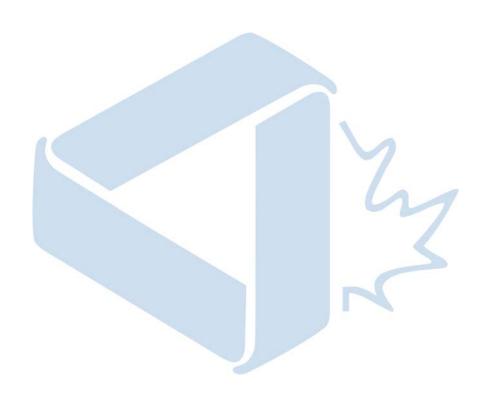


## Canadian Mathematical Society Sociéte mathématique du Canada

### CMS 2009 Annual Report Rapport annuel de la SMC 2009



The Canadian Mathematical Society promotes and advances the discovery, learning and application of mathematics in Canada by fostering the community of mathematicians; promoting mathematical research; supporting education efforts at all levels; and championing mathematics in the Canadian public.

The Canadian Mathematical Society (CMS) was established in 1945 to advance mathematics throughout Canada. The CMS promotes mathematics through meetings, publications, and educational events.

La Société mathématique du Canada (SMC) a été créé en 1945 pour faire progresser les mathématiques à travers le Canada. La SMC promut les mathématiques dans l'encadrement des réunions, publications et événements d'éducation.

The CMS office is located in Ottawa, Ontario, and a publishing group is located in Winnipeg, Manitoba.

Le bureau de SMC est situé à Ottawa, Ontario, et un groupe d'édition est située à Winnipeg, Manitoba.

THE CANADIAN MATHEMATICAL SOCIETY 105 - 17 Alta Vista Drive Ottawa, Ontario

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### THE 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 throughout 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.



### LA SOCIÉTÉ MATHÉMATIQUE DU CANADA

La Voix de mathématiques depuis 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

**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, not-for-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 Directors has representation from 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

question d'appuyer une collectivité mathématique canadienne bien portante et dynamique d'un océan à l'autre.



La SMC est une œuvre charitable d'inscription fédérale, sans but lucratif et composée de membres 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

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 problemsolving magazine, provides scholarships, and develops web-based resources. The CMS also stages the high school team that represents Canada at the International Mathematical Olympiad.

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 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

### PRESIDENT'S REPORT

**President:** Anthony To-Ming Lau (Alberta)



2009 – YEAR IN TRANSITION: The Canadian Mathematical Society seeks to advance and support all aspects of mathematics in Canada, in both research and

education. During 2009, we witnessed an unusual year of transition for the Society, with the change of executive directorship and the move of the Ottawa Office to premises outside the University of Ottawa after 30 years.

Our research meetings and publications are vital to a flourishing Canadian mathematical community. As the national organization that represents our profession, we speak on behalf of mathematics to industry and government. Our Math Camps and Math Competitions

### RAPPORT DU PRÉSIDENT

**Président :** Anthony To-Ming Lau (Alberta)

2009 - UNE ANNÉE DE TRANSITION : La Société mathématique du Canada (SMC) s'attache à promouvoir tous les domaines des mathématiques au Canada, en recherche comme en éducation. L'année 2009 aura été marquée par des transitions inhabituelles en raison du changement au poste de directeur administratif de la Société et du déménagement du bureau administratif hors du campus de l'Université d'Ottawa, où elle a résidé pendant 30 ans.

Nos Réunions scientifiques et nos publications sont essentielles à l'essor de la communauté mathématique canadienne. En tant qu'organisme national qui représente notre profession, la SMC se fait le porte-parole de la communauté mathématique auprès de l'industrie et des

programs support mathematics education across Canada, as do our problem-solving publications. These and related efforts aim to stimulate students mathematically, an activity critical to Canada's increasingly knowledge-based economy. Our Endowment Grants program enables mathematically rooted projects that would not exist otherwise. Our prestigious prizes celebrate excellence in research, education, teaching and service. The community is connected through electronic services and the CMS Notes.

Our success in sustaining a broad range of activities is due to the engagement of our community and to the generosity of our supporters. The Society is immensely grateful to all our volunteers and sponsors for their commitment to building and strengthening mathematics in Canada. The detailed descriptions found throughout the pages of the annual report attest to the health of our discipline and to the energy of our members.

MEETINGS: In 2009, the CMS Summer Meeting was held jointly with the Canadian Society of History and Philosophy in Mathematics in St. John's Newfoundland from June 6 to 8. There was a special joint session with the Korean Mathematical Society organized by Alejandro Adem (UBC) and Jong Hae Keum (Korean Institute of Advance Studies) in Algebraic Geometry and Topology. Also, the 2009 Canadian Mathematics Education Forum was held in Vancouver in May and the Society's second joint meeting with the Sociedad Matemática Mexicana was also held in Vancouver in August 2009. The 2009 Winter Meeting was held at the University of Windsor. In 2010, the Summer Meeting will

gouvernements. Nos camps et concours mathématiques renforcent l'enseignement des mathématiques dans tout le Canada, tout comme nos revues de résolution de problèmes. Ces activités et autres initiatives connexes visent à stimuler l'intérêt des jeunes pour les mathématiques. C'est là une préoccupation de plus en plus importante pour le Canada dans le contexte de l'économie du savoir. Notre programme de bourses du fonds de dotation permet la réalisation de projets mathématiques qui ne verraient pas le jour autrement. Nos prestigieux prix soulignent en outre l'excellence en recherche, en éducation, en enseignement et en service à la communauté. Nous maintenons par ailleurs les liens entre les membres de la communauté grâce à nos services électroniques et aux Notes de la SMC. Notre capacité d'offrir une gamme si vaste d'activités est largement attribuable à l'engagement de la communauté et à la générosité de nos partenaires. La Société doit une fière chandelle à tous ses bénévoles et commanditaires pour leur engagement envers l'essor des mathématiques au Canada. La description détaillée des activités de cette année à la SMC, que vous lirez dans le rapport annuel, témoigne de la vitalité de notre discipline et de l'énergie de nos membres.

**RÉUNIONS**: En 2009, la Réunion d'été de la SMC a été tenue en collaboration avec la Société canadienne d'histoire et de philosophie des mathématiques (SCHPM) à St. John's, Terre-Neuve-et-Labrador, du 6 au 8 juin. Une session commune avec la Société coréenne de mathématiques, organisée par Alejandro Adem (UBC) et Jong Hae Keum (KIAS) en géométrie et topologie algébriques, était au programme de cette rencontre. Toujours en 2009, le Forum canadien sur l'enseignement des mathématiques a eu lieu à Vancouver en mai, et la Société a tenu son

be held in Fredericton, New Brunswick and the 2010 Winter Meeting will be hosted by the University of British Columbia.

The Canadian mathematical community continues to plan for upcoming major meetings and the large 2011 International Congress of Applied and Industrial Mathematics. The report of the Research Committee contains details about the 2009 CMS Summer Meeting and the 2009 CMS Winter Meeting. We look forward to visiting Fredericton and Vancouver in 2010.

**PRIZES:** At the 2009 Summer Meeting in St. John's, we celebrated the winners of the following prizes: Yael Karshon (Toronto) - Krieger Nelson Prize, Stephen Kudla (Toronto) - Jeffery-Williams Prize; and David Poole (Trent) - Excellence in Teaching Award.

At the Winter Meeting in Windsor, we celebrated the winners of the following prizes: Walter Whiteley (York) - Adrien Pouliot Award, Patrick Brosnan (UBC) - Coxeter-James Prize, Mark Braverman (Toronto) - Doctoral Prize, Vladimir Manuilov (Moscow State) and Klaus Thomsen (Aarhus) - G. de B. Robinson Award, and Christiane Rousseau (Montréal), the Graham Wright Award for Distinguished Service.

The achievements recognized by the CMS prizes are truly outstanding. But this high standard relies on a continuing flow of excellent nominations. Please give serious consideration to nominating a deserving colleague.

**ADVANCEMENT OF MATHEMATICS:** Since the beginning of the year 2009, we have been

deuxième congrès conjoint avec la Société mexicaine de mathématiques, aussi à Vancouver, en août 2009. La Réunion d'hiver 2009 a eu lieu à l'Université de Windsor. En 2010, la Réunion d'été se déroulera à Fredericton, au Nouveau-Brunswick, et la Réunion d'hiver 2010, à l'Université de la Colombie-Britannique.

La communauté mathématique canadienne poursuit sa planification de grands congrès, en particulier l'imposant Congrès international de mathématiques appliquées et industrielles de 2011. Les rapports du directeur administratif et du Comité de la recherche contiennent de plus amples détails sur les Réunions d'été et d'hiver 2009 de la SMC. Nous avons tous hâte de nous retrouver à Fredericton et à Vancouver en 2010.

PRIX: Lors de la Réunion d'été 2009, tenue à St. John's, la Société a rendu hommage aux lauréats des prix suivants: Yael Karshon (Toronto) - prix Krieger-Nelson; Stephen Kudla (Toronto) - prix Jeffery-Williams; David Poole (Trent) - Prix d'excellence en enseignement.

À la Réunion d'hiver, tenue à Windsor, la Société a rendu hommage aux lauréats des prix suivants : Walter Whiteley (York) - prix Adrien-Pouliot; Patrick Brosnan (UBC) - prix Coxeter-James; Mark Braverman (Toronto) - Prix de doctorat; Vladimir Manuilov (U.d'État de Moscou) et Klaus Thomsen (Aarhus) – prix G. de B. Robinson; Christiane Rousseau (Montréal), prix Graham-Wright pour service méritoire.

Les réalisations soulignées par les prix de la SMC sont véritablement hors du commun. Pour maintenir ce niveau élevé, nous avons toutefois besoin d'un riche bassin de nominations. Nous vous incitons à proposer la candidature de collègues méritants.

conducting a "Membership Campaign".

