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

This information is a consolidation of information published in the *CMS Notes* and is subject to periodic updating.

1 Introduction

On behalf of Queen's University and the Royal Military College we extend a warm invitation to attend the 1998 Winter Meeting of the CMS.

The meeting will be of exceptionally broad interest, with a programme encompassing at least eleven symposia, various meetings, and plenary talks including the Coxeter-James Lecture and a public lecture given by H.S.M. Coxeter of the University of Toronto. The symposia are in algebraic geometry, extremal combinatorics, discrete geometry, education, number theory, operator algebras, probability theory, universal algebra and multivalued logic, and topology. In addition there will be the usual session for Graduate Students and a session for Contributed Papers.

The meeting is centered at the Holiday Inn on the Kingston waterfront, and will run from Sunday, December 13 to Tuesday, December 15, 1998. Scientific activities will take place in the Holiday Inn and the Howard Johnson Confederation Place Hotel immediately adjacent to it.

2 Plenary Speakers

Miklos Csörgo (Carleton)
Henri Darmon (McGill)
Z. Füredi (Illinois at Urbana / Inst. Hungarian Acad. Sci.)
Donal O'Shea (Mt. Holyoke College).

3 Prize Lectures and Awards

The **Coxeter-James Lecture** will be given by **Henri Darmon**, McGill University.

The CMS is pleased to announce that the recipient of this year's Adrien **Pouliot Award** is **Bernard Hodgson** (Laval).

The CMS is also pleased to announce that **Yuri Berest** is the recipient of this year's **CMS Doctoral Prize**. His lecture is scheduled for 9:00 to 10:00 am on Tuesday, December 15.

Prizes will be awarded at the Delegates' Luncheon, to be held Sunday, December 13, from 12:00 to 1:30 pm at the Howard Johnson Hotel.

4 Public Lecture

Saturday, December 12, 8:00 p.m.
H.S.M. Coxeter, University of Toronto
The Descartes Circle Theorem and Fibonacci Numbers

5 Symposia

[A more recent list of scheduled speakers is available at the web address http://www.cms.math.ca/Events/winter98/talks/]

By invitation of the Programme Committee, there will be symposia in the following areas.

Algebraic Geometry
(Org: **P. Milman**, University of Toronto)
Donal O'Shea (Mt. Holyoke College)
Fedya Bogomolov (NYU Courant Institute)
Askold Khovanskii (Univ. of Toronto)
Jenia Shustin (Tel-Aviv Univ.)
Yosef Yomdin (Weizmann Institute)

Discrete Geometry
(Org: **Robert Erdahl**, Queen's University, **Marjorie Senechal**, Smith College, and **Walter Whiteley**, York University)
V. Alexandrov (Moscow)
P. Atela (Smith College)
L. Batten (Manitoba)
M. Bayer (Kansas)
A. Bezdek (Auburn)
K. Bezdek (Budapest)
T. Bisztriczky (Calgary)
Jin-Yi Cai (Buffalo)
R. Connelly (Cornell)
H.S.M. Coxeter (Toronto)
L. Danzer (Dortmund)
T. Havel (Harvard)
D. Jacobs (Michigan State)

W. Kuperburg (Auburn)
M. Senechal (Smith College)
I. Talata (Budapest)
A. Walz (Cornell)
W. Whiteley (York)

Education Session I
Identifying and Overcoming Barriers to Teaching and Learning Mathematics at University
(Org: **Morris Orzech and Grace Orzech**, Queen's University)
Ed Barbeau (Toronto)
William Byers (Concordia)
Tom Rishel (Cornell)
Morris Orzech (Queen's)
Donal O'Shea (Mt. Holyoke College)
Martha Siegel (Towson)
Keith Taylor (Saskatchewan)

Education Session II
Teaching mathematics - Why We Do What We Do in the Classroom
(Org: **William Higginson, Grace Orzech and Morris Orzech**, Queen's University)

This session is supported by the Fields Institute, and will be held at MacArthur College, situated some distance from the hotels.

The Queen's University Instructional Development Centre is planning a workshop featuring some of the invited speakers. Meeting participants will have an opportunity to register for this workshop.

