

# Do the Math 2013 RAPPORT ANNUEL 2013 ANNUAL REPORT

Société mathématique du Canada · Canadian Mathematical Society

The Canadian Mathematical Society promotes the advancement, discovery, learning and application of mathematics.

La Société mathématique du Canada favorise l'avancement, la découverte, l'apprentissage et l'application des mathématiques.

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#### CANADIAN MATHEMATICAL SOCIETY

The voice of mathematics since 1945

#### WHY MATH

Mathematical thinking and abilities are critical success factors that fuel both national and personal prosperity. Mathematics allows economies to be understood and business sectors to function. Mathematics helps individuals understand, model, and change the world around them. Mathematics is creative. Mathematics is beautiful. Mathematics is universal. And mathematics is vitally important to the success of our nation, our enterprises, and our lives.To nurture that success, the Canadian Mathematical Society (CMS) promotes the advancement, discovery, learning and application of mathematics in Canada.

#### HISTORY

In 1945 a group of mathematicians met in Montreal as the *Canadian Mathematical Congress*. The group's aim was to try and collectively initiate important mathematical developments in Canada. This meeting led to the development of the Canadian Mathematical Society (CMS). The CMS has since evolved into Canada's voice of mathematics as the national professional society for Canadian mathematics.

#### **ABOUT US**

The CMS is all about mathematics. It's about mathematics research and discovery. It's about mathematics education and learning. It's about mathematics in daily life and in business. And it's about nurturing a strong and dynamic Canadian mathematics community from coast to coast to coast.

The CMS is a volunteer and member-based, notfor-profit, federally registered charity. The CMS membership encompasses professors, teachers, students, parents, universities, CEGEPs, colleges, schools, corporations, individuals, and other math societies from Canada and around the world. The CMS Board of Directora has representation from



#### **SOCIÉTÉ MATHÉMATIQUE DU CANADA** La voix de mathématiques

dépuis 1945

#### POURQUOI LA MATHÉMATIQUE

Une pensée mathématique et des capacités en mathématique sont des éléments de réussite essentiels pour assurer la prospérité nationale et personnelle. La mathématique permet aux économies d'être comprises et aux secteurs d'affaires de fonctionner. La mathématique aide les particuliers à comprendre, à modéliser et à changer leur univers. La mathématique est une discipline reposant sur la créativité. La mathématique est la beauté même. La mathématique est universelle. Et la mathématique est d'une importance vitale pour la réussite de notre pays et de nos entreprises et pour notre réussite personnelle. Pour favoriser cette réussite, la Société mathématique du Canada (SMC) s'est donnée pour mandat de promouvoir et de favoriser la découverte et l'apprentissage des mathématiques, et les applications qui en découlent à travers le Canada.

#### **HISTORIQUE**

En 1945, un groupe de mathématiciens se sont réunis à Montréal sous le nom de *Canadian Mathematical Congress*. Le groupe souhaitait lancer les fondements d'importantes percées en mathématique au Canada. Cette rencontre a entraîné la création de la Société mathématique du Canada (SMC). La SMC est devenue la voix de la mathématique du Canada en sa qualité de société professionnelle nationale pour la mathématique au Canada.

#### À PROPOS DE NOUS

Tout à la SMC gravite autour de la mathématique. Il est question de recherche et de découvertes en mathématique. Il est question d'enseignement et d'apprentissage de la mathématique. Il est question de mathématique au quotidien et dans le milieu des affaires. Et il est question d'appuyer une collectivité mathématique canadienne bien portante et dynamique d'un océan à l'autre. across Canada and CMS committees engage every manner of interest in mathematics. CMS sponsors include major corporations as well as federal and provincial governments.

#### WHAT WE DO

The CMS promotes and publishes research. The CMS engages math educators to share experiences and best practices. The CMS provides extra-curricular learning experiences for general enrichment and advanced study. The CMS promotes mathematics to advance career aspirations. The CMS gives voice to the Canadian mathematics community. And the CMS nurtures and celebrates Canadian math excellence on the domestic and international stage.

Much of what CMS does targets Canada's youth. CMS develops and holds math competitions, stages national and regional math camps, publishes a high school problem-solving magazine, provides scholarships, and develops web-based resources. The CMS also stages the high La SMC est une œuvre charitable d'inscription fédérale, sans but lucratif et composée de membres et de bénévoles. On compte parmi les membres de la SMC des professeurs, des enseignants, des étudiants, des parents, des universités, des CEGEP, des collèges, des écoles, des sociétés, des particuliers et d'autres sociétés mathématiques du Canada et d'ailleurs dans le monde. Le conseil de direction de la SMC compte des membres représentant diverses régions du Canada, et les comités de la SMC contribuent activement à tous les domaines d'intérêt en mathématique. La SMC compte parmi ses commanditaires de grandes sociétés et les gouvernements fédéral et provinciaux.

#### **CE QUE NOUS FAISONS**

La SMC encourage la recherche et publie les résultats. Elle incite les enseignants en mathématique à partager leur expérience et des pratiques exemplaires. La SMC offre des occasions d'apprentissage en dehors des salles de classe à ceux qui cherchent à enrichir leurs connaissances et à approfondir leurs études. La société fait la promotion de la mathématique comme moyen à préconiser pour faire avancer sa carrière. La SMC est la voix de la collectivité mathématique du Canada. Enfin, elle appuie et souligne l'excellence en mathématique au Canada, tant au niveau national qu'international.

> Une grande partie des activités de la société vise les jeunes du Canada. La SMC crée et organise des concours de

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school team, Math Team Canada, that represents Canada at the International Mathematical Olympiad.

Every facet of study, careers, and everyday life relies, to one degree or another, on mathematics. The development of math skills fuels our ability to reason, to organize, and to solve problems – all key skills to understanding and addressing the complexities of life. Because math is so important, the CMS promotes and advances 'the doing of math' across Canada. mathématique, organise des camps de mathématique nationaux et régionaux, publie une revue destinée aux étudiants du secondaire où l'on retrouve des problèmes à régler, décerne des bourses d'études et offre des ressources sur le Web. La SMC est aussi responsable de l'équipe d'étudiants du secondaire représentant le Canada à l'Olympiade internationale de mathématiques.

Tous les aspects des études, du travail et de la vie quotidienne dépendent à des degrés variables des mathématiques. Le développement des compétences mathématiques alimente la capacité de raisonner, d'organiser et de résoudre des problèmes – toutes des compétences essentielles pour comprendre et surmonter les difficultés de la vie. Puisque les mathématiques sont si importantes, la SMC fait la promotion et favorise l'avancement de l'activité mathématique partout au Canada.



#### **PRESIDENT'S REPORT** President - Keith Taylor (Dalhousie)



The Canadian Mathematical Society continues to thrive through the hard work of a vast number of members of our community and our professional staff in the Ottawa office. In my brief report, I can only highlight some aspects of the range of operations of the CMS.

You will find a more complete picture from our full annual report.

We had considerable turn-over in the Executive of the society as the four Vice-Presidents - Karl Dilcher (Atlantic), Olivier Collin (Quebec), Stephen Kudla (Ontario), and Elena Braverman (Western) – completed their terms and were replaced by Robert van den Hoogen, Louigi Addario-Berry, Gregory Smith and Mark Lewis, respectively. I extend my sincere thanks to the previous Vice-Presidents for the contributions they all made. Lia Bronsard joined the Executive as President-Elect and David Oaken took over as Treasurer. Our Executive Director Johan Rudnick is also a key member of the Executive Committee. The new members have enthusiastically engaged with all the interesting issues that are current.

After many years of service to the Society, David Rogers stepped down from the position of Treasurer. We sorely missed him at our last Executive meeting. Through his good-natured professionalism and detailed knowledge of our operation, David provided a solid overview of the finances of the Society over a difficult period as investment markets waned and waxed and income levels struggled to match expenses. **RAPPORT DU PRÉSIDENT** Président - Keith Taylor (Dalhousie)

La Société mathématique du Canada poursuit son élan grâce au travail acharné d'un grand nombre de membres de notre communauté et de notre professionnel du bureau d'Ottawa. Dans mon bref rapport, je ne peux que souligner quelques-uns des volets du large éventail d'activités de la SMC. On brosse un tableau beaucoup plus complet dans le rapport annuel intégral.

