CMS NOTES de la SMC

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In this issue / Dans ce numéro

Editorial **2**

Letter to the Editors **3**

A Random Path in Berlin **3**

Du bureau du directeur administratif **5**

MITACS Launch **6**

Book Review - Rudin Looks Back at his Life and Mathematics **7**

Meetings / Réunions

CMS Summer 1999 Meeting
Réunion d'été 1999 de la SMC **8**

CMS 1998 Winter Meeting
Réunion d'hiver 1998 de la SMC **15**

Scheduled Speakers
Conférenciers prévus **16**

Schedule / Horaire **17**

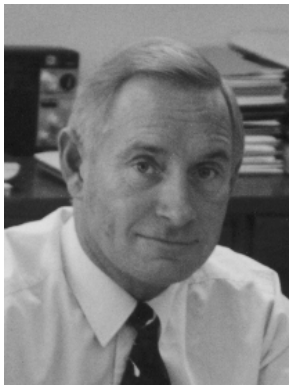
Call for Nominations / Appel de Candidatures

Rédacteur-gérant de la SMC / CMS Managing Editor **25**

Distinguished Service Award
Prix pour service méritoire ... **26**

Calendar of events / Calendrier des événements..... **29**

FROM THE EXECUTIVE DIRECTOR'S DESK



Graham Wright

(voir la page 5 pour la version française)

At this time of year, the Society reviews the financial status of all of its activities and prepares the budget for the next year – a process that involves committee chairs, editors and the various administrative offices. Having just completed this review and the budget preparations for 1999, it is clear we are walking a tight-rope.

At the end of 1997, the CMS Operations Fund (which includes all the research, publishing, education and administrative activities) had a cumulative surplus, excluding capital assests, of $32,583. In the budget proposal being submitted to the next meeting of the Board of Directors, this cumulative surplus is projected to be about the same by the end of 1999.

The CMS is very fortunate that many members, and others, volunteer a significant amount of time towards the Society's numerous activities which helps to minimize costs.

Over the past several years expenditures have been well controlled with estimates remarkably close to the actual final numbers. The same, however, cannot be said of revenues. Revenues depend upon the numbers of members and subscribers, the amounts obtained from donations, fluctuations in the exchange rate between the Canadian and US dollars, as well as publishing and other sales. With a cumulative deficit of approximately 3% of total annual revenues, a small decrease in projected revenues can impact drastically on the ability of the CMS to continue its current level of activities or consider new initiatives. Not surprisingly, therefore, much effort is being put into increasing revenues.

As a charitable society, *CMS membership fees are tax deductible* as a donation. Also, members can contribute to an area of the Society's operations of their choice (research, education, Camel, competitions, etc.) and, in 1998, many have been very generous in making additional donations to one or more CMS activity. Membership fees account for only 7% of total revenues and, rather than increase fees for 1999, significant efforts are being made to attract new members. Furthermore, many members will be retiring over the next few years and although

(continued on page 4)

CMS NOTES
NOTES DE LA SMC

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EDITORIAL

P. Fillmore

The CMS and Canadian mathematicians have been increasingly visible on the international stage of late. This has been earned by the hard work of a large number of people and presages well for the future development of our community.

As has been mentioned previously in the NOTES, Canada has been promoted to the elite Group V in the IMU. Participation by the five members of our delegation at the recent IMU General Assembly in Dresden was productive and well-received by the Assembly. Although our nominee to the Executive Committee was not accepted, the delegation played a leading role in efforts to make the selection process more transparent. Bernard Hodgson (Laval) was elected Secretary of ICMI, the educational arm of the IMU. And the organizing committee of a new IMU commission on electronic publication will include a Canadian.

At the Congress in Berlin, Canada was well-represented by five invited speakers. In addition a distinguished ex-Canadian, Cathleen Morawetz, gave the plenary Emmy Noether Lecture. With the financial support of Springer New York, the CMS hosted a very successful reception in honour of the Fields medallists. This event took place at the Canadian Embassy Office in Berlin and among the special guests were several of the medallists, the presidents of a number of leading mathematical societies, and representatives of the German Federal Ministry of Science and the Berlin universities. This initiative was applauded by all and should be repeated at future ICMs.

Successes of this sort, especially if combined with improved co-operation among the various organizations making up the Canadian mathematical science community, will lead to greater visibility and appreciation at home, including increased levels of financial support.

La SMC et les mathématiciens canadiens ont souvent fait parler d'eux sur la scène internationale ces derniers temps, grâce au travail acharné d'un grand nombre de personnes. C'est de bon augure pour l'épanouissement de la communauté mathématique!

Comme nous l'avons déjà mentionné dans les NOTES, le Canada a rejoint l'élite quand l'Union mathématique internationale (UMI) l'a classé dans le groupe V. La participation des cinq membres de notre délégation à l'assemblée générale de l'UMI tenue à Dresden a été productive et bien reçue par les participants. Même si notre candidat au comité exécutif n'a pas été accepté, la délégation canadienne a été l'un des principaux artisans de l'initiative visant à rendre le processus de sélection plus transparent. Bernard Hodgson (Laval) a été élu au poste de secrétaire du International Congress of Mathematical Instruction (ICMI), une division de l'UMI consacrée à l'éducation. En outre, un Canadien fera partie du comité responsable de la création d'une nouvelle commission de l'UMI sur la publication électronique.

Au Congrès international des mathématiciens, tenu à Berlin, le Canada a été bien représenté par ses cinq conférenciers invités. De plus, c'est une ex-Canadienne, Cathleen Morawetz, qui a prononcé la

conférence Emmy Noether. Grâce au soutien financier de Springer (New York), la SMC a organisé une réception fort appréciée, en l'honneur des médaillés de l'institut Fields, à l'ambassade du Canada à Berlin. Parmi les invités spéciaux se trouvaient plusieurs médaillés, les présidents d'un bon nombre de grandes sociétés mathématiques ainsi que des représentants des universités berlinoises et du ministère de la Science de l'Allemagne. L'initiative, qui a été très bien accueillie par tout le monde, devrait être reprise dans le cadre des Congrès à venir.

De telles réussites, surtout lorsqu'elles découlent d'une collaboration accrue entre les divers intervenants de la communauté mathématique canadienne, nous permettront d'être plus visibles et appréciés chez nous, et ainsi d'obtenir un meilleur soutien financier.

P. Fillmore

LETTER TO THE EDITORS

The Editors of the Notes welcome letters in English or French on any subject of mathematical interest but reserve the right to condense them. Those accepted for publication will appear in the language of submission. Readers may reach us at notes-letters@cms.math.ca or at the CMS Executive Office. Les rédacteurs des Notes acceptent les lettres en français ou en anglais portant sur un sujet d'intérêt mathématique, mais ils se réservent le droit de les comprimer. Les lettres acceptées paraîtront dans la langue dans laquelle elles nous sont parvenues. Les lecteurs pourront nous joindre au bureau administratif de la SMC ou à l'adresse suivante : notes-lettres@smc.math.ca.

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A Celebration of Women in the Mathematical, Statistical and Computer Sciences

The first "Celebration of Canadian Women in the Mathematical, Statistical, and Computer Sciences" took place at the University of Waterloo on May 22 and 23, 1998. It was organised by the Professors: J. Atlee, S.A. Campbell, K. Hare and M. Thompson from Waterloo University.

The purpose of this conference was to bring together Canadian women "mathematical scientists" to acknowledge and celebrate their accomplishments in mathematics, statistics and computer science. The event addressed also the problem of the loss of well-qualified women from the academic "pipeline" in these areas. Additionally, it provided a forum for networking and integration of Canadian women scientists. The scientific programme covered broadly the mathematical, statistical and computer sciences.

In addition, there was a variety of panel discussions and workshops on topics of general interests to the participants. It was a very successful meeting.

I congratulate the organisers on their success and thank them for their work.

Anna T. Lawniczak, CAIMS/SCMAI President
October 19, 1998

A RANDOM PATH IN BERLIN

George Elliott, University of Toronto and University of Copenhagen

I first realized that I was in it for the long haul when, on arriving in Berlin, I found myself on a fast train to Dresden—and, as it was a later train than I had hoped, saw that, fast though it was, I was going to miss dinner with the rest of the Canadian delegation to the IMU General Assembly. As it turned out, while I missed the dinner, I did manage to participate in most of the planning session itself.

The planning was particularly important because the Canadian delegation had decided that Canada should live up to its new responsibility as a senior member of the IMU and play a noticeable role in the proceedings. This we did, as our nomination of a member at large of the Executive Committee sparked three hours of debate spread over two days, followed by a painstaking election— perhaps the first time the EC had not been chosen by acclamation.

On the way back to Berlin, three days later, we were treated to a tour of the castle, cathedral, and porcelain factory in Meissen. Although it was not clear, in the midst of these eight hundred year old landmarks, that we were seriously closing in on Berlin, this was brought home to me when I met Harvey and Bernice Cohn, who I knew from their sabbatical year in Copenhagen, in the porcelain factory gift shop.

Entering downtown Berlin, later in the day, we happened to drive by the International Conference Centre, where the next day's proceedings were to be. Already one could see the hundred or so flags of participating countries, flying from poles along the autobahn.

The Opening Ceremony of the International Congress of Mathematicians was on Tuesday, August 18. Among the numerous, and impressive, welcoming addresses, including a message from the Federal President, Roman Herzog, was one by the Parliamentary State Secretary at the Federal Ministry of Finance, which was particularly interesting from a mathematical point of view. He gave a thorough explanation of the rather formidable looking mathematical design of the stamp being issued to commemorate the occasion.

Speeches by the Federal Minister of Education, Science, Research, and Technology, by the Governing Mayor of Berlin, and by the President of the Technical University of Berlin (the location of the Congress after the first day) were striking in their indication of how important a role science policy would appear to play in German public debate—and also of the rather high level of this debate. This was also reflected in the news coverage of the Congress.

The Fields Medallists were announced by Yuri Manin, who also exhorted participants to overlook it if they were not among them. The medallists were Richard Borcherds, Timothy Gowers, Maxim Kontsevich, and Curtis McMullen. A Special Tribute of the IMU, in the form of a silver plaque, was paid to Andrew Wiles.

The Nevanlinna Prize winner was announced by David Mumford, in his capacity as chairman of the selection committee for that prize. (He was also the retiring President of the IMU.) This was Peter Shor.

This ceremony concluded, Martin Groetschel, President of the Organizing Committee, invited members to the opening reception. The rear of the stage opened, revealing lunch for four thousand people. (This was so moving, that this correspondent failed to attend the press conference announced at the same time.)

There followed ten days (including the first afternoon) of the world on display.

As an example of the warmth of the event—especially of our German hosts—I would like to mention an evening that I spent at a very pleasant small restaurant, Le Canard, with Eberhard Kirchberg, Haskell Rosenthal, and Roland Speicher. Eberhard mumbled something about taking care of the wine, and went over to a rack containing a moderately interesting assortment of bottles. He looked over it fairly carefully, and came back happily carrying a bottle of Château Lafite Rothschild 1992.

This date reminds me—I look forward with pleasure to ICM '02 in Beijing.

(continued from page 1)

it is hoped they will continue to be involved in the CMS, the fee for retired members is much lower. Without an influx of new members, income from membership fees will decrease significantly.

Negotiations are taking place with the American Mathematical Society and with the Mathematical Association of America regarding a better reciprocal agreement between the CMS and these two societies. If an agreement can be reached, AMS and MAA members residing outside Canada will be able to belong to the CMS at a significant discount. Likewise, members of the CMS residing outside Canada will be able to belong to the AMS or the MAA at a significant discount. It is hoped that details of this "new deal" will be finalized in the next few months and then instituted as soon as possible. This is one initiative which hopefully will increase membership and I would welcome any suggestions on other ways to increase the number of members.

An important duty of the Executive Director is to direct and coordinate the Society's fund raising campaign. With the assistance of the President and the other members of the Fund Raising Committee, considerable efforts are being made to increase income from donations. Sponsorship levels have been established and fund raising materials developed that highlight our activities and provide sponsors with a number of opportunities. Each level - *Title Sponsor, Major Sponsor, Contributing Sponsor and Supporter* - has associated benefits and it is hoped to attract a significant number of new sponsors at each level over the next year. Although those companies and foundations who are likely to support our activities have been identified, and work is underway to meet with them to seek their support, members may have contacts that would be very beneficial in this regard.

The ability of the CMS to effectively represent and serve the mathematics community is dependent upon having sufficient financial resources. If the current fund raising campaign does not succeed in attracting new sponsors and significantly increase the level of donations, or other means of increasing revenues are not found, the viability of some of our activities will be in jeopardy.

DU BUREAU DU DIRECTEUR ADMINISTRATIF

(see page 1 for the English version)

À cette époque-ci de l'année, la Société réévalue la situation financière de toutes ses activités et prépare le budget de l'an prochain, de concert avec les présidents de comités, les rédacteurs et les divers bureaux administratifs de la SMC. Nous venons tout juste de terminer cette réévaluation et de dresser le budget, et le constat est clair: nous sommes sur la corde raide.

À la fin de 1997, le fonds de roulement de la SMC (qui comprend les activités liées à la recherche, à la publication, à l'éducation et à l'administration) affichait un surplus cumulatif (excluant les immobilisations) de 32 583 $. Dans le budget qui sera proposé à la prochaine réunion du conseil d'administration, on estime que ce surplus devrait être à peu près le même à la fin 1999.

La SMC est très chanceuse de pouvoir compter sur le bénévolat de bon nombre de ses membres et d'autres personnes pour assurer le bon fonctionnement de ses multiples activités et ainsi réduire les coûts.

Depuis plusieurs années, nous avons réussi à bien limiter les dépenses et à produire des évaluations incroyablement près de la réalité. On ne peut cependant pas en dire autant des recettes. Celles-ci varient selon le nombre de membres et d'abonnés, les dons, les fluctuations du taux de change du dollar américain, les publications et les autres ventes. Comme notre déficit cumulatif s'élève à environ 3 % des recettes annuelles totales, une faible diminution des recettes prévues peut avoir une énorme incidence sur la capacité de la SMC à conserver toutes ses activités ou à en prévoir de nouvelles. Vous ne serez pas surpris d'apprendre, cependant, que nous déployons de grands efforts pour accroître les recettes.