Representatives in almost all departments were talking to colleagues and requesting they join CMS. At the end of December we had 897 individual members, up from 868 a year ago.

We also had 62 Institutional members, bringing our total to 959.

EXECUTIVE: As usual, the Executive
Committee met four times in 2009; at the semi-annual meetings of the Society, and in
April and October, at the Fields Institute. It is a great pleasure working with our VicePresidents Michael Bennett, Gordon
MacDonald, Yvan Saint-Aubin, and Catherine
Sulem whose terms ended in June, 2009, and our new Vice-Presidents: Cathy Baker (from Mount Allison), Pengfei Guan (McGill), Micheal Lamoureux (Calgary) and Kumar Murty
(Toronto) from July, 2009.

Joseph Khoury informed the Executive Committee and the Board of Directors that, for personal reasons, he would be unable to assume the position of Executive Director effective January 1, 2009, as had been planned. Graham Wright offered to remain as Executive Director, but on a slightly reduced basis until June 30, 2009. During that period, Khoury agreed to continue in his role as the Associate Executive Director (on a part-time basis) and provide assistance to Graham. Johan Rudnick was appointed as the Executive Director and Secretary of the Canadian Mathematical Society, effective July 15, 2009. Graham again kindly offered to continue as an "Executive Consultant" to the end of 2009 to ensure a smooth transition for both the CMS and the staff.

AVANCEMENT DES MATHÉMATIQUES: Depuis le début de 2009, nous menons une vaste campagne de recrutement. Des représentants de presque tous les départements ont parlé à leurs collègues de la SMC et les ont incités à se joindre à la Société. À la fin de décembre, la Société comptait 897 membres individuels, comparativement à 868 une année plus tôt. La SMC compte aussi 62 membres institutionnels, ce qui donne un total de 95 membres.

comité exécutif : Comme d'habitude, le Comité exécutif s'est réuni quatre fois en 2009 : lors des deux Réunions semestrielles de la Société, puis en avril et en octobre, à l'Institut Fields. Ce fut un grand plaisir de travailler avec les anciens viceprésidents Michael Bennett, Gordon MacDonald, Yvan Saint-Aubin et Catherine Sulem, dont le mandat a pris fin en juin 2009, et c'est un égal plaisir de travailler avec les nouveaux viceprésidents Cathy Baker (Mount Allison), Pengfei Guan (McGill), Micheal Lamoureux (Calgary) et Kumar Murty (Toronto) depuis juillet 2009.

Joseph Khoury a informé le Comité exécutif et le Conseil d'administration qu'il ne pourrait assumer comme prévu les fonctions de directeur administratif le 1er janvier 2009 pour des raisons personnelles. Graham Wright a offert de rester en poste, mais à charge réduite jusqu'au 30 juin 2009. Joseph Khoury a accepté de continuer à titre de directeur administratif adjoint (à temps partiel) et d'épauler Graham durant cette période. Johan Rudnick est devenu directeur administratif et secrétaire de la SMC le 15 juillet 2009. Pour faciliter la transition, tant pour la Société que le personnel, Graham a bien voulu demeurer au service de la SMC en tant que conseiller de direction à temps partiel jusqu'à la fin de l'année.

**OTHER ISSUES:** Jacques Hurtubise, Johan Rudnick and I were invited to attend the Second Canadian Mathematics Retreat at BIRS (October 16-18, 2009) that was organized by Nassif Ghoussoub, Director of BIRS. This meeting was a follow-up to the first meeting held in March 2005. The meeting sought to address the challenges and opportunities facing mathematics in Canada, especially with respect to the interests of governments, funding agencies, universities, and the mathematics community as a whole. Discussions included: the state of the Canadian mathematics community; what big ideas are possible for the mathematics community; the state of the institutes, unique challenges for small universities; the future of MITACS and BIRS; relations with NSERC; and the impact of NSERC program changes on mathematical research.

The CMS was informed in November, 2008 that it had to vacate the current temporary space by December 31, 2008. The Board of Directors, at its meeting in December 2008, approved that the CMS Executive Office move to 1785 Alta Vista Avenue (Suite 105). The new space is only 1500 square feet, significantly less than that occupied at the University of Ottawa. However, the fact that the Administrative Assistant position was not filled allowed for some flexibility in accommodating the staff at the new location. A short-term lease was signed which will give the CMS the opportunity to consider options for the future.

**THANKS:** In 2010, the Society began a new era without Graham Wright. I would like to thank Graham for over 30 years of devotion to the Canadian Mathematical Society.

**AUTRES DOSSIERS**: Jacques Hurtubise, Johan Rudnick et moi avons été invités à la Deuxième retraite mathématique du Canada à la Station de recherche internationale de Banff (SRIB) du 16 au 18 octobre 2009, retraite organisée par le directeur de la SRIB, Nassif Ghoussoub. Cette rencontre fait suite à une première retraite tenue en mars 2005. Elle avait pour objectif d'aborder les difficultés et les possibilités propres au milieu des mathématiques au Canada, en particulier en ce qui concerne les intérêts des gouvernements, des agences subventionnaires, des universités et de la communauté mathématique dans son ensemble. Les discussions ont notamment porté sur : la situation de la communauté mathématique canadienne; les grandes avenues possibles pour la communauté mathématique; la situation des instituts, qui représentent des défis particuliers pour les petites universités; l'avenir du Réseau MITACS et de la SRIB; les relations avec le CRSNG et les répercussions des changements liés à la recherche mathématique apportés par le CRSNG.

En novembre 2008, l'Université a informé la SMC qu'elle devrait quitter ses locaux temporaires à la fin de l'année civile. À sa rencontre de décembre 2008, le Conseil d'administration a approuvé le déménagement du bureau administratif au 1785, avenue Alta Vista (bureau 105) à Ottawa. Les nouveaux bureaux, d'une superficie de 1 500 pi2, sont beaucoup plus petits que ceux de l'Université d'Ottawa. Toutefois, le fait que le poste de l'adjointe administrative n'a pas été pourvu a offert une certaine marge de manoeuvre à l'installation du personnel dans ces nouveaux locaux. La SMC a signé un bail à court terme, ce qui lui laisse l'option d'examiner d'autres options pour l'avenir.

**REMERCIEMENTS**: En 2010, la Société est entrée dans une ère nouvelle sans Graham Wright.

I would like to thank our past Vice Presidents: Michael Bennett, Gordon MacDonald, Yvan Saint-Aubin, and Catherine Sulem for their outstanding services.

I would also like to thank all of the staff at the CMS office who have worked very hard throughout the year and their patience and understanding with the move of the Executive Office and the change of officers.

As my term as president of the Canadian Mathematical Society will come to an end in June, I would like to welcome our new President Jacques Hurtubise (McGill University) who will take over on July 1, 2010. I am certain that the Society will benefit greatly from his leadership.

I would also like to welcome our 4 new Vice Presidents: Cathy Baker (from Mount Allison), Pengfei Guan (McGill), Micheal Lamoureux (Calgary) and Kumar Murty (Toronto). J'aimerais remercier Graham de ses 30 années de service dévoué envers la Société mathématique du Canada.

J'aimerais aussi remercier les vice-présidents sortants, Michael Bennett, Gordon MacDonald, Yvan Saint-Aubin et Catherine Sulem, de leur contribution exceptionnelle.

Je tiens également à remercier tout le personnel du bureau administratif de la SMC, qui a travaillé très fort toute l'année, et qui a fait preuve d'une grande patience et d'une grande compréhension par rapport au déménagement du bureau administratif et au changement d'administrateurs.

Mon mandat à la présidence de la Société mathématique du Canada arrivant à échéance en juin, j'aimerais souhaiter la bienvenue au nouveau président, Jacques Hurtubise (Université McGill), qui prendra la relève à compter du 1<sup>er</sup> juillet 2010. Je n'ai aucun doute que la Société sera entre bonnes mains sous sa gouverne. Merci aussi à nos quatre nouveaux vice-présidents : Cathy Baker (Mount Allison), Pengfei Guan (McGill), Micheal (Calgary) et Kumar Murty (Toronto).

### **EXECUTIVE DIRECTOR'S REPORT**

**Executive Director: Johan Rudnick** 



AN EVENTFUL YEAR: The CMS Ottawa office is involved in every aspect of CMS activity. It provides support, as required, to all

CMS members. It supports the CMS Board of Directors and the Executive Committee, from 'secretariat' support to development of recommendations and policies. The office also supports the work of the various standing and other committees whether it be in the area of

### RAPPORT DU DIRECTEUR EXÉCUTIF

Directeur exécutif: Johan Rudnick

UNE ANNÉE MOUVEMENTÉE: Le bureau d'Ottawa de la SMC participe activement à tous les volets des activités de la société. Il offre un appui au besoin à l'ensemble des membres de la SMC. Il appuie le Conseil d'administration de la SMC et son comité exécutif, du soutien en tant que secrétariat à l'élaboration de recommandations et de politiques. Le bureau appuie également le travail des divers comités permanents et autres comités, qu'il soit question de services électroniques, de concours, de recherche ou d'éducation. De plus, il

electronic services, competitions, research, or education. At the same time, it also supports CMS publications, from subscription management, to fulfillment, to 'managing editor' duties. And it supports the various CMS events throughout the year, from the semi-annual meetings to the COMC/CMO/IMO competitions to math camps across Canada. Furthermore, the office also manages and administers the grants and contributions from governments, the private sector, and other organizations, as well as the donations from individuals.

And if supporting the CMS were not enough, the office also provides office support to the Statistical Society of Canada and subscription support to the Royal Society of Canada. For 2009, the CMS Ottawa office managed to continue proving all this support, despite some rather significant events.

