectiveness of our evolving meeting format in terms of encouraging participation. The involvement of the three Mathematical Institutes whereby each will participate in a semi-annual meeting by organizing a session has been confirmed and will take effect at this June's meeting. We continue to pursue our partnership with the Mathematical Institutes in other ways. The CMS Job Fairs, mentioned above, are being organized in conjunction with the Institutes and MITACS.
"Math 2000" will be taking place during June 10-13 of this year at McMaster University. This meeting is part of the Canadian celebration of "World Mathematical Year 2000" (WMY 2000). It
is a large joint meeting involving the participation of six different Canadian mathematical organizations including the CMS. It has a very ambitious and diversified scientific program involving 20 special sessions and 15 plenary speakers including a number of Fields Medal winners. Math 2000 will culminate a week of intense mathematical activity. It is preceded by two other major events being held in Toronto: the first MITACS General Meeting (June 6-7) which will include a CMS Job Fair and the Symposium on the Legacy of John Charles Fields organized by the Fields Institute.

The organizational structure of the CMS is continuing to evolve. We have already mentioned changes in Electronic Services and the creation of the Endowment Grants Committee and the Student Committee. With the appointment of Robert Quackenbush (Manitoba) as Managing Editor of CMS publications in June these duties have been removed from the Executive Director's duties allowing him more time for fund raising and promotional activities. It seems fair to say that it is still undecided how we will eventually structure the Executive Director's position. Notably will the CMS need to move to a full time Executive Director? Significant changes in a number of CMS standing committees also occurred. The Investment Advisory Group of the Finance Committee was dissolved after years of effective service. This was a logical consequence of the adaption last year of a "passive investment" policy regarding our, now extensive, segregated Investment Funds. (Endowment Fund and Mathematical Olympiads Fund). It represents a logical step in the evolution of a more articulated and coherent investment policy. In another rationalization, the Board agreed in June to abolish the Governmental Affairs Committee. The main responsibility of that committee, the Annual Survey, is also under review.

At the Board level, beginning this year, the Institutes and the Statistics Society of Canada (SSC) will have representatives on the CMS Board. The arrangement with SSC is actually for mutual representatives. The CMS/NRC agreement for NRC funding of Canadian membership in the International Mathematical Union has been renewed. The new agreement contains a proviso for travel funds for Canadian delegates to attend IMU General Assemblies.

The re-organized Fund Raising Committee continues its pursuit of corporate sponsors and of members. These are very important initiatives. Our current budget is committed and the ability of the CMS to sponsor a wider range of activities is contingent on our ability to access new funding. Likewise the renewal and expansion of membership is also a priority. This year witnessed the implementation of our new membership reciprocity agreement with the AMS, which we hope will be effective. Also we have a new policy of offering three years of complementary membership to new faculty in Canadian Mathematics departments.

As the already mentioned "Math 2000" attests, WMY 2000 has arrived. The CMS is playing an active role in its celebration. Besides its key organizational role with regards to "Math 2000", the CMS has also contributed $\$ 45,000$ to partially fund eight different WMY 2000 projects across Canada. For information on WMY 2000 and the many projects taking place across Canada and the globe consult the website "wmy2000.math.jussieu.fr".

The McMaster meeting in June marks the official end of my two year term. I would like to thank everyone who has been so supportive, both of the CMS and of me personally, over the past two years. The CMS is a very successful professional organization and it has achieved its present position via the work of a large group of dedicated volunteers and staff. I feel privileged to have had the opportunity to represent these people and to work with them. I extend my very best wishes to my successor, Jonathan Borwein. I am sure that he will experience the same high level of support from our membership.

## Richard Kane (University of Western Ontario)

## Executive Director's Report

In 1979, when I took over as the Society's Executive Director from Dr. John McNamee, it would have been very difficult to predict the role and scope of Society's activities some twenty years later. Also, I did not expect that, in July 1999, after I have finished twenty years as Executive Director and be commencing another term. Fortunately, the duties or the being Executive Director are made much more manageable because of the crucial support received from the officers, directors, committee members, editors, Executive Office staff, and others.

The Society offers a wide array of research and educational activities and it is beginning 2000 (the "next millennium" minus one year!) from a position of strength. The 1999 Annual Reports from the various standing committees amply demonstrate the many ways in which the Society supports the Canadian mathematical community.

The Society's semi-annual meetings (Memorial - June 1999 and Montreal - December 1999) were extremely well attended and the meeting directors and organizers are to be congratulated on putting together an extensive programme of excellent sessions and activities and obtaining a tremendous level of support from the host university, the various research institutes as well as other sponsors. In May, the 1999 Canadian Undergraduate Mathematics Conference (CUMC) took place just before the CMS Meeting and the first CMS Job Fair took place the day after the CMS Meeting in December. It is hoped that future CUMC conferences will take place just before or after the CMS summer meeting and that a CMS Job Fair will be held at either the winter or summer meeting. The on-going commitment from the three research institutes through the National Program Committee will help provide important financial support for each CMS semi-annual meeting, including support for graduate student travel.

As has been the case for several years, the Society's ability to fund the research and educational activities, in large part, is due to the revenue generated from our various publication activities, particularly the Canadian Journal of Mathematics (CJM) and the Canadian Mathematical Bulletin (CMB), and the support received from the many editors and host universities. I am pleased to welcome Dr. Robert Quackenbush (Manitoba) as the new Managing Editor for our publications. In July 1999, the duties of Managing Editor were removed from those of the Executive Director and transferred to Dr. Quackenbush who has been appointed as the Managing Editor to June 30, 2002.

Our publication activities continue to be of a high standard, both scientifically and with respect to production quality. In 1999, the respective issues of the CJM, the CMB, CRUX with MAYHEM and the CMS Notes were published very close to the projected shipping date and each issue was also available on-line for for subscribers approximately one week beforehand. The new CMS Book Series with Springer-Verlag is progressing well and the first books in this series should be available early in 2000. Although the current agreement with the American Mathematical Society to publish the CMS Conference Proceedings Series will be ending next year, discussions are underway to establish a new agreement for the publication of a different series, perhaps a CMS Lecture Notes Series. Three books in the ATOM (A Taste of Mathematics) Series of educational booklets have been published and several others are in various stages of preparation.

The Annual Reports of the Education Committee and the Mathematical Competitions Committee (formerly the Mathematical Olympiads Committee) indicate the broad range of educational activities supported by the Society. All of these enrichment activities are possible because of the crucial assistance received from members, teachers and students across Canada. This is certainly true for the one of our new programs - Regional and National Math Camps.

The Math Camps Program brings together, university departments, school teachers and young students (grades 9 through 11) and offers an excellent way to show that mathematics can be fun, challenging and rewarding. Three such camps took place in 1999 (at the University of Calgary, the University of Western Ontario and the University of Waterloo). As part of World Math Year 2000, and with increased support from the Imperial Oil Charitable Foundation, the Math Camps Program is being expanded significantly in 2000. Although significant support has been received more is needed if the program is to reach its potential.

Participation in the 1999 Canadian Open Mathematics Challenge was almost 5000, up from nearly 3,800 in 1998. Several university mathematics departments are now using the results from the Open as a major factor in determining entrance scholarships. If this practice expands, it likely the number of students participating will increase significantly in future years.

From the large number of students who each year participate in the Open and the Society's other activities, to the six students who are chosen to represent Canada at the International Mathematical Olympiad, it is clear there is a lot of good young mathematics talent in Canada.

The Final Reports of the Task Force on Finances and Fundraising, the Task Force on Support of the Mathematics Community and the Ad-hoc Committee on Electronic Services and Camel were received at the end of 1999. These reports, together with those of earlier Task Forces have already resulted in a number of changes and recommendations adopted to improve in various aspects of the Society's operations. The reports received to-date and the reports of the remaining Task Forces due in 2000, will help to provide the vital framework for the future direction of the CMS. I wish to thank all the members of past and current Task Forces for their many contributions to this important planning exercise.

The past 20 years have been exhilarating and rewarding. With continued support from the membership as well good support from the public and private sectors, the future looks very promising.