Comme la Société est un organisme à but non lucratif, *les frais d'adhésion à la SMC sont déductibles du revenu imposable*, au même titre que les dons. De plus, les membres peuvent choisir d'appliquer leur don à une activité de la SMC en particulier (recherche, éducation, Camel, concours, etc.). D'ailleurs, en 1998, vous avez été nombreux à faire des dons supplémentaires à une ou à plusieurs activités de la Société. Les frais d'adhésion comptent pour seulement 7 % des recettes. Au lieu d'augmenter les frais en 1999, nous nous efforçons de recruter de nouveaux membres. Qui plus est, bon nombre de membres prendront leur retraite au cours des prochaines années et, même si nous espérons qu'ils continueront à participer aux activités de la SMC, leurs frais d'adhésion seront beaucoup plus bas. Sans l'arrivée de nouveaux membres, les recettes tirées des frais d'adhésion seront considérablement à la baisse.

Nous avons entrepris des négociations avec la *American Mathematical Society* et la *Mathematical Association of America* en vue de signer une meilleure entente réciproque. Si nous nous entendons, les frais d'adhésion des membres de l'AMS et de la MAA qui habitent hors Canada seront considérablement réduits. Il en ira de même pour les frais d'adhésion à l'AMS ou à la MAA des membres hors Canada de la SMC. Nous espérons que les détails de ce nouvel accord seront réglés dans quelques mois et que l'entente entrera en vigueur le plus tôt possible. Voilà l'une des façons par lesquelles nous espérons accroître notre bassin de membres. Je vous encourage vivement à me faire part de toute autre suggestion qui pourrait nous aider à ce chapitre.

L'une des tâches importantes du directeur administratif consiste à diriger et à coordonner la collecte de fonds de la Société. Avec l'aide du président et des autres membres du Comité pour la collecte de fonds, nous déployons de grands efforts pour accroître les recettes provenant de dons. Nous avons établi des niveaux de commandite et avons produit des documents où nous faisons la promotion de nos activités et fournissons aux commanditaires toute une gamme de possibilités de soutien. Chaque niveau - *commanditaire en titre, commanditaire principal, commanditaire secondaire, commanditaire de soutien* - donne droit à divers avantages. Nous espérons attirer ainsi un grand nombre de nouveaux commanditaires de tous les niveaux au cours de la prochaine année. Même si nous avons déjà repéré les entreprises et les fondations susceptibles de soutenir nos activités et si nous avons entrepris les démarches pour les rencontrer et leur demander leur appui, certains de nos membres pourraient avoir des relations qui nous seraient fort utiles à cet égard.

Pour être en mesure de représenter et de servir efficacement la communauté mathématique, la SMC doit disposer des ressources financières nécessaires. Si la collecte de fonds en cours ne nous permet pas d'attirer de nouveaux commanditaires et d'accroître considérablement les dons, et si nous ne trouvons pas d'autres moyens d'accroître les recettes, les jours de certaines de nos activités pourraient bien être comptés.

MATHEMATICS NETWORK WILL RECEIVE CLOSE TO $14.5 MILLION OVER FOUR YEARS

Ron J. Duhamel, Secretary of State (Science, Research and Development and Western Economic Diversification) announced on October 15, 1998 that the federal government will invest $41 million over the next four years in three new Networks of Centres of Excellence (NCEs). These are the Canadian Arthritis Network, the Geomatics for Informed Decisions Network and the Mathematics of Information Technology and Complex Systems Network. The new NCEs will join forces with 11 existing federally funded networks that conduct cutting-edge research in sectors of critical importance to Canadians, such as health and biotechnology, information technology, human resources, and natural resources. Over the next four years, the federal government will invest more than $189 million in the NCE Program. "Canadians can expect a high return on this investment," said Secretary of State Duhamel. "Many of our best researchers, and their partners in the university, government and private sectors, are once again pooling their talents to develop innovative technology, train young people in fields of national importance, help Canadian firms compete, and improve the quality of life in Canada."

Dr. Carolyn Bennett, MP for St. Paul's (Ontario), participated in the launch of MITACS at the University of Toronto, on behalf of Ron J. Duhamel, on October 16, 1998. Also present at this celebration were Dr. Tom Brzustowski, Chair of the NCE Steering Committee, and Dr. Stephen Halperin, the scientific leader of the new network, along with many of the networks' researchers and partners.

MITACS will harness Canadian mathematical power for the 21st century, developing new mathematical tools which will be crucial in many sectors of our economy. For instance, these new tools will help among others to unlock the genetic code of biological materials, to analyse environmental factors that affect our health, and to evaluate risks that impact on costs and prices.

MITACS, which will benefit from a federal investment of close to $14.5 million over the next four years, was established through a national competition in the Networks of Centres of Excellence Program. This Canada-wide program now has 14 networks, including two other new NCEs, the Canadian Arthritis Network and the Geomatics for Informed Decisions Network (GEOID).

"The new Mathematics network will make major contributions to the knowledge-based society, by building relationships with industry to transfer knowledge from the university to the private and public sectors," said Dr. Bennett. "I am especially pleased that it will also help to train young people in a fast-expanding field and to improve the quality of life in Canada."

Noting the network's goal of "harnessing Canada's mathematical power for the 21st century", Dr. Tom Brzustowski added: "Already the MITACS network pools the talents of 174 eminent researchers from 22 universities with partners from 34 companies and 8 other organizations to offer creative solutions to complex issues critical to our future. The value and importance of MITACS is underlined by the $1.5 million contribution from its partners."

Professor Heather Munroe-Blum, vice-president (research and international relations) at the University of Toronto where the administrative centre of the new network is located, highlighted the support provided by the University of Toronto. She said: "It is very gratifying to see that an NCE is being established around the excellence in research of the three main Mathematics Institutes in the country: the Centre de recherches mathématiques in Montreal (CRM), the Fields Institute for the Mathematical Sciences (Fields) in Toronto, and the Pacific Institute for the Mathematical Sciences (PIMS) in Vancouver." She stressed the fact that the university was supporting the network by providing the research infrastructure and a unique pool of human resources. The University of Toronto and the other 47 Canadian universities taking part in the NCE program are contributing to the success of the 14 Networks of Centres of Excellence.

Mathematics will play a key role in the coming decades; mathematical models of complex materials and of processes within biological cells that would have been inconceivable a decade ago will revolutionize electronic design, medical therapies and industrial manufacturing.

The MITACS research program is conceived to deal specifically with new emerging areas of applications for the mathematical sciences. To achieve this, MITACS consists of the following five main themes: the Mathematics of the Trading and Finance Sector; the Mathematics of the BioMedical Sector; the Mathematics of the Information Technology Sector; the Mathematics of the Commercial Industrial Sector and the Mathematics of the Manufacturing Sector.

Dr. Steven Halperin concluded the press conference by saying: "MITACS is truly a national proposal. With nine project leaders from the West and others in Ontario and Quebec, it binds the country with mathematical ties as surely as the railroads provided physical ties a century ago."

For more information on MITACS, visit the network's Web site at: http://www.mitacs.math.ca/ To know more about the NCE Program and the networks' achievements, visit the program's web site at http://www.nce.gc.ca.

From press releases at www.mitacs.math.ca

RUDIN LOOKS BACK AT HIS LIFE AND MATHEMATICS

Book Review by Keith F. Taylor, University of Saskatchewan

Walter Rudin, The Way I Remember It
Volume 12, History of Mathematics, AMS, Providence, RI

Rudin at M.I.T., c. 1951

Nearly all the readers of this review have been touched by the writings of Walter Rudin – of that I am confident. In fact, three quarters of my immediate family came to understand uniform convergence and the Stone-Weierstrass Theorem from his *Principles of Mathematical Analysis*; among other things this means we own three copies of this highly influential text. Rudin's *Functional Analysis* and *Real and Complex Analysis* were either recommended reading for graduate courses or primary references for qualifying exams for most analysts who are below retirement age. Walter Rudin has established a significant legacy with his straigtforward writing style and his taste in mathematics.

When asked to review *The Way I Remember It*, I welcomed the opportunity to find out more about Rudin as a person and I hoped to gain some insight into the development of his taste in mathematics. The book provides both.

An easy read for a Sunday afternoon, the book consists of two parts that, as the author explains in his preface, were written at different times and for somewhat different reasons. Part I was composed in 1992 as a record for family members and friends while Part II was written later when he was invited to prepare the book for the History of Mathematics series by the American Mathematical Society.

Most of Part I is devoted to the personal story of the author as he grew up in the turbulent environment experienced by one Jewish family in pre-war Austria. The writing style here is casual there are a few typographical errors, but this casual style engages the reader in the experiences of the family. There are several useful digressions to fill in a bit of the historical background, however this is not done in a systematic way. After the *Anschluss*, the family leaves Austria and his story becomes more dramatic. Chapters 9 through 17 constitute a good read that includes descriptions of internments, escapes, temporary memberships in various military units, a lucky passage to England, and apparently useful service as a translator with the British navy. The remainder of Part I covers university education at Duke and the author's early employment adventures up to the beginning of his long association with the University of Wisconsin.

While Part I is a personal story that can be read by anyone who is interested, Part II is definitely for mathematicians. It should be especially enjoyable and educational for analysts as Rudin, the scientist, discusses a selection of his research topics. We learn why he considers particular problems worthy of attention and the key ideas in their solution by him or others. In this part of the book, the writing is tighter and cleaner showing the author is very much at home when describing mathematical ideas.

The Way I Remember It is sucessful in revealing something of both Walter Rudin the person and the professional mathematician and in providing an introduction to his approach to analysis.

CMS Membership ...

The 1999 Membership forms have been mailed. Don't forget to renew your membership.

Adhésion à la SMC? ...

Les formulaires d'adhésion 1999 ont été poster. N'oubliez pas de renouveller votre adhésion.

CMS Summer 1999 Meeting
Memorial University of Newfoundland
St. John's, Newfoundland
May 29 - June 1, 1999

First Announcement

On behalf of Memorial University of Newfoundland and on the occasion of its 50^{th} anniversary, the Department of Mathematics and Statistics extends a warm welcome to all participants in the 1999 Summer Meeting of the CMS.

The meeting follows the usual format with a program encompassing eight symposia, various meetings, and plenary talks including the Jeffery-Williams Lecture and the Krieger-Nelson Prize. The symposia are in Ring Theory, Harmonic Analysis, Representation Theory, Combinatorics, Nonlinear Analysis, Surveys in Mathematics, and Education. In addition, there will be a Graduate Seminar and a Contributed Papers Session.

All scientific activities will take place at Memorial University of Newfoundland, St. John's, Newfoundland, from Saturday, May 29 to Tuesday, June 1, 1999.

Plenary Speakers

Tom Korner (Cambridge)
R.K. Brylinski (Pennsylvania State)
Ed Barbeau (Toronto)
Michael van den Bergh (Limburg/Belgium).

Prize Lectures

The **Jeffery-Williams Lecture** will be given by **John Friedlander**, University of Toronto.

The **Krieger-Nelson Lecture** will be given by **Nicole Tomczak-Jaegermann**, University of Alberta.

Public Lecture

To be announced

Special Sessions

By invitation of the Program Committee, there will be special sessions in the following areas.

Combinatorics and its Applications

(Org: **Nabil Shalaby**, Memorial University of Newfoundland and **Doug Stinson**, University of Waterloo)

Frank Bennett (Halifax), Charles Colbourn (Maine), Kathryn Heinrich (SFU), Alexander Rosa (McMaster), Doug Stinson (Waterloo), Luc Vinet (Montreal).

Education: What Mathematical Competitions do for Mathematics

(Org: **Bruce Shawyer** and **Ed Williams**, Memorial University of Newfoundland)

Ed Barbeau (Toronto), Ron Dunkley (Waterloo), Rita Janes (Director of NCTM, co-founder of Newfoundland and Labrador Mathematics League), Tony Gardiner (Birmingham), Shannon Sullivan (MUN student).

Graduate Student Seminar

A special session is being organized for graduate students. Anyone interested in participating in the organization of this program should contact the Dr. Hermann Brunner, Meeting Director, at the following address: `cms99@math.mun.ca`.

Joint CMS-CRM Session Harmonic Analysis

(Org: **Kathryn Hare**, University of Waterloo)

J. Benedetto (Maryland), B. Forrest (Waterloo), Jean-Paul Gabardo (McMaster), E. Granirer (UBC), H. Henig (McMaster), Z. Hu (Windsor), R. Kerman (Brock), Tom Korner (Cambridge), T. Lau (Alberta), D. Oberlin (Florida), J.-O. Ronning (Skode U.), G. Sinnamon (UWO), S. Wainger (Wisconsin).

Nonlinear Analysis and its Applications

(Org: **Sankatha Singh** and **Bruce Watson**, Memorial University of Newfoundland)

G. Allasia (Torino), J. Borwein (SFU), P. Gauthier (Montreal), K. Goebel (Lublin), W. A. Kirk (Iowa), W. Light (Leicester), S. Park (Seoul), B. Rhoades (Indiana), W. Takahashi (Tokyo), E. Tarafdar (Australia), J. Whitfield (Lakehead).

Perspectives in Ring Theory

(Org: **Eric Jespers**, Vrije Universiteit Brussel and **Edgar Goodaire**, Memorial University of Newfoundland)

Yuri Bahturin (Moscow), Michael van den Bergh (Limburg/Belgium), Jan Okninski (Warsaw), D. S. Passman (Wisconsin), Mohan Putcha (North Carolina State), Lex Renner (UWO), S. K. Sehgal (Edmonton).

Joint CMS-Fields Institute Session Representation Theory

(Org: **Abraham Broer**, McGill University)

Ranee K. Brylinski (Pennsylvania State), Jon Brundan (Oregon at Eugene), Clifton Cunningham (Massachusets), Sam R. Evens (Arizona at Tucson), Loek Helminck (North Carolina State), Markus Hunziker (Brandeis), Alex S. Kleshchev (Oregon at Eugene), Friedrich Knop (Rutgers), V. Lakshmibai (Northeastern), W. Monty McGovern (Seattle), George McNinch (Notre Dame), Fiona Murnaghan (Toronto), Monica Nevins (Alberta), Mark Reeder (Boston College), Yasmine Sanderson (Rutgers), Gordan Savin (Utah), Eric Sommers (Harvard), Peter Trapa (Institute for Advanced Studies).

Surveys in Mathematics
(Org: **Kumar Murty** Toronto)

Speakers to be announced.

Contributed Papers Session

Contributed papers of 15 minutes duration are invited and graduate students are particularly urged to participate. Abstracts for CMS contributed papers should be prepared as specified below. For an abstract to be eligible, the abstract must be received before **March 31, 1999**. The abstract must be accompanied by its contributor's registration form and appropriate fees.