The most interesting event in 2009 was the transition to a new Executive Director – one that is neither a mathematician nor an academic. After over thirty years of dedication and service, in mid-July, Graham Wright stepped down as the CMS Executive Director and I took over his responsibilities. Fortunately, Graham generously and kindly agreed to stay on as a consultant until the end of the year and his help and advice was a critical success factor in a smooth transition.

Another noteworthy event for 2009 was the unplanned mid-December 2008 move of the CMS Ottawa office from the University of Ottawa campus to commercial accommodations. Historically, the CMS was housed within the University of Ottawa for

appuie les publications de la SMC, de la gestion des abonnements, à l'exécution et aux responsabilités d'« éditeur en chef ». Il offre un soutien aux divers événements de la SMC tout au long de l'année, des rencontres semi-annuelles aux concours du DOCM/OMC/OIM et aux camps de mathématiques à travers le Canada. Qui plus est, le bureau gère et administre les subventions et les contributions du secteur public, du secteur privé et d'autres organisations, de même que les dons de particuliers.

Et comme si l'appui à la SMC ne suffisait pas, le bureau offre aussi un soutien administratif à la Société statistique du Canada et un appui en matière d'abonnements à la Société royale du Canada. En 2009, le bureau d'Ottawa de la SMC a réussi à maintenir tout son service de soutien malgré certains événements quelque peu significatifs.

L'événement le plus significatif en 2009 a été la venue d'un nouveau directeur exécutif, qui n'est ni un mathématicien, ni un universitaire. Après plus de 30 ans de dévouement et de service, Graham Wright a quitté, au milieu du mois de juillet, son poste de directeur exécutif de la SMC, et j'ai assumé ses responsabilités. Heureusement, Graham a été fort gracieux en acceptant de rester à titre de consultant jusqu'à la fin de l'année. Son aide et ses conseils ont été un des facteurs critiques de cette transition réussie.

Autre événement à noter en 2009, le déménagement non planifié du bureau d'Ottawa de la SMC à la mi-décembre 2008. Le bureau a quitté le campus de l'Université d'Ottawa pour s'établir dans des locaux commerciaux. Pendant plus de 30 ans, la SMC a occupé des locaux à même

more than the last thirty years. While the move represented a historical break with the University of Ottawa, it also represented a very significant cost increase. CMS began 2009 with a commercial rental rate that was more than twice the rate that had been paid in 2008 and for less space. The move added strain on the staff and a year-end deficit projection. Suffice to say, both the physical move and the subsequent start of operations in 2009 went very smoothly due to the tremendous efforts of the CMS staff. And despite the substantial accommodation cost increase, good fortune and some judicious budget management turned the projected 2009 deficit into a small surplus.

During the later half of 2009, the Ottawa office supported a number of internal renewal initiatives that were launched by the Executive and Finance committees. The two major initiatives were the review of the membership structure of the CMS and the review of all CMS publications. The preliminary work on memberships resulted in an interim revision to the Lifetime membership rates that were approved at the December 2009 Board meeting.

At the same time, the Ottawa office also initiated a general on-going review of current practices and procedures, especially with respect to office operations and support to the CMS. Should the office move more quickly to an electronic platform for all CMS activities? Is the work of the CMS committees and volunteers adequately supported? Can CMS activities be financially sustained? Can supporters be better informed about how they are making a real difference? Some initial

le campus de l'Université d'Ottawa. Bien que le déménagement ait marqué la fin d'une époque dans le rapport avec l'Université d'Ottawa, il a entraîné aussi une augmentation très importante des frais de fonctionnement de la société. La SMC a entamé l'année 2009 avec un taux de location de local commercial se chiffrant à plus du double de ce qu'elle payait en 2008. De plus, les locaux sont plus petits. Le déménagement a créé des pressions supplémentaires sur le personnel, et la SMC prévoyait un déficit de fin d'exercice. On se doit de noter que le déménagement et le lancement des activités en 2009 se sont déroulés tout en douceur grâce aux énormes efforts du personnel de la SMC. Malgré l'augmentation importante des frais de location, la bonne fortune et quelques décisions de gestion budgétaire judicieuses ont permis de transformer le déficit budgétaire prévu en un léger surplus.

Au cours de la deuxième moitié de 2009, le bureau d'Ottawa a appuyé un certain nombre de projets de renouvellement internes lancés par le Comité exécutif et le Comité des finances. Les deux projets principaux étaient l'examen de la structure des adhésions de la SMC et l'examen de l'ensemble des publications de la SMC. Le travail préliminaire touchant les adhésions a entraîné une révision intérimaire des taux d'adhésion à vie qui ont été approuvés au cours de la réunion du Conseil, au mois de décembre 2009.

Pendant ce temps, le bureau d'Ottawa a également lancé un examen général et continu des pratiques et des processus actuels, par rapport surtout aux opérations du bureau et à l'appui de la SMC. Le bureau devrait-il adopter plus rapidement une plate-forme électronique pour l'ensemble des activités de la SMC? Le travail des comités et des

benefits of these types of reviews are expected in early 2010.

Notwithstanding a small financial year end surplus, as noted in the Treasurer's Report which follows, 2009 also marked another year-over-year of deficit operations. The shortfalls represented by these deficits have necessitated drawing funds from the CMS contingency fund.

In 2009, the continuing economic downturn continued to keep CMS investment values severely depressed - having to underwrite deficit operations only served to exasperate the situation.

These deficits mean that in 2009, CMS spent more money than it generated and there is, unfortunately, a limit to how many years this type of operation can continue while at the same time entertaining the risks associated with foreign exchange transactions. The challenge herein is not so much in containing costs as it is in generating revenue. CMS expenditures, on the whole, are relatively 'lean and mean.' CMS revenues are simply inadequate to fully support all the 'good works' of the CMS. In 2009, the main event was the work started to determine how to best address this unsustainable situation.

bénévoles de la SMC est-il bien appuyé? Les activités de la SMC peuvent-elles être soutenues financièrement? Les personnes offrant leur appui pourraient-elles être mieux tenues au courant des conséquences de leurs efforts? On s'attend à voir quelques bienfaits initiaux de ces types d'examens au début de 2010.

Malgré un léger surplus en fin d'exercice, l'année 2009 a été une autre année d'activités déficitaires, une année sur l'autre. Comme on l'indique cidessous, si on élimine les rentrées liées aux opérations de change, la SMC enregistre toujours des déficits fonctionnels, une année sur l'autre.

Le manque à gagner que représentent ces déficits a contraint la SMC à tirer de sa caisse des fonds d'urgence. En 2009, la récession qui ne s'estompait toujours pas a eu pour effet de maintenir la valeur des investissements de la SMC en forte baisse. L'obligation de soutenir financièrement des opérations déficitaires n'a fait qu'envenimer la situation.

C'est donc dire qu'en 2009, la SMC a dépensé davantage de fonds qu'elle n'a pu générer. Ce mode de fonctionnement est malheureusement de durée limitée, surtout si l'on tient compte des risques associés aux transactions liées aux opérations de change. Le défi ne tient donc pas à minimiser les frais, mais bien à générer des revenus. La SMC, dans l'ensemble, dépense ses fonds judicieusement, sans excès. Les revenus de la SMC ne suffisent tout simplement pas à appuyer à part entière tout le « bon travail » de l'organisation. En 2009, les efforts mis de l'avant pour trouver la meilleure solution à cette situation insoutenable étaient l'événement principal de l'année.

### TREASURER'S REPORT

Treasurer: David Rodgers



As presented in Annex A, the 2009 CMS audited statement shows a *\$33,151 surplus*. The 2009 Budget approved by the Board of Directors in

December 2008 projected a deficit of \$45,755. The auditors continue to be pleased with CMS accounting practices and the satisfactory manner in which the audit is conducted.

Normally, a surplus would be cause for celebration, particularly in a year with extraordinary expenses. Namely, a change in the Executive Director position (Graham Wright retired after 30 years of service and Johan Rudnick was appointed to the position effective July 15), and the CMS Executive Office in Ottawa had to move to rental space significantly more costly than when the Office was located on the campus of the University of Ottawa. The CMS staff is to be commended for their efforts and their ability to perform their duties admirably throughout the transition period.

However, the operating surplus was (again) generated largely through foreign exchange revenue. The Canadian dollar stood at \$0.84 of the US dollar for the part of the year, November through March, when most subscription revenue received results from non-Canadian subscribers paying in US dollars. For 2009, foreign exchange revenue contributed \$114K. In the years 2004 to 2009, foreign exchange revenue has varied from a high of \$151K in 2004 to a low of \$3K in 2008. Clearly, it is highly risky to depend on currency exchange to support core operations.

### RAPPORT DU TRÉSORIER

Trésorier : David Rodgers

Le bilan vérifié de 2009 de la SMC affiche un *surplus de 33 151 \$*. Le budget de 2009 approuvé par le Conseil d'administration au mois de décembre 2008 prévoyait un déficit de 45 755 \$. Les vérificateurs sont toujours satisfaits des pratiques comptables de la SMC et de la manière adéquate dont la vérification est réalisée.

Habituellement, un surplus serait une raison de célébrer, surtout au cours d'une année marquée par des dépenses extraordinaires. Il a été question, entre autres, d'un changement au niveau du poste de directeur exécutif (Graham Wright a pris sa retraite après 30 ans de service et Johan Rudnick a été nommé au poste en date du 15 juillet) et du déménagement du bureau exécutif de la SMC à Ottawa dans des locaux aux frais de location plus élevés que ceux exigés sur le campus de l'Université d'Ottawa. Il sied de féliciter le personnel de la SMC de ses efforts et de sa capacité à s'acquitter admirablement de ses tâches pendant toute la période de transition.