Le roulement a été important au sein de l'Exécutif de l'organisation puisque les quatre vice-présidents, à savoir Karl Dilcher (Atlantique), Olivier Collin (Québec), Stephen Kudla (Ontario) et Elena Braverman (Ouest), ont terminé leur mandat et ont été remplacés par Robert van den Hoogen, Louigi Addario-Berry, Gregory Smith et Mark Lewis respectivement. Je souhaite remercier sincèrement les anciens vice-présidents de leur contribution à l'organisation. Lia Bronsard s'est jointe à l'Exécutif au poste de présidente élue et David Oaken a accepté le poste de trésorier. Notre directeur exécutif, Johan Rudnick, est également un des membres principaux du Comité exécutif. Les nouveaux membres se sont mis au fait des dossiers intéressants d'actualité avec grand enthousiasme.

Après de nombreuses années de service à la SMC, David Rogers a quitté le poste de trésorier. Il nous a beaucoup manqué à la dernière réunion de l'Exécutif. Grâce à son professionnalisme empreint d'une grande amabilité et à ses connaissances approfondies du fonctionnement de la SMC, David a donné un excellent survol des finances de l'organisation pendant une période difficile marquée par un marché de placement à la baisse et où les niveaux de revenus suivaient difficilement les dépenses.

On a organisé un premier Congrès mathématique des Amériques (CMA) au Mexique au mois d'août 2013. Jacques Hurtubise a eu l'amabilité de

A first Mathematical Congress of the Americas took place in Mexico in August, 2013. Jacque Hurtubise was kind enough to represent the CMS at the meeting of society presidents which took place in conjunction with the Congress. Possibly as a result of the impression he made, the CMS was invited to submit a bid to host the next Mathematical Congress of the Americas. Endorsed by the Executive, Jacques and the CMS office prepared a compelling national proposal with the support of the institutes and other organizations. While there was also a strong bid from Argentina, Canada was awarded the 2017 event to take place in Montreal. The MCA has the potential to be an outstanding conference and an opportunity to establish or enhance scientific relations with likeminded researchers and educators throughout the Americas. I encourage all mathematicians to consider ways to be involved, especially through the proposal of scientific sessions.

The two scientific meetings of the CMS were highly successful. The Summer Meeting took place in Halifax and the Winter Meeting was in Ottawa.

A number of outstanding members of our community were recognized by awards from the Society in 2013:

 Eddy Campbell, University of New Brunswick, received the Graham Wright Award for Distinguished Service.

• Kenneth Davidson, University of Waterloo, and Alex Wright won G. de B. Robinson Award, for their paper titled "Operator algebras with unique preduals" which appeared in the Canadian Mathematical Bulletin.

• John McLoughlin, University of New Brunswick won the Adrien Pouliot Award.

• Marc Ryser was the recipient of the 2013 Doctoral Prize for his thesis research at McGill University.

représenter la SMC à la réunion des présidents de société, qui a eu lieu en parallèle au Congrès. Grâce peut-être à l'impression qu'a laissée Jacques, les organisateurs ont invité la SMC à présenter une soumission pour être l'hôte du prochain Congrès mathématique des Amériques. Ayant eu l'approbation de l'Exécutif, Jacques et le bureau de la SMC ont préparé une proposition nationale convaincante qui avait l'appui des instituts et d'autres organisations. Bien que l'Argentine ait également présenté une excellente proposition, le Canada s'est vu conférer l'honneur d'organiser la rencontre en 2017, à Montréal. Le CMA pourrait s'avérer une conférence exceptionnelle et une occasion de nouer ou d'améliorer des relations scientifiques avec des chercheurs et des enseignants aux valeurs semblables à l'échelle des Amériques. J'incite tous les mathématiciens à songer à des moyens de participer, surtout en proposant des séances scientifiques.

Les deux rencontres scientifiques de la SMC ont été très réussies. La réunion d'été a eu lieu à Halifax et celle de l'hiver à Ottawa.

La SMC a souligné la contribution d'un certain de membres exceptionnels de notre communauté en leur décernant des prix en 2013. Les voici :

- Eddy Campbell, de l'Université du Nouveau-Brunswick, a été lauréat du prix Graham-Wright pour service méritoire.
- Kenneth Davidson, de la University of Waterloo et Alex Wright ont remporté le prix G. de B. Robinson pour leur article intitulé « Operator algebras with unique preduals », qui a paru dans le Bulletin canadien de mathématiques.
- John McLoughlin, de l'Université du Nouveau-Brunswick, a remporté le prix Adrien-Pouliot.
- Marc Ryser a été lauréat du Prix de doctorat 2013 pour sa thèse de recherche à l'Université McGill.

- Balázs Szegedy, University of Toronto, delivered the Coxeter-James Prize Lecture.
- Chantal David, Concordia University, delivered the Krieger-Nelson Prize Lecture.
- Zinovy Reichstein, University of British Columbia, gave the Jeffery-Williams Prize Lecture.
- Jan Minac, Western University, received the CMS Excellence in Teaching Award.

Perhaps the most noteworthy public activity related to mathematics last year was MPE2013. It developed into a world-wide movement and continues on as Mathematics of Planet Earth (http://mpe.dimacs.rutgers.edu/). Former CMS President Christiane Rousseau was the creator and driving force in making MPE2013 the success it became. The CMS launched the initiative in Canada and in collaborations with PIMS, Fields, CRM, AARMS, and a number of universities, sponsored a well-received series of public lectures across the country.

The Executive Committee and the Board haves been working on revised new bylaws for the Society in response to new Federal legislation on governance of not-for-profit organizations. These bylaws are expected to be put into final form at the upcoming Summer Meeting AGM in Winnipeg. This will be the last meeting at which I will serve as President. At the end of June, I will pass the role into the capable hands of Professor Lia Bronsard of McMaster University.

- Balázs Szegedy, de la University of Toronto, a présenté l'allocution plénière pour le prix Coxeter-James.
- Chantal David, de l'Université Concordia, a présenté l'allocution plénière pour le prix Krieger-Nelson.
- Zinovy Reichstein, de la University of British Columbia, a présenté l'allocution plénière pour le prix Jeffery-Williams.
- Jan Minac, de la Western University, a été lauréate du Prix d'excellence en enseignement de la SMC.

L'activité publique liée aux mathématiques principale qu'il sied de noter l'an dernier est sans doute MPT2013. L'activité s'est transformée en un mouvement mondial et se poursuit sous la désignation Mathématiques pour la planète Terre (http://mpe.dimacs.rutgers.edu/). L'ancienne présidente de la SMC, Christiane Rousseau, en est l'auteure, et c'est à ses efforts qu'on impute la grande réussite de MPT2013 aujourd'hui. La SMC a lancé l'initiative au Canada et, en collaboration avec le PIMS, l'institut Fields, le CRM, la AARMS et un certain nombre d'universités, a parrainé une série bien appréciée de conférences publiques à l'échelle nationale.

Le Comité exécutif et le Conseil d'administration s'affairent à rédiger les nouveaux règlements administratifs de la SMC à la suite de l'adoption d'une nouvelle loi fédérale sur la gouvernance des organisations sans but lucratif. On s'attend à fixer la version finale de ces règlements administratifs au cours de l'AGA à venir cet été, à Winnipeg. Ce sera pour moi ma dernière réunion en ma qualité de président. À la fin du mois de juin, je passerai les rênes à la très compétente professeure Lia Bronsard, de la McMaster University.

#### O EXECUTIVE DIRECTOR'S REPORT Executive Director - Johan Rudnick



# LOOKING FORWARD TO DOING MUCH MORE

As the national association promoting the advancement, discovery, learning, and application of mathematics, the CMS engages and serves a broad mathematics community

across Canada and internationally. The time has long since past when the primary CMS focus was meetings and publications – today's CMS is involved in a myriad of additional other activities and probably more so in the years to come.

In 2012, CMS was busy on the national as well as the international stage. The CMS promoted and helped celebrate Mathematics of Planet Earth (MPE2013) through a series of public lectures that were staged with university and institute partners across Canada. The CMS solidified a national partnership network of universities across Canada to engage students in national mathematics competitions. The CMS began preparations in est for the introduction on a contemporary -laws in 2014. And the CMS promoted Canadian mathematics at the inaugural Mathematical Congress of the Americas 2013 inGuanajuato, Mexico. At the same time, the

#### **RAPPORT DU DIRECTEUR EXÉCUTIF**

Directeur Exécutif - Johan Rudnick

#### EN ATTENDANT D'EN FAIRE ENCORE PLUS

En tant que porte-parole national ayant pour mission de promouvoir l'avancement, la découverte et l'apprentissage des mathématiques, ainsi que les applications qui en découlent, la SMC est au service de la grande communauté mathématique du Canada et d'ailleurs. Il s'en est écoulé du temps depuis que le principal rôle de la SMC était l'organisation de ses Réunions et ses publications. La SMC d'aujourd'hui prend part à toutes sortes d'autres activités, et en rajoutera probablement encore de nouvelles dans les années à venir.