Workshop on Combinatorics

Participants might like to note that Memorial University is host for an AARMS-sponsored Workshop on Combinatorics from May 24-28, 1999. Details can be obtained from Dr. Nabil Shalaby, Department of Mathematics and Statistics, Memorial University of Newfoundland `nshalaby@math.mun.ca`.

Submission of Abstracts

Titles for Plenary Speakers, Prize Lecturers and Invited Special Session Speakers for the scientific and education programme will appear in the **April** issue of the *CMS Notes*. **Titles** for Contributed Papers will appear in the **May** issue of the *CMS Notes*. All **abstracts** will be published in the meeting programme and will also be available on the Canadian Mathematical Electronics Services (Camel) *http://camel.math.ca/CMS/Events/summer99* and on the CMS99 Summer Meeting Web Site: *http://www.math.mun.ca/~cms99*.

Speakers should send their titles to their organizers before February 1.

Plenary Speakers, Prize Lecturers and Invited Special Session Speakers for the scientific and education programme: These speakers are asked to submit their abstracts to the CMS as instructed by their organizers.

Abstracts may be sent electronically, following instructions given below. Abstracts may also be prepared on the standard CMS form available from the session organizer or the CMS office in Ottawa. Abstracts should be sent to Dr. Richard Charron, Department of Mathematics and Statistics, Memorial University of Newfoundland, St. John's, Newfoundland CANADA A1C 5S7, so **as to arrive by the invited speaker deadline of February 26, 1999**.

Contributed Papers: Those submitting contributed papers may submit their abstracts electronically, following instructions given below, or by using the standard CMS form available from the CMS office in Ottawa, in the February issue of the *CMS Notes*, on at the CMS web site. Abstracts should be sent to Dr. Richard Charron, Department of Mathematics and Statistics, Memorial University of Newfoundland, St. John's, Newfoundland CANADA A1C 5S7, so **as to arrive by March 31, 1999**.

Electronic submission of abstracts: Files should include the speaker's name, affiliation, complete address, title of talk, and the abstract itself. Files may be sent by email to Dr. Richard Charron, at: `abstracts@cms.math.ca`.

Please note the appropriate deadline given above for the submission of your abstract.

Social Events

The welcoming reception will be held during registration on Friday evening from 7:00 p.m. to 10:00 p.m. at the Court Garden Salon of Hotel Newfoundland. A cash bar will be available.

A delegates' luncheon will be held on campus during the meeting.

The CMS banquet will be held at the Marine Institute. The organizing committee propose an evening of Dinner Theatre following the theme *Newfoundland Kitchen Party*. A cash bar will be available.

Coffee will be available during the scheduled breaks.

Exhibits

Exhibits will be open during specified hours in SN-2000 of the Science Building, Memorial University of Newfoundland. The CMS exhibit will be open throughout the course of the meeting.

Preliminary Activities

The following activities will be held prior to the scientific programme:

May 27	09:00-16:00	CMS Executive Committee Columbus Suite Hotel Newfoundland
May 28	11:00-13:00	CMS Development Group (luncheon) Columbus Suite Hotel Newfoundland
May 28	13:00-18:00	CMS Board of Directors Salon Battery Hotel Newfoundland

Registration

Payment for preregistration may be made by cheque, or by VISA or MasterCard. Although registration fees are given in Canadian dollars, delegates may send cheques in US dollars by contacting their financial institution for the current exchange rate.

Please note that **payment must be received on or before May 15 in order to qualify for reduced rates**.

A preregistration form will be included in the **February** issue of the *CMS Notes* and is available by contacting:

CMS Executive Office
577 King Edward, Suite 109
P.O. Box 450, Station A
Ottawa, Ontario CANADA K1N 6N5
Tel: 613-562-5702
FAX: 613-565-1539
Email: meetings@cms.math.ca

OR

CMS99
Department of Mathematics and Statistics
Memorial University of Newfoundland
St. John's, Newfoundland
CANADA A1C 5S7
Tel: (709) 737-8783
FAX: (709) 737-3010
Email: cms99@math.mun.ca

Electronic pre-registration is available on our Camel site at http://camel.math.ca/CMS/Events/summer99

Refund Policy

Delegates wishing to cancel their registration must notify the Executive Office in writing before May 15 to receive a refund less a $40 processing fee. Those whose contributed papers have not been accepted will upon request be fully refunded.

Accommodation

It is recommended that those attending the conference book early to avoid disappointment. Blocks of rooms have been reserved at three different facilities and will be held until **May 1, 1999**. Reservations not in by that date will be on a request only, space available basis. Rates quoted are in Canadian dollars.

Hotel Newfoundland
Cavendish Square, St. John's, Newfoundland
Check-in: 15:00; Check-out: 12:00
Reservation Deadline: **May 1, 1999**
Rates:
$119, single/double occupancy, *Canadian Pacific*
$129, single/double occupancy, *Canadian Deluxe*
(An additional charge of $20/room for additional person.)
Applicable taxes: 15% HST
Phone: (709) 726-4980
Reservations FAX: (709) 726-2025
Toll-free reservations: 1-800-441-1414
http://www.noia.nf.ca/hotelnf.htm

Quality Hotel
2 Hill O'Chips, St. John's, Newfoundland
Check-in: 13:00; Check-out: 12:00
Reservation Deadline: **May 1, 1999**
Rates:
$85, single/double occupancy
(A complimentary upgrade to harborside guest rooms, pending availability, is offered, free parking.)
Applicable taxes: 15% HST
Phone: (709) 754-7788
Toll-free reservations: 1-800-228-5151

MUN Housing
Memorial University of Newfoundland, St. John's, Newfoundland
Check-in: 13:00; Check-out: 12:00
Reservation Deadline: **May 1, 1999**
Rates: (estimated)
$32, single occupancy
$50, double (twin beds) occupancy
Applicable taxes: 15% HST
Phone: (709) 737-4003
Email: `ptulk@morgan.ucs.mun.ca`
http://www.housing.mun.ca/

Attendees should make their own reservations by calling the above numbers. For the hotels, reservations will be held until 18:00 on the arrival day only, unless guaranteed by a major credit card. The conference rate is extended up to two days pre- and post-convention. Please mention that you are participating in the CMS Summer Meeting.

Child Care

Child care is available at the MUN Daycare Centre, located on the MUN campus, St. John's, Newfoundland. Hours of operation are 7:45 to 17:15 from Monday to Friday. Rates are $23 per day for children from two to 10 years of age. Please contact Anne Goebel at (709) 737-4728 to make arrangements.

Travel

Participants are urged to check their travel arrangements to make sure they are destined for St. John's, Newfoundland (call YYT) and **NOT** Saint John, New Brunswick (call YSJ).

Upon arrival, taxis are available for the 15-minute ride from the airport to the hotels.

A shuttle service will be arranged from the hotels to the meeting site.

Acknowledgements

The CMS and the Meeting Committee wishes to extend its thanks to the CRM, the Fields Institute, the following sponsors from, Memorial University of Newfoundland: the Faculty of Science, the Vice-President (Research), the School

of Graduate Studies, and the members of the Department of Mathematics and Statistics, for their support.

The CMS wishes to acknowledge the contribution of the Meeting Committee in presenting these exciting scientific, educational, and social programs.

Meeting Committee

Meeting Director: Hermann Brunner (MUN), *Local Organizing Committee:* Richard Charron (MUN), *Ring Theory:* Eric Jespers (Brussels) and Edgar Goodaire (MUN), *Harmonic Analysis:* Kathryn Hare (Waterloo), *Representation Theory:* Abraham Broer (McGill), *Combinatorics:* Nabil Shalaby (MUN) and Doug Stinson (Waterloo), *Nonlinear Analysis:* Sankatha Singh (MUN) and Bruce Watson (MUN), *Surveys in Mathematics:* Kumar Murty (Toronto), *Education:* Bruce Shawyer (MUN) and Ed Williams (MUN), Monique Bouchard (CMS), Graham Wright (CMS), Rosalind English (MUN), Wanda Heath (MUN).

Information sent to Speakers in December 1998

First Announcement
Registration Form - Speakers
Hotel Reservation Form
Equipment Order Form - Speakers
Abstract Form - Speakers
Instructions on Submission of Abstracts

In the next issue of the *CMS Notes*

Second Announcement
Maps to St. John's & Hotels
Registration, Abstract and Hotel Forms

Réunion d'été de la SMC
Université Memorial de Terre-Neuve
St. John's, Terre-Neuve
du 29 mai au 1er juin, 1999

Première annonce

Au nom de l'Université Memorial et à l'occasion de son 50e anniversaire, le département de mathématiques et statistiques souhaite la bienvenue à ceux et celles qui participeront à la Réunion d'été 1999 de la SMC.

La réunion suivra son format habituel : seront inscrits au programme plusieurs symposiums, conférences plénières, notamment les conférences Jeffery-Williams et Krieger-Nelson. À date, les symposiums porteront sur les sujets suivants : Perspectives de la théorie des anneaux, Analyse harmonique, Théorie des representations, Combinatoire et applications, Analyse non linéaire et ses applications, Études en mathématiques, et Éducation. Il y aura également un séminaire pour étudiants diplômés en plus d'une séance de communications libres.

Les activités scientifiques se tiendront sur le campus de l'Université Memorial de Terre-Neuve, St. John's, Terre-Neuve du samedi, 29 mai au mardi, 1er juin, 1999.

Conférenciers Principaux

Tom Korner (Cambridge)
R.K. Brylinski (Pennsylvania State)
Ed Barbeau (Toronto)
Michael van den Bergh (Limburg/Belgium).

Conférences des Récipiendaires de prix

La **conférence Jeffery-Williams** sera prononcée par **John Friedlander**, Université de Toronto.

La **conférence Krieger-Nelson** sera prononcée par **Nicole Tomczak-Jaegermann**, Université de l'Alberta.

Conférence publique

À confirmer.

Séances spéciales

À l'invitation du comité scientifique, il y aura des séances spéciales dans les domaines suivants :

Combinatoire et applications

(Org: **Nabil Shalaby**, Université Memorial de Terre-Neuve et **Doug Stinson**, Université Waterloo)

Frank Bennett (Halifax), Charles Colbourn (Maine), Kathryn Heinrich (SFU), Alexander Rosa (McMaster), Doug Stinson (Waterloo), Luc Vinet (Montreal).

Éducation: ce que contribuent les compétitions au domaine des mathématiques

(Org: **Bruce Shawyer** et **Ed Williams**, Université Memorial de Terre-Neuve)

Ed Barbeau (Toronto), Ron Dunkley (Waterloo), Rita Janes (Directrice du NCTM, et co-foundatrice du «Newfoundland and Labrador Mathematics League»), Tony Gardiner (Birmingham), Shannon Sullivan (étudiante MUN).

Séminaire pour étudiants diplômés

Une séance spéciale à l'intention des étudiants diplômés est prévue. Tout individu intéressé à organiser le programme de cette séance devrait contacter Dr. Hermann Brunner, Directeur de la Réunion, à l'adresse suivante : cms99@math.mun.ca.

Session conjoint SMC-CRM
Analyse harmonique
(Org: **Kathryn Hare**, Université Waterloo)

J. Benedetto (Maryland), B. Forrest (Waterloo), Jean-Paul Gabardo (McMaster), E. Granirer (UBC), H. Henig (McMaster), Z. Hu (Windsor), R. Kerman (Brock), Tom Korner (Cambridge), T. Lau (Alberta), D. Oberlin (Florida), J.-O. Ronning (Skode U.), G. Sinnamon (UWO), S. Wainger (Wisconsin).

Analyse nonlinéaire et ses applications
(Org: **Sankatha Singh** et **Bruce Watson**, Université Memorial de Terre-Neuve)

G. Allasia (Torino), J. Borwein (SFU), P. Gauthier (Montreal), K. Goebel (Lublin), W. A. Kirk (Iowa), W. Light (Leicester), S. Park (Seoul), B. Rhoades (Indiana), W. Takahashi (Tokyo), E. Tarafdar (Australia), J. Whitfield (Lakehead).

Perspectives de la théorie des anneaux
(Org: **Eric Jespers**, Vrije Universiteit Brussel et **Edgar Goodaire**, Université Memorial de Terre-Neuve)

Yuri Bahturin (Moscow), Michael van den Bergh (Limburg/Belgium), Jan Okninski (Warsaw), D. S. Passman (Wisconsin), Mohan Putcha (North Carolina State), Lex Renner (UWO), S. K. Sehgal (Edmonton).

Session conjoint SMC-Institut Fields
Théorie des representations
(Org: **Abraham Broer**, Université McGill)

Ranee K. Brylinski (Pennsylvania State), Jon Brundan (Oregon at Eugene), Clifton Cunningham (Massachusets), Sam R. Evens (Arizona at Tucson), Loek Helminck (North Carolina State), Markus Hunziker (Brandeis), Alex S. Kleshchev (Oregon at Eugene), Friedrich Knop (Rutgers), V. Lakshmibai (Northeastern), W. Monty McGovern (Seattle), George McNinch (Notre Dame), Fiona Murnaghan (Toronto), Monica Nevins (Alberta), Mark Reeder (Boston College), Yasmine Sanderson (Rutgers), Gordan Savin (Utah), Eric Sommers (Harvard), Peter Trapa (Institute for Advanced Studies).

Études en mathématiques
(Org: **Kumar Murty** Université de Toronto)

À confirmer

Communications libres

Nous lançons un appel pour des communications libres en solicitant particulièrement la participation des étudiants diplômés. Nous réservons 15 minutes pour chaque communication. Les résumés devront respecter les critères précisés ci-dessous et nous parvenir **au plus tard le 31 mars, 1999**. Nous demandons à chacun de joindre au résumé le formulaire et frais d'inscription.

Atelier en combinatoire

Les participants sont avisés que l'Université Memorial est aussi hôte d'un atelier en combinatoire parrainé par la AARMS du 24 au 28 mai, 1999. De plus amples détails sont disponibles auprès de Dr. Nabil Shalaby, Département de mathématiques et statistiques, Université Memorial de Terre-Neuve, nshalaby@math.mun.ca.

Envoi des résumés

Titres : La SMC publiera les **titres** des conférenciers principaux, récipiendaires de prix et conférenciers invités pour les activités scientifiques et portant sur l'éducation dans le numéro **d'avril** des *Notes et la SMC*. Les **titres** des communications libres paraîtront dans le numéro de **mai**. Tous les **résumés** seront aussi accesibles à partir des sites Web : *http://camel.math.ca/CMS/Events/summer99* et *http://www.math.mun.ca/~cms99*.