## Graham P. Wright (University of Ottawa)

## Treasurer's Report

Generally speaking, the financial year 1999 can be considered to be satisfactory. Income kept up reasonably well, and most expense items came in on or below budget

The Operations Fund, consisting of the four general divisions: General, Education, Research, and Publishing, showed an excess of revenue over expenses of about $\$ 51,000$. With the exception of Publishing, all divisions showed deficits, as expected. Most of the deficit in the Education and Research divisions comes about because their estimated fair share of office costs has been charged to the their account, - i.e., transferred from General, where it formerly resided.

The largest revenue, by far, comes from sales of subscriptions to the Journal and Bulletin, but substantial amounts also come from membership fees, donations, meeting registrations, and foreign (i.e. U.S.) exchange. We continue to seek ways in which Camel can generate revenue. We appreciate the sensitivity of staff and committee chairs in keeping within their budgets, indeed often coming in under budget. Without this, we might well have run a deficit in 1999.

In some respects, the investment income was a disappointment. In 1999, we began our new policy of entrusting the two investment accounts (Endowment Fund and Olympiads Fund) to a passive money-manager (TD Quantitative Capital). A combination of transfer costs and volatile markets resulted in a yield which did not come up to expectations. We remain convinced, however, that the move to a money-manager is correct, and we have every reason to expect better yields on our investments in the future.

For the first time, there was an expenditure from the Endowment fund for Endowment Grants. We expect that future years will show considerably larger outlays, as the Endowment Grants Program evolves.

## Arthur Sherk (University of Toronto)

Note: The information given in the following two pages is extracted from the 1999 Treasurer's Report. A copy of the complete report is available from the Executive Office for review.

# Canadian Mathematical Society Balance Sheet <br> as at December 31, 1999 

|  | Designated |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Operations | Activities | Endowment | Mathematical <br> Olympiads |  |  |
| Fund | Fund | Fund | Fund | $\mathbf{1 9 9 9}$ | 1998 |
| $\$$ | $\$$ | $\$$ | $\$$ | $\$$ | $\$$ |

ASSETS
CURRENT

| Cash | 164,521 | - | - | - | $\mathbf{1 6 4 , 5 2 1}$ | 437,823 |
| :--- | ---: | :--- | :--- | ---: | ---: | ---: |
| Temporary investments | 72,955 | - | - | - | $\mathbf{7 2 , 9 5 5}$ | 44,125 |
| Accounts receivable and accrued interest | 224,817 | - | 2,000 | - | $\mathbf{2 2 6 , 8 1 7}$ | 231,738 |
| Budget advances | 35,025 | - | - | - | $\mathbf{3 5 , 0 2 5}$ | 32,508 |
| Prepaid expenses | 86,428 | - | - | - | $\mathbf{8 6 , 4 2 8}$ | 61,514 |
| Interfund receivable (payable) | $(64,139)$ | 4,440 | 66,798 | $(7,099)$ | - |  |
|  | 519,607 | 4,440 | 68,798 | $(7,099)$ | $\mathbf{5 8 5 , 7 4 6}$ | 807,708 |
| INVESTMENTS |  |  |  |  |  |  |
| CAPITAL ASSETS | - | - | $1,572,144$ | 194,310 | $\mathbf{1 , 7 6 6 , 4 5 4}$ | $1,262,984$ |
|  |  | 21,288 | - | - | - | $\mathbf{2 1 , 2 8 8}$ |

## CURRENT LIABILITIES

Account payable and accrued liabilities
Deferred revenue

| 122,578 | - | - | - | 122,578 | 210,284 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 322,029 | - | - | - | 322,029 | 309,374 |
| 444,607 | 0 | 0 | 0 | 444,607 | 519,658 |

## FUND BALANCES

Investment in capital assets
Restricted
Unrestricted

| 21,288 | - | - | - | $\mathbf{2 1 , 2 8 8}$ | 23,057 |
| :---: | :---: | :---: | ---: | ---: | ---: |
| - | 4,440 | $1,640,942$ | 187,211 | $\mathbf{1 , 8 3 2 , 5 9 3}$ | $1,476,034$ |
| 75,000 | - | - | - | $\mathbf{7 5 , 0 0 0}$ | 75,000 |
| 96,288 | 4,440 | $1,640,942$ | 187,211 | $\mathbf{1 , 9 2 8 , 8 8 1}$ | $1,574,091$ |
| 540,895 | 4,440 | $1,640,942$ | 187,211 | $\mathbf{2 , 3 7 3 , 4 8 8}$ | $2,093,749$ |

## Statement of Revenue and Expenditures

 as at December 31, 1999
## Operations Fund

REVENUE
Grants
Donations
Membership fees
Registration fees and other sales
Subscritpions and publications
Advertising and promotional sales
Interest and foreign exchange
Miscellaneous
EXPENDITURES
National projects
Speakers and prizes
Production
Promotion
Salaries and benefits
Board and Committees
Legal and audit
General administration
Amortization
Excess (Deficiency) of Revenue
over Expenditures

## Restricted Funds

## REVENUE <br> Donations

Membership fees
Dividend, interest and other income
Amortization of bond discounts (premiums)
Gain on sale of investments

## EXPENDITURES

Lifetime membership fees annual transfer
Projects
Mathematical Olympiad annual transfer
Commissions

Excess of revenue over expenditures
Fund balances, beginning of period
Interfund transfer from Operations Fund
Fund balances, end of period

| General <br> Division | Publishing <br> Division | Research <br> Division | Education <br> Division | 1999 |  |
| :---: | :---: | :---: | :---: | ---: | :---: |


| Special Assistance Fund | Endowment Fund | Math Olympiads Fund | 1999 | 1998 |
| :---: | :---: | :---: | :---: | :---: |
| \$ | \$ | \$ | \$ | \$ |
| 4,440 | 1,173 | 1,147 | 6,760 | 4,684 |
| - | 6,000 | - | 6,000 | 1,000 |
| - | 99,783 | 10,045 | 109,828 | 69,893 |
| - | - | - | 0 | 616 |
| - | 187,877 | 40,841 | 228,718 | 47,656 |
| 4,440 | 294,833 | 52,033 | 351,306 | 123,849 |
| - | 10,788 | - | 10,788 | 10,260 |
| - | 25,302 | - | 25,302 | - |
| - | - | 6,000 | 6,000 | 6,000 |
| - | 4,623 | 572 | 5,195 | 4.765 |
| 0 | 40,713 | 6,572 | 47,285 | 21,025 |
| 4,440 | 254,120 | 45,461 | 304,021 | 102,824 |
| - | 1,334,284 | 141,750 | 1,476,034 | 1,327,951 |
| 4,440 | 1,588,404 | 187,211 | 1,780,055 | 1,430,775 |
| - | 52,538 | - | 52,538 | 45,529 |
| 4,440 | 1,640,942 | 187,211 | 1,832,593 | 1,476,304 |

## Budget 2000-Operations Fund Summary

| Division Grand Summaries | Audited prior yearend | Budget $1999$ | Budget 2000 |
| :---: | :---: | :---: | :---: |
| GENERAL |  |  |  |
| Total Revenue | 107,198 | 105,710 | 116,270 |
| Total Expenditure | 154,535 | 180,098 | 175,078 |
| NET REVENUE/EXPENDITURE | $(47,337)$ | $(74,388)$ | $(58,808)$ |
| RESEARCH |  |  |  |
| Total Revenue | 118,919 | 169,050 | 216,785 |
| Total Expenditure | 217,209 | 272,183 | 332,463 |
| NET REVENUE/EXPENDITURE | $(98,290)$ | $(103,133)$ | $(115,678)$ |
| EDUCATION |  |  |  |
| Total Revenue | 76,321 | 134,680 | 171,000 |
| Total Expenditure | 209,802 | 237,188 | 269,428 |
| NET REVENUE/EXPENDITURE | $(133,481)$ | $(102,508)$ | $(98,428)$ |
| PUBLISHING |  |  |  |
| Total Revenue | 781,257 | 760,806 | 859,796 |
| Total Expenditure | 412,526 | 492,431 | 562,399 |
| NET REVENUE/EXPENDITURE | 368,731 | 268,375 | 297,397 |
| OPERATIONS FUND |  |  |  |
| Total Revenue | 1,083,695 | 1,170,246 | 1,363,851 |
| Total Expenditure | 994,072 | 1,181,900 | 1,339,368 |
| NET REVENUE/EXPENDITURE | 89,623 | $(11,654)$ | 24,483 |