En 2012, la SMC a été occupée tant au pays que sur la scène internationale. La Société a fait la promotion et participé à la célébration de Mathématiques de la planète Terre (MPT2013) par l'entremise d'une série de conférences publiques organisées avec des universités et instituts partenaires d'un peu partout au Canada. Elle a consolidé un réseau national de partenariat entre les universités du pays pour stimuler la participation d'étudiants à des concours nationaux de mathématiques. Elle se prépare à adopter un nouveau règlement administratif actualisé en 2014. Et elle a fait la promotion des mathématiques canadiennes au premier Congrès mathématique des Amériques 2013 à Guanajuato, au Mexique. Tout cela en poursuivant le développement de ses activités pour les membres et de ses programmes de recherche et d'éducation.

Du côté des opérations, la SMC mise depuis longtemps sur les recettes tirées de la publication de ses revues pour financer son fonctionnement général. Aujourd'hui, la viabilité des publications CMS continued to develop its core membership, research, and learning program initiatives.

Operationally, the CMS has historically relied heavily on journal publication revenues to sustain overall operations. Today the viability of academic publications is being challenge by a shift from controlled research distribution to subscribed research services coupled with the evolution of Open Access. As a result CMS is being challenged to transform and recast its publishing activities while at the same time diversifying its revenue stream. The requisite transformation of CMS operations necessitates a certain level of investment and some considerable time to compete.

The 2013 preparatory work on new CMS by-laws provided a unique opportunity to begin assessing the current state of CMS governance, management, and operations. In addition, the new by-laws are expected to result in a smaller more efficient and representative Board, The renewed CMS Board in 2014 is expected to have an early opportunity to assess what CMS should be doing and how best to do it.

Financially CMS incurred an operating deficit in 2013 and is expected to continue to do so over the next few years until additional revenues develop. Fortunately, the CMS has a mature investment fund to sustain operations. As a result of the general 2013 investment market recovery, notwithstanding the operating deficit, the net value of the CMS increased in 2012.

As the multi-year cycle of quiet CMS renewal and development continues to unfold, so will the vision of a Canada where mathematics is robustly supported, developed and applied to fuel individual, sectorial, and national prosperity. In that future state, the CMS will definitely be doing much more than meetings and publications. scientifiques est remise en question en raison de la disparition des services de recherche contrôlés au profit des services de recherche par abonnement, ainsi que de la popularité croissante d'Open Access. Résultat : la SMC est appelée à transformer et à recentrer ses activités de publication, tout en diversifiant ses sources de revenus. Ces transformations obligées des opérations de la SMC nécessitent un certain niveau d'investissement et prennent un certain temps.

Les travaux préparatoires réalisés en 2013 en vue de l'adoption du nouveau règlement administratif de la SMC nous ont donné une occasion unique d'entreprendre un examen de l'état actuel de la gouvernance, de la gestion et des opérations de la Société. Le nouveau règlement administratif prévoira également un conseil d'administration réduit, plus efficace et plus représentatif. On s'attend en outre à ce que le conseil renouvelé de 2014 ait la chance d'évaluer ce que la SMC devrait faire et comment elle devrait le faire.

Sur le plan financier, la SMC a enregistré un déficit en 2013, et l'on s'attend à ce que la même situation se reproduise dans les prochaines années, jusqu'à ce que la Société trouve de nouvelles sources de revenus. Heureusement, la SMC dispose d'un bon fonds d'investissement pour soutenir ses opérations. Grâce à la remontée générale du marché des investissements en 2013, et malgré le déficit enregistré, la valeur nette de la SMC a augmenté en 2012.

Alors que la SMC suit son cycle pluriannuel habituel de renouvellements et de développements, elle continue d'alimenter la vision d'un Canada où les mathématiques sont soutenues, développées et appliquées de façon énergique pour stimuler la prospérité individuelle, sectorielle et nationale. Dans ces nouvelles conditions, la SMC ne se limitera certainement pas à s'occuper de ses Réunions et de ses publications.

#### **BILINGUALISM COMMITTEE REPORT** Chair - Jacques Carette

The role of the CMS Bilingualism Committee is to ensure that, consistent with the CMS Language Policy, the bilingual character and quality of CMS's advancement, research, learning and application programs are maintained. To this end, the committee endeavors to ensure that CMS activities reflect the CMS commitment to support the use of both languages. The primary committee tasks are language quality assurance and the identification of potential program improvements.

#### EDUCATION COMMITTEE REPORT Chair: Peter Taylor (Queen's)

The role of the Education Committee in any professional academic society like the CMS is to help implementing education strategies, consistent with the society's mission and Strategic Plan. The Committee is also involved in developing new ideas and strategies to either expand the existing programs or to create new ones in the goal of impacting more students and educators. This is accomplished by reviewing reports and issues that may have an impact on education-related topics pertaining to the CMS, by selecting winners for national education prizes and by recommending support for various educational activities. As part of these general objectives, the committee has a number of specific tasks. These include the selection of organizers for the education sessions at the semi-annual meetings, the annual selection of the winners of the Adrien Pouliot Award and the CMS Excellence in Teaching Award, the awarding of grants for math competitions run in different provinces, and the selection of the winners of the Math in Moscow Scholarship.

In 2013 the Committee met at each of the CMS meetings and its main activities can be summarized as follows:

The winner of the 2013 Teaching Award was Dr. Jan Minac of Western University.

The winner of the 2013 Adrien Pouliot Award was Dr. John McLoughlin of UNB.

The education session at the summer meeting in Halifax was organized by John McLoughlin of UNB. The outreach focus had two broad components: a school and student focused part, along with a session on popularization. This latter part considered writing, communications, and public aspects of mathematics that affect how mathematics is perceived in the community, and how mathematicians can contribute to this picture. In addition. there was a school outreach day in conjunction with Math Circles at Dalhousie coordinated by Danielle Cox (Dalhousie), John McLoughlin and Ryan Jones (UNB).

There were two Education plenary talks. The first was the AARMS-CMS Public Lecture and the speaker was Erik Demaine of MIT on Algorithms Meet Art, Puzzles, and Magic. The second was also public and featured Eva Knoll of Mount St. Vincent University on The Hilbert curve, algorithms, processes, influences, results, and featured the mathematically-based art of the speaker and others.

The education session at the winter meeting in Ottawa was organized by Peter Taylor (Queen's) and the

focus was on the undergraduate math curriculum, particularly in the first year, but with strong echoes from senior high school. The Education Plenary speaker was Alexander Karp of Columbia University on Mathematicians and pre-college mathematics education: thinking about productive involvement.

Provincial Grants: The committee made 12 awards spanning most of the provinces of a total amount of \$5000.

Math in Moscow: The 2013 recipients were Adam Dyck from the University of Regina and Asmita Sodhi from Mount Allison University

#### ELECTRONIC SERVICES COMMITTEE REPORT Johan Rudnick, Executive Director, CMS

The committee provides advice and guidance to the CMS in developing the digital platform(s) to showcase CMS initiatives.



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#### ENDOWMENT GRANTS COMMITTEE REPORT Chair - Odile Marcotte (Centre de recherches mathématiques and UQAM)

The CMS Endowment Grants Committee adjudicates proposals for projects that request financial support from the CMS Endowment Grants Competition. Projects that are funded must contribute to the goals of the CMS and to the broader good of the Canadian mathematical community.

In 2013 the committee awarded grants to four projects, listed below.

