



Canadian Mathematical Society

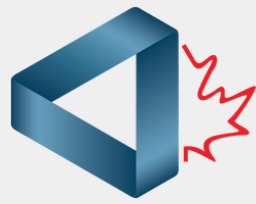
# ANNUAL REPORT

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2022

CMS.MATH.CA 

OFFICE@CMS.MATH.CA 



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# ABOUT THE CANADIAN MATHEMATICAL SOCIETY (CMS)

*As of December 31, 2022*

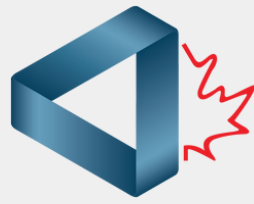
## Board of Directors

- \*David Pike (Memorial), President
- \*Javad Mashreghi (Laval), Past-President
- \*Tim Alderson (UNBSJ), VP - Atlantic
- \*Matilde Lalin (Montréal), VP - Québec
- \*Monica Nevins (Ottawa), VP Ontario
- \*Liam Watson (UBC Vancouver), VP - Pacific
- Stephen Finbow (StFX), Director - Atlantic
- Mikhail Kotchetov (Memorial), Director - Atlantic
- Christophe Hohlweg (UQAM), Director - Québec
- Damir Kinzebulatov (Laval), Director - Québec
- Alina Stancu (Concordia), Director - Québec
- Hans Boden (McMaster), Director - Ontario
- Anthony Bonato (Toronto Metropolitan University), Director - Ontario
- Megan Dewar (Gov. of Canada), Director - Ontario
- Spiro Karigiannis (Waterloo), Director - Ontario
- Adam Clay (Manitoba), Director - West
- Joy Morris (Lethbridge), Director - West
- Sarah Plosker (Brandon), Director - West
- Ailana Fraser (UBC Vancouver), Director - West
- Gary MacGillivray (Victoria), Director - Pacific
- Nilima Nigam (Simon Fraser), Director - Pacific
- Genevieve Maalouf (McMaster), Director - Student
- William Verreault (Laval), Director - Student

## Appointed by the Board

- \*David Pike (Memorial), Chair
- \*Javad Mashreghi (Laval), Vice-Chair
- \*Termeh Kousha (CMS), Corporate Secretary
- \*David Oakden (Retired), Treasurer

\*Member of the Executive Committee



# ABOUT THE CANADIAN MATHEMATICAL SOCIETY (CMS)

*As of December 31, 2022 (Continued)*

## Committee Chairs

### Distinguished Awards Selection Committee

David Pike (Memorial)

### Education Committee

Brian Forrest (Waterloo)

### Endowment Grant Committee

Javad Mashreghi (Laval)

### Equity, Diversity and Inclusiveness Committee

Vacancy in 2022

### Finance Committee

Adam Clay (Manitoba)

### Human Rights Committee

### International Affairs Committee

Edward Bierstone (Toronto)

### Invested Funds Committee

David Saunders (Waterloo)

### Mathematical Competitions Committee

Dorothea Pronk (Dalhousie)

### Nominating Committee

Megan Dewar (Tutte Institute, Carleton University)

### Publications Committee

Patrick Ingram (York)

### Research Committee

Sara Faridi (Dalhousie)

### Student Committee

Alice Lacaze-Masmonteil (Ottawa)

## Editorial Board

### CJM/CMB Editorial Board

Editors-in-Chief CJM: Louigi Addario-Berry and Eyal Goren (McGill)

Editors-in-Chief CMB: Antonio Lei and Javad Mashreghi (Laval)

### CMS Notes Editorial Board

Editors-in-Chief: Robert Dawson (Saint Mary's) and Srinivasa Swaminathan (Dalhousie)

### Crux Mathematicorum Editorial Board

Editor-in-Chief: Kseniya Garaschuk (Fraser Valley)

### ATOM Editorial Board

Editor-in-Chief: Shawn Godin (Ottawa-Carleton D.S.B.)