Conférenciers, veuillez remettre aux organizateurs le titre de votre conférence avant le 1er février.

Conférenciers principaux, récipiendaires de prix et conférenciers invités pour les activités scientifiques et portant sur l'éducation, veuillez remettre à la SMC le résumé de votre communication selon les directives des organisateurs de vos séances respectives.

Les résumés peuvent être transmis par courriel (directives ci-dessous) ou via le formulaire de la SMC disponible au bureau de la SMC ou par l'intermédiaire des organisateurs des séances. Les résumés devraient parvenir à Dr. Richard Charron, Département de Mathématiques et Statistiques, Université Memorial de Terre-Neuve, St. John's, Terre-Neuve, A1C 5S7 **afin d'arriver avant le 26 février, 1999**.

Communications libres : les résumés peuvent être transmis par courriel (directives ci-dessous) ou via le formulaire de la SMC disponible au bureau de la SMC ou encore dans le numéro de **février** des *Notes de la SMC*. Adresser le tout à Dr. Richard Charron, Département de Mathématiques et Statistiques, Université Memorial de Terre-Neuve, St. John's, Terre-Neuve, A1C 5S7 **afin d'arriver avant le 31 mars, 1999**.

Envoi des résumés par courriel : les fichiers doivent inclure le nom du conférencier, son affiliation, son adresse

complète ainsi que le titre et résumé de la communication. On peut transmettre le tant au Dr. Richard Charron à l'adresse : `resumes@smc.math.ca`.

Prière de respecter les dates limites ci-dessus pour soumission de votre résumé.

Activités sociales

Une réception avec bar payant aura lieu le vendredi 28 mai, de 19h00 à 22h00 pendant l'inscription au Salon du Jardin de l'Hôtel Newfoundland.

Le lunch des participants se tiendra à l'Université Memorial.

Le banquet de la conférence aura lieu à l'Institut Marine de l'Université Memorial. Le comité organisation vous propose une soirée dîner-théâtre suivant le thème *Newfoundland Kitchen Party*. Un bar-payant sera ouvert.

Café et jus seront offerts au cours des pauses.

Expositions

Les kiosques d'expositions seront ouverts aux heures indiqués dans le salon SN-2000 au pavillon de Science. Celui de la SMC restera ouvert durant toute la réunion.

Séances de travail de la SMC

Les activités suivantes auront lieu avant le début des activités scientifiques :

27 mai	9h00 à 16h00	Réunion du comité exécutif Suite Columbus Hôtel Newfoundland
28 mai	11h00 à 13h00	Lunch du groupe de développement Suite Columbus Hôtel Newfoundland
28 mai	13h00 à 18h00	Réunion du Conseil d'administration Salon Battery Hôtel Newfoundland

Inscriptions

Les frais (en devises canadiennes) sont payables par chèques, VISA ou MasterCard. Paiements en devises américaines seront acceptés mais nous vous demandons de contacter votre institution financière pour prendre connaissance du tarif d'échange en vigueur.

Le paiement doit nous parvenir au plus tard le 15 mai pour que vous ayez droit aux tarifs réduits.

Un formulaire de préinscription sera inclus dans le numéro de **février** des *Notes de la SMC*. On peut également se le procurer à l'adresse :

Bureau d'administration de la SMC
577 King Edward, Suite 109
C.P. 450, Succursale A
Ottawa, Ontario CANADA K1N 6N5
Téléphone: 613-562-5702
Télécopieur: 613-565-1539
Courriel: reunions@smc.math.ca

OU

SMC99
Département de Mathématiques et Statistiques
Université Memorial de Terre-Neuve
St. John's, Terre-Neuve
CANADA A1C 5S7
Tél: (709) 737-8783
Télécopieur: (709) 737-3010
Courriel: `cms99@math.mun.ca`

Vous pouvez aussi vous inscrire par courrier électronique en consultant la page d'accueil de Camel :
http://camel.math.ca/CMS/Events/summer99

Remboursement

Les participants qui désirent annuler leur inscription doivent en aviser le bureau administratif de la SMC par écrit avant le **15 mai** pour se voir rembourser leurs frais d'inscription (moins 40 $). Les participants dont les communications libres n'auront pas été acceptées seront remboursés intégralement sur demande.

Hébergement

Il est fortement recommandé aux participants de bien réservér à l'avance par mesure de précaution. Des chambres ont été réservées aux trois endroits ci-dessous. Celles-ci sont disponibles jusqu'aux dates indiquées, après quoi il faudra réservér soi-même. Les tarifs sont présentés en devises canadiennes.

Hôtel Newfoundland
Cavendish Square, St. John's, Terre-Neuve
Arrivée : 15h; départ : 12h
Réserver au plus tard le **1er mai, 1999**
Tarifs :
119,00 $, 1 ou 2 personnes, chambre *Canada Pacifique*
129,00 $, 1 ou 2 personnes, chambre *Canada de Luxe*
(20,00 $ supplémentaire pour deuxième personne)
Taxes applicables : 15 % TVH
Téléphone: (709) 726-4980
Réservation par télécopieur : (709) 726-2025
Réservation sans frais : 1-800-441-1414
http://www.noia.nf.ca/hotelnf.htm

Quality Hotel
2 Hill O'Chips, St. John's, Terre-Neuve
Arrivée : 13h; départ : 12h
Réserver au plus tard le **1er mai, 1999**
Tarif :
85,00 $, 1 ou 2 personnes
(Chambre donnant vue sur port est offerte à titre complémentaire, selon disponibilité, stationement gratuit)
Taxes applicables : 15 % TVH
Téléphone: (709) 754-7788
Réservation sans frais : 1-800-228-5151

Résidences MUN
Université Memorial de Terre-Neuve
St. John's, Terre-Neuve
Arrivée : 13h; départ : 12h
Réserver au plus tard le **1er mai, 1999**
Tarifs :
32,00 $, chambre simple
50,00 $, chambre double
Taxes applicables : 15 % TVH
Téléphone: (709) 737-4003
Courriel : ptulk@morgan.ucs.mun.ca
http://www.housing.mun.ca/

Vous êtes priés de faire vos propres réservations. Les réservations sont guarantis jusqu'à 18h le jour d'arrivée à moins d'être assurées avec carte de crédit. Les tarifs préférentiels s'appliquent aussi pour les deux jours qui précèdent et qui suivent la réunion. Veuillez mentionner que vous participez à la réunion d'été de la SMC.

Service de garde

Le service de garde pour les enfants de deux à dix ans est disponible au *MUN Daycare Centre* situé sur le campus de l'université. Le centre est ouvert de 7h45 à 17h15 du lundi au vendredi. Le frais de garde est de 23 $ par jour. Prière de contacter Anne Goebel au (709) 737-4728 pour réservations.

Transport

Nous encouragons fortement les participants à s'assurer que leur destination est bien St. John's, Terre-Neuve (code YYT) et **NON** Saint-Jean, Nouveau-Brunswick (code YSJ).

Un service de taxi faisant novette entre l'aéport et les hotels est habituellement disponible.

Le transport par autocar entre hotels et le site de la conférence sera disponible.

Remerciements

Le comité organisationnel et la SMC tient à remercier le Centre de recherches mathématiques de l'Université de Montréal, l'Institut Fields, la Faculté de Sciences, le Vice-Président (Recherches) et l'école des Hautes Études de l'Université Memorial pour leurs contributions financières aux séances scientifiques de la Réunion. Nous remercions également le département de mathématiques et statistiques pour son support dans l'organisation de la Réunion.

La SMC tient à remercier le comité des Réunions qui a contribué à l'organisation des activités scientifiques et éducatives, ainsi que les activités sociales.

Comité des Réunions

Directeur de la Réunion : Hermann Brunner (MUN), *Président du Comité local* : Richard Charron (MUN), *Théorie des anneaux* : Eric Jespers (Bruxelles) et Edgar Goodaire (MUN), *Analyse harmonique* : Kathryn Hare (Waterloo), *Théorie des représentations*, Abraham Broer (McGill), *Combinatoire*, Nabil Shalaby (MUN) et Doug Stinson (Waterloo), *Analyse non linéaire*, Sankatha Singh (MUN) et Bruce Watson (MUN), *Éducation*, Bruce Shawyer (MUN) et Ed Williams (MUN), Études en mathématiques, Kumar Murty (Toronto), Monique Bouchard (SMC), Graham Wright (SMC), Rosalind English (MUN), Wanda Heath (MUN).

Information envoyée aux conférenciers en décembre 1998

Première annonce
Formulaire d'inscription - Conférenciers
Formulaire de réservation d'hôtel
Formulaire de réquisition de matériel - Conférenciers
Formulaire de résumé - Conférenciers
Directives concernant l'envoi des résumés

Dans le prochain numéro des *Notes de la SMC*

Deuxième annonce
Cartes de St. John's et du trajet vers les hôtels
Formulaires d'inscription, de résumé et de réservation d'hôtel

1998 CMS Membership Directory

The 1998 CMS Membership Directory has just been released. To obtain your copy be sure to complete the section on the back of the 1999 Membership Renewal Form.

Le répertoire des membres de la SMC 1998

Le répertoire des membres de la SMC 1998 est maintenant prêt. Pour obtenir votre copie veuillez remplir la section au verso du formulaire d'adhésion 1999.

Winter Meeting
Queen's University and
Royal Military College
Kingston, Ontario
December 13-15, 1998

Fifth Announcement

Please refer to the Second, Third and Fourth Announcements for more complete information on the scientific, education and social programmes. This announcement features a updated timetable and any changes to the programmes previously announced. The most up-to-date information concerning the programmes, including scheduling, is available at the following world wide web address:

http://www.camel.math.ca/CMS/Events/winter98/

Meeting registration forms and abstract forms for contributed papers may be found in the September issue of the *CMS Notes*.

Programme Updates

The Adrien-Pouliot, Coxeter-James and Doctoral Prizes will be awarded at the Banquet, to be held on Monday, December 14 (18:30 to 22:00) at the Royal Military College, Kingston.

Acknowledgements

The CMS wishes to thank the Centre de recherches mathématiques, the Fields Institute and the Pacific Institute for Mathematics Science for their financial support of scientific sessions at this meeting.

Thanks are also extended to the Royal Bank – MSTE Group and the Queen's University Instructional Development Centre for their support of the expanded programme of education activities.

The CMS wishes to acknowledge the contribution of the Meeting Committee in presenting exciting scientific, educational and social programmes. Thanks are also extended to members of the host departments who have taken time from their regular duties to help out.

Meeting Committee

Meeting Directors: Tony Geramita (Queen's) and David Wehlau (RMC), *Local Arrangements Committee:* Fady Alajaji (Queen's) and Leo Jonker (Queen's), *Algebraic Geometry:* P. Milman (Toronto), *Discrete Geometry:* Robert Erdahl (Queen's), Marjorie Senechal (Smith College), Walter Whiteley (York), *Education:* William Higginson, Morris Orzech and Grace Orzech (Queen's), *Extremal Combinatorics:* D. de Caen (Queen's), *Mathematics on the Internet:* June Lester (New Brunswick-Fredericton), Malgorzata Dubiel (Simon Fraser) and Nathalie Sinclair (Queen's), *Number Theory:* Ram Murty and Noriku Yui (Queen's), *Operator Algebras:* James Mingo (Queen's), *Probability Theory:* Miklos Csörgo (Carleton), *Topology:* Eddy Campbell (Queen's), Muang Min-Oo and McKenzie Wang (McMaster), Lisa Langsetmo (Ottawa), Jim Shank (Queen's), Juris Steprans (York), Steve Watson (York), Steve Boyer (UQAM), Jacques Hurtubise (McGill, CRM) and François Lalonde (UQAM, CRM), *Universal Algebra and Multiple-Valued Logic* and *Contributed Papers:* L. Haddad (RMC), *Graduate Student Session:* David Gregory (Queen's), *Other members:* Monique Bouchard (CMS) – Ex-officio, Jean Fugere (RMC), Graham Wright (CMS) – Ex-officio.

Items also published with this announcement

Updated list of speakers and titles of talks
Timetable - schedule

Réunion d'hiver
Université Queen's et
Collège militaire royal
Kingston (Ontario)
du 13 au 15 décembre 1998

Cinquième annonce

Veuillez consulter la deuxième, troisième et quatrième annonce pour obtenir de l'information détaillée sur les programmes scientifique et pédagogique, et les activités sociales. La présente annonce contient l'horaire et tous les changements aux programmes annoncés précédemment. Vous trouverez l'information la plus récente sur les programmes, y compris les horaires, à l'adresse Web suivante:

http://www.camel.math.ca/CMS/Events/winter98/

Un formulaire d'inscription et un formulaire de résumé pour communications libres étaient inclus dans le numéro de septembre des *Notes de la SMC*.

Changements au programme

La remise des prix Adrien-Pouliot, Coxeter-James et Doctoral aura lieu au diner du lundi le 14 décembre (18h 30 à 22h) au Collège militaire royal, Kingston.

Remerciements

La SMC désire remercier le Centre de recherches matématiques et l'Institut Fields d'avoir contribué financièrement aux séances scientifiques de la Réunion.

Nous remercions également la Banque Royale (groupe MSTE) et le Instructional Development Centre de l'Université Queen's pour leur soutien au programme élargi d'activités sur l'éducation.

La SMC tient à remercier le Comité des Réunions, qui a contribué à l'organisation des activités scientifiques et sur l'éducation, ainsi que des activités sociales. Merci également à toutes les personnes des départements hôtes qui ont empiété sur leurs heures de travail habituelles pour nous venir en aide.

Comité des Réunions

Directeurs de la Réunion : Tony Geramita (Queen's) et David Wehlau (CMR), *Président du Comité local :* Fady Alajaji (Queen's) et Leo Jonker (Queen's), *Géométrie algébrique :* P. Milman (Toronto), *Géométrie discrète :* Robert Erdahl (Queen's), Marjorie Senechal (Smith College), Walter Whiteley (York), *Éducation:* William Higginson, Morris Orzech et Grace Orzech (Queen's), *Combinatoire extrémale :* D. de Caen (Queen's), *Mathématiques sur Internet:* June Lester (Nouveau Brunswick - Fredericton), Malgorzata Dubiel (Simon Fraser) et Nathalie Sinclair (Queen's), *Théorie des nombres :* Ram Murty et Noriku Yui (Queen's), *Algèbre des opérateurs :* James Mingo (Queen's), *Théorie des probabilités :* Miklos Csörgo (Carleton), *Topologie :* Eddy Campbell (Queen's), Muang Min-Oo (McMaster), McKenzie Wang (McMaster), Lisa Langsetmo (Ottawa), Jim Shank (Queen's), Juris Steprans (York), Steve Watson (York), Steve Boyer (UQAM), Jacques Hurtubise (McGill, CRM) et François Lalonde (UQAM, CRM), *Algèbre universelle et logique multivaluée* et *Communications libres :* L. Haddad (CMR), *Étudiants diplômés :* David Gregory (Queen's), *Autres membres :* Monique Bouchard (SMC) – d'office, Jean Fugere (CMR), Graham Wright (SMC) – d'office.