George Gadanidis (Durham Board of Education)
William Higginson (Queen's)
Lynn McAlpine (McGill)
Pat Rogers (York)
Nathalie Sinclair (Queen's)

Extremal Combinatorics
(Org: **D. de Caen**, Queen's University)
Zoltan Füredi (University of Illinois at Urbana and Math. Inst. Hungarian Acad. Sci.)
Richard Anstee (UBC)
Jason Brown (Dalhousie)
Ralph Faudree (Memphis)
Jerrold Griggs (South Carolina)
Penny Haxell (Waterloo)
David Fisher (Colorado)
Felix Lazebnik (Delaware)

Laszlo Székely (South Carolina)
Bing Zhou (Trent)

Mathematics on the Internet
(Org: **June Lester**, University of New Brunswick, **Nathalie Sinclair**, Queen's University, and **Malgorzata Dubiel**, Simon Fraser University)

This session is supported by the Fields Institute and the Pacific Institute for Mathematical Sciences.

There will also be two workshops entitled **Introduction to Geometer's Sketchpad** and **JavaSketchpad: Geometry on the Web**. The first is suitable for teachers and the second for those with some web experience. For more information, please contact the organizers at the following email addresses: `jalester@cecm.sfu.ca` or `dubiel@cs.sfu.ca` or `sinclair@cecm.sfu.ca`

Steve Braham (CECM)
Bill Casselman (UBC)
Stan Devitt (Waterloo Maple)
Chris Howlett (Web Pearls)
Loki Jörgenson (CECM)

Number Theory
(Org: **Ram Murty and Noriko Yui**, Queen's University)

This session has received additional funding from the Centre de recherches mathématiques.

Amir Akbary (Concordia)
Henri Darmon (McGill)
Chantal David (Concordia)
Jacek W. Fabrykowski (Manitoba)
Gunther Frei (Laval)
E. Goren (McGill)
C. Greither (Laval)
J. Huard (Canisius and Carleton)
Hershy Kisilevsky (Concordia)
Manfred Kolster (McMaster)
A. Ledet (Queen's)
Claude Levesque (Laval)
Kumar Murty (Toronto)
W. Nowak (Austia)
Y. Petridis (McGill)
Vladimir Platonov (Waterloo)
C.S. Rajan (Tata Institute)
Damien Roy (Ottawa)
Gary Walsh (Ottawa)
Hugh Williams (Manitoba)
Kenneth Williams (Carleton)

Operator Algebras
(Org: **James Mingo**, Queen's University)
Ken Davidson (Waterloo)
George Elliott (Toronto)
Thierry Giordano (Ottawa)
Andu Nica (Waterloo)

Probability Theory
(Org: **Miklos Csörgo**, Carleton University)

This session has received additional funding from The Fields Institute.

Miklos Csörgo (Carleton)
Siva Athreya (Fields)
M. Claude Belisle
Murray D. Burke
Colleen D. Cutler (Waterloo)
Andre R. Dabrowski (Ottawa)
Eric Derbez (McMaster)
Shui Feng (McMaster)
Rene Ferland
Antonia Foldes
Genevieve Gauthier
Christian Genest
Edit Gombay
Lajos Horvath
Gail Ivanoff (Ottawa)
Mike Kouritzin (Alberta)
Reg Kulperger (Western Ontario)
Brenda MacGibbon
Neal Madras (York)
Don L. McLeish (Waterloo)
Majid Mojirsheibani
Bruno Remillard (Québec-Trois Rivières)
Jeffrey S. Rosenthal (Toronto)
Tom Salisbury (York)
Byron Schmuland (Alberta)
Qi-Man Shao
Zhan Shi
Gordon Slade (McMaster)
Chistopher G. Small (Waterloo)
Barbara Szyszkowicz (Carleton)
Jean Vaillancourt
Keith Worsle
Hao Yu
Ricardas Zitikis

Topology - 4 Sub-sessions
(Org: **Eddy Campbell**, Queen's University)

1) Differential Geometry and Global Analysis
(Org: **Muang Min-Oo and McKenzie Wang**, McMaster University).
Christoph Boehm (McMaster)
Jingyi Chen (MIT)
Ailana Fraser (Stanford)
W. Goldman (Maryland)
Ross Niebergall (UNBC)
P. Ryan (McMaster)
John Toth (McGill)
Patrice Sawyer (Laurentian)
Miroslav Lovric (McMaster)
Jeffrey Boland (McMaster)
Alina Stancu (Courant Institute)
Igor Belagradek (McMaster)
Mike Gage (Rochester)
Mohan Ramachandran (SUNY Buffalo)

2) Homotopy Theory
(Org: **Lisa Langsetmo**, University of Ottawa and **Jim Shank**, Queen's University).
Speakers to be announced.