Archimedes Math Schools - Math enrichment in inner-city Winnipeg: Archimedes Math Schools is a
non-profit organization run by math professors in Winnipeg. It provides quality instruction in math and
math enrichment to elementary-aged school children. In addition it provides valuable teacher training
to university mathematics students by letting them teach mathematics to children in the community.
The current grant will help organize a regular program out of Wii Chiiwaakanak Learning Centre, at the
University of Winnipeg, which will be free for children from inner-city Winnipeg. [Organizers: Anna Stokke,
University of Winnipeg; Ross Stokke, University of Winnipeg; Darja Kalajdzievska, University of Manitoba;
Robert Craigen, University of Manitoba]

• Parents as Participants in Mathematics: This project is designed to bring parents into mathematical workshops in an effort to engage them in discussion and learning of mathematics. Specifically there are three guiding objectives: to broaden and deepen awareness of mathematics including aspects of beauty; to offer an avenue for parents to discuss mathematics education in order for them to support their own children actively; and to engage parents in some mathematical activities themselves. These activities will take place in partnership with community groups, schools, and the university. [Organizer: John Grant McLoughlin, University of New Brunswick]

• MathLink - Math enrichment program for high school students: MathLink provides an opportunity for high school students to see mathematics beyond the high school curriculum, and brings together students who enjoy doing mathematics. It has been very successful, with 20-40 students participating in each class, and it is expected to be as successful this year as in past years. [Organizer: Yuli Billig, Carleton University]

Semaine des mathématiques et des sciences: The «Sciences et mathématiques en action» program (SMAC) and the Association québécoise des jeux mathématiques (AQJM, Québec Association for Mathematical Games) launched the first «Semaine des mathématiques, des sciences et du génie» (Week of Mathematics, Science, and Engineering) on November 25-29, 2013. The goal of this week is to celebrate the importance of mathematics in science in order to help mathematics teachers motivate their students. [Organizer: Frédéric Gourdeau, Université Laval]

#### FINANCE COMMITTEE REPORT Chair - Douglas Farenick (Regina)

The Finance Committee met twice in 2013 at the Fields Institute. At the first of these meetings, in April, the Committee assessed the CMS financial position as of the end of the previous year, and made a careful review of the budgeted expenditures and revenues versus the actual expenditures and revenues. With expenditures of just over \$1.5 million and revenues of just under \$1.5 million, the Society closed 2012 with an operating deficit of \$28,176. The Committee also received a report from the Invested Funds Committee concerning the financial assets of the Society.

The purpose of the Committee's second meeting, in October, was to review the 2013 financial position of the CMS to date, to discuss the economic outlook for 2014, and to finalise the 2014 Budget, which subsequently received Board approval in Ottawa in December 2013. A deficit of \$160K was projected for 2014; however, this figure may turn out to be much lower because of some very cautious estimates on revenues and expenditures. The downturn in the Canadian dollar relative to the American dollar may also result in better than anticipated revenues, as international subscribers to the Society's journals pay for their subscriptions in American dollars.

The CMS Executive continues to seek and promote ways to augment revenues, whether through donations or sponsorships or services. On the whole, the CMS office in Ottawa operates efficiently and the CMS manages its finances prudently, both of which contribute significantly to keeping the Society on solid financial footing.

#### INTERNATIONAL AFFAIRS COMMITTEE REPORT Chair - Kenneth R. Davidson (Waterloo)

The International Affairs Committee is responsible for relationsh with international organisations and support of the National Research Council's international affiliations relating to mathematics or mathematics education. As such, the committee also includes representatives from other national organisations such as CAIMS and SSC. For the International Mathematical Union, the committee acts as the Canadian National Committee.

Canada has been a member since 1932, and since 1998 has been a 'group V' country, the top category that now comprises ten countries. The committee nominated approximately two dozen Canadian mathematicians to speak at the up-coming ICM in Seoul, Korea this August. This time around, Canadian mathematicians were more successful than any time before. There are nine Canadian mathematicians invited to speak at the ICM: James Arthur (plenary), Kai Behrend, Andrei Bulatov, Ilijas Farah, Robert Jerrard, Izabella Laba, Robert J. McCann, Balint Virag and Daniel Wise. Also Christiane Rousseau, currently a Vice President of the IMU, will be a panel moderator. Canadians will be represented at the IMU General Assembly, which precedes the Congress, by Alejandro Adem, Walter Craig, Henri Darmon, Robert McCann and Keith Taylor. The CMS and the three major Canadian mathematics institutes will be hosting a reception at the ICM.

#### INVESTED FUNDS COMMITTEE REPORT Chair - David Bates

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The Invested Funds Committee met twice during 2013, once in April and again in October. During the April meeting, the monies invested with TD Asset Management were reviewed. Overall, the funds grew 9.39% over the year ending March 2013 compared with a 9.32% rise in the corresponding indexes. Discussion continued concerning the Committee's request for improved reporting for the Restricted Funds. A draft statement was presented and the Committee provided suggestions for improvement.

At the October meeting, a review of the Investment Fund Report as of September 30, 2013 revealed a yearly overall investment return of 11.84% compared with a 11.78% rise in the corresponding indexes. Bond market returns rose modestly with corporate bonds outperforming government bonds. Equity markets provided strong positive returns. An Invested Fund statement including a more transparent reporting format was presented and approved.

This year, the Committee's allocation for 2014 from each endowment fund reflected 3% of the corresponding fund value as of September 30 2013 less projected administration costs. Using the values as of September 30 2013, rather than the projected 2013 year end values from the 2014 Budget, was a direct consequence of the improved reporting provided to the Committee by the CMS office. The following projected allocations for the Endowed Funds for 2014, net of projected administration fees, were approved: up to \$7,500 for the CMS Endowment Fund, \$5,163 for the Olympiads Fund, and \$5,000 for the David Borwein Fund noting that a potential payout from the Borwein Fund was scheduled for 2014.

#### MATHEMATICAL COMPETITIONS COMMITTEE REPORT Chair - Bill Sands (Calgary)

The Mathematical Competitions Committee (MCC) oversees the Society's involvement in mathematics contests. The Society sponsors and runs three competitions: the Sun Life Financial Canadian Open Mathematics Challenge (COMC); the Sun Life Financial Repêchage; and the Sun Life Financial Canadian Mathematical Olympiad (CMO. The MCC is also responsible for Canada's participation in the Asian Pacic Mathematics Olympiad (APMO) and the International Mathematical Olympiad (IMO), and oversees the CMS Canada Math Camp.

Most of the work of the MCC is done by its three subcommittees (the COMC, CMO, and IMO Committees). Further information, including press releases, on most of the items in this report can be found through the CMS Competitions web pages www.cms.math.ca/Competitions/ and www.cms.math.ca/MediaReleases/.

The MCC and (especially) its subcommittees are very active, with a large number of deadlines throughout the calendar. We would like to thank all members for their enthusiasm, reliability, and hard work in making sure that everything runs smoothly. The CMS Executive Office, especially the Executive Director Johan Rudnick, also deserves our gratitude for their dedication.

#### THE SUN LIFE FINANCIAL CANADIAN MATHEMATICAL OLYMPIAD

The 45th Canadian Mathematical Olympiad was written by 68 candidates on Wednesday, March 27, 2013. Seven students were awarded prizes:

FIRST PRIZE and the Sun Life Financial Cup: Calvin Deng, NC School of Science & Math, Cary, NC, USA.

SECOND PRIZE: Alex Song, Phillips Exeter Academy, Exeter, NH, USA.

THIRD PRIZE: Kevin Sun, Kennedy Jr. High, Naperville, IL, USA.

HONOURABLE MENTIONS were awarded to: Richard (Rongxin) Du, Marc Garneau Collegiate Institute, Toronto, ON; Zhiyao (John) Ma, Interlake High School, Bellevue, WA, USA; Alexander Whatley, North Houston Academy, Spring, TX, USA; and Jerry (Xiaoze) Wu, Marc Garneau Collegiate Institute, Toronto, ON.

All prizewinners with addresses located in the United States are Canadian citizens. A full report of the CMO, including the question paper, solutions and analysis of the marking can be found at www.cms.math.ca/Competitions/CMO/.

In 2013, the 53 students with highest COMC scores from the 2012 competition were invited to write the CMO. Another 68 students, next in rank, were invited to participate in the Sun Life Financial Repêchage, a set of 8 problems posted online at the end of January. Invited participants had just one week to submit solutions. The Repêchage was assembled by a group of volunteer experts, chaired by Adrian Tang, who handled all the grading himself. The top 10 students from the Rep^echage were then invited to the CMO. A few additional students were invited to write the CMO based on high school competition results in Alberta and Quebec and on participation in the CMS winter camp at York.

The Society is indebted to many sponsors for the success of the CMO, particularly to its dedicated and long-term major sponsor, Sun Life Financial.



## 18 THE ASIAN PACIFIC MATHEMATICS OLYMPIAD

The 24th Asian Pacic Mathematics Olympiad (APMO) was written on March 11, 2013 in North and South America, and on March 12 in the Western Pacic and Asia, with Kazakhstan serving as the coordinating country. Of the 32 Canadian students who wrote the four-hour competition, 10 were Canada's official participants.