Documents publiés avec cette annonce

Liste des conférenciers et titres des conférences
Horaire et programme

SCHEDULED SPEAKERS / CONFÉRENCIERS PRÉVUS

Here is a list of the scheduled speakers, along with the titles of their talks where available. Abstracts for all talks may be found at the following world wide web page:

http://www.camel.math.ca/CMS/Events/winter98/

Voici les conférenciers prévus, ainsi que les titres de leurs conférences. Les résumés pour tous les conférences seront disponibles à l'adresse Web suivante:

http://www.camel.math.ca/CMS/Events/winter98/

COXETER-JAMES LECTURE
CONFÉRENCE COXETER-JAMES

Henri Darmon (McGill University) *Recent progress in the theory of elliptic curves*

DOCTORAL PRIZE LECTURE
CONFÉRENCE DU PRIX DOCTORAL

Yuri Berest (University of California, Berkeley) *Lacunae for hyperbolic differential operators with variable coefficients*

PLENARY SPEAKERS
CONFÉRENCIERS PRINCIPAUX

Miklos Csörgo (Carleton University) *Random walking around financial mathematics*

Z. Füredi (University of Illinois at Urbana / Inst. Hungarian Acad. Sci.) *Lotto, football pool and other covering radius problems*

W. Goldman (University of Maryland) *Topology and dynamics of moduli spaces of geometric structures on surfaces*

Donal O'Shea (Mt. Holyoke College) *The glory and perversity of us*

CMS WINTER MEETING 1998 RÉUNION D'HIVER DE LA SMC
SCHEDULE - HORAIRE
QUEEN'S UNIVERSITY and ROYAL MILITARY COLLEGE - UNIVERSITÉ QUEEN'S et COLLEGE MILITAIRE ROYALE
PLENARY AND PRIZE LECTURES: Ballroom, Holiday Inn Waterfront KINGSTON, ONTARIO CONFÉRENCES PRINCIPALES: Ballroom, Holiday Inn Waterfront

Time Heure	Friday / vendredi December 11 décembre	Saturday / samedi December 12 décembre	Sunday / dimanche December 13 décembre	Monday / lundi December 14 décembre	Tuesday / mardi December 15 décembre
8:00			Registration open from 8:00 a.m. to 5:00 p.m. Bureau d'inscription ouvert de 8:00 à 17:00 Coffee will be available in the Exhibit area / Le café sera servi dans l'aire d'exposition		
			12:00 to 17:00 Exhibits - Expositions	8:00 to 17:00 Exhibits / Expositions	
8:30			8:30 - 9:00 Opening Remarks Mots de bienvenue		
9:00	9:00 - 15:00 Executive Committee Meeting Réunion du Comité exécutif Cataraqui Suite Holiday Inn		9:00 - 10:00 **Z. FUREDI**	9:00 - 10:00 **MIKLOS CSORGO**	9:00 - 10:00 DOCTORAL PRIZE **YURI BEREST**
10:00			10:00 - 11:00 **COFFEE AVAILABLE / CAFÉ DISPONIBLE**		
			10:00 - 12:00 SESSIONS AG, DG, EC, HT, NT, PT, ST	10:00 - 12:00 SESSIONS AG, DG, HT, MI, NT, PT, ST	10:00 - 12:00 SESSIONS AG, CP, DG, DT, GS,OA, PT, ST
11:00		11:00 - 13:00 CMS Development Group Groupe de développement Sir John A. MacDonald Room Holiday Inn			
12:00			12:00 - 13:30 **DELEGATES LUNCHEON** **LUNCH DES PARTICIPANTS** Ballroom Howard Johnson	12:00 -13:30 **LUNCH / DÉJEUNER**	12:00 - 13:30 **LUNCH / DÉJEUNER**
12:30					
13:00				11:30 - 13:30 **DEPARTMENT HEADS' LUNCH**	
13:30		13:30 - 18:30 Board of Directors Meeting Réunion du Conseil d'administration Bellevue North Holiday Inn	13:30 - 14:30 **DONAL O'SHEA**	13:30 - 14:30 COXETER-JAMES LECTURE **HENRI DARMON**	13:30 - 14:30 **W. GOLDMAN**
14:00					

<table>
<tr><th>Time
Heure</th><th>Friday / vendredi
December 11 décembre</th><th>Saturday / samedi
December 12 décembre</th><th>Sunday / dimanche
December 13 décembre</th><th>Monday / lundi
December 14 décembre</th><th>Tuesday / mardi
December 15 décembre</th></tr>
<tr><td>14:30</td><td rowspan="2">9:00 - 15:00

Executive Committee
Meeting
Réunion du Comité
exécutif
Cataraqui Suite
Holiday Inn</td><td rowspan="4">13:30 - 18:30

Board of Directors
Meeting
Réunion du Conseil
d'administration

Bellevue North
Holiday Inn</td><td>14:30 - 17:30

SESSIONS
DG, DT, ED I,
EC, HT,NT, PT, ST</td><td>14:30 - 18:00

SESSIONS
AG, DG, ED II, HT, MI,
NT, OA, PT, SL, UA</td><td>14:30 - 18:00

SESSIONS
DG, DT, GS,
PT, ST, UA</td></tr>
<tr><td>15:00</td><td colspan="3">14:30 - 16:00
COFFEE AVAILABLE / CAFÉ DISPONIBLE</td></tr>
<tr><td>15:30</td><td rowspan="6"></td><td rowspan="4">17:30 - 19:30

General Meeting
Assemblée Générale</td><td></td><td></td></tr>
<tr><td>16:00</td><td></td><td></td></tr>
<tr><td>17:00</td><td></td><td></td></tr>
<tr><td>17:30</td><td></td><td></td></tr>
<tr><td>18:00</td><td rowspan="3">18:00 - 20:00
Reception
Cash-bar and
Evening Registration
Réception (bar payant)
et inscription

Holidome Holiday Inn</td><td rowspan="3">18:30 - 19:30
Reception
(Cash bar)

19:30 - 22:00
Banquet

Royal Military College</td><td rowspan="3"></td></tr>
<tr><td>Evening</td><td rowspan="2">20:00 - 21:00
PUBLIC LECTURE

H.S.M. COXETER

Kingston City Hall</td><td rowspan="2"></td></tr>
<tr><td></td><td></td></tr>
</table>

Session	Title / Titre
AG	Algebraic Geometry / Géométrie algébrique
CP	Contributed Papers / Communications Libres
DG	Discrete Geometry / Géométrie discrète
EC	Extremal Combinatorics / Combinatoire extrémale
ED I	Education I / Éducation I
ED II	Education II / Éducation II
GS	Graduate Student Session / Séance pour étudiants diplômés
MI	Math on the Internet / Mathématiques sur Internet
NT	Number Theory / Théorie des nombres

Session	Title / Titre
OA	Operator Algebras / Algébre des opérateurs
PT	Probability / Probabilités
UA	Universal Algebra / Algébre universelle
	Topology:
DT	Differential Geometry / Géométrie différentielle
HT	Homotopy Theory / Théorie de l'homotopie
ST	Set Theoretic / Topologie des ensembles
SL	Symplectic/Low Dimensional .... / Symplectique et en basse dimensions ....

PUBLIC LECTURE
CONFÉRENCE PUBLIQUE

H.S.M. Coxeter (University of Toronto) *The Descartes circle theorem and Fibonacci numbers*

SPECIAL SESSIONS / SÉANCES SPÉCIALES

Algebraic Geometry / Géométrie algébrique
(Org: P. Milman)

Fedya Bogomolov (NYU Courant Institute) *On the fundamental groups and universal coverings of complex projective surfaces and symplectic fourfolds*

Andrew Hwang (University of Toronto) *Construction of circle-invariant Kahler metrics*

Lisa Jeffrey (University of Toronto) *The Verlinde formula for moduli spaces of parabolic bundles*

Askold Khovansky (University of Toronto) *Algebraic geometry and geometry of convex polyhedra*

Donal O'Shea (Mt. Holyoke College) *Limits of tangent spaces to real surfaces*

Evgenii Shustin (Tel-Aviv University) *Asymtotically proper bounds in the geometry of equisingular families of curves*

Yosef Yomdin (Weizmann Institute) *A tractable problem of the way (hopefully) to counting limit cycles of polynomial vector fields*

Discrete Geometry / Géométrie discrète
(Org: Robert Erdahl, Marjorie Senechal, Walter Whiteley)

V. Alexandrov (University of Moscow) *Sufficient conditions for the extendibility of an N-th order flex of polyhedra*

Valery Alexeev (University of Georgia) *Families of algebraic varieties associated with cell decompositions*

Pau Atela (Smith College) *Periodicity in geometric dynamical models in phyllotaxis*

Lynn Batten (University of Manitoba) *Blocking sets and security*

Margaret Bayer (University of Kansas) *Eulerian partially ordered sets*

András Bezdek (Auburn University) *A Sylvester type theorem on circles*

Karoly Bezdek (University of Budapest) *On a stronger form of Rogers' lemma and the minimum surface area of Varoni cells in unit ball packings*

T. Bisztriczky (University of Calgary) *A signature theorem for uniform oriented matroids*

Jin-Yi Cai (University of Buffalo) *A new transference theorem in geometry of numbers with applications to Ajtai's connection factor*

R. Connelly (Cornell University) *Holes in a membrane: tension percolation*

H.S.M. Coxeter (University of Toronto) *Whence does an ellipse look like a circle?*

Balazs Csikos (Eötvös University, Budapest) *Some results around the Hadwiger-Knesar-Poulsen conjecture*

Ludwig Danzer and Gerrit van Ophuysen (University of Dortmund) *A species of planar triangular tilings with inflation factor $\sqrt{-\tau}$*

Robert Dawson (Saint Mary's University) *What Shape is a Loaded Die?*

Michel Deza and Mikhail Shtogrin (Ecole Normale Sup., Paris) *Embedding of regular tilings and star-honeycombs*

Robert Erdahl (Queen's University) *Voronoi's hypothesis on perfect domains*

Ferenc Fodor (Auburn University) *Large polygons in convex sets and polygons with large perimeter*

Deborah Franzblau (CUNY/College of Staten Island) *Generic rigidity of molecular graphs*

Christopher Gold (Laval University) *Voronoi methods in geomatics – the importance of the spatial model*

Chaim Goodman-Strauss (University of Arkansas) *Addressing and substitution tilings*

Timothy Havel (Harvard University) *The role of tensegrity in distance geometry*

Donald Jacobs (Michigan State University) *Graph rigidity: Applications of material science and proteins*

Gábor Kertétz (Eötvös Loránd University) *Dido problem on planes of constant curvature*

Wlodzimierz Kuperberg (Auburn University) *Covering the cube with equal balls*

Barry Monson (University of New Brunswick) *Realizations of regular abstract polytypes*

Konstantin Rybnikov (Queen's University) *On traces of d-stresses in the skeletons of lower dimensions of homology manifolds*

Idzhad Sabitov (Moscow State University) *Solution of polyhedra*

Peter Schmitt (Universität Wien) *The versatility of (small) sets of prototiles*

I. Talata (University of Budapest) *On translative coverings of a convex body with its homothetic copies of given total volume*

Anke Walz (Cornell University) *The Bellows Conjecture in dimension four*

Walter Whiteley (York University) *Constraining a spherical polyhedron with dihedral angles*

EDUCATION I/ ÉDUCATION I
IDENTIFYING AND OVERCOMING BARRIERS TO TEACHING AND LEARNING MATHEMATICS AT UNIVERSITY/
IDENTIFIER ET VAINCRE LES OBSTACLES À L'ENSEIGNEMENT ET L'APPRENTISSAGE DES MATHÉMATIQUES À L'UNIVERSITÉ
(Org: Morris Orzech and Grace Orzech)

Ed Barbeau (University of Toronto) *The teacher as coach*

William Byers (Concordia University) *Revealing the inner mathematician*

Morris Orzech (Queen's University) *Addressing student difficulties specific to linear algebra*

Tom Rishel (Cornell University) *Teaching and job initiatives for graduate programs in mathematics*

Martha Siegel (Towson University)

Keith Taylor (University of Saskatchewan) *The math readiness project at the University of Saskatchewan*

EDUCATION II/ ÉDUCATION II
TEACHING MATHEMATICS – WHY WE DO WHAT WE DO IN THE CLASSROOM?/
L'ENSEIGNEMENT DES MATHÉMATIQUES – POURQUOI FAIT-ON CE QU'ON FAIT EN CLASSE?
(Org: William Higginson, Morris Orzech and Grace Orzech)

George Gadanidis (Durham Board of Education)

William Higginson (Queen's University) *Having, knowing, and being: some fundamental questions about mathematics teaching*

Lynn McAlpine and Cynthia Weston (McGill University) *How six outstanding math professors use reflection to improve their teaching*

Pat Rogers (York University) *The importance of why: encouraging students to reflect*

Nathalie Sinclair (Queen's University) *Romancing powerful mathematical ideas*

Extremal Combinatorics / Combinatoire extrémale
(Org: D. de Caen)

Richard Anstee (University of British Columbia) *Small forbidden configurations*

Jason Brown (Dalhousie University) *The inducibility of complete bipartite graphs*

Ralph Faudree (University of Memphis) *Anti-Ramsey Colorings in several rounds*

David Fisher (University of Colorado) *The minimum number of triangles in a graph*

Jerrold Griggs (University of South Carolina) *Extremal graphs with bounded densities of small subgraphs*

Penny Haxell (University of Waterloo) *Integer and fractional packings in dense graphs*

Felix Lazebnik (University of Delaware) *On a class of algebraically defined graphs*

Laszlo Székely (University of South Carolina) *Some new Erdös-Ko-Rado type problems*

Bing Zhou (Trent University) *Extremal graphs related to star chromatic number and fractional chromatic number*

GRADUATE STUDENT SESSION
SÉANCE POUR ÉTUDIANTS DIPLÔMÉS
(Org: David Gregory)