3) Set Theoretic Topology
(Org: **Juris Steprans and Steve Watson**, York University).
Speakers to be announced.

4) Symplectic/Low Dimensional Topology
(Org: **Steve Boyer**, UQAM), **Jacques Hurtubise**, McGill, CRM and **François Lalonde**, UQAM, CRM).
Speakers to be announced.

Universal Algebra and Multiple-Valued Logic
(Org: **L. Haddad**, Royal Military College)
Speakers to be announced.

Contributed Papers Session
(Org: **L. Haddad**, Royal Military College)

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 September 30, 1998**. The abstract must be accompanied by its contributor's registration form and appropriate fees.

Graduate Student Session
(Org: **David Gregory**, Queen's University)

In this session, graduate students will have an opportunity to present contributed papers on their research. Abstracts should be prepared as specified in the September issue of the *CMS Notes*. A limited fund will be available to pay part of the costs of travel for student speakers (last year this was about $3,500 at a payment of approximately $500 per speaker). Please contact the Meeting Directors for details on funding. Anyone interested in participating in the organization of this programme should contact the Meeting Director at the following address: **md-w98@cms.math.ca**.

6 Submission of Abstracts

Titles for Plenary Speakers, Prize Lecturers and Invited Special Session Speakers for the scientific and education programme will appear in the **November** issue of the *CMS Notes*. Titles for Contributed Papers will appear in the **December** 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).

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 the Abstracts Coordinator, CMS Executive Office, 577 King Edward, P.O. Box 450, Station A, Ottawa, Ontario Canada K1N 6N5, **so as to arrive by September 30, 1998.**

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 or in the **September** issue of the *CMS Notes*. Abstracts should be sent to the Abstracts Coordinator, CMS Executive Office, 577 King Edward, P.O. Box 450, Station A, Ottawa, Ontario Canada K1N 6N5, **so as to arrive by September 30, 1998**.

Electronic submission of abstracts: This service is available only to those who use the TEX typesetting system. Files should include the speaker's name, affiliation, complete address, title of talk and the abstract itself. Files may be sent by e-mail to the Abstracts Coordinator at: **abstracts@cms.math.ca**

Please note the appropriate deadline given above for the submission of your abstract. Please note that we cannot accept abstracts sent by FAX.

7 Social Events

Welcoming Reception: Social events include a cash-bar reception scheduled for Saturday evening from 6:00-8:00 p.m., during evening registration at the Holiday Inn, Kingston Waterfront.

Delegate's Luncheon: The CMS delegates' luncheon will be held at the Howard Johnson Confederation Place Hotel on Sunday, December 13. The cost of this luncheon is included in all registration categories.

Banquet: The CMS banquet will be held at the Royal Military College on Monday, December 14. A cash bar will precede the event. Banquet tickets are available at $45 each.

Vegetarian meals are available upon advance request. Please indicate preference on your meeting registration form. Ticket prices include wine, taxes and gratuities.

Coffee Breaks: Coffee and juice will be available.

8 Exhibits

Exhibits: Exhibits will be open during specified hours in the Holidome area of the Holiday Inn. The CMS exhibit will be open throughout the course of the meeting.

Joint Exhibit: This exhibit features books and other products from publishers and other companies and organizations not represented at the meeting. Order forms will be available at the exhibit for your convenience. The CMS Operations Manager will forward any orders to the corresponding company after the meeting. Books and other materials that will be displayed at this Joint Exhibit will be donated to the local university.

CMS Membership Booth and Book Display: We invite delegates to visit the CMS Membership Booth and Book Display. A representative will be available from 9:00 a.m. to 5:00 p.m. every day to answer questions about membership, future meetings, publications and other programmes.

Information table: In response to members' suggestions, this table will be set up in the registration area for information of interest to delegates. Please send a copy of your announcement to the Operations Manager, CMS, 577 King Edward, Suite 109, P.O. Box 450, Station A, Ottawa, Ontario, Canada K1N 6N5, facsimile (613) 565-1539.