The top Canadian student was Calvin Deng (NC School of Science & Math, Cary, NC, USA), who was given a Gold Award. Alex Song (Phillips Exeter Academy, Exeter, NH, USA) and Kevin Sun (Kennedy Jr. High, Naperville, IL, USA) were given Silver Awards. Bronze Awards went to Zhiyao (John) Ma (Interlake High School, Bellevue, WA, USA), Daniel Spivak (Bayview Secondary School, Thornhill, ON) Alexander Whatley (North Houston Academy, Spring, TX, USA), and FeiWu (Upper Canada College, Toronto, ON). Honourable Mentions went to Richard (Rongxin) Du (Marc Garneau Collegiate Institute, Toronto, ON), Leo Lai (Sir Winston Churchill S.S., Vancouver, BC), and Ursula Anne Lim (Burnaby North S.S., Burnaby, BC).

Further details regarding the APMO are available through www.cms.math.ca/Competitions/APMO/.

#### INTERNATIONAL MATHEMATICAL OLYMPIAD

The 54th International Mathematical Olympiad (IMO) took place in Santa Marta, Colombia, from July 18 to July 28, 2013. The Team Leader was Ralph Furmaniak of Stanford University, the Deputy Leader was Robert Morewood of the University of British Columbia, and the Deputy Observer was Felix Recio of the University of Toronto. The six high school students on the Canadian team were: Calvin Deng, North Carolina School of Science and Mathematics, Cary, NC, USA; Zhiyao (John) Ma, Interlake High School, Bellevue, WA, USA; Alex Song, Phillips Exeter Academy, Exeter, NH, USA; Daniel Spivak, Bayview Secondary School, Toronto, Ontario; Kevin Sun, Kennedy Jr. High, Naperville, IL, USA; and Alexander Whatley, North Houston Academy, Spring, TX, USA.

The 2013 Math Team Canada was notable for the fact that five of its six members were attending school in the USA. However, all Team members were Canadian citizens.



The Canadian team placed a very excellent 11th out of 97 countries, one of our best IMO results. Gold Medals were awarded to Calvin Deng and Alex Song, Silver Medals to John Ma and Daniel Spivak, and Bronze Medals to Kevin Sun and Alexander Whatley. The team's total score was 163 out of 252. Individually, Calvin Deng placed 8th in the world, and Alex Song placed 10th. The CMS's Media Release on the 2013 IMO results is at http://cms.math.ca/MediaReleases/2013/imo-results.

The Winter Training Seminar was hosted by York University, January 2{7, 2013, and was attended by eleven high school students from across Canada. The local organizer was Neal Madras, assisted by Alfred Pietrowski, Wei Liu, Kate Singh, Lindsey Shorser, and the staff of Norman Bethune College at York. The program of the seminar was organized by the three Team Leaders (Ralph Furmaniak, Robert Morewood, and Felix Recio), with additional trainers Youness Lamzouri and Jacob Tsimerman.

The Summer Training Seminar took place at BIRS in Banff from July 7-20, 2013, immediately before the team departed for Colombia. Training was done by the three Team Leaders, with help from Mark Braverman, Stephen Karp, and Soroosh Yazdani.

A report on the 2013 IMO by the Team Deputy Leader was published in the September 2013 issue of the CMS Notes. More information regarding the 2013 IMO can be found at http://www.cms.math.ca/ MediaReleases/ and www.cms.math.ca./Competitions/IMO.

#### CMS CANADA MATH CAMP

The Canada Math Camp is designed primarily for younger Canadian students with at least two years remaining in high school (grades 8-10) and with the potential to compete at the Mathematical Olympiad level. Participation in this camp is by invitation only.

The 2013 CMS Canada Math Camp took place at the University of Toronto from July 27 to August 3, organized by Pamela Brittain, and again was a big success. Twenty-ve students attended the camp (6 female, 19 male). The selection process is based predominantly on the results of the COMC.

See the Education Committee report for information about other Math Camp activities.

#### THE SUN LIFE FINANCIAL CANADIAN OPEN MATHEMATICS CHALLENGE

The eighteenth writing of the COMC, the seventh under the banner of Sun Life Financial, took place on November 6, 2013. The contest was supported by a partnership of universities from across Canada. The CMS extends a special note of thanks and appreciation to all the volunteers, at several locations across the country, who helped to mark the competition papers.

The competition questions were developed by the 2013 Problem Committee which consisted of Lino Demasi (Chair), Dragos Ghioca, Alexander Remorov, James Rickards, Dan Brown, Sarah Sun, and Adrian Tang.

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The success of the COMC owes much to the quality of the questions developed for the competition, and the 2013 committee is to be thanked and commended for once again creating a competition that earned kudos from the participants.

As the title sponsor of the competition and longstanding sponsor of the CMS, the support of Sun Life Financial is very much appreciated and valued.

The COMC has several purposes. First and foremost, it aims to encourage students in their exploration of mathematics and problem solving. Second, the COMC provides an enrichment activity for teachers to use with their students during the Fall term. Third, the COMC is used by the CMS to identify students who will write the Canadian Mathematical Olympiad and who will attend, among other events, the Winter Training Seminar and the Canada Math Camp.

The 2013 COMC had a decrease in participation to just over 4900 students. The paper had an average mark of 26 out of 80, somewhat lower than the previous year. Two students achieved a perfect score of 80, compared to one perfect score the year before.

For the 2013 COMC, the top awards were given in two categories: Canadian-schooled students, and students (regardless of citizenship) at schools outside Canada. The top four competitors in the Canadian category were:

Gold Award: Qi Qi, Burnaby North S.S., Burnaby, BC;

Silver Award: Young Suk Choi, St. George's School, Vancouver, BC;

**Bronze Award:** Zhi Xue Chen, Markville S.S,Markham, ON; and Frank Zhu, University Hill Secondary School, Vancouver, BC.

Eight other Canadian students were named to the Honour Roll: Letian Chen (Hon. Vincent Massey S.S., Windsor, ON); Frank Hong (Inspiration Learning Centre, Aurora, ON); Andrei Purcarus (Vanier College, Saint-Laurent, QC); Xinyu Shi (Lord Byng S.S., Vancouver, BC); Xiaoze (Jerry) Wu (Marc Garneau C.I., Toronto, ON); Rui Zhou Yang (University Hill S.S., Vancouver, BC); Gavin Zhang (Sir Winston Churchill S.S., Vancouver, BC); and William Zou (Pierre Elliott Trudeau H.S., Markham, ON).

In addition, hundreds of awards at the provincial level and at various regional and grade levels were made, and one \$500 prize, sixteen \$100 prizes, and close to 300 T-shirts or USB thunb drives were given out through random draws. In the International category the top competitors were:

**Gold Award**: Zhuoquan Alex Song, Phillips Exeter Academy, USA; and Alexander Whatley, North Houston Academy of Science and Mathematics, USA;

Bronze Award: Yan Huang, Stuart Academy, USA.

Twenty other students were named to the International Honour Roll. Further details are available at www. cms.math.ca/Competitions/COMC/.

#### NOMINATING COMMITTEE REPORT Chair - Ed Perkins, (UBC)

During 2013, 190 individuals contributed to the work of the CMS by serving as one or more of 318 Board of Directors and standing committee, sub-committee, or editorial members. The CMS Nominating Committee and various standing committees chairs actively solicit and recruit individuals with an interest in making a contribution to the Canadian mathematics community. The Nominating Committee is also responsible for reviewing the terms of reference for all the standing committees.

At the end of 2012, there were 36 committee and board position vacancies. During the course of 2013, 107 appointments were initiated, including 47 appointments to standing committees, that resulted in 52 vacant committee and board position vacancies at the end of 2013.

#### PUBLICATIONS COMMITTEE REPORT Chair - Nantel Bergeron (York University)

The CMS Publications Committee oversees and participates in various activities of the Society related to its publications. 2013 is my last year as chair of this committee, in 2014, Karl Dilcher will be the new Chair, I will be serving as an ordinary member.

Michael Bennett, Patrick Brosnan and Zighou Hu completed their term on this committee, and Olivier Collin was the representative of the Executive. Their service to the CMS was really appreciated. As these members retire, in 2014, we see Heinz Bauschke (UBC Okanagan) starting as member and Mark Lewis (Alberta) as the President delegate.