Leo Butler (Queen's University) *A new class of homogenous manifolds with Liouville-integrable geodesic flows*

Leo Creedon (University of Alberta) *Constructing free groups in modular group algebras*

Mark DeFazio (York University) *The behaviour of the complex zeros of the Laguerre polynomials*

Jody Esmonde (McGill University) *Parametric solutions to the generalized Fermat equation*

Shaun Fallet (William and Mary University) *Multiplicative principal minor inequalities for totally nonnegative matrices*

Andrei Gagarin (University of Manitoba) *Characterizations of (α, β)-polar graphs by forbidden induced subgraphs*

Malcolm Harper (McGill University) *A family of Euclidean rings containing $Z\left[\sqrt{14}\right]$*

Yu-Ru Lui (Harvard University) *The Turán sieve and probabilistic Galois theory*

David McKinnon (University of California, Berkeley) *An arithmetic Bézout theorem*

Satya Mohit (Queen's University) *The ABS-Conjecture and bounds for the order of the Tate-Shafarevich group*

Daniel Piché (University of Waterloo) *Wavelet compression on fractal tilings*

Philip Saidak (Queen's University) *On zero-free regions of the zeta function*

Gregory Smith (University of California, Berkeley) *Computing global extension modules*

Sarah Sumner (Queen's University) *Investigating transcendence in the field of p-adic numbers*

Drew Vandeth (McQuarrie university, Australia) *Transcendence of the values of generalized Mahler function*

MATHEMATICS ON THE INTERNET
MATHÉMATIQUES SUR INTERNET
(Org: June Lester, Nathalie Sinclair and Malgorzata Dubiel)

Bill Casselman (University of British Columbia) *Colour, animation, interaction – the next generation of electronic articles*

Stan Devitt (Waterloo Maple) *MathML support for defining notation – an essential step towards live math on the web*

Stan Devitt (Waterloo Maple) *The relationship between OpenMath and MathML*

Nick Jackiw (KCP Technologies) *JavaSketchpad: Taking dynamic geometry on-line*

Loki Jörgenson (CECM) *The CMS journals on-line: A study in digital publishing*

Robert Miner (WebEQ) *Putting math on the web*

Number Theory/ Théorie des nombres
(Org: Ram Murty, Noriko Yui)

Amir Akbary (Concordia University) *On the distribution values of symmetric square L-functions in the half plane $Re(s) > \frac{3}{2}$*

Henri Darmon (McGill University) *Modularity of hypergeometric abelian varieties*

Chantal David (Concordia University)

Jacek Fabrykowski (University of Manitoba)

Gunther Frei (Laval University) *On the discovery of the reciprocity law by Artin*

Eyal Goren (Corcordia & McGill University, CICMA) *Stratifications of moduli spaces and modular forms*

C. Greither (University of Laval) *On Brumer's Conjecture*

James Huard (Canisius College, Carleton University) *An arithmetic reciprocity relation of Liouville type and applications*

Hershy Kisilevsky (Concordia University) *Rank of E(K) for cyclic cube extensions K/ $\backslash Q$*

Manfred Kolster *(McMaster University) Higher relative class number formulas*

Arne Ledet *(Queen's University) Some small 2-groups as Galois groups*

Claude Levesque *(University of Laval) Explicit solutions of a family of Thue diophantine equations*

Kumar Murty *(University of Toronto) Zeros of Dedekind zeta functions in towers of fields*

Werner Nowak *(University of Austria) Large convex domains sometimes contain more lattice points than we would expect*

Yiannis Petridis *(McGill University) Zeros of the Riemann zeta function and central values of the L-series of holomorphic cusp forms*

Damien Roy *(University of Ottawa) Criteria of algebraic independence and approximation by hypersurfaces*

Gary Walsh *(University of Ottawa) Solving families of quartic equations*

Hugh Williams *(University of Manitoba) Computer verification of the Ankeny-Artin-Chowla conjecture for all $p < 5.10^{10}$*

Kenneth Williams *(Carleton University) Values of the Dedekind eta function at quadratic irrationalities*

Operator Algebras/ Algèbre d'opérateurs
(Org: James Mingo)

Berndt Brenken *(University of Calgary) Endomorphisms of finite direct sums of I_∞ factors*

Ken Davidson *(University of Waterloo) Principal bimodules of nest algebras*

George Elliot *(University of Toronto) An abstract Brown-Douglas-Fillmore absorption theorem, II*

Thierry Giordano *(University of Ottawa)*

Daniel Kucerovsky *(Fields Institute, University of Toronto) An abstract Brown-Douglas-Fillmore absorbtion theorem, I*

Michael Lamoureux *(Universtiy of Calgary) Crossed product algebra constructions*

A. Nica *(University of Waterloo) Some minimization problems for the free analogue of the Fisher information*

John Phillips *(University of Victoria) Spectral flow and index in bounded and unbounded θ-summable Fredholm modules*

Jack Spielberg *(Arizona State University) A new look at C*-algebras of infinite graphs*

Sam Walters *(University of Northern British Columbia) K-theory on non commutative spheres arising from the Fourier automorphism*

Probability Theory/ Théorie des probabilités
(Org: Miklos Csörgo)

Siva Athreya *(Fields Institute) Existence of positive solutions satisfying the boundary Harnack principle for a semi-linear Dirichlet problem*

M. Claude Belisle *(Université Laval) The hit-and-run sampler*

David Brillinger *(University of California, Berkeley) Some aspects of the motion of particles described by stochastic differential equations*

Murray D. Burke *(University of Calgary) Model checking and estimation: A large sample approach*

Colleen D. Cutler *(University of Waterloo) Scaling structures, chaos, and determinism in time series*

Andre R. Dabrowski *(University of Ottawa) A unified approach to fast teller queues and ATM*

Eric Derbez *(McMaster University) Generating functions and integrated super Brownian excursion (ISE)*

Shui Feng *(McMaster University) The behaviour of some degenerate diffusions near boundary under large deviations*

Rene Ferland *(Université du Québec à Montréal) Propagation of chaos: from Physics to Finance*

Antonia Foldes *(The College of Staten Island, CUNY) About the local time of random walk and Brownian motion*

Genevieve Gauthier *(École des Hautes Études Commerciales) Service de l'enseignement des methodes quantatives de gestion*

Edit Gombay *(University of Alberta) Correcting some limit theorems about the likelihood ratio*

Lajos Horvath *(University of Utah) Best approximations for bootstrapped processes with applications*

Gail Ivanoff *(University of Ottawa) Set-indexed martingales*

Mike Kouritzin *(University of Alberta) Parabolic equations with random coefficients*

Reg Kulperger *(University of Western Ontario) Empirical processes and tests of independence*

Brenda MacGibbon *(Université du Québec à Montréal) On statistical minimax estimation and principal eigenfuctions of the Laplacian*

Neal Madras *(York University) In search of faster simulations*

Don L. McLeish *(University of Waterloo) Estimating parameters of financial time series using highs and lows*

Majid Mojirsheibani *(Carleton University) Combined estimation and probabilistic classification*

Bruno Remillard *(Université du Québec à Trois-Rivières) Empirical processes based on pseudo-observations*

Pál Révész *(Math. Inst. Hung. Acad Sci.) Critical branching Wiener process*

Jeffrey S. Rosenthal *(University of Toronto) The mathematics of Markov chain Monte Carlo algorithms*

Tom Salisbury *(York University) The complement of the planar Brownian path*

Byron Schmuland *(University of Alberta) Rademacher's theorem on configuration space*

Qi-Man Shao *(University of Oregon) Gaussian correlation conjecture and small ball probabilities*

Zhan Shi *(Université Paris VI) The maximum of the uniform emprical process*

Gordon Slade *(McMaster University) The scaling limit of the incipient infinite cluster in high-dimensional percolation*

Chistopher G. Small *(University of Waterloo) The analysis of random shapes*

Barbara Szyszkowicz *(Carleton University) An interplay of weighted approximations and change-point analysis*

Keith Worsley *(McGill University) The geometry of correlation fields, with an application to functional connectivity of the brain*

Hao Yu *(University of Western Ontario) Weighted Kolmogorov-Smirnov test of stock return distributions*

Ricardas Zitikis *(Carleton University) The Vervaat, Lorenz and some other related processes of probability and mathematical statistics in weighted metrics*

Topology - 4 Sub-sessions/ Topologie - 4 sous-sessions
(Org: Eddy Campbell)

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1) Differential Geometry and Global Analysis
Géométrie différentielle et analyse globale
(Org: Muang Min-Oo, McKenzie Wang)

Igor Belagradek *(McMaster University) Pinching and Pontrjagin classes*

Christoph Böhm *(McMaster University) Inhomogenous Einstein metrics on spheres*

Jeffrey Boland *(McMaster University) Magnetic fields on negatively curved manifolds*

Virginie Charette *(University of Maryland) Properly discontinous actions of free groups on Minkowski space*

Jingyi Chen *(University of British Columbia) Triholomorphic curves and complex ASD connections*

Ailana Fraser *(Stanford University) On the free boundary variational problem for minimal disks*

Mike Gage *(University of Rochester) Remarks on B. Süssman's proof of the Banchoff-Pohl inequality*

Miroslav Lovric *(McMaster University) Multivariate normal distributions parametrized as a Riemannian symmetric space*

Mohan Ramachandran *(SUNY)*

Patrick Ryan *(McMaster University) Real hypersurfaces in complex space forms*

Patrice Sawyer *(Laurentian University) Ghostly symmetric spaces*

Alina Stancu *(Courant Institute) Asymptotoic behaviour of a crystalline evolution*

John Toth *(McGill University)*

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2) Homotopy Theory/Théorie de l'homotopie
(Org: Lisa Langsetmo, Jim Shank)

Dan Christensen *(Johns Hopkins University) Phantom maps: all or nothing*

Fred Cohen *(University of Rochester) On stunted projective spaces*

Gustavo Granja *(MIT) On self maps of HP^n*

Steve Halperin *(University of Toronto) The homotopy Lie algebra of a finite complex*

Philip Heath *(Memorial University) Fibre techniques in Nielsen perioidic point theory*

Barry Jessup *(University of Ottawa) Estimating the rational of LS-category of elliptic spaces*

Brenda Johnson *(Union College) Constructing and characterizing degree n functors*

Keith Johnson *(Dalhousie University) Elliptic homology cooperations*

Sadok Kallel *(University of British Columbia) The homology structure of free loop spaces*

Kathryn Lesh *(University of Toledo) Progress toward a partial splitting of E_2 in the UASS for SO*

Gaunce Lewis *(Syracuse University) Recent results on Mackey functors for a compact Lie group*

John Martino *(University of Western Michigan) A Minami-Webb formula for compact Lie groups*

Joe Neisendorfer *(Rochester University) James-Hopf invariants, Anick's spaces, and decompositions of the double loops on a Moore space*

Stewart Priddy *(Northwestern University) Decomposing products of classifying spaces*

Charles Rezk *(Northwestern University) A model for the homotopy theory of homotopy theory*

Laura Scull *(University of Chicago) Rational S^1-equivalent homotopy theory*

Paul Selick *(University of Toronto) Natural decompositions of loop suspensions and tensor algebras*

Stephen Theriault *(MIT) Homotopy exponents for certain mod-$2(r)$ Moore Spaces*

3) Set Theoretic Topology/Topologie des ensembles
(Org: Juris Steprans, Steve Watson)

Murray Bell *(University of Manitoba) Cardinal functions of centered spaces*

Maxim Burke *(University of Prince Edward Island) Continuous functions which take a somewhere dense set of values on every open set*

Krzysztof Cielsielski *(West Virginia University) Each Polish space is cocompactly quasimetrizable*

Wistar Comfort *(Wesleyan University) Continuous cross sections on Abelian groups equipped with a Bohr Topology*

Ilijas Farah *(York University)* $Exp(N^*)$ *need not be an* N^**-image*

Douglas Grant *(University College of Cape Breton) Alternative universes: the role of set theory in topological algebra*

Gary Gruenhage *(Auburn University) More on alpha-Toronto spaces*

Melvin Henriksen *(Harvey Mudd College) Embedding a ring of continuous functions in a regular ring; preliminary report*

James Hirschorn *(University of Toronto) Towers of measurable functions*

Valery Miskin *(Kemerovo State University) Set ideals everywhere*

Justin Moore *(University of Toronto) A linearly fibered Souslinean space under Martin's axiom*

Eduardo Santillan *(UNAM - Mexico) Topological properties of removable singularities for analytic functions*

Alexander Shibakov *(Tennessee Technological University) Controlling sequential order in topological vector spaces*

Slawomir Solecki *(Indiana University) Polish group actions and measures*

Paul Szeptycki *(Ohio University) Normality and property (a)*

Andrzej Szymanski *(Slippery Rock University of Pennylvania) On a class of special Namioka spaces*

Franklin Tall *(University of Toronto) The topology of elementary submodels*

Murat Tuncali *(Nipissing University) On generalizations of the Hahn-Mazurkiewicz Theorem*

Ed Tymchatyn *(University of Saskatchewan) Measures and topological dynamics on Menger manifolds*

Grant Woods *(University of Manitoba) Recent developments in rings of continuous functions*

Eduardo Santillan *(York University, Cinvestav, Mexico) Topological properties of removable singularities for analytic functions*

4) Symplectic/Low Dimensional Topology
Topologie en basses dimension/
Topologie symplectique
(Org: Steve Boyer, Jacques Hurtubise, François Lalonde)

Steve Boyer *(Université de Québec à Montréal) Norm duality and hyperbolic 3-manifolds*

Jacques Hurtubise *(McGill University, CRM) Framed parabolic bundles*

François Lalonde *(Université de Québec à Montréal, CRM) Applications of quantum cohomology to some fundamental problems of dynamics*

Yuriy Shkolnikov *(University of Calgary) A generalisation of Whitney's trick in dimension 4, borromeanism and related questions*

Jennifer Slimowitz *(Université de Québec à Montréal) Length minimizing geodesics in the group of hamiltonian diffeomorphisms*

Xingriu Zhang *(SUNY Buffalo) On simple points of the character variety of a cusped hyperbolic 3-manifold*

Universal Algebra and Multiple-Valued Logic
Algèbre universelle et logique multiple valeurs
(Org: L. Haddad)

Clifford Bergman *(Iowa State University) Complexity of some problems in universal algebra*

Jie Fang *(Simon Fraser University) Ockham algebras with pseudocomplementation*

Ibrahim Garro *(University of Toronto) An application of non-well founded sets to infinite valued infinitary propositional calculus*

George Grätzer *(University of Manitoba) Independence theorems for automorphism groups and congruence lattices of lattices*

Jennifer Hyndman *(University of Northern British Columbia) Dualizable is not the same as fully dualizable*

Benoit Larose *(Concordia University) Projective graphs and Hedetnyemi's conjecture*

Jonathan Leech *(Westmount College) Noncommutative lattices: foundational issues and recent results*

Robert Quackenbush *(University of Manitoba) Varieties of binary linear codes*

Ivo Rosenberg *(Université de Montréal) Completeness for uniformly delayed circuits*

Ross Willard *(University of Waterloo) Independence of the linear commutator*

CONTRIBUTED PAPERS
COMMUNICATIONS LIBRES
(Org: L. Haddad)

Igor Nikolaev *(Université de Montréal) 3-manifolds, foliations and* $K_0(C(X) \rtimes Z)$

Dieter Ruoff *(University of Regina) Solution of a non-Euclidean convexity problem*

Andrew Toms *(Fields Institute, University ofToronto) Perforated* K_0-*groups of* C^*-*algebras*

CALL FOR NOMINATIONS / APPEL DE CANDIDATURES

Rédacteur-gérant de la SMC / CMS Managing Editor

Le Comité des publications de la Société mathématique du Canada sollicite des mises en candidature pour rédacteur gérant de la SMC. La nomination est habituellement pour une période de trois ans et, sous réserve d'un accord avec l'établissement-hôte, comporte divers avantages (par example Réduction de la charge d'enseignement) pendant la durée du mandat.