## Budget 2000 - General and Education Divisions

GENERAL - SUMMARY

|  | Audited prior yearend | Budget <br> 1999 | Budget 2000 |
| :---: | :---: | :---: | :---: |
| REVENUE |  |  |  |
| Administration | 27,613 | 22,750 | 26,000 |
| Members | 79,585 | 82,960 | 90,270 |
| Projects | 0 | 0 | 0 |
| TOTAL REVENUE | 107,198 | 105,710 | 116,270 |
| EXPENDITURE |  |  |  |
| Administration | 148,203 | 173,748 | 166,378 |
| Members | 4,324 | 0 | 3,000 |
| Projects | 2,008 | 6,350 | 5,700 |
| TOTAL EXPENDITURE | 154,535 | 180,098 | 175,078 |
| NET REVENUE/EXPENDITURE | $(47,337)$ | $(74,388)$ | $(58,808)$ |

## SUMMARY - EDUCATION

REVENUE

| Administration |  |  | 21,921 | 17,180 |
| :--- | :--- | ---: | ---: | ---: |

EXPENDITURE

| Administration | 106,412 | 114,288 | 125,818 |
| :---: | :---: | :---: | :---: |
| Competitions | 95,987 | 98,850 | 113,810 |
| Projects | 7,403 | 24,050 | 29,800 |
| TOTAL EXPENDITURE | 209,802 | 237,188 | 269,428 |
| NET REVENUE/EXPENDITURE | $(133,481)$ | $(102,508)$ | $(98,428)$ |

## Budget 2000 - Research and Publications Divisions

| RESEARCH - SUMMARY | Audited prior yearend | Budget $1999$ | Budget 2000 |
| :---: | :---: | :---: | :---: |
| REVENUE |  |  |  |
| Administration | 1,100 | 400 | 400 |
| Meetings | 116,819 | 166,650 | 215,385 |
| Projects | 1,000 | 2,000 | 1,000 |
| TOTAL REVENUE | 118,919 | 169,050 | 216,785 |
| EXPENDITURE |  |  |  |
| Administration | 102,300 | 99,238 | 112,968 |
| Meetings | 112,386 | 171,345 | 217,895 |
| Projects | 2,523 | 1,600 | 1,600 |
| TOTAL EXPENDITURE | 217,209 | 272,183 | 332,463 |
| NET REVENUE/EXPENDITURE | $(98,290)$ | $(103,133)$ | $(115,678)$ |

PUBLISHING - SUMMARY

## REVENUE

| Administration | 6,237 | 0 | 1,500 |  |
| :--- | ---: | ---: | ---: | ---: |
| Journal | 535,263 | 509,350 | 530,257 |  |
| Bulletin | 167,410 | 154,890 | 165,833 |  |
| Notes | 7,175 | 8,628 | 10,030 |  |
| Camel | 1,100 | 15,108 | 78,391 |  |
| Crux | 45,147 | 46,830 | 48,485 |  |
| Other Publications | 14,604 | 18,600 | 25,300 |  |
| Projects | 4,321 | 7,400 | 0 |  |
|  |  | $\mathbf{7 8 1 , 2 5 7}$ | $\mathbf{7 6 0 , 8 0 6}$ | $\mathbf{8 5 9 , 7 9 6}$ |


| EXPENDITURE |  |  |  |
| :---: | :---: | :---: | :---: |
| Administration | 106,785 | 110,788 | 128,968 |
| Journal | 122,974 | 144,709 | 170,793 |
| Bulletin | 51,885 | 72,910 | 78,852 |
| Notes | 22,705 | 24,360 | 30,870 |
| Camel | 63,659 | 87,100 | 99,930 |
| Crux | 32,888 | 38,415 | 40,287 |
| Other Publications | 1,337 | 10,850 | 12,300 |
| Projects | 10,293 | 3,300 | 400 |
| TOTAL EXPENDITURE | 412,526 | 492,432 | 562,400 |
| NET REVENUE/EXPENDITURE | 368,731 | 268,374 | 297,396 |

## Education

## Morris Orzech (Queen's) Chair

|  | Sub-Committees: |  |
| :--- | :--- | :--- |
|  | Camel: <br> Jacqueline Klasa (Dawson College) <br> Jennifer Hyndman (UNBC) <br> Morris Orzech (Queen's) | Chair |
|  | Provincial Competitions: |  |
| Jacques Bélair (Montréal) | Morris Orzech (Queen's) | Chair |
| Eddy Campbell (Queen's) | Andy Liu (Alberta) |  |
| Afton Cayford (UBC) | Gordon MacDonald (UPEI) |  |
| John Grant McLoughlin (Memorial) | Public Appreciation of Mathematics: |  |
| Denis Hanson (Regina) John Grant McLoughlin (Memorial) | Chair |  |
| Jennifer Hyndman (UNBC) | Denis Hanson (Regina) |  |
| Jacqueline Klasa (Dawson College) | Andy Liu (Alberta) |  |
| Andy Liu (Alberta) | Morris Orzech (Queen's) |  |
| Gordon MacDonald (UPEI) |  |  |

The sub-committee structure of the Education Committee was changed in 1999, with the amalgamation of two committees into one. The Committee on Promoting Public Awareness of Mathematics and the Committee for Public Lectures were combined into a Committee on Grants for Public Appreciation of Mathematics, charged with adjudicating applications for talks and events aimed at fostering appreciation of mathematics as a subject of aesthetic, practical and scientific interest. In 1999 this CMS programme supported outreach talks at a CMESG conference, an elementary school Family Math Fair, and special exhibits at an APICS conference. As an extension of this outreach programme, the Education Committee initiated a special WMY2000 initiative to help fund public events at meetings of provincial mathematics teachers' associations. The Committee also undertook development of a CMS service for helping organizers of public outreach events recruit appropriate speakers.

The other subcommittees of the Education Committee are the Committee on Grants for Provincial Competitions and the Committee on Education Materials on Camel. The first of these committees oversaw CMS support of provincial or regional competitions involving high school students in eight Canadian provinces. The Education Materials on Camel committee worked on extending use of Camel: to distribute Education Committee administrative materials (e.g. forms and information on grant applications); to link to mathematics education organizations and mathematics education resources; and to support mathematics education discussion through a bulletin board modelled on Digital-After-Math (a CMS discussion site associated to Crux Mathematicorum ). The infrastructure for the education bulletin board was put in place, but public availability awaits changes in Camel structure.

The Education Committee is indirectly involved in the education sessions at the CMS annual meetings, through appointment of session organizers and by providing organizers with advice and organizational support. The education sessions at the Summer 1999 and Winter 1999 meetings were well-attended, and involved participation not only by CMS members but also by school teachers and CEGEP instructors. The themes were: What Competitions do for Mathematics and The Teaching of Linear Algebra.

This year the CMS sponsored three cash prizes for mathematics projects at the Canada Wide Science Fair in Edmonton. Arrangements for this participation involved the CMS Education Committee and the CMS Executive Director. The quality of all three winning projects was gratifyingly high. Another instance where the Committee was gratified by the high quality of contenders was in selecting the recipient of the 1999 Adrien Pouliot Award. It was the pleasure of the Education Committee to select Eric Muller for the award, in recognition of his long-term, varied, and significant contributions to mathematics education in Canada.

# Electronic Services 

Edgar Goodaire (Memorial) Chair

François Bergeron (UQAM)
Eddy Campbell (Queen's)
Gerald Cliff (Alberta)
Robert Corless (Western)
Ian Goulden (Waterloo)
Jacqueline Klasa (Dawson College)
June Lester (UNB)
L.W. Marcoux (Alberta)

Ian Putnam (Victoria)
Robert Quackenbush (Manitoba)
David Rodgers (Argus Associates)
Robert Rosebrugh (Mt. Allison)
Graham P. Wright (Ottawa)

The function of the Electronic Services Committee of the Canadian Mathematical Society is to provide advice about the electronic products and services offered by the CMS and to monitor Camel, the CMS web site. The responsibilities are major because almost every area of concern to the CMS is affected by and makes use of modern technology, from the Executive Office to publications, research, education and outreach.