Une fois de plus cependant, le surplus dans le budget de fonctionnement est attribuable, en grande partie, aux entrées sur opérations de change. Pendant une partie de l'année, soit du mois de novembre au mois de mars, le dollar canadien se situait à 0,84 cents par rapport au dollar américain. Pendant cette période, la plupart des revenus d'abonnements reçus provenaient d'abonnés à l'étranger qui s'acquittaient de leurs frais en dollars américains. Pour 2009, les rentrées sur opérations de change se situaient à 114 000 dollars. Au cours de la période 2004-2009, les rentrées sur opérations de change ont été, à leur plus haut, de l'ordre de 151 000 \$ en 2004 et

Since 2006, the CMS has taken steps to put the planning and budgeting process on firmer ground. Budgets have been developed assuming a \$0.97 Canadian Dollar (a better guess some years than others). Subsidy reports instituted in 2006 identify direct and indirect costs associated with each CMS activity. While these steps have proved moderately successful in highlighting budget challenges, they do not tie budget decisions to the CMS mission.

The CMS needs to continue its focus on revenue generation through memberships, subscriptions, donations and sponsorships. It is an ongoing process that needs to be tied to the CMS mission, with an emphasis on aligning initiatives to sustainable revenues. The Executive Director is taking measured steps to address the broader, longer-term issues facing the CMS.

de l'ordre de 3 000 \$, leur plus bas, en 2008. Il est clair que de se fier aux taux de change pour appuyer les activités centrales de la SMC est un exercice fort risqué.

Depuis 2006, la SMC prend des mesures pour faire porter sur des assises plus solides les processus de planification et de budgétisation. On prépare les budgets en présumant une valeur de 0,97 \$ pour le huard (une prévision qui s'avère plus juste certaines années que d'autres). Les rapports sur les subventions institués en 2006 font état des coûts directs et indirects associés à chacune des activités de la SMC. Bien que ces étapes aient permis dans une certaine mesure de faire ressortir les défis budgétaires à relever, elles ne créent aucun lien entre les décisions touchant le budget et la mission de la SMC.

La SMC ne doit pas cesser de mettre l'accent sur la génération de revenus par le biais des adhésions, des abonnements, des dons et des commandites. C'est un processus continu qui doit tenir compte de la mission de la SMC et qui doit viser avant tout à aligner les projets sur les revenus durables. Le directeur exécutif procède à pas mesurés pour régler les questions plus larges et à plus long terme touchant la SMC.

### BILINGUALISM COMMITTEE REPORT

Chair: Joseph Khoury (Ottawa)

The Bilingualism Committee is the youngest member to join the CMS committees' family. The Committee oversees, in accordance with policies determined by the Board of Directors, the bilingual character of the education, publication and research programs, as well as the electronic and other activities of the Society.

Other duties of the Committee include, but are not limited to:

- Ensuring the majority of the Society's public documents, meeting materials, press releases and other literature are produced bilingually;
- Ensuring that highly scientific documents are translated appropriately in a way that

- preserves the scientific value in both languages; and
- Assisting with the translation of documents, to review translated documents, and to ensure such documents are in accordance with the policies of the Society.

In its first year of operation, the committee's work was mainly about ensuring that some important public documents of the Society were provided in both languages. To be more precise, most of the committee's effort was on translating highly technical material that could not possibly be done by a non mathematician. This has proven to be a very challenging and time consuming task.

In 2009, the Committee:

- Reviewed the Math Enrichment Pamphlet;
- Translated the GdeB Robinson Media Release;

- Translated the Canadian Math Open (CMO)
   Questions and the CMO Report;
- Provided Technical assistance with the IMO Media Release;
- Translated the Scientific sessions Titles for both annual meetings;
- Translated the IMO results for the CMS webpage;
- Translated the Asian Pacific Math Olympiad Questions; and
- Reviewed the new CMO webpage.

It seems that in the near future, the committee will continue to be mainly involved in translating technical document. But in the medium and long terms, the committee could play an important role on reviewing the polities of the Society as part of a new CMS strategic plan.

### **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 to implement 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, including the:

- selection of organizers for the education sessions at the semi-annual meetings;
- annual selection of the winners of the Adrien Pouliot Award and the CMS Excellence in Teaching Award; and
- allocation of grants and sponsorships to a number of activities, such as provincial math contests, math camps, the Canada-Wide Science Fair, and the Ottawa Regional Science Fair.

In 2009 the Committee met at each of the CMS meetings and efforts were primarily focused on such main activities as Awards, Meetings, Grants, Science Fairs, and Math Camps.

**AWARDS:** The 2009 Teaching Award was presented to Dr. David Poole (shown below) from Trent University at the summer meeting in St. John's.



The Adrien Pouliot Award was presented to Dr. Walter Whiteley from York University at the winter meeting in Windsor.

**MEETINGS:** The education session at the summer meeting in St. John's was organized by Sherry Mantyka (Memorial). Sessions were organized jointly with the regional meeting of the Canadian Language and Literacy Research Network around the theme of numeracy and cognitive development in mathematics learning.

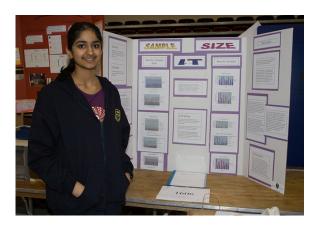
The education session at the winter meeting in Windsor was organized by Dragana Martinovics (Windsor) and focused on the interaction between Mathematics and Mathematics Education. The session included two lively panel discussions on that topic. The Education

Plenary Address was delivered by Dr. Alan Schoenfeld (Berkeley) on "How we think (a work in progress)".

The organizer for the summer meeting in Fredericton is Alyssa Sankey (UNB) with the consultation of Maureen Tingley, Eric Robert and John Grant McLoughlin.

**GRANTS:** The committee approved an amount of \$3450.00 in provincial grants. The successful applicants were from the provinces of Alberta, Manitoba, Newfoundland, Ontario, Prince Edward Island and Quebec.

SCIENCE FAIRS: The Ottawa Regional Science
Fair was held at Carleton University on April 3-4
2009. The CMS contributed \$300 towards
support of this Fair, (two awards of \$100 each +
\$100 general support). We are grateful to
Benoit Dionne (University of Ottawa) for
agreeing to adjudicate these awards for us. The
winners of our two awards were Rishika
Aggarwal for the project "Sample Size It"
(shown below) and Zerin Khan for the project
"The Pendulum Experiment, The Effect of
Mass."



The Canada-wide Science Fair was held this year in Winnipeg on May 9 2009. We are grateful to James Currie of the University of Winnipeg to adjudicate the CMS Award of \$1000. The winner was Erin Baker from Paradise NL for the project "Get Bent: How Black Holes Bend Spacetime and the Minds of Modern Physicists."

MATH CAMPS: Fourteen regional and one national CMS Math Camps were held in 2009, an increase of one over 2008. The 2009 camps were attended by 373 students, and forty percent of the campers were female. Based upon the feedback and surveys undertaken, the camps continue to be very successful and are making a difference to the participants who indicate an increased interest in math, science and engineering, including career interests. A further indication of the success of this program is requests for two additional camps in 2010.

During 2009 the Math Camp web page, <a href="http://www.cms.math.ca/MathCamps/">http://www.cms.math.ca/MathCamps/</a> was redesigned with an improved look and

functionality. The Math Camps coordinator, Harley Weston, is a member of the Education Committee.

Over the past year the Committee has been discussing the possibility of offering two Teaching Awards annually instead of only the one, and to differentiate these awards, roughly between "instructors" and "research faculty" although care would have to be taken over the definitions of these categories. The problem is two-fold: first the difficulties of comparing apples and oranges among the nominees, and secondly the fact that we get a large number of excellent nominations. Certainly there are concerns over possible devaluation of the existing award, but preliminary discussions have been had with Nelson Publishing, the cosponsor of the Award, about this matter and the more general matter of the shape of our continued collaboration. Discussions of these matters will continue.

### **ELECTRONIC SERVICES COMMITTEE REPORT**

Chair: Jacques Carette (McMaster)

The *Electronic Services Committee* (ESC) provides policy oversight for services provided by the *Electronic Services Group* (Ottawa) and the *Publications Office* (Winnipeg).

For the Electronic Services Group, 2009 was a consolidation year, with a variety of long-standing projects moving forward. The most visible result is the new web site for the journals. As with the main web site, the underlying infrastructure has been greatly

modernized, so that ongoing operations should be simpler for several years to come. As usual, much further work was done behind the scenes, in an effort to ensure a steady delivery of services to the members.

The contract services that the Web Services Group provides to the *Statistical Society of Canada* have stabilized into a steady working pattern, properly integrated into the workflow of the group. This work continues to be a source of synergy between various electronic offerings.

The *Publications Office* continues to produce issues of CMS journals on a timely basis, as well as providing editorial and technical assistance to other CMS-supported publications. They provided significant input and help in the journals web site upgrade, and share the credit for making this project a success. Another

accomplishment is the addition of Digital Object Identifiers (DOI) to journal articles. In particular, authors can consider their papers *published* once they appear online with a DOI.

Investigations were started into various potential (electronic services) projects which could become strategically important for the CMS, its members and our visibility online.

### **ENDOWMENTS GRANTS COMMITTEE REPORT**

Chair: Hassan Safouhi (Alberta)

The main task of the Endowment Grants
Committee is to adjudicate 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.

Because of a significant drop in the value of the CMS investment portfolio, it was decided to suspend the provision of grants in 2009.





Past CMS Endowment Grants Projects



The Endowment Grants Committee expects that a restrained but meaningful competition for Endowment Grants will be held in 2010.

### FINANCE COMMITTEE REPORT

Chair: Ken Davidson (Waterloo)

This year, we had another year-over-year projected deficit. The good news is that we finished 2009 in the black in spite of several setbacks. However the picture for the future remains much the same.