### CMS Books in Mathematics Series

Editorial Board Editors-in-Chief: Karl Dilcher (Dalhousie) and Keith Taylor (Dalhousie)

## Executive Office

Termeh Kousha - **Executive Director**

Yvette Roberts - **Manager, Finance and Operations**

Steve Larocque - **Electronic Services**

Xinxin Zhao - **IT and Projects Assistant**

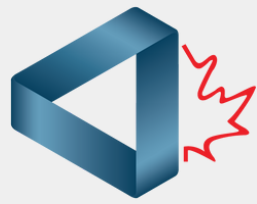
Kaileigh Robertson - **Program Assistant**

Sarah Watson - **Meeting Organizer**

Jessica Horobetz - **Communications Officer**

Levente Olvaso - **Membership and Publications Assistant**



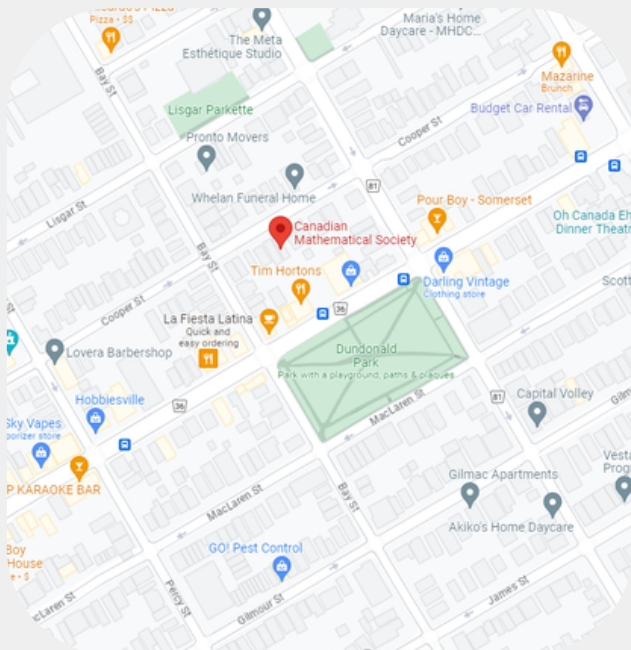


# THE HOUSE OF MATH

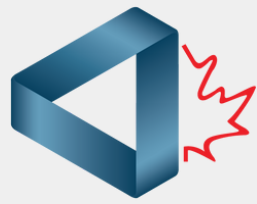
The CMS is proud to introduce...

## The New House of Math!

Located at the heart of downtown Ottawa, the house was purchased in the summer of 2022 and staff officially moved in as of September 2022. The members of the Executive Office hope to see you here!



616 Cooper Street  
Ottawa, ON  
K1R 5J2, Canada



# The President's Report

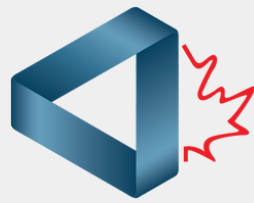
## Dr. David Pike (Memorial University)

Dear Members of the Canadian Mathematical Society,

Let me first express our collective thanks to Javad Mashreghi for all that he did for the CMS during his time as President. In June, at the close of the society's Annual General Meeting, the role of President passed from Javad to me. It has been a rewarding experience for me to learn about the many and diverse activities of the CMS, and to become better acquainted with the many people who make them possible. Our people are without any doubt our greatest strength, and on that note let me offer thanks to the many volunteers and the handful of staff members who dedicate themselves to promoting mathematics throughout Canada.

The financial stability of the society has been a key concern of mine, in part because of the concern that our revenue from subscriptions to our journals may be at risk as the publishing world transitions away from subscriptions and toward open access models. Our contract with Cambridge University Press (CUP) is due to expire at the end of 2023, so discussions and negotiations occupied a good deal of my time during 2022. I am pleased to report that a tentative agreement has been reached to continue publishing with CUP for another five years. Included in this agreement is a new journal that we hope to launch in 2024 as a venue for lengthy journal articles. The final contract is expected to be signed in mid-2023.