The editors-in-chief of various journals and series serve ex-officio on Publications, as well as the Executive Director and publications support personnel.

Canadian Journal of Mathematics

Journal canadien de mathématiques





# CANADIAN JOURNAL OF MATHEMATICS AND CANADIAN MATHEMATICAL BULLETIN

The current Editors-in-Chief of the Canadian Journal of Mathematics are Henry Kim and Robert McCann of the University of Toronto.

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The Editors-in-Chief of the Canadian Mathematical Bulletin are Terry Gannon and Volker Runde of the University of Alberta.

There were no new associate editors in 2013 but many members have completed their term in 2013; there will be 7 new editors in 2014 and 1 returning.

The backlogs of both journals are in good shape and the online versions of preprints are now available at an early stage.

The 2013 G. de B. Robinson Award is awarded to Kenneth Davidson (Waterloo) and Alex Wright (University of Chicago) for their paper "Operator algebras with unique preduals" which appeared in the Canadian Mathematical Bulletin (CMB) (54:3 2011, 411-421; http://cms.math.ca/10.4153/CMB-2011-036-0). This prize honours a top paper published in CMB in 2011 or 2012. This coming year, we are seeking a strong paper in CJM published in 2012 or 2013 for this award.



#### **CMS NOTES**

The Editors-in-Chief of the CMS Notes are Robert Dawson of Saint Mary's University and Srinivasa Swaminathan of Dalhousie University. John McLoughlin and Jennifer Hyndman are the Education Editors, Florin Diacu is the Research Editor and Renzo Piccinin is Book Reviews Editor. Johan Rudnick serves as the managing editor

The online version of the Notes (since Jan 2012) aims to be of greater interest to our general members. Our executive and computer staff has dedicated time and energy to produce a better product and we feel that this is indeed well received.



#### **CRUX WITH MATHEMATICAL MAYHEM**

The Editors-in-Chief of Crux with Mathematical Mayhem is Shawn Godin of the Ottawa Region School and Johan Rudnick serves as the managing editor. We need to fill three more vacancies on the editorial board. CRUX is still in the process of developing a new plan to revitalize the publication.



#### A TASTE OF MATHEMATICS

The Editor-in-Chief of the series A Taste of Mathematics (ATOM) is Alistair Lachlan of Simon Fraser University and Johan Rudnick serves as the managing editor. One book has appeared in 2012:

ATOM Volume XIII: Quadratics and Complex Numbers by Edward J. Barbeau.



Karl Dilcher and Keith Taylor of Dalhousie University are the Editors-in-Chief of the CMS Books in Mathematics Series, published by Springer. We need to fill one vacancies on the editorial board.

On average, two volumes per year are produced. The following two volumes were produced

in 2012.

Interpolation and Sidon Sets for Compact by Hare Graham. (2013) 249p. ISBN: 978-1-4614-5392-5

Ordering Block Designs by Stevens Dewar (2012) 207p. ISBN: 978-1-4614-4325-4

The Publications Office is headed by Craig Platt of the University of Manitoba as Technical Editor and Michael Doob of the University of Manitoba as Technical Consultant. Lee-Ann Baldwin is the administrative assistant and Laura Lamont is the technical assistant. Computer support from Steve La Rocque and Alan Kelm, and administrative support from Denise Charron comes from the Ottawa office.

We thank everyone for the efforts they have put in on this extensive publishing effort.

#### RESEARCH COMMITTEE REPORT Chair - Stephen Kudla (Toronto)

The CMS Research Committee oversees the research activities of the Society. This includes helping to select the scientific organizers for the summer and winter meetings, participating in the scientific organization of these meetings, playing a major role in the selection of winners for research-related prizes and advising the Executive committee on research related issues.

The Research Committee adjudicates a number of awards and prizes. The Coxeter-James prize recognizing a young mathematician who have made outstanding contributions to mathematical research was awarded to Balázs Szegedy (University of Toronto). The Jeffery-Williams prize recognizing mathematicians who have made outstanding contributions to mathematical research was awarded to Zinovy Reichstein (University of British Columbia). The Krieger-Nelson Prizes recognizing outstanding research by a female mathematician was awarded to Chantal David (Concordia University). The Doctoral Prize recognizing outstanding performance by a doctoral student was awarded to Marc Ryser (Duke University).

With the support of PIMS, Fields, CRM, and AARMS, the CMS semi-annual national meetings attracted 706 participants from across Canada. Together, the meetings presented 5 public lectures, 9 plenary speakers, and 37 sessions encompassing 501 talks.

The year 2013 was one marked by transitions for the Student Committee. We saw a change in leadership with Louis-Xavier Proulx taking over for Kseniya Garaschuk as Chair, the introduction of several new enthusiastic committee members, as well as the beginnings of a transition to a brand new website with the introduction of a new student webmaster. Regardless of these changes in the Studc landscape, committee members remained dedicated to existing committee initiatives. For instance, we continued organizing stimulating student programming during the CMS Meetings in the form of poster sessions, socials, and workshops, and provided funding to exciting regional conferences planned by and for students. Moving forward, the committee will continue to reflect on and document past projects, primarily in the newly-created Studc Operations Manual, in order to refine our current activities (described in detail below). The committee will also continue to seek out new projects that will engage Canadian students in the national mathematics community.

#### **CHANGE OF MEMBERSHIP**

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In 2013, Studc saw a change of several members. We say goodbye to Gary Bazdell (Webmaster), Jean Lagacé (CUMC 2013 President), Mark Penney, and David Thomson, and welcome new members Aaron Berk (Webmaster), Arthur Mehta (CUMC 2014 President), Léo Raymond-Belzile, and Cristina Rosu. Lastly, Louis-Xavier Proulx has taken over for Kseniya Garaschuk as Chair, though Kseniya continues to remain involved with the committee as Editor of Notes from the Margin.

#### CMS SUMMER MEETING (HALIFAX, NS)

#### **AARMS-CMS Poster Session**

There were eight posters in this meeting's poster session – a decent number for a summer meeting. Organized by Amanda Malloch, the session attracted posters and presentations of a very high caliber. Although the winners were not easy to choose, the awards ultimately went to Svenja Huntemann from Dalhousie University (AARMS Award), Sarah Carruthers from University of Victoria (CMS President's Award) and Melissa Huggan from Carleton University (CMS Student Committee Award). Based on the experience with this event, Studc learned that advertising the session well in advance is key to guaranteeing its success. In the future, Studc will investigate the possibility of a lower meeting registration fee for students presenting a poster to help increase the number of participants.

#### **Student Social**

Studc is committed to organizing socials that feature the meeting host city's unique cultural offerings. The social in Halifax, organized by Louis-Xavier Proulx and David Peterson, included the beautiful harbourfront in the evening's programming. Studc lead a group of about 20 students for a nice walk down to the Halifax ferry terminal from the Dalhousie campus via the scenic harbour. Studc paid for each student's ferry pass

and the group enjoyed a pleasant ferry ride with great views of the Halifax skyline at sunset. The ferry took students to Dartmouth, where they gathered in the Celtic Corner Irish Pub for light refreshments provided by the committee. The event truly was a success, with many students commenting that they enjoyed having the chance to explore Halifax beyond the Dalhousie campus, especially through the ferry ride.

#### CMS WINTER MEETING (OTTAWA, ON)

#### **AARMS-CMS Student Poster Session**

The poster session at the 2013 CMS Winter Meeting attracted 17 abstract submissions, with 15 participants actually presenting posters at the session. The session was organized primarily by Léo Raymond-Belzile with help from Cristina Rosu. Judging took place during the Sunday lunch break, which was the only time slot for which participants, judges and the Studc session organizers were available. Awards for this poster session went to Darcy Best (Lethbridge University), Carly Rozins (Queen's University), and Greg Doyle (Carleton University).

The Studc organizers used experiences with past poster sessions to inspire changes to this iteration of the event. For instance, since each poster presentation lasts 15 minutes, Studc recruited a larger team of six judges to shorten the judging period. Feedback from judges suggests that while they appreciated a shortened judging period, though they still found it difficult to avoid conflicts between judging and other meeting activities. The judges also gave constructive comments for grading scheme used and how winners are selected which Studc looks forward to implementing in future poster sessions.

Although participation was down from the record set at the 2012 Winter Meeting in Montreal, there was the notable presence of four high school students from the SCM School of Competitive Math, all of whom benefited from the opportunity to prepare an academic poster and give an oral presentation to professional mathematicians.