The CMS web site (Camel - the Canadian Mathematics Electronic Service/Les Services Mathematiques Electroniques Canadiens) receives hundreds of thousands of "hits" per month. Created in 1994 and originally an experimental project of the Centre for Experimental and Constructive Mathematics of Simon Fraser University, a migration to the University of Ottawa was well under way by the end of 1999. In the future, the plan is to maintain and develop the CMS web site in Ottawa, while special projects and responsibility for digital versions of CMS journals will be the responsibility of the western "hump".

Camel has become an enormous depository of information and resources, about its membership, Canadian mathematics departments and institutes, and meetings, and it has links to a broad selection of web sites like NSERC and CTAN, the comprehensive $\backslash T e X \backslash$ archive, which are of special interest to mathematicians. One of its most popular areas is KaBoL - Knot a Braid of Links - a `cool math site of the week" service. Digital After Math provides a forum for exchanges amongst the readers of its highly regarded problem solving journal - Crux Mathematicorum with Mathematical Mayhem.

All CMS publications are now available on-line and long before hard copies arrive in mail boxes. Effective January 1, 2000 electronic versions of CMS journals will be included with the price of a regular subscription. Thus the Society should continue to see a return on its investment in digital publishing.

During 1999, an ad-hoc committee chaired by Ian Goulden of the University of Waterloo conducted a major review of all CMS electronic services and produced a report intended to guide future development. The report included some interesting suggestions of ways, over and above publishing, in which Camel can generate revenue. Also, to provide better focus, it recommended a considerable downsizing of the Committee, the effects of which were noticeable by the end of the year. Ex-officio
positions filled by individuals representing other CMS committees were removed, so we said good-bye to people who have previously provided important perspectives. In this connection, I thank especially Gerald Cliff, Ian Goulden, Jacqueline Klasa, June Lester and Ian Putnam. My thanks as well go to Eddy Campbell and Robert Rosebrugh, whose terms ended in December 1999. To all these people, and to continuing members Francois Bergeron, Robert Corless, Lawrence Marcoux and David Rodgers, I express my sincere gratitude for the time they have devoted to the Committee and for their personal advice and support.

# Endowment Grants 

James Timourian (Alberta) Chair

George Bluman (UBC)
Kathryn Hare (Waterloo)
Thomas Ransford (Laval)
Richard Wood (Dalhousie)

1999 was the year in which the CMS Endowment Grants and the Endowment Grants Committee were established. The Committee created documents to publicize the program, formed an application and review procedure, conducted the 1999 competition and made the first awards.

We received 13 applications for the 1999 competition. Eight were electronic applications, one was submitted as an attachment to an e-mail, and the others came into the Ottawa office either by mail, fax, or in some cases both methods. The total amount requested was $\$ 85,000$. In December, 1999, the Committee approved full or partial funding for 5 applicants totalling $\$ 17,200$, out of a budget allocation of \$40,000.

Applicants were informed in early January, 2000 of our decisions, and the successful applications can be viewed on line.

The number of applications we received was just enough: not enough to overwhelm us as we considered for the first time how to review them, but enough for us to test our procedures and to establish preliminary policies. We hope to receive many more in the 2000 Competition.

Materials for the 2000 Competition will be available on line by the spring. They will not be substantially different from the ones for 1999 , but we will have more options for people to submit applications electronically and have other changes suggested by participants in the 1999 competition. Potential applicants might find it useful to look at the successful 1999 proposals as well as the fresh advice we will provide in the Spring with the directions on how to apply.

We welcome any comments about projects we should fund, the procedures we have created, or the decisions we have made.

## Finance

Timothy Appelt (Structured Analytics)<br>Ian Goulden (Waterloo)<br>Richard Kane (Western)<br>Michael Lamoureux (Calgary)<br>Ben Segal (Gov. of Canada)<br>F. Arthur Sherk (Toronto)<br>Graham P. Wright (Ottawa)

The Finance Committee is responsible for the overall financial activities of the Society including the annual budget and the restricted investments funds (the Endowment Fund and the Mathematical Olympiad Fund).

The Treasurer's Report provides details on the 1999 Financial Year and the 2000 Budget.
This year, with the establishment of the Endowment Grants Competition, the first allocation from the Endowment Fund was approved. $\$ 40,000$ was allocated to the Endowment Grants Competition for the 1999 Competition. A minimum of $\$ 30,000$ has been approved for the 2000 Competition and the final amount will be confirmed by the Finance Committee at its October 2000 meeting.

With the transfer of the management of the Society's Restricted Investments to the Toronto Dominion Quantative Capital Division, the Board approved that the Investment Advisory Group (IAG) should be dissolved. The Society is extremely grateful to those who have served on the IAG over the years, particularly Ben Segal (Chair), Timothy Appelt and Andy Dencs.

The Finance Committee will continue to include up to two consultants as members. Timothy Appelt will continue as a consultant to the Committee for a further two years and David Bates (a member of the CMS Board of Directors) has kindly agreed to be also be a consultant to the Committee for two years.

# Fund Raising 

Richard Kane (Western) Chair

Lesya Balych (Bank of Montreal)<br>Jonathan Borwein (Simon Fraser)<br>Katherine Heinrich (Regina)<br>David Leeming (Victoria)<br>Rosaria Morelli

Georg Schmidt (McGill)
F. Arthur Sherk (Toronto)

Jon Thompson (UNB)
Joan Wick Pelletier (York)
Graham P. Wright (Ottawa)

## Government Sponsors

We reached a level of 8 ministries contributing a total of $\$ 28,000$ during 1998. Because of the provincial budget cycles we are still awaiting the 1999 funding decisions for some Provincial Ministries. So far funding has been received from Alberta, Saskatchewan, New Brunswick, Newfoundland, the North West Territories, Quebec and Ontario totalling \$???? (Amount to be filled in when we have the totals!).

## Corporate Sponsors

The total contributions from corporate sources during 1999 was $\$ 30,000$ of which $\$ 22,500$ was new funds. Sun Life agreed to double their contribution and become a Major Sponsor of the Canadian Mathematical Olympiad. The Imperial Oil Charitable Foundation became the Title Sponsor of a new programme of national and regional math camps. We were delighted to welcome some new corporate sponsors - Bank of Nova Scotia, Becton Dickinson Canada, Celestica International Incorporated and Royal Bank of Canada as new donors for 1999. The list of private and public sector sponsors is included in this Annual Report.

We are hopeful that a number of the contacts developed in last year's Fund Raising campaign will bear fruit this year. One notable success has already been attained. The Imperial Oil Charitable Foundation has agreed to almost double their support for 2000. A number of meetings with potential corporate sponsors will be taking place this year.

The format for corporate sponsorship has been simplified as a result of the experiences of the 1999 campaign. The goal is a clearer and more coherent framework. Activities have been grouped under headings (electronic, national \& international, community, awards) and sponsorship levels within a particular grouping are now fairly uniform.

## Membership

This is the first year in which the new reciprocity membership agreement with the AMS will be in effect and it is hoped that it will attract a number of new members, in particular those who are currently AMS but not CMS members. Three years of free membership is being offered to new faculty. In addition, all graduate students are being offered free membership and an electronic network for these students will be set up.

## Donations

For the past two CMS membership drives, members have been given the opportunity, when renewing, to direct their donations to specific areas of CMS operations. This proved to be very successful and will continue to be a feature of the membership renewal forms. In 1998 members donated over $\$ 6,200$. In 1999 members donated $\$ 14,800$. We are very grateful for our members' generosity.

# Human Rights 

David Poole (Trent) Chair

Lynn Batten (Manitoba)
Margaret Beattie (Mt. Allison)
Karl Dilcher (Dalhousie)
Paul Gauthier (Montréal)
Zhiguo Hu (Windsor)

In 1999, the Society adopted a position statement on the employment situation for young mathematicians in Canada. This statement was prepared by the Human Rights Committee at the request of the Executive Committee. The statement that was approved unanimously by the CMS Board of Directors is as follows:
"The Canadian Mathematical Society has a natural interest in the employment situation for young mathematicians. Consequently, the Society is concerned over the appearance of some job advertisements in which mathematics departments at some Canadian universities are offering only short-term appointments (some as brief as nine months) in order to fill regular teaching positions. This has prompted the CMS to investigate the number of short-term appointments, and to draft this statement expressing its concern over the consequences of such appointments.