Another major milestone for the CMS was the successful purchase of a building to house the society's offices. After a protracted search that sometimes tried our patience, the building located at 616 Cooper Street in Ottawa came onto the real estate market in April 2022. After a small dance involving offers and counteroffers, we took possession on July 20th. Our new home is a designated heritage building in Ottawa's Centretown neighbourhood. Initially built as a residential house, it has several charming features, including some stained glass windows and a spiral stairwell from the second to the third floor. We hope that many society members will be able to visit, perhaps during the Summer 2023 CMS Meeting which will be hosted by the University of Ottawa. Instead of taking on debt, we decided to use our legacy



## The President's Report (Continued)

funds to pay for the entire cost of the house. We are hoping to replenish these funds through a fundraising campaign (I encourage everybody to donate generously).

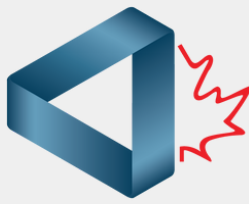
The year 2022 also marked the resumption of in-person conferences as we began to emerge from the isolation that had been necessary during the height of the COVID pandemic. In June we came together at Memorial University in St. John's, and in December we gathered in Toronto. It was a refreshing joy to be able to engage face to face, to network with one another, and to witness students give talks and interact with interested audience members. We were also able to celebrate outstanding achievements by members of our community who gave prize lectures and were lauded at our awards ceremonies. These include:

Matilde Lalin (Montréal), winner of the Krieger-Nelson Prize  
André Joyal (Québec à Montréal), winner of the Jeffery-Williams Prize  
Dan Wolczuk (Waterloo), winner of the Excellence in Teaching Award  
Andrei Bulatov (Simon Fraser), winner of the Cathleen Synge Morawetz Prize  
John Mighton (Jump Math), winner of the Adrien Pouliot Award  
Jacques Hurtubise (McGill), winner of the David Borwein Award  
Fabio Pusateri (Toronto), winner of the Coxeter-James Prize  
Qin Deng (MIT), winner of the Blair Spearman Doctoral Prize  
David Oakden (Retired), winner of the Graham Wright Award

We also inducted six people as new Fellows of the CMS:

Termeh Kousha (CMS/Ottawa)  
Matilde Lalin (Montréal)  
Anita Layton (Waterloo)  
Bojan Mohar (Simon Fraser),  
David Oakden (Retired)  
Noriko Yui (Queen's)

I have already offered thanks to the staff and volunteers without whom our society would not be able to function. It is my solemn duty to express our deep grief for the loss of Alan Kelm who passed away in September. Alan had served our society for the past three decades, providing critical support to our computing systems and information technology. As a token of recognition, we have designed one of the offices in our new building as the Alan Kelm Memorial Office.



# Awards and Prizes

## Jeffery-Williams Prize



Professor André Joyal as recipient of the 2022 CMS Jeffery-Williams Prize for his contributions to mathematical research.

André was visiting professor at Columbia University from 1982 to 1984, under the patronage of Samuel Eilenberg. He visited the Fields Institute in 2007, the CRM of Barcelona in 2008, and l'Université de Paris in 2011. He was a member of the Institute for Advanced Study in 2013 and IHES in 2014. More recently, he was a member of the Center for Advanced Study in Oslo.

André Joyal is a remarkable mathematician who has made many important contributions to mathematics across the globe. The CMS is delighted to award him with the 2022 Jeffery-Williams Prize.



## Krieger-Nelson Prize



Dr. Matilde Lalín (Université de Montréal) as the recipient of the 2022 Krieger-Nelson Prize for her outstanding contributions to research in Number Theory and related areas.

Matilde Lalín received her PhD from the University of Texas at Austin, where she was a Harrington Fellow. She was also a member at the Institute for Advanced Study, a Clay Liffoff Fellow, a PIMS postdoctoral fellow at the University of British

Columbia and an Assistant Professor at the University of Alberta. Matilde is currently a professor at the Université de Montréal and a member of the Centre de recherches mathématiques (CRM).

Matilde Lalín is an indispensable member of the mathematical community who has authored and coauthored over 100 articles, and given more than 130 invited lectures worldwide. The CMS is proud to award her the 2022 Krieger-Nelson Prize.





## Awards and Prizes

### Coxeter–James Prize



Dr. Fabio Pusateri (University of Toronto) is the recipient of the 2022 Coxeter–James Prize for his seminal work in Analysis and Partial Differential Equations. Dr. Pusateri will receive his award at the CMS Winter Meeting in December 2022, where he will give a prize lecture.