We continue to depend critically on our revenue from the CJM and CMB. The majority of subscriptions are foreign, and these payments are priced in US dollars. So our

income in Canadian dollars is a function of the exchange rate. The continuing strong Canadian dollar makes it likely that we will be short for the coming year again. In 2009, the Canadian dollar dropped during the first few months of the year when most subscriptions are received. That explains the solvency this past year. In the long term, we are looking for a plan to price the journals in a way that protects our income while

not jeopardizing our subscription base. We have introduced an electronic only version of the subscription, which we hope will attract a number of additional subscribers.

A subcommittee of the Finance committee led by Tom Salisbury looked into the issue of currency hedging. While this report offered some options to try to hedge the currency fluctuations, there was insufficient support to implement any such plan.

The other main source of income is membership, and the CMS has been successful in its drive to attract new members. Continued emphasis on this aspect will help balance the books. A subcommittee of the Finance and Executive Committees is looking into the whole issue of membership fees at the moment. I reiterate a point made before. The CMS has limited cash reserves, and cannot continue to run deficits year after year. We need to increase our income or decrease expenses. The CMS funds many worthy projects in many areas of mathematics research, education and outreach. We want to keep them at viable levels. So we continue to look for ways to balance the books without serious cutbacks.

### INTERNATIONAL AFFAIRS COMMITTEE REPORT

Chair: Nicky Kamran (McGill)

The Committee met via conference call on May 17, and September 16, 2009 and carried out the rest of its business via e-mail. The Committee's work in 2009 has dealt mainly with the International Mathematical Union (IMU).

IMU: The IAC discussed the call for nominations issued by the IMU for the positions of Vice-President (2) and Member-at-large (6) of the Executive Committee of the International Mathematical Union. The IAC also considered the responses received from the Canadian mathematical community to the call sent out for suggestions. As a result of this process, three Canadian mathematicians have been nominated by the IAC (acting as the Canadian CNC-IMU Committee) for positions on the IMU Executive: N. Ghoussoub as President, C. Rousseau as Vice-President and A. Adem as member-at-large. The final vote on these

nominations will take place at the IMU General Assembly in Hyderabad in 2010.

The IAC consulted on the composition of the Canadian delegation to the General Assembly of the IMU: A. Adem, E. Bierstone, J. Hurtubise, J. Quastel and P. Russell. All five have agreed to serve as delegates.

The IAC consulted on the motions submitted by the IMU for the associate membership of Thailand and the creation of a Commission for Developing Countries within the IMU. A favorable vote was recommended on both issues and was forwarded to the IMU.

The IAC Chair filled the annual survey required by NRC for its continued support of the membership of Canada in the IMU through the payment of the annual membership fee (about 18,000 Swiss Francs). NRC has just informed the Chair of its approval of the payment of the fee.

### **INVESTED FUNDS COMMITTEE REPORT**

Chair: David Bates

The Invested Funds Committee met at the Fields Institute twice during 2009, once in April and again in October.

During the April meeting, the continuing global credit crisis and its effect on the invested funds was reviewed. Overall, the funds declined 17.54 % over the year ending March 2009 compared with a 17.45 % decline in the corresponding indexes. Investment portfolio rebalancing for the Endowed Funds was reviewed and TD Asset Management was asked to report back on the availability of more flexible rebalancing options. Tactical Asset Allocation was discussed and felt to be inappropriate for our funds as it involves market timing and would inevitably introduce an element of higher risk. Richard Johnston, a retired institutional investment professional, attended the meeting by invitation to be considered for the position of Consultant on the committee.

At the October meeting, a review of the Investment Fund Report as of September 30, 2009, revealed a yearly overall investment return of 3.91% and 6.44% over the most recent three months. It was noted that the equity markets bottomed out in March 2009 and have recovered more or less steadily since. TD Asset Management reported that there were no flexible rebalancing options economically

available for our fund and the committee decided to continue with our current approach.

Richard Johnston accepted our invitation to become a Consultant following the April 2009 meeting and was welcomed as a member of the Invested Funds Committee.

Concern regarding the continuing fragile global market conditions and the need for preservation of the Endowed Funds' capital prompted the Committee to retain its cautious funding level for each endowment fund of 3% of the corresponding year end fund value less administration costs. The following projected allocations for the Endowed Funds for 2010, net of administration fees, were approved: \$6,379 for the CMS Endowment Fund, \$3,191 for the Olympiads Fund, and \$860 for the David Borwein Fund.

A discussion of currency hedging prompted the Committee to suggest the CMS reduce its exposure to currency fluctuation rather than introduce a currency hedging strategy for the Contingency Fund. Exchanging our present Contingency Fund US market equity investments for Canadian market equity investments was put forth for consideration.

### MATHEMATICAL COMPETITIONS COMMITTEE REPORT

Chair: Neal Madras (York)

The Mathematical Competitions Committee (MCC) oversees the Society's involvement in mathematics contests. The Society sponsors and runs two competitions: the Sun Life Financial Canadian Open Mathematics Challenge (COMC) with the University of Waterloo's Centre for Education in Mathematics and Computing, and jointly sponsored with Sun Life, the Canadian Mathematical Olympiad (CMO). The MCC is also responsible for Canada's participation in the Asian Pacific Mathematics Olympiad (APMO) and the International Mathematical Olympiad (IMO), and supervises the Mathematical Olympiad Correspondence Program (Olymon) and the Esso/CMS National Math Camp.

Most of the work of the MCC is done by its four subcommittees (the COMC, CMO, and IMO Committees, and the Correspondence Coordinator). Further information, including media releases, on most of the items in this report can be found on the respective CMS web pages: <a href="www.cms.math.ca/Competitions/">www.cms.math.ca/Competitions/</a> and <a href="www.cms.math.ca/MediaReleases/">www.cms.math.ca/MediaReleases/</a>.

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 Ottawa Office, especially the past and present Executive Directors, Graham Wright and Johan Rudnick, also deserve our gratitude for their dedication.

### THE CANADIAN MATHEMATICAL OLYMPIAD

**(CMO):** The 41st Canadian Mathematical Olympiad was written by 81 candidates on Wednesday, March 25, 2009.

Eight students were presented with awards at the annual Awards Banquet at the University of Waterloo on Thursday, June 11, 2009. First Prize and the Sun Life Financial Cup was awarded to Jonathan Schneider, University of Toronto Schools, Toronto, Ontario. Second Prize was awarded to XiaoLin (Danny) Shi, Sir Winston Churchill High School, Calgary, Alberta. Third Prize was awarded to Chengyue (Jarno) Sun, Western Canada High School, Calgary, Alberta.



CMO First Prize winner and Sun Life Financial Cup recipient Jonathan Schneider

Honourable mentions were awarded to:
Ahmad Abdi, Sabouhi Academy of Art and
Design, Toronto, Ontario; Yu (Robin) Cheng,
Pinetree Secondary School, Coquitlam, British
Columbia; Nikita Lvov, Marianopolis College,
Westmount, Quebec; Hunter Spink, Western
Canada High School, Calgary, Alberta; and Chen
Sun, A.B. Lucas Secondary School, London,

Ontario. A full report of the CMO, including the question paper, solutions and analysis of the marking can be found at the CMS website: www.cms.math.ca/Competitions/CMO/.

The top 50 candidates for the CMO were invited on the basis of their high performance in the Canadian Open Mathematics Challenge (COMC) written in November 2008. The next 150 highest scoring students from the COMC were invited to write the CMO Qualifying Repêchage (CMOQR) in January 2009. In the CMOQR, a set of problems are posted on-line and participants must submit their solutions within one week. Almost two-thirds, 95, of the invited students submitted solutions, which were graded by a team of markers at the University of Waterloo under the supervision of Ian VanderBurgh. On the basis of the results, 25 additional students were invited to write the CMO. This was the second year of the CMOQR, and it was generally agreed that this event has been very successful. Accordingly, the MCC changed its Terms of Reference in 2009 so that the CMOQR would be a permanent and formal part of the CMS' annual competition cycle.



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

### THE ASIAN PACIFIC MATHEMATICS OLYMPIAD:

The 21<sup>st</sup> Asian Pacific Mathematics Olympiad (APMO) was written on March 9, 2009 in North

and South America, and on March 10 in the Western Pacific and Asia. Of the 29 Canadian students who wrote the four-hour competition, ten were Canada's official participants. The top Canadian student was Chen Sun, who was awarded a Gold Medal. Hunter Spink and Jonathan Schneider were second and third respectively, and were awarded Silver Medals. Also in the top ten were Yuhan Chen, Junghoo Kim, Danny Shi, and Jarno Sun, who received Bronze Medals. This was the last year in which South Korea served as Senior Coordinating Country; this role will pass to Japan in 2010.

Further details regarding the APMO will be available through the CMS website at: <a href="https://www.cms.math.ca/Competitions/APMO/">www.cms.math.ca/Competitions/APMO/</a>.

INTERNATIONAL MATHEMATICAL OLYMPIAD: The 50<sup>th</sup> International Mathematical Olympiad (IMO) took place in Bremen, Germany, from July 10 to July 22, 2009. The Team Leader was Dr. Dorette Pronk of Dalhousie University, the Deputy Leader was Mr. David Arthur of Stanford University, and the Deputy Leader Observer was Mr. Jacob Tsimerman of Princeton University.

The six high school students on the Canadian team were Yu (Robin) Cheng, Pinetree Secondary School, Coquitlam, British Columbia; Jonathan Schneider, University of Toronto Schools, Toronto, Ontario; XiaoLin (Danny) Shi, Sir Winston Churchill High School, Calgary, Alberta; Hunter Spink, Western Canada High School, Calgary, Alberta; Chen Sun, A.B. Lucas Secondary School, London, Ontario; and Chengyue (Jarno) Sun, Western Canada High School, Calgary, Alberta.