The Canadian Mathematical Society understands that short-term university appointments can be an effective solution to certain staffing problems. However, the Society holds the view that, with the possible exception of research positions, short-term appointments should be made only to fill short-term staffing needs. Whenever there is a continuing need for staff, positions should be filled by continuing appointments.

The systematic hiring of young mathematicians into non-continuing appointments undermines our profession: good people are deterred from entering mathematics by such insecure career prospects, while emerging mathematicians find themselves in circumstances that inhibit their pursuit of excellence in teaching and research. The Society urges its members to work to ensure that their departments and faculties promote the ongoing development and health of our profession."

In the fall of 1999, there was good news in the form of a news report that the South Korean mathematician Ahn Jae-Ku had been released from prison following a change of government in that country. Professor Ahn had been jailed in 1994 for allegedly pro-North Korean activities. The Human Rights Committee and the Society had been monitoring the case and, along with other international organizations, had lobbied for Ahn's release. The Committee is trying to obtain independent information as to Professor Jae-Ku's well-being so that a more detailed report can be provided to the Society and the Canadian mathematical community.

# International Affairs 

Peter Fillmore (Dalhousie) Chair

Henri Darmon (McGill)
Mohammad Hamdan (UNB)
Katherine Heinrich (Regina)
Robert Miura (UBC)
Thomas Salisbury (York)
Catherine Sulem (Toronto)
Nicole Tomczak-Jaegermann (Alberta)

Professor Miura represents the Canadian Applied and Industrial Mathematics Society and Professor Salisbury the Statistical Society of Canada. The seat for the representative of the Canadian Mathematics Education Study Group is vacant.

As was reported to the Board a year ago, at that time the CMS-NRC partnership agreement was due for reassessment by NRC and the committee was beginning the process of gathering the information requested by NRC for this purpose. The review was conducted by NRC's Committee on International Science, Engineering and Technology (CISET). In July we heard that on CISET's recommendation NRC had offered to extend the agreement, subject to minor modification (including re-establishment of an NRC contribution to travel costs of Canada's IMU General Assembly delegation). But we also heard that "CISET members expressed some concern as to the number of Canadian involved in IMU activities both at the national and international levels [and] asked that every effort be made in the future to increase Canadian participation". IAC is somewhat mystified by this but we think it is important to understand and address CISET's concern.

The Committee was asked by NRC to provide input for the Canadian delegation to the "World Conference on Science - Science for the Twenty-First Century: a New Committment", held in July in Budapest. We proposed that Canada "urge governments to give priority to measures that will increase mathematical literacy at all levels". We are sorry to report that in spite of our suggestion the conference documents do not contain any reference to mathematics. This is somewhat puzzling as UNESCO is a sponsor of both this conference and the "World Mathematical Year 2000".

Part of NRC's mandate is to encourage and support the holding of international congresses in Canada. The Committee was not aware of any interest in the Canadian mathematical community in hosting ICM2006, and in any case such countries as France, Germany and Russia are due to host it again before Canada does.

On our recommendation Canada voted in support of establishing the IMU ad hoc Committee on Electronic Information and Communication. This important committee has begun to function, with Jon Borwein as a member, and we trust that more information will soon be available.

In November the Committee submitted to NRC the annual report required by the CMS-NRC agreement. That report contains further details of the Committee's activities.

# Mathematical Competitions 

Daryl Tingley (UNB) Chair

Margaret Beattie (Mt. Allison)
Peter Crippin (Waterloo)
Luis Goddyn (Simon Fraser)
Richard Nowakowski (Dalhousie)
Bill Sands (Calgary)
Christopher Small (Waterloo)
Jean Turgeon (Montréal)
Graham P. Wright (Ottawa)

## Sub-Committees:

Correspondence Programme:
Edward J. Barbeau (Toronto) Coordinator

International Mathematical Olympiad:
Bill Sands (Calgary) Chair
Edward Barbeau (Toronto)
Andy Liu (Alberta)
Richard Nowakowski (Dalhousie)
Christopher Small (Waterloo)

Canadian Open Mathematics Challenge:<br>Peter Crippin (Waterloo) Chair<br>Radford de Peiza<br>Ronald Dunkley (Waterloo)<br>Gareth Griffith (Saskatchewan)<br>Gordon Nicholls (Waterloo)<br>Daryl Tingley (UNB)

Canadian Mathematical Olympiad:
Luis Goddyn (Simon Fraser) Chair
Iliya Bluskov (UNBC)
Richard Brewster (Capilano College)
Petr Lisonek (Simon Fraser)
Richard Lockhart (Simon Fraser)
Reza Naserasr (Simon Fraser)
Naoki Sato (Yale)
Daryl Tingley (UNB)
Edward Wang (Wilfrid Laurier)

The Mathematical Competitions Committee (MCC) of the CMS 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 MCC include the Mathematical Olympiads' Correspondence Program, and Mathematics Camps.

At the June 1999 meeting of the CMS Board of Directors, the Mathematical Olympiads Committee was renamed the Mathematical Competitions Committee. The name change was thought to be desirable as some of the recent initiatives of the Committee have been below the Olympiad level. These include the introduction of the Canadian Open Mathematics Challenge, a competition which is designed for a far greater number of students than those able to perform at the Olympiad level, the creation of the ATOM (A Taste Of Mathematics) series of enrichment books (these now come under the mandate of the Publications Committee), and the introduction of a programme of Math Camps at the grades 9-11 levels. Although all the camps the MCC is involved with, including the IMO training camps, give top notch students a wealth of mathematical enrichment, the IMO training camps and The National Math Camp (see below) are competition based. The ESSO Regional Math Camps are for mathematical enrichment. Their responsibility may well be moved to another CMS standing committee.

Much of the work of the MCC is done by its three subcommittees, namely the Canadian Open Mathematics Challenge Committee, the Canadian Mathematical Olympiad Committee and the International Mathematical Olympiad Committee. Further information, including press releases, on most of the topics in this report can be found through the CMS Competitions web page: http://www.math.ca/CMS/Competitions/.

The year closed on a tragic note for all of us involved with the Society's competition efforts. Jessie Lei, a two time member of Canada's IMO team and whose name appears frequently below, was in a traffic accident on Christmas Day, and died on New Years Day. (Her mother also died in the accident.) We will all miss her contagious smile and laughter.

## The Canadian Mathematical Olympiad

The $31^{\text {st }}$ Canadian Mathematical Olympiad (CMO) took place on March $31^{\text {st }}$, 1999. The top three students were Jimmy Chui Earl Haig Secondary School, Toronto, Ontario; Adrian Chan, Upper Canada College, Toronto, Ontario; and David Pritchard, Woburn C.I., Scarborough, Ontario.

These students received prizes of $\$ 2,000, \$ 1,500$ and $\$ 1,000$, respectively. In addition, Jimmy Chui was presented with the Sun Life Cup, and all winners received book prizes, donated by John Wiley \& Sons and Nelson Thomson Learning.

More information about the 1999 CMO is available from the press releases (http://www.camel.math.ca/New), the CMO web page (http://www.camel.math.ca/CMS/Competitions/CMO/) and the September 1999 issue of the CMS Notes (http://camel.math.ca/CMS/Notes/).

## The Asian Pacific Mathematics Olympiad

The 1999 Asian Pacific Mathematics Olympiad (APMO) was written in March by 35 Canadian students, selected either because they had been been invited to the Canadian Mathematical Society's 1999 Winter IMO Training Camp in January, or because they had placed well in the 1998 Canadian Open Mathematics Challenge. The Canadian students performed very well, receiving 7 medals and an honourable mention. Canada placed 7th amongst the 21 participating countries. Adrian Chan received a gold medal, David Arthur and David Nicholson received silver medals, while Daniel Brox, David Pritchard, Jimmy Chui, and Jessie Lei received bronze medals. Adrian Lau received an honourable mention.

## The International Mathematical Olympiad

The 1999 (40th) International Mathematical Olympiad (IMO) was held in Bucharest, Romania July 10-22, with 82 countries participating. Canada's team consisted of Jimmy Chui, Earl Haig Secondary School, North York, Ontario and Yin (Jessie) Lei, Vincent Massey Secondary School, Windsor, Ontario both of whom were part of Canada's 1998 IMO team, and David Arthur, Upper Canada College, Toronto, Ontario; James Lee, Eric Hamber Secondary School, Vancouver, British Columbia; David Nicholson, Fenelon Falls Secondary School, Ontario; and David Pritchard, Woburn Collegiate Institute, Scarborough, Ontario.