Dr. Pusateri is an Assistant Professor at the University of Toronto. He has published several articles on fluid dynamics and the motion of water waves. Fabio is also interested in the development of multilinear harmonic analysis using the Fourier transform adapted to Schrodinger operators, with applications to the stability of special solutions (such as soliton and kinks) for nonlinear PDEs, and has published work on the topic. Currently, Dr. Pusateri is working on the subject of periodic waves in the context of wave turbulence. Fabio continuously makes valuable contributions to mathematics, and the CMS is delighted to present him with the 2022 Coxeter–James Prize.



### CMS Blair Spearman Doctoral Prize



Dr. Qin Deng (Massachusetts Institute of Technology) has been named the 2022 CMS Blair Spearman Doctoral Prize recipient.

Deng received his PhD from the University of Toronto in 2021 under the supervision of Vitali Kapovitch. The recipient of several awards such as the Ida Bulat Teaching Award, Malcolm Slingsby Robertson Prize, George F.D. Duff Graduate Fellowship, and an NSERC Alexander Graham Bell Canada Graduate Scholarship, Deng is now a C.L.E. Moore Instructor at the Massachusetts Institute of Technology.

Qin Deng is an outstanding researcher working in metric and Riemannian geometry as well as geometric analysis. Deng's thesis contains a solution to a long-standing open problem in the theory of manifolds with lower Ricci curvature bounds and RCD spaces.



## Awards and Prizes

### Adrien Pouliot Award



Dr. John Mighton (JUMP Math) is the recipient of the 2022 Adrien Pouliot Award in recognition of his outstanding contributions to mathematics education.

Dr. John Mighton is an award-winning mathematician, playwright and best-selling author, who founded JUMP Math as a charity in 2002. He is internationally recognized for his groundbreaking work building children's confidence, skills, and success in math.

Through John's leadership and innovation, JUMP Math has grown into an award-winning charitable organization dedicated to enhancing every child's learning and life potential and addressing academic and social inequities through math education. Dr. John Mighton's exceptional contributions to mathematics education make him a most deserving recipient of the 2022 Adrien Pouliot Award.



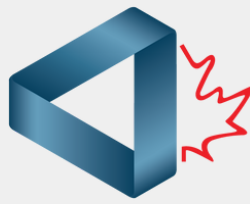
### Excellence in Teaching Award



Professor Dan Wolczuk (University of Waterloo) as the 2022 recipient of the CMS Excellence in Teaching Award.

Professor Wolczuk obtained his BSc in Mathematics from UNBC in 2001. He completed his MMath in Pure Mathematics from UWaterloo in 2004, where he has worked as a lecturer in the Faculty of Mathematics since.

Although he is a mathematician, his work is interdisciplinary. Dan has collaborated on various projects with members of the University of Waterloo's Faculty of Science, Department of Psychology, Student Success Office, and Centre for Teaching Excellence. He has co-authored a linear algebra textbook with Pearson Publishing (which is now in its third edition).



## Awards and Prizes

### Fellows of the CMS

The Canadian Mathematical Society's 2022 Class of Fellows consists of 6 members from the Canadian mathematical community.

The Fellowship recognises CMS members who have made excellent contributions to mathematical research, teaching, or exposition; as well as having distinguished themselves in service to Canada's mathematical community.

Induction to the 2022 Class of Fellows was based upon nominations, reception of the David Borwein Distinguished Career Award or the Graham Wright Award for Distinguished Service, or reception of any other CMS prize or award for outstanding contributions for research, education, exposition and service to the Society and having served the CMS as a Vice-President, a standing committee chair or Editor-in-Chief of the CMS' Canadian Mathematical Bulletin or Canadian Journal of Mathematics.