The Canadian team (shown above) placed 18<sup>th</sup> out of 103 countries. A Gold Medal was awarded to XiaoLin (Danny) Shi, Silver Medals to Yu (Robin) Cheng, Hunter Spink, and Chen Sun, and Bronze Medals to Jonathan Schneider and Chengyue (Jarno) Sun. The team's total score, 158 out of a maximum 252, was the highest that a Canadian team had received in over fifteen years. The CMS Media Release on the 2009 IMO results is on the CMS website at: http://cms.math.ca/MediaReleases/2009/imoresults.

The Winter Training Seminar was hosted by York University, January 6-11, 2009, and was attended by thirteen high school students from across Canada. The local organizer was Peter Gibson, assisted by Neal Madras, Alfred Pietrowski, and Andrew Toms (all of York), as well as the staff of the Department of Mathematics and Statistics and of Bethune College. The program of the seminar was organized by the three team leaders, with additional trainers Adrian Tang (Calgary) and Yufei Zhao (MIT).

The Summer Training Seminar took place at University of Calgary and the Banff International Research Station (BIRS) from June 26 to July 12, immediately before the team departed for Bremen. Bill Sands and Adrian Tang, as well as the BIRS staff, assisted with the logistics. On June 29, a Team Sendoff Reception was held at the University of Calgary, where the Team was introduced to the local media, and later that afternoon the team members were driven to Banff. One local student from Alberta, Mariya Sardarli, also attended the first few days of the Seminar. The training at BIRS was held jointly with the Mexican IMO team. In addition to the team leaders, Christopher Small and Adrian Tang assisted with the training.

Reports on the 2009 IMO from Chen Sun and Dorette Pronk were respectively published in the December 2009 and February 2010 issues of the CMS Notes. More information regarding the 2009 IMO can be found at <a href="http://www.cms.math.ca/MediaReleases/">http://www.cms.math.ca/MediaReleases/</a> and <a href="http://www.cms.math.ca/Competitions/IMO">www.cms.math.ca/Competitions/IMO</a>.



# ESSO/CMS NATIONAL MATH CAMP: The National 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 2009 Esso/CMS National Math Camp took place at University of Windsor from July 6 to 10,

with Richard Caron as the main organizer. 22 students attended the camp (8 female, 14 male). To increase the number of female participants, invitations stressed the safety of the environment and the presence of female "den mothers". Student feedback was very positive. See the Education Committee report for information about other Math Camp activities.

### MATHEMATICAL OLYMPIAD CORRESPONDENCE PROGRAM: The

Mathematics Olympiad Correspondence
Program (Olymon) is a continuing program in
which secondary school students submit
solutions to problems for marking. In 2009,
there were nine sets of problems, set and
marked by Ed Barbeau and Rosu Mihai. Each
problem first appears as a "Problem of the
Week" that is e-mailed to a list of about 200
high school students. Generally, each problem
attracts solutions from five to ten students.
There are now over 600 problems with
solutions posted on both the websites
<a href="https://www.cms.math.ca/Competitions/MOCP">www.cms.math.ca/Competitions/MOCP</a> and
<a href="https://www.math.utoronto.ca/barbeau">www.math.utoronto.ca/barbeau</a>, so students
can practice and check their solutions.



THE SUN LIFE FINANCIAL CANADIAN OPEN MATHEMATICS CHALLENGE: November 2009 marked the fourteenth writing of the COMC, and its third writing under the banner of Sun Life Financial. It is a collaborative activity between the CMS and the Centre for Education in Mathematics and Computing (CEMC). This

Contest 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 National Math Camp.

The 2009 edition of the COMC had a record number of over 8400 participants (with more than 9600 registrants). The paper had an average mark of 39.3 out of 80 thus giving a good chance of success to every student who wrote the paper, while continuing to provide a challenge for the very best problem solvers in the country. The 2009 edition of the COMC again saw a marked increase in the number of international competitors.

The Canadian Mathematical Olympiad Qualification Repêchage (CMOQR) was administered again in 2009/2010. This provides a bit more flexibility to the COMC/CMO sequence, as the COMC to not have to be as difficult at the "top end" in order to provide sufficient "separation" to make CMO invitations more clearcut. This makes the task of the COMC Problems Committee easier as it strives to make the COMC more consistent in feel and difficulty from year to year.

The top nine competitors were: Ram Bhaskar, Indus Center for Academic Excellence, Troy, MI; Brian Bi, Woburn Collegiate Institute, Scarborough, Ontario; Robin Cheng, Pinetree Secondary School, Coquitlam, British Columbia; Calvin Deng, Enloe High School, Raleigh, North Carolina; James Duyck, Vincent Massey Secondary School, Windsor, Ontario; Jun Hou Fung, Canadian International School, Aberdeen, Hong Kong; Fang Guo, Richmond Hill High School, Richmond Hill, Ontario; Zhiqiang Liu, Don Mills Collegiate Institute, North York, Ontario; Alex Song, Windsor, Ontario. Thanks go to the hard-working Problems
Committee who annually ensure that the paper meets its varying goals, as well as the wonderful group of more than 80 markers. Further details are available on the CMS website at:

www.cms.math.ca/Competitions/COMC/ or

www.cemc.math.uwaterloo.ca/contests/open.h
tml.

### NOMINATING COMMITTEE REPORT

Chair: Richard Kane (Waterloo)

Over 150 individuals contribute to the work of the Canadian Mathematical Society by serving on the CMS Board or a CMS standing committee or sub-committee. The Nominating Committee and various standing committees and boards 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.

Across the standing committees, 134 appointments were made for 96 individuals. On the CMS Editorial Boards, 56 appointments were made for 51 individuals. At the subcommittee level, 50 appointments were made for 39 individuals. Including seven other appointments, in total, the Nominating Committee and various standing committees managed 247 appointments of 150 volunteers, of which 110 began their terms in 2009.

There is an enormous amount of energy and talent within the Canadian mathematical community. Nevertheless, it always proves to be a significant challenge for the Nominating

Committee to identify individuals willing to contribute their talents and expertise to the Society, especially individuals who have not served the Society before. Given the major turnover in mathematics faculty across the country in the last few years, it continues to be important to involve such "new people" and, given the changing gender balance in graduate schools and faculties across the country, it is particularly important to recruit more women to fill these positions. As well, the Committee continues to make a concerted effort to enlist the support of business and other professional people from outside academia because of the special expertise and fresh viewpoints such individuals provide.

The Society is extremely grateful to all the volunteers who serve the CMS with commitment and passion. Without the efforts of these individuals, the 'good works' of the CMS could never be undertaken.

### **PUBLICATIONS COMMITTEE REPORT**

Chair: Matthias Neufang (Carleton)

The principal task of the CMS Publications
Committee is to oversee and participate in
various activities of the Society related to its
publications. Kenneth R. Davidson of the
University of Waterloo will start his two-year
term as Committee Chair {and three-year term
as Member} in January 2010, taking over from
Matthias Neufang (Carleton) who stepped
down in December 2009. With Murray Bremner
of the University of Saskatchewan, the
Committee welcomes another new Member
starting his three-year term in January, 2010.

MATHERMATICS JOURNALS: The current Editors-in-Chief of the Canadian Journal of Mathematics are Henry Kim and Robert McCann of the University of Toronto, who are starting the fourth year of their term. The Editors-in-Chief of the Canadian Mathematical Bulletin, Nantel Bergeron and Jianhong Wu of

York University, are beginning the fifth year of their term. Thanks are due to the Editors-in-Chief and the Publications Office in particular for their success in improving the backlog situation.



Of the 14 Associate Editors on the Editorial Board for the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin in 2009, Luc Devroye (McGill), Thomas Ransford (Laval) and Ravi Vakil (Stanford) stepped down in December at the end of their term. The Society is currently seeking nominations for appointments of suitable new members.

Following the tradition of alternating between the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin, the 2009 G. de B. Robinson Award was given for the best article published in the CMB in 2007 or 2008. The recipients of the 2009 G. de B. Robinson Award



were Vladimir Manuilov (Moscow State) and Klaus Thomsen (Aarhus) for their article 'On the lack of inverses to C\_-extensions related to property T groups' which appeared in the Canadian Mathematical

Bulletin (2007), volume 50, no. 2, 268-283.

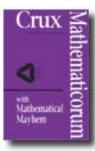
ATOM: The Editor-in-Chief of the series A Taste of Mathematics (ATOM) is Bruce Shawyer of Memorial University. In 2009, two new volumes of the ATOM series appeared: {ATOM IX: The



CAUT Problems by Edward Barbeau; and ATOM X: Modular Arithmetic by Naoki Sato.

CRUX: Vaclav Linek of the University of Winnipeg is the Editor-in-Chief of Crux

Mathematicorum with Mathematical Mayhem. Edward Barbeau (Toronto) had extended his service as Contributing Editor - Education in 2009 and stepped down in December. Iliya Bluskov



(Northern British Columbia) as well as Maria L. Torres (Athabasca) stepped down as Problems Editors, and John Grant McLoughlin (New Brunswick) stepped down as CRUX Member-at-Large in December, 2009.

The following appointments to the CRUX Editorial Board have been approved in 2009:

- Jonatan Aronsson (Manitoba) and Dzung Minh Ha (Ryerson) as Problems Editors, each with a term ending in December, 2010;
- Mogens Lemvig Hansen (Yen-Hansen L.C.) and Lily Yen (Capilano) as Skoliad Editors, extending their term until December, 2011.

Of the CRUX publications in 2009, we note in particular the Jim Totten Special Issue which appeared in September, 2009; it was greatly appreciated by the readers.

NOTES: The Editors-in-Chief of **the CMS Notes** are Robert Dawson of Saint Mary's University and Srinivasa Swaminathan of Dalhousie University.



Following the recommendation by the Finance Committee, the number of issues for the CMS Notes has been reduced from eight to six per year, effective 2010.