The Team Leader was Dr. Edward Barbeau (University of Toronto), the Deputy Team Leader Dr. Arthur Baragar, (University of Nevada - Las Vegas and a member of Canada's first IMO team in 1981), and the Deputy Team Leader - Observer was Dr. Dorette Pronk (Dalhousie University and Calvin College, Michigan).

A number of events were held prior to the team's departure to Bucharest. A reception was held at The Bank of Montreal Institute for Learning in Toronto on June 29, 1999, where the team was introduced to the media and invited guests. Then a two week training camp was hosted at the University of Waterloo from June 30 - July 11 (see below).

At the Awards Ceremony in Bucharest, Bronze Medals were awarded to David Arthur, Jimmy Chui and David Pritchard. More information is available from the press releases (http://www.camel.math.ca/New/) and an article by Ed Barbeau in the November 1999 edition of the CMS Notes (http://www.camel.math.ca/CMS/Notes/).

## IMO Training Camps

Two training camps are held each year to prepare students for the IMO. The CMS Winter IMO Training Camp, held in January, 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 CMS Summer IMO Training Camp is used for intensive training of the actual IMO team.

The 1999 Winter IMO Training camp took place at York University from January 7 to January 10. Students were selected on the basis of their performance in a variety of competitions. The camp featured a group of 14 students from across the country as well as a team of trainers and support people: Ed Barbeau, Arthur Baragar and Dorette Pronk (the team leaders) Bill Sands (University of Calgary, Chair of the IMO committee), and Felix Recio.

The 1999 Summer IMO Training camp took place in Waterloo from June 30 to July 12. The coaches were Ed Barbeau, Arthur Baragar and Dorette Pronk, as well as Christopher Small (Team Leader in 1998), Richard Hoshino (a member of the 1996 IMO Team), and Ed Wang (Wilfred Laurier University). Peter Crippin (University of Waterloo) made the local arrangements.

## Mathematical Olympiads' Correspondence Program

The Mathematical Olympiads' Correspondence Program(MOCP) is a problems based correspondence program. It is intended for Canadian (or permanent resident) high school students with exceptional mathematical ability who wish to pursue mathematical problem solving at a high level and/or have ambitions to compete in Mathematical Olympiads. Dr. Edward Barbeau has been the coordinator of this programme for many years. Dr. Barbeau sends out problem sets and marks (with copious comments) the solutions returned by the students. During 1998-99, 21 students participated and about 50 students are registered for the 1999-2000 year.

## ESSO Math Camps

The Imperial Oil Charitable Foundation generously agreed to be the Title sponsor of a series of "Esso Math Camps". During June 19-25, 1999 the second CMS National Math Camp took place at the University of Waterloo. Seventeen students from across the country attended. The camp was organized and run by Tom and Marlene Griffiths, Richard Hoshino, Adam Brown and Wai Ling Yee, with the help of a number of the IMO alumni who were in the Waterloo area.

In addition to the National Math Camp, two ESSO Math Camps were held at The University of Calgary and the University of Western Ontario. The University of Calgary ran a week long residential camp from July 17-23. A total of 28 students attended the camp. These students came from across Western Canada. The camp was organized and run by Bill Sands (University of Calgary) with the help of many Calgary faculty, staff, teachers, students and others.

The University of Western Ontario ran a three day "day camp" (the students went home each evening) August $10,11,12$, with 20 students from the London area participating. This camp was organized by Richard Kane (University of Western Ontario), with the help of other faculty from UWO teachers from the London area.

More detailed reports on these camps are available.
For the year 2000, the Society plans to increase the number of ESSO Math Camps. Currently, there will be a National Camp at the University of Western Ontario (organized by Tom Griffiths), and regional camps at Dalhousie University, the University of New Brunswick, Brebeuf College (Montreal), the University of Ottawa, Brock University, the University of Western Ontario, the University of Regina and the University of Calgary.

## The Canadian Open Mathematics Challenge

The COMC is a math contest written in November of each year. Although it is the last MCC event of the calendar year (and hence of this report) it is the first scheduled MCC event of the academic year. The COMC 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 considered for the selection of students to the IMO winter training camp. Plaques are awarded to both the students and schools for being a provincial or regional winner and Gold Medals are awarded to up to 9 other students in each province or region.

The fourth COMC was held on November 25, 1999. Almost 5,000 students participated. This was a substantial increase from last year, when about 3,200 students participated. For a list of the regional and provincial winners, please see the press releases(http://www.camel.math.ca/New/) and the COMC web page (http://www.camel.math.ca/CMS/Competitions/COMC).

As the increase in the number of students participating shows, the COMC is going well. Schools and provincial governments seem to like the opportunity to see how their top students fair on a national basis. The Society's increased interest in students(including the COMC and Math Camps) is reaping various rewards.

## A Note of Thanks

As I hope this report shows, the MCC is a very active committee. I wish to thank all of the members of the MCC and its subcommittees for their time and effort. As many know, the CMS is a society of volunteers. Members of the MCC contribute large amounts of time to make our events run smoothly. I must also thank the staff of the CMS Executive Office and the Executive Director, Graham Wright. They perform much of the administrative work for the MCC and its sub-committees and ensure seamless transition as chairs and membership changes.

# Nominating 

## Kenneth Davidson (Waterloo) Chair

Edward Barbeau (Toronto)<br>Jonathan Borwein (Simon Fraser)<br>Steven Boyer (UQAM)<br>Katherine Heinrich (Regina)<br>Richard Kane (Western)<br>Anthony Lau (Alberta)<br>Wendy MacCaull (St. Francis Xavier)

In addition to all the vacancies on various standing committees being filled, the terms of reference for the new Endowment Grants Committee and the Student Committee were approved.

The Board approved the dissolution of the Government Policy Committee. The major responsibilities of this Committee over the past few years has been the Annual Survey of the Mathematics Profession in Canada and providing representatives to attend the meetings of several organizations located in the Ottawa area. These responsibilities will be reassigned to particular individuals appointed by the Executive Committee.

In accordance with a broader mandate, the name of the Mathematical Olympiads Committee has been changed to Mathematical Competitions Committee. The Terms of Reference of a number of standing committee were modified to more accurately reflect the current situtation.

A complete slate for the Endowment Grant Committee was approved by the Board of Directors in June in time for the first Endowment Grants Competition to take place in the fall of 1999.

The membership of the Student Committee is subject to the approval of the Nominating Committee and all vacancies were filled effective September 1, 1999.

## Publications

James Mingo (Queen's) Chair

Gerald Cliff (Alberta)<br>Bradd Hart (McMaster)<br>Anthony Peirce (UBC)<br>Thomas Salisbury (York)<br>Christine Soteros (Saskatchewan)<br>Richard Wood (Dalhousie)

The Publications Committee oversees the publishing activities of the Society. The publications of the Society together with their editors-in-chief are:

Canadian Journal of Mathematics J. Carrell and N. Ghoussoub (UBC)<br>Canadian Mathematical Bulletin M. Min-Oo and A. Nicas (McMaster)<br>Crux Mathematicorum with<br>Mathematical Mayhem Bruce Shawyer (Memorial)<br>CMS Book Series J. Borwein and P. Borwein (SFU)<br>Conference Proceedings Series<br>CMS Notes<br>A Taste of Mathematics R. Nowakowski (Dalhousie)

## The G. de B. Robinson Prize

This prize is awarded each year for an outstanding article published in one of the Society's two research journals; in even numbered years the prize is awarded for an article published in the Canadian Journal of Mathematics and in odd numbered years for an article published in the Canadian Mathematical Bulletin. The jury recommended that no award be made this year.

## On-line Journals

In 1999, the Committee recommended that, when in final form, CJM/CMB articles will be posted CJM/CMB web pages in the free area. They will remain there until the number in which they appear is printed.

## CMS Advanced Book Series

The contract with Springer Verlag as the new publisher of the CMS Advanced Book Series was finalized and several manuscripts have been accepted for publication. The first books in this new series should be released early in 2000.