Moreover, all participants benefited from a drastically reduced meeting registration fee courtesy of the CMS, which went down from \$90 to \$30.

The poster session at the 2012 Summer Meeting in Regina attracted 18 participants, a very large number for a summer meeting. Studc suspected that part of the success of that session could be attributed to the fact that the University of Regina organized and paid for the printing of each participant's poster. As a result, Studc decided to allocate some funds from its student activities fund to reimburse participants for their poster printing costs, in hopes of attracting a larger number of participants in the session. However, this measure was only introduced and advertised in early November, by which time most participants were already registered in the session. As a result, the incentive did little to increase participation in this particular case. That said, Studc will consider implementing some form of poster printing subsidy at future poster sessions with proper advertising well in advance of the CMS meeting to be able to properly evaluate whether such an initiative is truly effective in incentivizing participation in these sessions.

Other ideas Studc is considering to improve poster sessions include offering workshops on effective communication in oral presentations and giving more direct constructive feedback to participants.

#### **Student Social**

The Student Social at the 2013 Winter Meeting attracted about 30 participants. It was organized primarily by Cristina Rosu with support from Léo Raymond-Belzile. The event was well-advertised beforehand on Facebook, Google+, and through flyers distributed to participants at the conference. The evening began with a short walk to Parliament Hill, where everyone gathered around the Centennial Flame to see the Christmas light show projected on the Parliament buildings. We then took a short walk to MacLaren's Sports Bar for several friendly games of pool and some light refreshments courtesy of the committee. Overall, the event was a great way for students to experience Ottawa in the winter and get to know each other.

#### Student Workshops

Stude ran two workshops on the Friday of the meeting weekend to both supplement the meeting programming directed at students, as well as to attract students from local institutions to the meeting. Diverse topics for these workshops were chosen to ensure that students at various stages of their academic careers could benefit.

#### **Intermediate LaTeX Tutorial**

An intermediate LaTeX tutorial was prepared by Léo Raymond-Belzile and Aaron Berk, and presented by Aaron Berk. There were roughly seven to ten participants that seemed to benefit from the activity. In the future, Studc will look to build upon this particular workshop by perhaps running another workshop immediately beforehand aimed at complete LaTeX beginners. That way, students with no experience with LaTeX can benefit in addition to those that have some previous experience with the markup language.

#### **CV** Writing

An academic CV writing workshop was presented by Amanda Malloch following the Intermediate LaTeX Tutorial. This CV writing workshop had already been prepared and presented by Kseniya Garaschuk previously and so the material only had to be refined slightly for the purposes of the CMS meeting. Most students that attended the Intermediate LaTeX Tutorial stayed for the CV writing workshop and seemed to benefit from participating.

Stude is actively working towards collecting and refining a pool of varied workshops to draw from to make this activity a staple of student programming at future CMS meetings.

#### CANADIAN UNDERGRADUATE MATHEMATICS CONFERENCE

The 2013 edition of the Canadian Undergraduate Mathematics Conference (CUMC) was successfully hosted by Université de Montréal from July 10th to July 14th. The 2014 edition will take place at Carleton University from July 2nd to July 5th.

Stude is considering ways in which to improve the current soliciting process for hosting the next CUMC. We hope to implement a new process in time for the 2014 edition of the conference.

#### **CUMC Award for Excellence**

The CUMC Award for Excellence is a \$500 award given to a Canadian undergraduate mathematics student for the purposes of attending and participating in the CUMC the year it is awarded. All applicants are asked to submit a statement of interest, a CV and a reference letter for consideration by the committee. Stude then judges these applications on university and mathematical community involvement, academic excellence and research potential. In 2013, we received 10 outstanding applications and the award ultimately went to Eric Naslund (UBC).

#### STUDENT ACTIVITIES FUNDING

In 2013, Studc sponsored 6 events as part of our regional funding initiative. The following events benefitted from Studc's sponsorship:

Pacific Institute for the Mathematical Sciences Young Researchers Conference – Edmonton, ABSéminaires universitaires en mathématiques à Montréal – Montréal, QC Science Atlantic Mathematics and Statistics and Computer Science Conference – Charlottetown, PE Southwest Ontario Graduate Mathematics Conference – Guelph, ON Canadian Undergraduate Mathematics Conference (CUMC) – Montréal, QC Poster Session at 2013 CMS Winter Meeting (printing subsidy) – Ottawa, ON

These events were reasonably well-spread across the country. We hope to increase the number of sponsored events next year and continue to reinforce Studc's commitment to supporting the mathematical community throughout Canada.

#### NOTES FROM THE MARGIN STUDENT NEWSLETTER

In 2013, Stude has produced and published two issues of the semi-annual Notes from the Margin. We now consistently receive articles in both English and French and, with the publication's popularity growing, we now receive more submission than ever; in fact, 2013 marked the production of our two largest issues yet at 12 and 16 pages each. As in previous years, hard copies of The Margin are mailed to the math departments of all the major Canadian universities and appear at the CUMC along with other events sponsored by Stude.

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The Margin is also available online at issuu.com, a free online publishing service, where all the past issues can be viewed and downloaded.

Switching graphic designers in 2012 has proven to be a success. After incurring some initial costs to train the designer in typesetting mathematical content, we now have consistently LaTeX'd math throughout the publication. The reduced graphics costs have also allowed us to produce larger issues and still distribute printed copies to all major universities in Canada.

This year has also marked the production of the first special CMS Meeting edition of The Margin, which was distributed to participants at the 2013 CMS Winter Meeting in Ottawa. The 8-page issue with reduced content (based on the fall edition of The Margin) and increased promotion of the CMS and Studc initiatives seemed to be a great way to advertise the committee's activities and The Margin itself. Given that the costs associated with creating a shortened version of an already-produced volume of The Margin are minimal, we plan to continue producing these special Meeting editions of The Margin in the future.

As in the previous years, the main challenges of The Margin production are budgetary constraints and large editorial load. Stude is actively investigating solutions to both of these issues to ensure that the production of The Margin becomes an entirely sustainable initiative.

#### STUDC ONLINE PRESENCE

#### Website

The Studc website is in the process of being completely rebuilt. The biggest issue with the current website is ensuring that it remains up-to-date since all updates must go through one individual: the student webmaster. As a result, Studc has decided to move away from the current system and implement a new version of the website through Wordpress, a system which allows for committee members to easily post and update content themselves. Along with this infrastructure update, the website will undergo a re-design that matches the current Studc branding (modelled after the Notes from the Margin re-design implemented in 2011). Lastly, the new website will feature a private section that will serve as an archive for Studc documents available only to current committee members with active logins (which are maintained by the student webmaster).

A working website has been created and is under construction, though it is not yet publicly available. We expect to launch this new website in time for the 2014 CMS Summer Meeting in Winnipeg.

#### Social Media

Studc has been very active on social media in the last year. The Facebook page (CMS Studc) has reached more than 215 followers. We are still working in improving this number by consistently advertising our social media presence during the different events organized by Studc. The Facebook page is now linked to

our Twitter account (@studcCMS) and we have also created a Google+ page (CMS Studc). Studc believes that social media is a great way to stay connected with Canadian math students between Studc-organized events and to share news about the Canadian mathematics community. We will continue to look for ways to effectively engage Canadian math students via social media in the coming year.

#### STUDC OPERATIONS MANUAL

A Stude Operations Manual has been drafted and is in the process of being reviewed and finalized. This initiative was spearheaded by Kseniya Garaschuk and David Thomson and has been supplemented by the work of various committee members. The manual includes information about the committee's regular activities, along with details about special projects that it has been involved with in the past. The purpose of this dynamic document is to provide for a regular opportunity to reflect and build on the committee's projects and to ensure that the committee remains efficient in its activities.

#### LOOKING AHEAD

Studc is looking forward to a productive year in which we continue to focus on both refining our wellestablished projects and building on newly-minted ones. Our priorities in 2014 will be a smooth transition to a brand new, fully updated website, continuing to add original student programming to both the CMS meetings and CUMC, as well as implementing a new soliciting process for soliciting interest in hosting the CUMC. We hope that in prioritizing these three projects, we will continue to generate student interest in the Canadian mathematics community and add value to student memberships in the CMS.



#### WOMEN IN MATHEMATICS COMMITTEE REPORT Chair - Shannon Fitzpatrick (University of Prince Edward Island)

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The committee work focuses on encouraging the development of women in Canadian mathematics at all levels. In addition to providing a supportive venue for dialogue, the committee staged a discussion group and workshop at the CMS Summer meeting and a luncheon and panel forum at the CMS Winter meeting. The committee also staged a Women in Math dinner forum at the 2013 Canadian Undergraduate Mathematics Conference (CUMC). The committee is very encouraged by the level of dialogue and engagement by the participants in the 2013 events.