BOOKS: Karl Dilcher and Keith Taylor of Dalhousie University are the Editors-in-Chief of the CMS Books in Mathematics Series, published by Springer. The following four volumes were published in the series in 2009 or will appear in 2010:

- Solving the Pell Equation, by M. Jacobson and H. Williams (2009);

- A Concrete Approach to Classical Analysis, by M. Muresan (2009);
- Selected Topics in Discrete Geometry, by K. Bezdek (2010); and



- Functional Analysis and Infinite-Dimensional Geometry, Second Edition, by M. Fabian, P. Habala, P. Hajek, V. Montesinos Santalucia, J. Pelant and V. Zizler (2010).

Four more volumes are currently under contract.

Henri Darmon of McGill University is the Editorin-Chief of the CMS Treatises in Mathematics, published by A.K. Peters. In 2009, the volume *Algebraic Combinatorics and Coinvariant Spaces* by Francois Bergeron appeared.

The Publications Office is headed by Craig Platt of the University of Manitoba as Technical Editor, Srinivasa Swaminathan of Dalhousie University as Associate Technical Editor, and Michael Doob of the University of Manitoba as Technical Consultant. The Society is especially grateful for their work on the DOI implementation: DOIs for all articles published in 2008 and 2009 in the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin have now been registered.

### **RESEARCH COMMITTEE REPORT**

Chair: Ed Bierstone (Toronto)

The Research Committee met on December 6, 2009 at the CMS Winter Meeting in Windsor. Much of the Committee's work is done by email correspondence.

The Research Committee helps select the scientific organizers for the summer and winter meetings, and participates in the scientific organization of these meetings. The Committee also participates, to a lesser extent, in the organization of other special CMS meetings.

**AWARDS:** The Research Committee selects the winners of the Coxeter-James, Jeffery-Williams and Krieger-Nelson Prizes. These prizes recognize outstanding contributions to research by members of the Canadian mathematical community (the Coxeter-James Prize by younger mathematicians, and the Krieger-Nelson Prize by women).

At the December 2009 meeting, the following prize winners were selected: 2010 Coxeter James - Bálint Virág (Toronto); 2010 Jeffery-Williams - Kai Behrend (UBC); and 2011 Krieger-Nelson - Rachel Kuske (UBC).

The Research Committee also appoints the members of the Doctoral Prize Selection Committee (one of whom must be a member of the Research Committee). The Doctoral Committee selected Mark Braverman (Ph.D. University of Toronto, 2008) as the recipient of the 2009 Doctoral Prize for his thesis supervised by Stephen Cook.

The Research Committee helps develop the scientific sessions of the CMS semi-annual

meetings as well as joint meetings with other societies.



Yael Karshon receives the 2010 Krieger-Nelson Prize

**2009 CMS SUMMER MEETING** (JUNE 6-8, ST. JOHN'S, NEWFOUNDLAND): The Scientific Director for the meeting was David Pike (Memorial University of Newfoundland). There were 19 scientific sessions. The meeting attracted 400 participants.

The program included plenary lectures by Elizabeth J. Billington (Queensland), Jeremy Gray (Open Univ.; Warwick), Michael Mackey (McGill), Susan Montgomery (USC), Michael Sigal (Toronto) and Gaoyong Zhang (Polytechnic Univ.; New York). A public lecture was given by Helaman Ferguson (Sculptor).

Prize lectures were given by David Poole (Trent)

– Excellence in Teaching Award, Stephen Kudla
(Toronto) – Jeffery-Williams Prize, and Yael
Karshon (Toronto) – Krieger Nelson Prize.

CMS-SMM-2009: SECOND JOINT MEETING OF THE CANADIAN MATHEMATICAL SOCIETY AND THE SOCIEDAD MATEMÁTICA MEXICANA (AUGUST 13-15, 2009): The Scientific Committee consisted of: Alejandro Adem (UBC), Fernando Brambila (SMM; UNAM), Walter Craig (McMaster), Isidoro Gitler (CINVESTAV), Andrew Granville (Montréal), and Jose Seade (UNAM). There were 10 scientific sessions.

The program included plenary lectures by James Arthur (Toronto), Onésimo Hernández-Lerma (CINVESTAV), Niky Kamran (McGill), Rachel Kuske (University of British Columbia), Jose Seade (UNAM), and Alberto Verjovsky (UNAM-Cuernavaca). The meeting attracted 225 participants.

**2009 CMS WINTER MEETING** (DECEMBER 5-7, WINDSOR, ONTARIO): The Scientific Director

was Dan Britten (Windsor). The meeting had 18 scientific sessions encompassing over 230 talks. The meeting attracted 370 participants.

Plenary lectures were given by Jonathan Borwein (Newcastle, NSW), Anthony To-Ming Lau (Alberta), Naomi Leonard (Princeton), Nancy Reid (Toronto), Christine Shoemaker (Cornell) and David Vogan (MIT). A public lecture was given by Alan H. Schoenfeld (Berkeley).

Prize lectures were given by Walter Whiteley (York) – Adrien Pouliot Award, Patrick Brosnan (UBC) – Coxeter-James Prize, and Mark Braverman (Toronto) – Doctoral Prize.

### STUDENT COMMITTEE REPORT

Chairs: Kseniya Garaschuk (Victoria) and Jenna G. Tichon (Winnipeg)

2009 has been a great year for the Student Committee. We have expanded our ongoing projects as well as started several new ones, including the organization of the first-ever student poster session to be held in Fredericton at the CMS Summer meeting. We have developed closer ties with student groups across the country and are working closer with CMS to increase student awareness and participation in the life to the mathematical community. Our newly updated web-site contains all the relevant information about our membership and activities: http://www.cms.math.ca/Students/Studc/.

**CHANGE OF MEMBERSHIP:** We would like to thank the members whose term has ended over the past year: Iva Halacheva, Co-Chair, Gary Bazdell, CUMC president, and Joanna Colling, Newsletter editor. We also welcome our newest member this year, Sarah Plosker.

STUDC WEB SITE: During the past year, the website has been restructured and updated with the help of our webmaster. It now contains all the back issues of the student newsletter, updated biographies of all Studc members, a form for applying for our regional funding, links to several "how to" guides and much more. Starting with the winter 2009 meeting, we now also take minutes of our panel discussion and post it online, making all the useful information that was discussed during the panel accessible for the students who could not go to the meeting. We encourage you to visit the site at http://www.cms.math.ca/Students/. If you have any comments on the website, just send an e-mail to the webmaster studentwebmaster@cms.math.ca.

**STUDENT E-MAIL LISTS:** The Stude webmaster moderates listservers that distribute announcements to math students across the

country. There are separate lists for graduate and undergraduate students. There are currently 166 members of the graduate list and 216 members of the undergraduate list. We are working to increase the frequency of postings to this list.

cms Meetings: Both summer and winter CMS meeting were a great success for the Studc. At the summer meeting we have organized a panel discussion on how to apply for scholarships. It featured 3 professors, one of whom was a Departmental Chair, and a post-doc. At the winter meeting the panel discussion featured two professors and two journal editors discussing the publishing process. The latter one was our most successful and well-attended panel discussion yet.



Both student socials were held at local pubs with a high number of students attending. For 2010 we are planning to increase the attendance at these events by including flyers in the registration packets for students and offering door prizes at the social. The online registration form will now also include a section where student participants can check whether or not they will attend the panel and/or the student social. This will not only give us a better idea of how many people we should expect, but will also increase student awareness regarding those events. We are also currently looking into inviting a guest speaker to give a lecture at one

of the upcoming CMS meetings about the National Research Council and their projects.



### **CANADIAN UNDERGRADUATE MATHEMATICS**

CONFERENCE: The CUMC 2009, the 16th edition, took place in Ottawa on July 8th to July 11th. The conference was a great success as always with over 100 student participants and great plenary speakers. The Stude, on behalf of the CMS, once again gave \$1,000 towards the conference and sent a representative to talk to the students about the CMS and our activities. The preparations for the CUMC 2010 at Waterloo are already well underway. With the organizers taking hands-on approach to advertising, this conference promises to be a big success. For more details, see www.cumc.math.ca. We will once again revisit the idea of starting a collection of framed posters from past conferences that can be displayed at CMS events and future CUMCs.

**STUDC LOGO:** Due to possible copyright and formatting issues, we have abandoned the plan to run a contest for the Studc logo. Instead, in 2010 we are planning on hiring a graphic designer to create the logo.

stude poster: Our Stude poster has now been re-formatted, printed and, for the first time, displayed at the CMS Winter meeting 2009. Although it contains all the information about our services, our webpage and listservers and exists in both French and English version, it lacks the logo and generally has too much writing. Now, with the help of CMS, we are

hoping to create a new more clean-cut poster, print it as a banner and have it ready for the Summer 2010 meeting.

ATTENDING A CONFERENCE BROCHURE: The conference tips brochure was put in a new format. It is now available as a threefold brochure, which was designed with Scribus, an open-source software. The brochure is an excellent tool for students that are not familiar with attending a conference. It was printed and added to the conference kit at CUMC 2009 and got great reviews from students. The brochure exists in both French and English versions, it is available through our website and will be included in the CUMC conference kits from now on.



student Newsletter: A new template was created for the Winter 2010 edition (published in December 2009). It came back to its old format, i.e. the booklet. Although we have recently had success in delivering the brochure to the students and making it visible at the Math Departments across Canada, we are considering switching to an electronic version.

We will still send a copy to each Department and/or a corresponding student union, but it will now serve as a display copy only. The newsletter helps engage mathematics students in Stude activities; it contains information on conferences, book reviews, articles on noteworthy events in the math community as well as mathematical diversions and humour. We hope to expand the newsletter and encourage submissions from students outside of the Stude for future issues.

FACEBOOK GROUP: The social media has become a new popular tool to share information, so the committee has created a Facebook group called "CMS Students/Étudiants de la SMC" which contains information about the different activities the committee is offering, discussions related to future possible projects as well as pictures from previous events. Check it out at: <a href="http://www.facebook.com/group.php?gid=196">http://www.facebook.com/group.php?gid=196</a> 813069508&ref=ts.