## Conference Proceedings Series

In mid-1999, the publisher of the series, the American Mathematical Society, gave notice that it wishes the discontinue publishing the series. The Committee is exploring ways to keep the series going as an electronic publication.

In the meantime, the Committee gave its approval to a new series of lecture notes and short monographs. The American Mathematical Society has given approval in principle to publish the series. A contract is being negotiated.

## Editorial Appointments

The Publications Committee approved the following appointments and, where necessary, all recommendations were approved by the Board of Directors.

The Editorial Board for the Canadian Journal of Mathematics and Canadian Mathematical Bulletin - Associate Editors: Martin Barlow (UBC), Peter Borwein(SFU), Nicholas Pippenger from January 2000 to December 2004.

Canadian Mathematical Bulletin - Editors-in-Chief: James Lewis (Alberta), Arturo Pianzola (Alberta) and Noriko Yui (Queen's) from January 2001 to December 2005.

CMS Notes - Editors-in-Chief: P. Fillmore and S. Swaminathan (Dalhousie) from January 2001 to December 2002.

A Taste of Mathematics - Associate Editor Katherine Heinrich (Regina), Associate Editor from January 2000 to December 2004.

Crux Mathematicorum with Mathematical Mayhem - Editorial Board: Bruce Shawyer (Memorial)

- Editor-in-Chief and Clayton Halfyard (Memorial) - Associate Editor from January 2001 to December 2002 and Bruce Gilligan, Articles Editor from January 2000 to December 2004.


## Research

Niky Kamran (McGill) Chair

Martin Barlow (UBC)
François Bergeron (UQAM)
Jacques Hurtubise (McGill)
V. Kumar Murty (Toronto)

Ian Putnam (Victoria)<br>Dana Schlomiuk (Montréal)<br>Cameron Stewart (Waterloo)

The 1999 Summer Meeting of the CMS was held in St. John's, Newfoundland, and was hosted by Memorial University. There were the following research sessions: Perspectives in Ring Theory, organized by Eric Jespers (Brussels) and Edgar Goodaire (Memorial), Harmonic Analysis, organized by Kathryn Hare (Waterloo) and supported by CRM, Representation Theory, organized Abraham Broer (Montreal) and supported by the Fields Institute, Combinatorics and its Applications, organized by Nabil Shalaby (Memorial) and Douglas Stinson (Waterloo), Nonlinear Analysis, organized by S. P. Singh and Bruce Watson (Memorial), Surveys in Mathematics, organized by Kumar Murty (Toronto) and Niky Kamran (McGill). The Jeffery-Williams Prize Lecturer was John Friedlander (Toronto) and the Krieger-Nelson Prize Lecturer was Nicole Tomczak-Jaegermann (Alberta).

The research plenary lectures were given by Michel van den Bergh (VUB, Brussels), Ranee Brylinski (Penn State), Tom Korner (Cambridge), Doug Stinson (Waterloo) and Luc Vinet (Montreal).

The Research Committee met in St. John's and selected the four core CMS sessions for the Summer 2001 meeting, to be held in Saskatoon. This was done in consultation with Keith Taylor, who will be serving as the Meeting Director.

The 1999 Winter Meeting of the CMS was held in Montreal, Québec and hosted by the Université de Montreal. There were the following research sessions: Algebraic Combinatorics, Group Representations and Macdonald Polynomials, organized by Francois Bergeron (UQAM), Nantel Bergeron (York) and Mike Zabrocki (UQAM) and supported by CRM and LaCIM, Mathematical Physics I. Probability Methods and Applications, II. Group Theory Methods and Applications, organized by George Bluman (UBC), Michel Grundland (UQTR and CRM), and Gordon Slade (UBC) and supported by PIms, Orders, Lattices and Universal Algebra, organized by Lucien Haddad (Royal Military College, Kingston), Benoit Larose (College regional Champlain, Longueuil) and Ivo Rosenberg (Montreal), Computing and Mathematical Modelling, organized by Pierre Hansen (HEC) and Gilbert Laporte (CRT) and supported by NCM2, Mathematical Genetics and Genomics, organized by Sabin Lessard and David Sankoff (Montreal) and supported by the Fields Institute, Applied logic, organized by Wendy MacCaull (St-Francis Xavier), Prakash Panangaden (McGill), and Phil Scott (Ottawa), Algebraic and Geometric Methods in Differential Equations, organized by Angelo Mingarelli (Carleton) and Christiane Rousseau (Montreal) and supported by CRM. The Coxeter-James Prize Lecturer was Maciej Zworski (Berkeley and Toronto). The Doctoral Prize lecture was given by Jian Shen (Queen's).

The research plenary lectures were given by Andreas Dress (Bielefeld), Adriano Garsia (UCSD), Elliot H. Lieb (Princeton) and Zhihong Xia (Northwestern and Georgia Tech).

The Research Committee met in Montreal and selected the four core sessions for the Winter 2001 meeting, to be held at York University. This was done in consultation with Tom Salisbury, who will be serving as the Meeting Director.

The next meetings of the CMS will be held in Hamilton (McMaster) in Summer 2000, Vancouver (UBC) in Winter 2000, Saskatoon (Saskatchewan) in Summer 2001 and Toronto (York ) in the Winter of 2001.

## Students

## Daniel Piché (Waterloo) Chair

Susan Cooper (Queen's)
Gabriella Couto
Tullia Dymarz
Alexandre Girouard
Andrew Irwin

Robert Juricevic
Dave Morgan
Robert Woodrow (Calgary)
Graham P. Wright (Ottawa)

This is the first annual report of the newly formed Student Committee, which began in September 1999. Our first meeting was held in December 1999, to determine what our objectives should be and what the Committee should focus upon.

The Student Committee is responsible for all aspects of mathematics student affairs. The ones we are focusing upon at present are:

1. Development of a national student newsletter
2. Development of a student Web site at the CMS
3. Supporting the Canadian Undergraduate Mathematics Conference (CUMC), through funding, organisational planning and editing its proceedings
4. Supporting regional student initiatives
5. Responding to Task Force recommendations on student related issues

We expect that 2000 will be a busy year and that our next report will be longer. At this time I would like to thank the Committee members for giving their time, and their home universities for their support towards our first meeting.

# Women in Mathematics 

Shelly Wismath (Lethbridge) Chair

Robert Corless (Western)
Nancy Heckman (UBC)
Jennifer Hyndman (UNBC)
Lisa Jeffrey (Toronto)

June Lester (UNB)
Keith Taylor (Saskatchewan)
Richard Wood (Dalhousie)
Frank Zorzitto (Waterloo)

The Committee for Women in Mathematics (CWM) is charged with monitoring the status of women within the Canadian mathematical community and the Society, recommending actions to the Board which will ensure the equitable treatment of women there, and encouraging the participation of women at all levels of mathematics.

The main activity of the CWM in 1999 has been on-going work on two projects. The first is the Directory of Canadian Women in the Mathematical Sciences, a project conceived and started up by former CWM Chair Joan Geramita with funding from Nancy's Very Own Foundation and assistance from Camel. The Directory is an indexed collection of web pages of Canadian-connected women who are actively involved in some aspect of the mathematical sciences. Each web page lists name, address, contact information and research interests for the woman mathematician; she may also provide links to her home page or curriculum vitae if she wishes. With some additional advertising this year (handouts at CMS and other conferences and e-mail letters), we now have 62 women listed in the Directory. The Directory is searchable, for instance by geographical or research area, and should provide a valuable resource for those searching the Web for information about Canadian women mathematicians. Check it out at http://camel.math.ca/Women/WMpages/

Our second major project is a poster to celebrate the role of women in mathematics as part of the Mathematics Year 2000 events. Jennifer Hyndman is co-ordinating this project, which will feature the Krieger-Nelson Prize winners.

Frank Zorzitto (Waterloo) joined the committee as of January 1999. Lisa Jeffrey (Toronto) finished her term in December 1999 and will be replaced by Neal Madras (York). Shelly Wismath (Lethbridge) finished her term as Chair of the Committee in December 1999, but will continue as a member for an additional year. Malgorzata Dubiel (SFU) will take over as Chair January 1, 2000.