# The complete CMS Audited Financial Statements (December 31, 2013), including notes, are posted on the CMS website.

#### Canadian Mathematical Society

Statement of Revenue, Expenses and Changes

in Fund Balances, Operations Fund for the year ended December 31, 2013 Société Mathématique du Canada État des revenus, dépenses et évolution du solde des fonds, Fonds d'administration pour l'exercice terminé le 31 décembre 2013

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		2013	2	012		2013	1000	2012	 2013	140	2012		2013	icati	2	012		2013		2012	
REVENUE		2015	2	.012		2015		2012	2015		2012		2015		2	.012		2013		2012	REVENUS
Donations	\$	8,429	\$ 8	3,457	\$	3,256	\$	3,526	\$ 310	\$	699	\$	-	\$		-	\$	11,995	\$	12,682	Dons
Unrealized gain on investments		496		· -		-		-	-		-		-			-		496		369	Gain non réalisé sur les placements
Grants		-		-		140,066		117,582	27,500		32,449		-			-		167,566		150,031	Subventions
Membership fees		136,819	139	9,789		-		-	-		-		-			-		136,819		139,789	Cotisations des membres
Registration fees and other sales		-		-		82,298		80,246	163,650		195,278		-			-	2	245,948		275,524	Inscriptions et autres ventes
Subscriptions and publications		1,464		1,477		36,659		34,317	671,893		676,121		-			-	7	710,016		711,915	Abonnements et publications
Foreign exchange		1,104		(997)		98		449	(4,465)		10,658							(3,263)		10,110	Devises étrangères
Services, advertising and sales		9,701	1	1,079		1,782		2,841	10,733		11,004		87,734		88	8,739		109,950		113,294	Publicité et ventes promotionnelles
Other		2,425	7	5,000		-		-	350		-		-			-		2,775		75,000	Autre
		160,438	234	4,805		264,159		238,961	869,971		926,209		87,734		88	8,739	1,3	382,302	1	1,488,714	
EXPENSES																					DÉPENSES
National projects		12,109	i	7,363		186,713		181,821	1,000		-		-			-		199,822		189,184	Projets nationaux
Speakers and prizes		289		215		22,227		21,681	30,324		29,550		-			-		52,840		51,446	Conférenciers et prix
Production		22,340	20	),551		19,418		19,119	64,029		68,827		-			-		105,787		108,497	Production
Promotional materials		5,628	(	6,387		5,097		6,020	3,761		4,598		-			-		14,486		17,005	Matériel promotionnel
Salaries and benefits	1	250,181	30	5,916		122,480		118,517	235,126		236,121		83,032		70	0,470	6	690,819		731,024	Salaires et avantages sociaux
Boards and committees		32,555	3	1,174		23,947		20,468	70,333		79,897		-			-		126,835		131,539	Conseil d'administration et comités
Legal and audit		18,598	16	6,583		-		-	-		-		-			-		18,598		16,583	Honoraires légaux et de vérification
General administration		44,855	52	2,345		33,288		33,939	149,846		150,027		20,079		17	7,551	2	248,068		253,862	Frais généraux d'administration
Amortization of capital assets		5,728		7,233		-		-	407		407		-			-		6,135		7,640	Amortissemment des immobillisations
	:	392,283	44	7,767		413,170		401,565	554,826		569,427	1	03,111		88	8,021	1,4	463,390	1	1,506,780	
NET REVENUE (EXPENSES)	\$ (2	231,845)	\$ (212	2,962)	\$	(149,011)	\$	(162,604)	\$ 315,145	\$	356,782	\$ (	15,377	) \$		718	\$	(81,088)	\$	(18,066)	REVENU NET (DÉPENSES)
Fund balances, beginning of year																		119,720		137,786	Solde des fonds au début
FUND BALANCES, END OF YEA	R																\$	38,632	\$	119,720	SOLDE DES FONDS À LA FIN

Canadian Mathematical Society Statement of Revenue, Expenses and Changes in Fund Balances, Restricted Funds for the year ended December 31, 2013 Société Mathématique du Canada État des revenus, dépenses et évolution des soldes des fonds, Fonds affectés pour l'exercice terminé le 31 décembre 2013

		Mathematical Borwein Distinguished											
		Legacy		Lifetime Fund		Endowment		Olympiads Fund		Career Fund			
	Fund / Fon					ind / Fonds	Fonds pour Olympiades			Fonds Borwein de			
	de l'héritage		Fo	onds à vie	d	de dotation		de mathématiques		carrière distinguée	Total	Total	
											2013	2012	
REVENUE													REVENUS
Donations	\$	50	\$	-	\$	1,181	\$	543	\$	150	\$ 1,924	\$ 4,525	Dons
Dividends, interest and other income		26,634		6,161		14,756		7,296		2,149	56,996	56,401	Dividendes, intérêts et autres revenus
Gain on sale of investments		8,080		-		-		-		-	8,080	1,141	Gain sur la vente de placements
Unrealized gain on investments due													Gain non réalisé sur les placements causé par
to change in market value		106,068		26,406		63,242		31,267		9,209	236,192	93,191	les fluctuations de la valeur du marché
		140,832		32,567		79,179		39,106		11,508	303,192	155,258	
EXPENSES													DÉPENSES
Projects		-		-		10,000		4,321		-	14,321	6,732	Projets
Service fees		7,010		1,622		3,883		1,920		565	15,000	15,000	Frais de courtage
		7,010		1,622		13,883		6,241		565	29,321	21,732	
NET REVENUE (EXPENSES)	\$	133,822	\$	30,945	\$	65,296	\$	32,865	\$	\$ 10,943	\$ 273,871	\$ 133,526	REVENU NET (DÉPENSES)
Fund balances, beginning of year		786.748		-		435.317		215.277		63.344	1.500.686	1.367.160	Solde des fonds au début
Contribution (from) to		(150)		-		-		-		150	-	-	Contribution (des) aux
FUND BALANCES, END OF YEAR	\$	920,420	\$	30,945	\$	500,613	\$	248,142	\$	\$ 74,437	\$ 1,774,557	\$ 1,500,686	SOLDE DES FONDS À LA FIN

Canadian Mathematical Society Consolidated Statement of Financial Position as at December 31, 2013

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Société Mathématique du Canada État consolidé de la situation financière au décembre 31, 2013

	O Fui d'ad	perations nd / Fonds ministration	Re: Solo	stricted Funds des des Fonds Affectés	Total 2013	Total 2012			
ASSETS CURRENT ASSETS							ACTIF ACTIF À COURT TERME		
Cash Short-term investments Accounts receivable Prepaid expenses	\$	115,448 90,916 155,453 110,412	\$	- - 8,375 -	\$ 5 115,448 90,916 163,828 110,412	\$ 119,342 88,808 335,664 48,106	Encaisse Placements à court terme Débiteurs Frais payés d'avance		
Investments (note 3) Capital assets (note 8)		472,229 147,708 18,509		8,375 1,960,675 -	480,604 2,108,383 18,509	591,920 1,823,358 23,605	Placements (note 3) Immobillsations (note 8)		
	\$	638,446	\$	1,969,050	\$ 2,607,496	\$ 2,438,883			
LIABILITIES CURRENT LIABILITIES							PASSIF PASSIF À COURT TERME		
Accounts payable and accrued liabilities Deferred revenue (note 9)	\$	308,480 291,334	\$	۔ 194,493	\$ 308,480 485,827	\$ 251,924 566,553	Créditeurs et charges à payer Revenus reportés (note 9)		
		599,814		194,493	794,307	818,477			
FUND BALANCES							SOLDES DES FONDS		
Restricted (note 11) Unrestricted		38,632		1,774,557	1,774,557 38,632	1,500,686 119,720	Affectés (note 11) Non affectés		
	\$	638.446	\$	1.969.050	\$ 2.607.496	\$ 2.438.883			



The CMS is managed by an Executive Committee which reports to the Board of Directors. The CMS operates by enlisting the participation of our members in an extensive committee structure. The following lists include all those who have served on the CMS board and committees throughout 2013. The CMS would like to acknowledge and thank the following individuals, without whom the work done by the CMS to promote the advancement, discovery, learning and application of mathematics would not be possible.

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