All announcements require prior approval. Once approved, delegates may display up to 100 copies of the announcement. The delegate is responsible for providing all copies for display and for removing any remaining copies before 3:00 p.m. on the last day of the meeting. After that time, all remaining material will be discarded.

Announcements may not be posted in the registration or meeting area. Personal distribution of announcements is also not allowed. Announcements of events competing in time or place with the meeting programme cannot be accepted.

This table is not meant for material promoting products or services for sale. Those wishing to promote products for sale should contact the Operations Manager for information on the Joint Exhibit.

9 CMS Business Meetings

Executive Committee Meeting: The Executive Committee will meet on Friday, December 11, from 9:00 a.m. to 3:00 p.m. at the Holiday Inn Kingston Waterfront.

CMS Development Group Lunch: The CMS Development Group, consisting of the CMS Executive Committee and the Chairs of all CMS Standing Committees, will meet on Saturday, Decmeber 12, from 11:00 a.m. to 1:00 p.m. at the Holiday Inn Kingston Waterfront.

Board of Directors Meeting: The Board of Directors will meet on Saturday, December 12, from 1:30 to 6:30 p.m. at the Holiday Inn Kingston Waterfront. The Board is pleased to invite the Chairs of all CMS Standing Committees and the appointed delegates from the AMS and the MAA.

General Meeting: The General Meeting of the Society will take place on Sunday, December 13, from 5:30 to 7:00 p.m. at the Holiday Inn Kingston Waterfront. All members are invited to attend.

Agendas and Meeting Material: Agendas and accompanying material for the General Meeting will be mailed three weeks before the meeting, that is **November 23**.

Notices of Motion: In accordance with CMS policy, notices of motion must be received at the Executive Office **at least eight weeks** before the meeting at which the notice of motion is to be considered.

Notices of motion must be duly signed by the mover and seconder, who must be members in good standing of the Society. In order to be considered at the General Meeting, such notices are to be sent to the Secretary, Canadian Mathematical Society, Executive Office, 577 King Edward, Suite 109, P.O. Box 450, Station A, Ottawa, Ontario, Canada K1N 6N5, facsimile: 613-565-1539, so as to arrive no later than 5:00 p.m., **October 19**.

Committee Meetings: Most standing and ad-hoc committees will hold meetings. CMS Members are encouraged to contact committee Chairs regarding any item for inclusion in committee agendas. Room assignments for all CMS committee meetings are in the hands of the Operations Manager in Ottawa.

Luncheon Meeting of the Department Heads: At the invitation of the Chair of the Department of Mathematics and Statistics, Queen's University, a luncheon meeting of the department chairs will be held on Monday, December 14, from 11:30 am to 1:30 pm at Clark's on King. Further details will be provided when available.

10 Registration

Payment Method: 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.

A preregistration form is included in this issue of the *CMS Notes* and is also available by contacting the CMS Executive Office, 577 King Edward, Suite 109, PO Box 450, Station A, Ottawa, Ontario CANADA K1N 6N5, Tel: 613-562-5702, FAX: 613-565-1539, Email: meetings@cms.math.ca. **Electronic preregistration** is available on our Camel site at
http://camel.math.ca/CMS/Events/winter98/#forms.
This site also has the latest information on the meetings.

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

All fees include a free meeting lunch ticket	Before Nov 15	After Nov 15
CMS/AMS/MAA members with grants	$260	$340
CMS/AMS/MAA members without grants	130	170
Non-members with grants	390	505
Non-members without grants	195	255
One-day fee	130	170
Teachers, postdocs, retired, unemployed	95	125
Students	25	25
Monday night Banquet	45	45

Plenary Speakers, Prize Lecturers and Invited Special Session Speakers for the scientific and education programme: These speakers should register using the special Registration Form for Speakers available from the Chair of the Scientific Programme Committee or from session organizers.

Confirmation of Registration: Those delegates preregistering before **December 1** will receive a confirmation of registration and receipt in the mail. Those preregistering after **December 1** will find their receipt in their registration packet which may be picked up at the Registration Desk on-site.

Refund Policy: Delegates wishing to cancel their registration must notify the Executive Office in writing before **December 7** to receive a refund less a $40 processing fee. Those whose contributed papers have not been accepted will upon request be refunded at 100%.

Tickets/badges/meeting programme: All tickets, badges and meeting programmes will be included in the registration packet which may be picked up at the Registration Desk at the meeting site.