MATH UNIONS PROJECT: The project of getting the email addresses of every Canadian math student union is now underway. With each committee member responsible for contacting and getting information about student unions in his/her area, we are now beginning to collect the needed information to connect to these separate groups.

### **WOMEN IN MATHEMATICS COMMITTEE REPORT**

Chair: Ping Zhou (St. Francis Xavier)

The Committee on Women in Mathematics is charged with monitoring the status of women within the Canadian mathematical community, recommending actions that will help to ensure equitable treatment of women in the community, and encouraging the participation of women in mathematics at all levels. In 2009, the Committee continued working with the CMS Executive Committee to establish guidelines for the purpose of increasing gender diversity among speakers (plenary and public speakers in particular) at CMS meetings. With the implementation of the new policies for the NSERC Discovery Grants, the committee starts to get concerned on how this does and will affect women mathematicians in Canada

and decides to work on this issue when more data is available.

In addition, we are starting to make plans to host the fifth edition of the Connecting Women in Mathematics Across Canada (CWiMAC) workshop at the end of 2010. This workshop brings together women in mathematics from many different levels (undergraduate and graduate students, postdoctoral fellows, and women in junior and senior faculty positions), with the aim of supporting women in the early stages of their career in the mathematical sciences.

**ANNEX A** 

### CMS Financial Position (December 31, 2009)<sup>[1]</sup>

	Operations Fund \$	Contingency Fund \$	Endowment Fund \$		Mathematical Olympiads Fund \$		Borwein Distinguished Career Fund \$		2009 Total \$	2008 Total \$
	7	Ą	Capital	Operations	Capital	Operations	Capital	Operations	,	Ą
ASSETS CURRENT ASSETS										
Cash	129,471								129,471	151,987
Short-Term Investments	157,861								157,861	73,366
Accounts Receivable	351,764	22,163							373,927	422,131
Budget Advances										4,000
Prepaid Expenses	59,224								59,224	60,004
Due From (to) Specified Fund	89,585	(40,177)	(36,366)	3,859	(19,890)	6,266	(3,386)	109		
SUB-TOTAL	787,905	(18,014)	(36,366)	3,859	(19,890)	6,266	(3,386)	109	720,483	711,488
INVESTMENTS	2,443	860,302	403,476		199,522		52,631		1,518,374	1,360,405
CAPITAL ASSETS	38,818								38,818	35,621
ASSETS TOTAL	\$829,166	\$842,288	\$367,110	\$3,859	\$179,632	\$6,266	\$49,245	\$109	\$2,2276,75	\$2,107,514
LIABILITIES										
CURRENT LIABILITIES										
Accounts Payable and Accrued Liabilities	242,848								242,848	354,029
Deferred Revenue	517,547	183,296							700,843	593,364
LIABILITIES TOTAL	\$760,395	\$183,296							\$943,691	\$947,393
FUND BALANCES										
RESTRICTED		658,992	367,110	3,859	179,632	6,266	49,245	109	1,265,213	1,124,500
UNESTRICTED	68,771								68,771	35,621
FUND BALANCES TOTAL	\$829,166	\$842,288	\$367,110	\$3,859	\$179,632	\$6,266	\$49,245	\$109	\$2,277,675	\$2,107,514

<sup>[1]</sup> This presentation is intended to generally represent the financial position of the CMS. Financial data is extracted from the March 12, 2010 Auditor's Report (Raymond Chabot Grant Thorton), page 3, excluding the respective accompanying notes from the audited statements.

ANNEX A
CMS Revenue and Expenditures, Operations Fund (Dec. 31, 2009) [1]

	General Division \$		Publishing Division \$		Research Division \$		Education Division \$		Total \$	
	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008
REVENUE										
Grants		4,000			73,400	171,376	123,208	120,000	196,608	295,376
Donations	4,924	6,688	812	1,084	1,096	719	108,678	124,298	115,510	132,789
Membership Fees	138,085	122,206							138,085	122,206
Registration Fees and Other Sales		1,050			203,735	249,759	151,700	112,710	355,435	363,519
Subscriptions and Publications	2	66	839,198	702,619	40	40			839,240	702,725
Services, Advertising and Sales	78,333	79,736	17,428	9,197	33,876	25,740			129,637	114,673
Sundry (expenditures)	(5,031)	3,179	(4,766)	(3,272)		11			(9,797)	6,462
REVENUE TOTAL	\$216,313	\$216,925	\$852,672	\$716,172	\$312,147	\$447,645	\$383,586	\$357,008	\$1,764,718	\$1,737,750
EXPENDITURES										
National Projects	8,511	7,971					230,601	238,488	239,112	246,459
Speakers and Prizes	584	330	26	361	93,362	196,016	52,631	19,703	146,603	216,410
Production			135,081	124,832	6,275	9,829			141,356	134,661
Promotional Material	5,193	3,306	4,036	5,785	4,221	4,543	5,051	5,102	18,501	18,736
Salaries and Benefits	182,875	184,052	262,329	257,167	160,083	166,817	98,778	93,825	704,065	701,861
Boards and Committees	29,676	39,636	78,570	63,397	133	180	2,096	1,619	110,475	109,832
Legal and Audit	3,986	4,924	3,986	4,925	3,986	4,925	3,030	3,743	14,988	18,517
General Administration	55,017	33,877	80,726	66,368	147,657	171,914	55,922	13,317	339,322	285,476
Amortization of Capital Assets	3,286	3,178	2,520	2,435	7,497	7,409	2,520	2,435	15,823	15,457
Development Campaign	496	5,528			165	1,842	662	7,370	1,323	14,740
EXPENDITURES TOTAL	\$289,624	\$282,802	\$567,274	\$530,270	\$423,379	\$563,475	\$451,291	\$385,602	\$1,731,568	\$1,762,149
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENDITURES	(\$73,311)	(\$65,877)	\$285,398	\$185,902	(\$111,232)	(\$115,830)	(\$67,705)	(\$28,594)	\$33,150	(\$24,399)

<sup>[1]</sup> This presentation is intended to generally represent the financial position of the CMS. Financial data is extracted from the March 12, 2010 Auditor's Report (Raymond Chabot Grant Thorton), page 4, excluding the respective accompanying notes from the audited statements.

ANNEX A CMS Revenue, Expenditures and Changes in Fund Balances, Restricted Funds (Dec. 31, 2009)<sup>[1]</sup>

	Contingency Fund	Endowment Fund \$		Mathematical Olympiad Fund \$		Borwein Distinguished Fund \$		Total \$	
	\$	Capital	Operations	Capital	Operations	Capital	Operations	2009	2008
REVENUE									
Donations		1,624		406		2,075		4,105	3,995
Dividends, Interest and Other Income	28,055	13,719		6,732		1,692		50,198	54,801
Gain (loss) on Investments Due to Changes in Fair Value	59,122	28,912		14,185		3,564		105,783	(293,820)
REVENUE TOTAL	\$87,177	\$44,255		\$21,323		\$7,331		\$160,086	(\$235,024)
EXPENDITURES									
Projects			1,500					1,500	16,000
Grants					2,630			2,630	
Service Fees	8,384	4,100		2,011		505		15,000	15,000
Invested funds Committee	135		65		33		9	243	125
Speakers and Prizes									2,009
EXPENDITURES TOTAL	\$8,519	\$4,100	\$1,566	\$2,011	\$2,662	\$505	\$9	\$19,373	\$33,134
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENDITURES	76,658	40,155	(1,566)	19,312	(2,663)	6,826	(9)	140,713	(268,158)
Fund Balances, Beginning of Year	583,676	332,380	(3,342)	162,965	6,284	43,112	(575)	1,124,500	1,407,594
Contribution From (To) Operations From Capital	(3,342)	(5,425)	8,767	(2,645)	2,645	(693)	693		
Transfer to Operations Fund									(14,936)
FUND BALANCES, END OF YEAR	\$658,992	\$367,110	\$3,859	\$179,632	\$6,266	\$49,245	\$109	\$1,265,213	\$1,124,500

<sup>[1]</sup> This presentation is intended to generally represent the financial position of the CMS. Financial data is extracted from the March 12, 2010 Auditor's Report (Raymond Chabot Grant Thorton), page 6, excluding the respective accompanying notes from the audited statements.

#### ANNEX B



# CMS BOARD OF DIRECTORS AND COMMITTEES as of Dec 31, 2009

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 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.

#### **Board of Directors**

Catherine Baker (Mt. Allison)
Martin Barlow (UBC)
David Bates
Nantel Bergeron (York)
Jerry Bona (Illinois Chicago)
Christopher Bose (Victoria)
Gerald Cliff (Alberta)
James Colliander (Toronto)
Octav Cornea (Montréal)
Clifton Cunningham (Calgary)
Chantal David (Concordia)
Alan Dow (North Carolina)

Douglas Farenick (Regina)
Shannon Fitzpatrick (UPEI)
Brian Forrest (Waterloo)
Kseniya Garaschuk (Victoria)
Pengfei Guan (McGill)
Bernard Hodgson (Laval)
Jacques Hurtubise (McGill)
Vojkan Jaksic (McGill)
Michael Lamoureux (Calgary)
Anthony To-Ming Lau (Alberta)
Anna Lawniczak (Guelph)
Maung Min-Oo (McMaster)

V. Kumar Murty (Toronto Miss.)
Klaus Peters (A.K. Peters)
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#### ANNEX D



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The CMS office supports every aspect of CMS activity, from membership activities, subscriptions, meetings, events, and the work of the Board and Committees. The Publications group in Winnipeg handles the technical elements of our journal publication. The CMS would like to acknowledge and thank the following individuals for their hard work and dedication to the advancement, discovery, learning and application of mathematics.

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ANNEX F



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