The CMS 2022 Class of Fellows:

**Termeh Kousha (CMS/Ottawa)**

**Matilde Lalín (Montréal)**

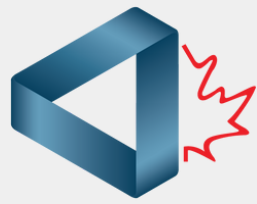
**Anita Layton (Waterloo)**

**Bojan Mohar (Simon Fraser)**

**David Oakden (Retired)**

**Noriko Yui (Queen's)**

*Congratulations!*



# Math Camps

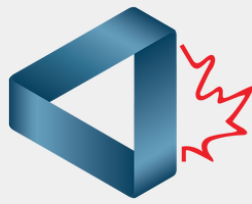


Since its inception in 2000, the CMS Math Camps program has captured the spirit of mathematics from coast to coast and to inspired young minds across the country. The program offers a unique opportunity for young Canadian students to explore a side of mathematics that is not accessible in a traditional classroom setting. Although the CMS gives local organizers the freedom to choose the topics and activities of their camps, the main goal of a typical camp is to engage students in an authentic learning environment in mathematics and its broad applications to Science, Technology and Engineering. This is achieved through stimulating presentations, hands-on activities, building projects and competitions. Students who attend the camps leave with new friends who share the same passion for the subject, new ideas to explore, and a fresh outlook on mathematics and the role it plays in our lives.

Many 2022 camps were cancelled or held virtually due to the COVID-19 pandemic. There were several successful virtual camps offered again this year. The number of camps offered in 2022 increased from 2021, with the CMS offering 9 Regional Camps, 1 National Camp, and 8 Specialty Camps. Due to the virtual nature of some of the camps and limited reporting capabilities, the current report will be quite brief.

There are already 13 Regional Camps, 1 National Camp, and 3 Specialty Camps confirmed for 2023.





# Meetings

## 2022 CMS Summer Meeting



Over 375 mathematicians attended the 2022 CMS Summer Meeting from June 3–6 at the Memorial University of Newfoundland in St. John's. This was the first meeting that CMS has hosted in person since the COVID-19 pandemic. Participants attended over 30 scientific sessions; two plenary lectures; three prize lectures and one public lecture over the course of the meeting. The plenary lecturers were Jacob Tsimerman (University of Toronto), and Miroslav Lovric (McMaster) giving the education plenary lecture. The plenary lecture by Natalia Komarova was done virtually and posted on the website.

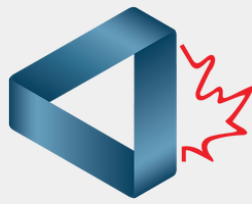
There were five three-hour mini-courses offered on Friday, June 3 including Geometry of Black Hole Mergers, Introduction to Arithmetics in Function Fields, Modes of Motion by Coronavirus, Introduction to non-Archimedean Analysis, and High-Dimensional Approximation: from sparse polynomials to deep learning.

On Friday evening, CMS hosted a Public Lecture featuring Elisabeth Werner (Case Western Reserve University) who gave a talk entitled *Floating Bodies and Ulam's Problem*.

The CMS Student Committee (STUDC) hosted a student social on Friday evening giving students a chance to network at *The Landing* in St. John's.

On Saturday morning, the conference officially began with scientific sessions, followed by a prize lecture by Dan Wolczuk, and Matilde Lalin. Over lunch CMS hosted an Equity, Diversity, and Inclusiveness Luncheon entitled *Overcoming Fear of Failure in Mathematics*.

On Sunday morning, the conference continued with scientific sessions, followed by a plenary lecture by Jacob Tsimerman, and the CMS AGM over lunch. After the AGM, CMS quickly transitioned to the AMS/CMS town hall meeting.



## 2022 CMS Summer Meeting (Continued)



*AMS President, Catherine Roberts, CMS Presidents Javad Mashreghi, David Pike, and CMS Executive Director, Termeh Kousha*

On Sunday evening, the CMS Awards Banquet was held at the Sheraton Hotel Newfoundland highlighting exceptional performance in the area of mathematics research and education. Winners include Matilde Lalin (Montreal), Andr  Joyal (UQAM), Dan Wolczuk (Waterloo), and Andrei Bulatov (Simon Fraser).

The CMS would like to thank the amazing scientific directors, Marco Merkli and Chunhua Ou from Memorial University.