Les principales fonctions et responsabilités du poste sont décrites ci-dessous. Le titulaire pourra également lancer d'autres initiatives s'il le désire. Le rédacteur-gérant travaille de concert avec le directeur administratif, et sa charge de travail hebdomadaire est évaluée à une moyenne de cinq à dix heures par semaine.

1. Veiller à ce que les activités d'édition de la SMC soient conformes aux politiques établies par le Conseil.
2. Superviser la production des périodiques, des monographies et des autres publications de la Société et veiller à ce que ces documents soient publiés à temps; mousser les ventes et promouvoir la distribution des publications de la SMC; recommander des améliorations et des changements à apporter à la politique et à d'autres aspects relatifs au programme de publications de la Société.
3. Surveiller les pages des publications sur le site Web de la SMC, veiller à ce que l'information présentée soit exacte et, en consultation avec le spécialiste de la rédaction électronique de la SMC, s'assurer que le site Web de la SMC offre un niveau approprié de service aux abonnés, aux membres ainsi qu'aux autres visiteurs, et que la promotion des publications de la Société soit faite de façon efficace.
4. Aider à l'établissement du budget et aux autres questions financières pour la division des publications de la Société et, de concert avec le bureau administratif de la SMC, veiller à ce que la division des publications respecte le budget approuvé par le conseil d'administration.
5. Le rédacteur-gérant est un membre d'office (sans droit de vote) du Comité des publications et du Comité des services électroniques; il participe aux réunions de ces comités et à celles des autres comités, au besoin.

Les mises en candidature doivent inclure une lettre formelle et les éléments suivants:

- Un curriculum vitae
- Un texte où le candidat décrit sa façon de voir le poste de rédacteur-gérant, ses qualités pertinentes au poste et les projets de publication qu'il croit que la Société devrait réaliser dans les années à venir.

Le Comité des publications transmettra ses recommendations au Comité exécutif de la SMC avant le fin d'avril 1999. L'écheance pour la reception des mises en candidature est **le 15 mars 1999.**

Les mises en candidature, avec matériel à l'appui, et/ou commentaires devrait être acheminés à l'addresse ci-dessous.

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The Publications Committee of the Canadian Mathematical Society invites applications for the position of CMS Managing Editor. The appointment is usually for a three-year term and, subject to an agreement with the host institution, will include some form of compensation (e.g. teaching release) during the term of the appointment.

The current major duties and responsibilities are outlined below and the incumbent may also take initiatives in other directions. The Managing Editor works with the CMS Executive Director and it is anticipated that the tasks will require, on average, five to ten hours per week.

1. To ensure that the publishing activities of the CMS are in accordance with the policies determined by that Board.
2. To supervise and ensure the timely production of the Society's periodicals, monographs and other publications; to promote the sales and distribution of the Society's publications; to bring forth recommendations for improvements, changes in policy and other matters related to the Society's publications programme.
3. To monitor the publications pages on the CMS web site, ensure that the information provided is accurate and, in consultation with the CMS Digital Editor, that the CMS web site offers the proper level of service to subscribers, members and others, and that it effectively promotes the Society's publications.
4. To assist with the budget preparations and other financial matters for the Society's Publications Division and, in consultation with the CMS Executive Office, ensure that Publications Division operates within the budget approved by the CMS Board of Directors.
5. The Managing Editor is an ex-officio (non-voting) member of the CMS Publications Committee and Electronic Services Committee and participates in the meetings of these committees and other committees, as appropriate.

Applications should consist of a formal letter of application and include the following:

- A curriculum vitae
- A statement of the views of the candidate regarding the position of Managing Editor, the qualities of the candidate that pertain to the position and any publishing initiatives etc. she/he considers the Society should be addressing for the future.

The Publications Committee will communicate its recommendation to the Executive Committee of the CMS by April 1999. The deadline for receipt of applications is **March 15, 1999.**

Applications, with supporting material or comments, should be sent to the address below.

Dr. James A. Mingo, Chair/Président
Publications Committee/Comité des publications
Department of Mathematics and Statistics
Queen's University, Kingston, Ontario
K7L 3N6 Canada

CMS Distinguished Service Award / Prix de la SMC pour service méritoire

In 1995, the Society established this award to recognize individuals who have made sustained and significant contributions to the Canadian mathematical community and, in particular, to the Canadian Mathematical Society.

The first awards were presented at the 1995 Winter Meeting in Vancouver to Donald Coxeter, Nathan Mendelsohn, John Coleman, Maurice L'Abbé and George Duff. The second awards were presented at the 1996 Winter Meeting in London, Ontario to David Borwein and P.G. (Tim) Rooney. The next awards will be presented at the 1999 Summer Meeting in St. John's, Newfoundland.

Nominations should include a reasonably detailed rationale and be submitted by **March 31, 1999**, to the address below.

En 1995, la Société mathématique du Canada a créé un nouveau prix pour récompenser les personnes qui contribuent de façon importante et soutenue à la communauté mathématique canadienne et, notamment, à la SMC.

Les premiers lauréats furent honorés lors de la réunion d'hiver 1995 à Vancouver aux Donald Coxeter, Nathan Mendelsohn, John Coleman, Maurice L'Abbé et George Duff. Les deuxièmes lauréats, David Borwein et P.G. (Tim) Rooney, furent honorés lors de la réunion d'hiver 1996 à London, Ontario. Les prochains lauréats seront honorés lors de la réunion d'été 1999 à St. John's, Terre-Neuve.

La période de mises en candidature est en cours; prière de présenter des dossiers suffisamment détaillés et de les faire parvenir, le **31 mars 1999** au plus tard, à l'adresse ci-dessous.

Selection Committee / Comité de sélection
Distinguished Service Award / Prix pour service méritoire
577 King Edward, Suite 109
C.P./P.O. 450, Succursale / Station A
Ottawa, Ontario K1N 6N5 Canada

Séminaire de Mathématiques Supérieures - Séminaire Scientifique OTAN
Université de Montréal, 26 juillet - 6 août 1999
38e Session

INTEGRABLE SYSTEMS: FROM CLASSICAL TO QUANTUM

Séminaire subventionné par l'OTAN et l'Université de Montréal.

Conférenciers:

D. BERNARD (Service de Physique Théorique de Saclay): Form factors, KdV and deformation of hyperelliptic curves
B. DUBROVIN (SISSA Trieste): Frobenius manifolds, topological field theory and integrable systems
J. HARNAD (Concordia & Montréal): Loop groups, R-matrices and separation of variables
A. ITS (Indiana-Purdue): Riemann-Hilbert approach in exactly solvable quantum field and statistical physics models
V. KOREPIN (SUNY at Stony Brook): Determinant representations for quantum correlation functions for exactly solvable models
A. LECLAIR (Cornell): Integrability of quantum field theory with defects
T. MIWA (RIMS, Kyoto): Algebraic analysis of solvable lattice models
A. MOROZOV (ITEP, Moscow): Identities between quantum field theories in different dimensions
A. POLYCHRONAKOS (Ioannina & Uppsala): Calogero-like systems: physics and mathematics
N. RESHETIKHIN (California at Berkeley): Representations of quantum affine algebras
S. RUIJSENAARS (CWI Amsterdam): Special functions associated with integrable quantum systems
E. SKLYANIN (St. Petersburg & ÉNS Lyon): Bäcklund transformations, Baxter's Q-operators and seperations of variables
C.A. TRACY (California at Davis): Random matrix models and integrable systems
P. WINTERNITZ (Montréal): Integrable systems, symmetries and Lie algebra contractions

Demande de participation avant le 12 mars 1999. Renseignements: G. David, Département de mathématiques & de statistique, Université de Montréal, CP 6128-Centre-ville, Montréal (Qc) H3C 3J7, tél. (514) 343-6710, fax (514) 343-5700, http://www.dms.umontreal.ca/activite/sms

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BROCK UNIVERSITY
DEAN OF FACULTY OF MATHEMATICS AND SCIENCE

Brock University, located in St. Catharines, Ontario, invites applications and nominations for the position of Dean, Faculty of Mathematics and Science. The appointment, to be effective July 1, 1999, is for a period of five years, renewable.

The Faculty of Mathematics and Science has 65 full-time faculty members and 1500 undergraduate students in the Departments of Biological Sciences, Chemistry, Computer Science, Earth Sciences, Mathematics, and Physics. The newly-established Cool Climate Oenology and Viticulture Institute, and a number of active interdisciplinary programs, reflect the Faculty's commitment to research and teaching. The Departments of Biological Sciences, Chemistry, Earth Sciences, and Physics currently offer M.Sc. programs in addition to the honors B.Sc. programs offered in all departments. Plans are going forward for new and innovative graduate programs, in keeping with the faculty's long history of outstanding teaching and research.

The University seeks an individual, with administrative experience and an established record of excellence in research and teaching, to provide dynamic leadership in a Faculty where teaching and research are equally valued. The individual must be able to work effectively with faculty, students and staff, and to promote relations and develop further linkages with the external community. Consideration of applications and nominations will begin **January 15, 1999.** They should be submitted in confidence to:

Dr. R. Terrance Boak,
Vice President, Academic
Brock University
St. Catharines, Ontario
L2S 3A1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Brock University is an equal opportunity employer.

McMASTER UNIVERSITY
DEPARTMENT OF MATHEMATICS AND STATISTICS

BRITTON POST-DOCTORAL FELLOWSHIP IN MATHEMATICS

Applications are invited for the Britton Post-Doctoral Fellowship in Mathematics, named after our former colleague Dr. Ronald F. Britton. This Fellowship is intended for talented research mathematicians with a recent Ph.D.

The Britton Fellowship is open to candidates of any nationality and selection will be based upon the candidate's research potential.

McMaster is committed to Employment Equity and encourages applications from all qualified candidates, including aboriginal peoples, persons with disabilities, members of visible minorities and women.

The Britton Fellowship is tenable for a period of two years beginning July 1, 1999 at a salary of $35,000 per year plus a research grant of $5,000. Duties include research and the teaching of one course per year.

Applications, including three letters of reference, should be received before **January 1, 1999** by:

I. Hambleton, Chair
Mathematics & Statistics
McMaster University
Hamilton, Ontario
Canada, L8S 4K1

We appreciate all replies to this advertisement, but only those applicants selected for our short list will be contacted.

McMASTER UNIVERSITY
DEPARTMENT OF MATHEMATICS AND STATISTICS

POST-DOCTORAL INSTRUCTORSHIPS IN MATHEMATICS

Applications are invited for post-doctoral fellowship positions in the Department of Mathematics & Statistics. These fellowships provide an opportunity to spend up to two years engaged in research, with a limited amount of teaching, and are particularly suitable for talented young mathematicians who have recently completed the Ph.D. degree.

The Fellowships are open to candidates of any nationality and selection will be based upon the candidate's research potential. McMaster is committed to Employment Equity and encourages applications from all qualified candidates, including aboriginal peoples, persons with disabilities, members of visible minorities and women.

Starting July 1, 1999, the stipend will be $34,000 plus a $2,000 grant for research expenses.

Applications and three letters of reference should be sent by **January 1, 1999** to:

I. Hambleton, Chair
Mathematics & Statistics
McMaster University
Hamilton, Ontario
Canada, L8S 4K1

We appreciate all replies to this advertisement, but only those applicants selected for our short list will be contacted.

PACIFIC INSTITUTE OF MATHEMATICAL SCIENCES
Mathematical Modelling and Scientific Computation Group

POST-DOCTORAL FELLOWSHIPS

The Mathematical Modelling and Scientific Computation (MMSC) group of the Pacific Institute of Mathematical Sciences expects to have one or two industrial mathematics post-doctoral fellowships starting January, 1999, subject to the availability of funds. Positions are one year, with expected renewal for a second year. A Ph.D. or equivalent and evidence of high potential for research in Applied Mathematics are required. Successful applicants will contribute to MMSC's ongoing fuel cell modeling efforts in conjunction with a world leading fuel cell manufacturer; no teaching is required. The start-date could potentially be arranged for May or September and the applicant will be based at either the University of British Columbia or at Simon Fraser University in Vancouver, Canada. A background in interfacial dynamics, fluid or continuum mechanics, or inverse problems would be ideal. Experience in modelling or scientific computing is an asset. The salary will be commensurate with experience and research record.

Applications, including C.V. and names of references, should be sent to: *The Director, Pacific Institute of Mathematical Sciences,* **Attention:** *MMSC post-doc search, University of British Columbia, Vancouver, B.C. Canada V6T 1Z2.*

We encourage all qualified persons to apply.

McGILL UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE
ASSISTANT PROFESSOR

The School of Computer Science at McGill University wishes to invite applications for two tenure-track positions at the assistant professor level, to begin June 1st, 1999. One position is in the systems area, including, but not limited to, networks, architecture, real-time systems. The other position is in the general area of computational intelligence, including, but not limited to, machine learning, model- checking, reasoning with uncertainty, speech understanding, neural nets.