On-site registration: The Registration Desk will be open on Sunday, Monday and Tuesday from 8:00 a.m. to 5:00 p.m.

11 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 the dates given below. The Howard Johnson is adjacent to the Holiday Inn. The Ramada is within 5 minutes walking distance from either of these. Reservations not in by the dates given below will be on a request only, space available basis. Rates quoted are in Canadian dollars.

Holiday Inn Kingston-Waterfront
1 Princess Street
Kingston, Ontario
CANADA K7L 1A1
Check-in: 2:00 pm, Check-out: 11:00 am
Reservation Deadline: **November 10, 1998**
Rate: $60.00 single/double occupancy
Applicable taxes: 12% (including 7% GST)
Phone: (613) 549-8400
Reservations Fax: (613) 549-2014
Toll-free reservations: 1-800 HOLIDAY
Reservations Manager: Anna-Marie de Vos

Howard Johnson Confederation Place Hotel
237 Ontario Street
Kingston, Ontario
CANADA K7L 2Z4
Check-in: 2:00 pm, Check-out: 11:00 am
Reservation Deadline: **November 13, 1998**
Rate: $55.00 single/double occupancy
Applicable taxes: 12% (including 7% GST)
Phone: (613) 549-6300
Fax: (613) 549-1508
Toll-free reservations: 1-888-825-4656

Ramada Plaza Hotel Harbourfront Kingston
1 Johnson Street
Kingston, Ontario
CANADA K7L 5H7
Check-in: 3:00 pm, Check-out: 11:00 am
Reservation Deadline: **November 14, 1998**
Rate: $79.00 single/double occupancy
Applicable taxes: 12% (including 7% GST)
Phone: (613) 549-8100
Fax: (613) 547-3241
Toll-free reservations: 1-888-548-6726
Note: The rooms have been held under the group block number 5649. Mention this number when making a reservation.

Attendees must make their own reservations by calling the above numbers or using the form included in the **September** issue of the *CMS Notes*. The conference rate is extended up to two days pre- and post- convention. Please mention that you are participating in the CMS Winter Meeting.

12 Child Care

Both the Holiday Inn Kingston-Waterfront Hotel and the Howard Johnson Confederation Place Hotel will provide complimentary cribs. Both hotels can arrange for child care, given two weeks notice. Child care at the Holiday Inn can be arranged by contacting Maria D'silva (Housekeeping Department) at (613) 549-8400, ext. 662. Child care at the Howard Johnson can be arranged by contacting the reservations office at (613) 549-6300.

13 Travel

Kingston is served by Canada's two major carriers, Air Canada and Canadian Airlines. There are direct flights to Kingston from Ottawa and Toronto - with most of the connections coming through Toronto.

There is also Via Rail service to Kingston from Montreal (either Dorval - 5 minutes by special van from Dorval Airport - or from Centre Ville, in the center of Montreal) and also from Toronto and Ottawa.

The Voyageur bus company operates several daily trips from Montreal, Toronto and Ottawa.

Kingston is also easily reached by car from either Montreal and Toronto by using Highway 401 and exiting at the Highway 15 exit (Exit 623), which brings the driver into Kingston right at the Holiday Inn and Howard Johnson.

From Ottawa one arrives using Highway 15 in the same way. Highway 15 enters the city right near the Holiday Inn and Howard Johnson (see map).

On arrival: Upon arrival at Kingston's airport, taxis are available for the 20 minutes ride from the airport to downtown where the conference hotels are located. Taxis are also available at the VIA train station and the Voyageur bus station, both located on Counter Street. The ride from these stations to downtown takes around 15 minutes.

Car Rentals: For attendees wishing to rent a car in Kingston, the following car rental agencies are located downtown:
ACE Rent-A-Car: (613) 546-2228
Discount: (613) 548-4004
Hertz: (800) 263-0600.

Car rentals at Kingston's airport are available via
National Tilden: (613) 546-1145 or (800) 227-7368.

Car rentals near the VIA/Voyageur stations are available with Budget: (613) 549-2794.

Parking: Free parking is available for attendees staying at any of the conference hotels: the Holiday Inn, the Howard Johnson, and the Ramada Plaza.

14 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.

15 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 (UNBF), Malgorzata Dubiel (SFU) 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