## Editorial Boards

Canadian Journal of Mathematics (CJM) Graham P. Wright (Ottawa) - Managing Editor and the<br>Canadian Mathematical Bulletin (CMB)<br>Editors-in-Chief - CJM<br>James Carrell (UBC)<br>Nassif Ghoussoub (UBC)<br>Editors-in-Chief- CMB<br>Maug Min-Oo (McMaster)<br>Andrew Nicas (McMaster)<br>Associate Editors<br>Brian Alspach (Simon Fraser)<br>John Bland (Toronto)<br>John Friedlander (Toronto)<br>Mark Goresky (Inst for Adv Study)<br>Nigel Higson (Penn State)<br>John Jardine (Western)<br>François Lalonde (UQAM)<br>Joe Lipman (Purdue)<br>John Millson (Maryland)<br>Edwin Perkins (UBC)<br>Catherine Sulem (Toronto)<br>\section*{Crux Mathematicorum with}<br>Mathematical Mayhem<br>\section*{Editor-in-Chief}<br>Bruce Shawyer (Memorial)<br>Catharine Baker (Mt. Allison)<br>J. Chris Fisher (Regina) - Problems Editor<br>Richard Guy (Calgary) - Editor at Large<br>Clayton Halfyard (Memorial) - Associate Editor<br>Denis Hanson (Regina) - Articles<br>Cyrus Hsia (Toronto) - Mayhem Assistant Editor<br>Loki Jörgenson (Simon Fraser) - Digital Editor<br>Alan Law (Waterloo) - Book Reviews<br>Robert Quackenbush (Manitoba) Managing Editor<br>Naoki Sato (Yale) - Mayhem Editor<br>Jim Totten (Cariboo College)<br>Edward Wang (Wilfrid Laurier) - Problems Editor<br>Robert Woodrow (Calgary) - Olympiad Editor<br>CMS Conference Proceedings<br>Series (CPS)<br>Editors-in-Chief<br>Anthony Geramita (Queen's)<br>Niky Kamran (McGill)<br>CMS Series of Advanced Books in<br>Mathematics (SAMB)<br>\section*{Editors-in-Chief}<br>Jonathan Borwein (Simon Fraser)<br>Peter Borwein (Simon Fraser)<br>CMS Notes<br>Editors-in-Chief<br>Peter Fillmore (Dalhousie)<br>S. Swaminathan (Dalhousie)<br>R. Quackenbush (Manitoba) Managing Editor Graham P. Wright (Ottawa) Managing Editor<br>CMS Notes Contributing Editors:<br>Edward Barbeau (Toronto) - Education<br>Monique Bouchard (CMS) - Meetings<br>James Lewis (Alberta) - Research<br>Noriko Yui (Queen's) - Research<br>\section*{A Taste of Mathematics (ATOM)}<br>\section*{Editor-in-Chief}<br>Richard J. Nowakowski (Dalhousie)<br>\section*{Associate Editors}<br>Edward J. Barbeau (Toronto)<br>Bruce Shawyer (Memorial)<br>R. Quackenbush (Manitoba) - Managing Editor<br>Graham P. Wright (Ottawa) - Managing Editor

## Contributors

The Canadian Mathematical Society would like to acknowledge the following individuals, foundations and corporations for their encouragement and support. In addition to these, more than 100 members contributed to the Society's various activities.

Government of Alberta
James and Dorothy Arthur
The Bank of Nova Scotia
Becton-Dickinson Canada Inc.
Board of Education for the City of Toronto
University of British Columbia
University of Calgary
Canada Life Assurance Company
Celestica International
Centre de Recherches Mathématiques
The Centre for Education in Mathematics and Computing
Stephen Chui
Citibank
Dalhousie University
Eric Hamber Secondary School
The Fields Institute for Research in Mathematical Sciences
Imperial Oil Charitable Foundation
Institut des sciences mathématiques
John Wiley \& Sons Canada Ltd.
Laboratoire universitaire Bell Canada
Angeline Lim
University of Manitoba
McMaster University
Memorial University of Newfoundland
Nelson Thomson Learning

Network for Computing and Mathematical Modelling
Government of New Brunswick
Government of Newfoundland \& Labrador
Al and Evelyn Nicholson
Government of the Northwest Territories
Government of Ontario
University of Ottawa
The Pacific Institute for the Mathematical Sciences
Karen Pritchard
Government of Québec
Royal Bank of Canada
Samuel Beatty Fund
Government of Saskatchewan
Simon Fraser University
Springer-Verlag
Sun Life Assurance Company of Canada
Andrzej Szymanski
Upper Canada College
University of Waterloo
Waterloo Maple
University of Western Ontario
Ya Wu

## CMS Executive Committee

| President | Richard Kane | University of Western Ontario |
| :--- | :--- | :--- |
| Past-President (Jan-May 99) |  |  |
| President-Elect (May-Dec 99) | Katherine Heinrich <br> Jonathan Borwein | Simon Fraser University <br> Simon Fraser University |
| Vice Presidents (Jan-May 99) | Lynn Batten <br> Eddy Campbell <br> Jacques Hurtubise <br> Richard Wood | University of Manitoba <br> Queen's University <br> McGill University <br> Dalhousie University |
| Vice Presidents (May-Dec 99) | Margaret Beattie <br> François Bergeron <br> Thomas S. Salisbury <br> Keith F. Taylor | Mount Allison University <br> Université du Québec à Montréal <br> University of Saskatchewan |
| Executive Director and Secretary | Graham P. Wright | University of Ottawa |
| Treasurer | F. Arthur Sherk | University of Toronto |

## CMS Board of Directors

Thomas Archibald - Acadia University Lesya Balych - Bank of Montreal David Bates - Aetna Life Insurance Co. Lynn Batten - University of Manitoba Margaret Beattie - Mount Allison University Jacques Bélair - Université de Montréal François Bergeron - UQAM<br>George Bluman - University of British Columbia<br>Peter Booth - Memorial Univ of Newfoundland Jonathan Borwein - Simon Fraser University Jason Brown - Dalhousie University Eddy Campbell - Queen's University Andrew Carson - University of Saskatchewan F. Peter Cass - University of Western Ontario John Chadam - University of Pittsburgh<br>Benoit Charbonneau - Massachusetts Inst. of Tech<br>Richard Charron - Memorial University of Newfoundland<br>Susan Cooper - Queen's University<br>Henri Darmon - McGill University<br>Robert Dawson - St-Mary's University<br>François Dubeau - Université de Sherbrooke Joan Geramita - Queen's University<br>Fereidoun Ghahramani - University of Manitoba<br>Penny Haxell - University of Waterloo

Katherine Heinrich - University of Regina
Jacques Hurtubise - McGill University Jennifer Hyndman - Univ of Northern British Columbia
Lisa Jeffrey - University of Toronto
Richard Kane - University of Western Ontario
Michael Lamoureux - University of Calgary
Anthony Lau - University of Alberta
Neal Madras - York University
Michael Makkai - McGill University
Julien Marcil - Université de Montréal
Judith McDonald - University of Regina
Rosaria Morelli
V. Kumar Murty - University of Toronto

Donal O'Shea - Mount Holyoke College
Daniel Piché - University of Waterloo
Michel Racine - University of Ottawa
Thomas Ransford - Université Laval
Thomas Salisbury - York University
Georg Schmidt - McGill University
Karen Seyffarth - University of Calgary
Keith Taylor - University of Saskatchewan
Daryl Tingley - University of New Brunswick
David Wehlau - Royal Military College
Sylvia Wiegand - University of Nebraska

Gail Wolkowicz - McMaster University
Richard Wood - Dalhousie University

# CMS Executive Office 

Canadian Mathematical Society
577 King Edward, Suite 109
P.O. Box 450, Station A

Ottawa, ON Canada K1N 6N5

Tel: (613) 562-5702
Fax: (613) 565-1539
email: office@cms.math.ca www.cms.math.ca

## CMS Executive Office Staff

| Graham P. Wright | Executive Director and Secretary |
| :--- | :--- |
| Monique L. Bouchard | Operations Manager |
| Caroline Baskerville | Assistant to the Executive Director |
| Diane J. Ellis | Comptroller |
| Alan Kelm | Site Manager - Camel East |
| Suzanne Lalonde | Executive Office Clerk |
| Claire Ryan | Financial Assistant |
| Chantal Stevenson | Membership and Publications Agent |