Hardcopy applications, including a curriculum vitae, a list of publications with copies of one or two sample reprints, a research proposal and the names and e-mail addresses of three references should be sent to:

Head, Search Committee
School of Computer Science
McGill University
McConnell Engineering Building, #318
3480 University Street
Montreal, Quebec, Canada H3A 2A7

The review process will start December 1st, 1998 and the search will continue until the positions are filled. Further information and the status of the job search can be found on our web page, www.cs.mcgill.ca.

McGill University is committed to equity in employment and, in accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada.

UNIVERSITY OF OTTAWA / UNIVERSITÉ D'OTTAWA
Department of Mathematics and Statistics/Département de mathématiques et de statistique

The Department of Mathematics and Statistics of the University of Ottawa invites applications from recent Ph.D's for one tenure-track position at the assistant professor level beginning July 1, 1999. Applications in all areas of mathematics and statistics are invited. The department's priorities are modern applied mathematics and statistics. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. Applicants should send a curriculum vitae and have three letters of recommendation sent to Wulf Rossmann, Chairman, Department of Mathematics and Statistics, University of Ottawa, Ottawa, ON Canada, K1N 6N5 by **January 15, 1999.** Conditions of employment are set by a collective agreement. Employment equity is University policy and the University strongly encourages applications from women.

The University of Ottawa has a student population of over 25,000. It has a full range of academic and professional programs, several research institutes, and is near the federal government with all its agencies and laboratories. The region is home to Canada's biggest concentration of high-tech companies.

The Department of Mathematics and Statistics has 28 full-time faculty members, more than 80% of whom hold national research grants. Shared computing facilities (Sun, RS/6000) with mathematical and statistical software are available for the successful applicant. New tenure-track appointees begin with reduced teaching and administrative loads and usually receive a start-up grant. Please consult `http://www.science.uottawa.ca/science/mathstat/` for further information.

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Le Département de mathématiques et de statistique de l'Université d'Ottawa met au concours un poste menant à la permanence au niveau de professeur adjoint. Entrée en fonction: le 1er juillet 1999. Pour poser sa candidature, il faut avoir reçu, récemment, un doctorat en mathématiques ou en statistique. Les candidates et candidats de tout domaine de mathématiques ou de la statistique seront considérés. La priorité du département se situe en mathématiques appliquées modernes et en statistique. Conformément aux exigences prescrites en matière d'immigration au Canada, cette annonce s'adresse aux citoyens canadiens et aux résidents permanents. Envoyer son c.v. ainsi que trois lettres de recommandation à Wulf Rossmann, Directeur, Département de mathématiques et de statistique, Université d'Ottawa, Ottawa, ON, Canada, K1N 6N5. La date limite pour la réception des candidatures est **le 15 janvier 1999.** Les conditions d'emploi suivent les dispositions d'une convention collective. L'Université a une politique d'égalité en matière d'emploi et encourage fortement les demandes de la part des femmes.

L'Université d'Ottawa offre à plus de 25,000 étudiants une gamme complète de programmes d'études tant académiques que professionels. En plus du gouvernement fédéral, de ses agences et de ses laboratoires, la région abrite la plus grande concentration d'entreprises de haute technologie au pays.

Le département de mathématiques et de statistique est composé de 28 professeurs dont plus de 80% reçoivent des fonds de recherche d'organismes nationaux. Des ordinateurs (Sun, RS/6000) munis de logiciels de mathématiques et de statistique sont disponibles. De plus, les nouveaux titulaires de poste menant à la permanence reçoivent un octroi de démarrage ainsi qu'une charge administrative et d'enseignement réduite. Pour plus de renseignement voir `http://www.science.uottawa.ca/science/mathstat/.`

CALENDAR OF EVENTS / CALENDRIER DES ÉVÉNEMENTS

DECEMBER 1998 **DÉCEMBRE 1998**

8–12 International Commission on Mathematical Instruction (ICMI) Study Conference (Singapore)
http://elib.zib.de/IMU/ICMI/bulletin/43/Study.html

13–15 CMS Winter Meeting / Réunion d'hiver de la SMC (Queen's University, Kingston)
Monique Bouchard: meetings@cms.math.ca

JANUARY 1999 **JANVIER 1999**

13–16 Joint Mathematics Meetings (San Antonio, Texas)
A.H. Daly: AMS, meet@math.ams.org

MAY 1999 **MAI 1999**

18–21 Vision Interface (VI'99)/Quality Control By Artifical Vision (QCAV'99) (Hotel Delata, Trois-Rivieres, Quebec)
http://www.dmi.usherb.ca/conferences/

29–31 CMS Summer Meeting / Réunion d'été de la SMC (Memorial University of Newfoundland, St. John's)
Monique Bouchard: meetings@cms.math.ca

29–June 4 Moonshine in '99 (Montreal, Quebec)
mckay@vax2.concordia.ca

JUNE 1999 **JUIN 1999**

4–8 CMESG Meeting (Brock University, St. Catherine's)

6–9 Annual Meeting of the Statistical Society of Canada (Regina, Saskatchewan)

13–17 Conference on the Mathematics of Public-Key Crytography (Fields Institute for Mathematical Sciences, Toronto, Ontario)
Gary Walsh, Chair: gwalsh@mathstat.uottawa.ca
http://fields.utoronto.ca/publickey.html

14–19 14th Householder Symposium on Numerical Linear Algebra (Whistler, British Columbia)
varah@cs.ubc.ca;
http://roadmap.ubc.ca/hholder/

20–24 The Sixth Conference of the Canadian Number Theory Association (CNTA'99) (University of Manitoba, Winnipeg)
P.N. Shivakumar: insmath@cc.umanitoba.ca
http://www.iims.umanitoba.ca

JULY 1999 **JUILLET 1999**

5–9 4th International Congress on Industrial and Applied Mathematics (Edinburgh, Scotland)
geninfo.iciam@meetingmakers.co.uk;
http://www/,atjs/ed/ac/uk/conferences.icicam99/

10–22 40th International Mathematical Olympiad (Romania)

AUGUST 1999 **AOÛT 1999**

International Conference on Valuation Theory and its Applications, Conf. dedicated to Paulo Ribenboim (University of Saskatchewan)
fvk@usask.ca;
http://math.usask.ca/ fvk/Valth.html

NOVEMBER 1999 **NOVEMBRE 1999**

14–18 International Conference on Mathematics Education into the 21st Century (Cairo, Egypt)
Dr. A Rogerson: arogers@mgs.vic.edu.au

DECEMBER 1999 **DÉCEMBRE 1999**

11–13 CMS Winter Meeting / Réunion d'hiver de la SMC (Université de Montréal)
Monique Bouchard: meetings@cms.math.ca

JUNE 2000 **JUIN 2000**

CMESG Meeting (UQAM, Montreal)

9–13 CMS Summer Meeting / Réunion d'été de la SMC (McMaster University)
Monique Bouchard: meetings@cms.math.ca

4–7 Annual Meeting of the Statistical Society of Canada (Ottawa, Ontario) *adrsg@uottawa.ca*

12–15 Integral Methods in Science and Engineering (Banff, Alberta) *Peter.Schiavone@ualberta.ca*

JULY 2000 **JUILLET 2000**

11–24 41st International Mathemaical Olympiad (Korea)

SEPTEMBER 2000 **SEPTEMBRE 2000**

22–24 American Mathematical Society Central Section meetings (University of Toronto) *http://www.ams.org/meetings/*

DECEMBER 2000 **DÉCEMBRE 2000**

CMS Winter Meeting / Réunion d'hiver de la SMC (University of British Columbia)
Monique Bouchard: meetings@cms.math.ca

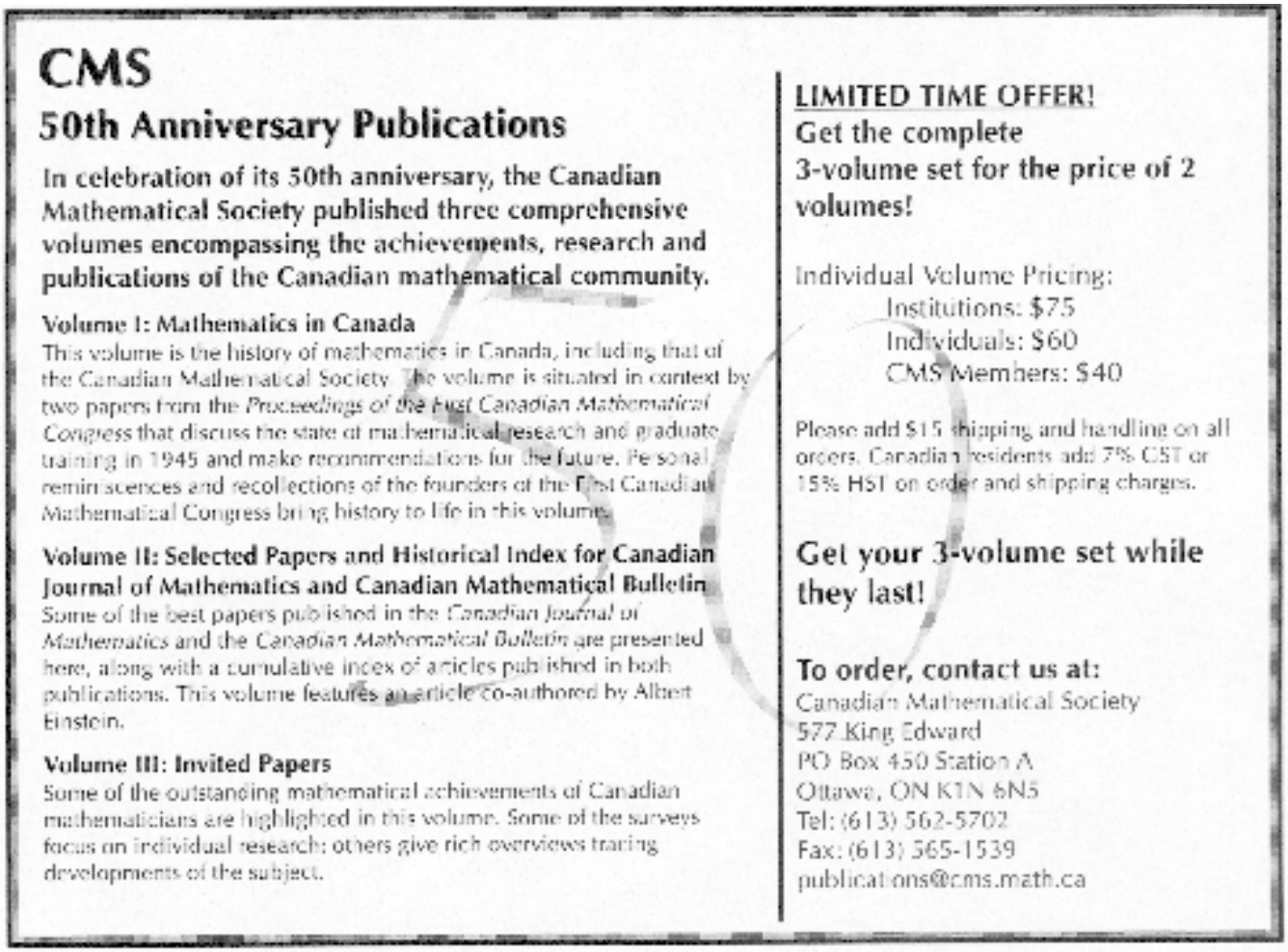
JUNE 2001 **JUIN 2001**

CMESG Meeting (University of Alberta, Edmonton)

Annual Meeting of the Statistical Society of Canada (Vancouver, British Columbia)

SUMMER 2002 **ÉTÉ 2002**

25th Anniversary CMESG Meeting (Queen's University, Kingston)



RATES AND DEADLINES / TARIFS ET DATES LIMITES

If requested the rates indicated include electronic availability.
S'il y a lieu, les tarifs indiqués valent aussi pour la disponibilité électronique

Deadlines for receipt of material are as follows: Les dates limites pour la réception des annonces sont les suivantes :		RATES/TARIFS		
		Advertisement size Grandeur de l'annonce	Educational Institutionnelle	Commercial Commerciale
Feb / fév	15 décembre / December 15	bus. card / carte d'aff.	$40.00	$65.00
March / mars	15 janvier / January 15	1/4-page	$60.00	$90.00
April / avril	15 février / February 15	1/2-page	$110.00	$165.00
May / mai	15 mars / March 15	3/4-page	$160.00	$240.00
September / septembre	15 juillet / July 15	1-page	$200.00	$300.00
October / octobre	15 août / August 15	Surcharges apply for prime locations / des sur-charges sont applicables pour les places de choix.		
November / novembre	15 septembre / September 15			
December / décembre	15 octobre / October 15			

Subscription to the *CMS Notes* is included with the CMS membership. For non-CMS members, the subscription rate is $40 (CDN) for subscribers with Canadian addresses and $40 (US) for subscribers with non-Canadian addresses.
L'adhésion à la SMC comprend l'abonnement aux *Notes de la SMC*. Le tarif d'abonnement pour les non-membres est de 40 $ CAN si l'adresse de l'abonné est au Canada et de 40 $ US si l'adresse est à l'étranger.

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Essential Mathematics References

INTEGER PROGRAMMING
Laurence A. Wolsey

This reference stands out from any other by clearly explaining how to construct custom-made algorithms or use existing commercial software to obtain optimal or near-optimal solutions for a variety of real-world problems.

0-471-28366-5 $89.95 Cloth
260 pages September 1998

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Second Edition
Erich Zauderer

This classic text provides a comprehensive account of partial differential equations and their applications.

0-471-31516-8 $104.95 Paper
891 pages July 1998

Now in paper!

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Jonathan M. Borwein
Peter B. Borwein

Examining the complex relationship between pi and the AGM, or Arithmetic-Geometric Mean, this book reveals the interplay between classical analysis and modern computation and complexity theory.

0-471-31515-X ~~$89.95~~ Paper
432 pages June 1998

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Second Edition
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This vital resource provides proof of van der Waerden's conjecture on permanents, Wilson's theorem on asymptotic existence, and many other developments in combinatorics.

0-471-31518-4 $89.95 Paper
440 pages July 1998

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Charles F. Laywine and Gary L. Mullen

This is the only professional reference that fully engages the subject of Latin squares and its many important applications.

0-471-24064-8 $119.95 Cloth
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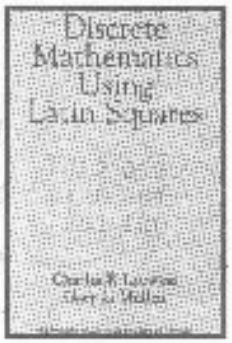

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