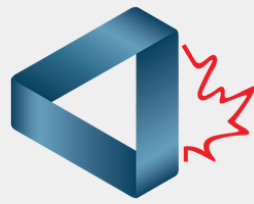
During the 2022 Summer Meeting attendees were finally able to network in person with peers in the mathematical community.

## 2022 CMS Winter Meeting



Over 550 mathematicians attended the 2022 CMS Winter Meeting from December 6-9 at the Chelsea Hotel, Toronto. This was the second meeting that CMS has hosted in person after the COVID-19 pandemic. Participants attended over 30 scientific and education sessions; three plenary lectures; three prize lectures and one public lecture during the meeting. The plenary lecturers were Dr. Gigliola Staffilani (MIT), Dr. Peter Shor (MIT), and Dr. Fok-Shuen Leung (University of British Columbia) giving the education plenary lecture. The plenary lecture by Natalia Komarova was done virtually and posted on the website.

There were seven three-hour mini-courses offered on Friday, December 6 including Introduction to Topological Data Analysis, Pursuit-Evasion Games on Graphs, Sphere Packing, and Semidefinite Programming, Instructional Skills for New



## 2022 CMS Winter Meeting (Continued)

Instructors, Introduction to Discrete Quantum Walks, Machine Learning from the Perspective of Data Science, and Multiplication Kernels.

On Friday evening, CMS hosted a Public Lecture featuring Dr. Suzanne L. Weekes (Society for Industrial and Applied Mathematics) who gave a talk entitled *On the SIAM Convening on Climate Science, Clean Energy, and Sustainability*

On Saturday morning, the conference officially began with scientific sessions, followed by a plenary lecture by Gigliola Staffilani. Over lunch, CMS hosted an Equity, Diversity, and Inclusiveness Luncheon with a talk by Dr. Anita Layton (Waterloo). After lunch attendees were delighted with an education prize lecture by John Mighton, founder of *Jump Math*.

The CMS Student Committee (STUDC) hosted a student social on Saturday evening giving students a chance to network. The venue was Twilight Cafe, a board game cafe steps away from the Chelsea Hotel.

On Sunday morning, the conference continued with scientific sessions, followed by a plenary lecture by Peter Shor (MIT) and the David Borwein Prize Lecture given by 2022 winner, Jacque Hurtubise (McGill).

Sunday evening was capped off with a tasteful awards banquet to celebrate excellence in mathematics by awarding the David Borwein Prize, Adrien Pouliot Prize, Coxeter James Prize, Doctoral Prize, and the G de B Robinson Award.





# Committee Reports

## Education Committee

### **Chair: Brian Forrest (Waterloo)**

With a return to in-person classes and in-person meetings the activities overseen by the Education Committee are thankfully returning to more of a pre-pandemic normal. In particular, there was a strong contingent of education-related sessions at this years Summer and Winter Meetings.

Here are some of the key developments relating to the Education Committee over the last year:

#### Education Committee Meetings Subcommittee

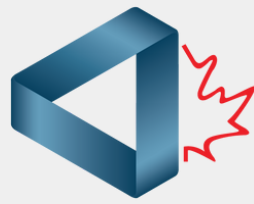
This year the Education Committee's terms of reference were amended to establish a new subcommittee empowered to oversee all aspects relating to the education component of the Society's meetings. One of the core missions of this subcommittee is to explore the possibility of a virtual education- focused meeting to be held either in conjunction with, or independently from the existing in-person meetings. One of the key motivations for considering a virtual meeting is to expand participation in the Society's education-related activities. Our experience during Covid has demonstrated a potential for a dedicated virtual meeting to attract individuals who might otherwise find it difficult to travel to in-person meetings.

This subcommittee will be chaired by Dr. Andrijana (Andie) Burazin of the University of Toronto, Mississauga.

#### Awards

The Excellence in Teaching Award recognizes sustained and distinguished contributions to the teaching of undergraduate mathematics in Canada. This year the Selection Committee, chaired by Professor Peter Taylor, selected Dan Wolczuck of the University of Waterloo. As one of his colleagues wrote of Dan "It is without a doubt that the dedication and commitment to mathematics education that Dan has exhibited over the years is a stalwart example of an exceptional ambassador of mathematics."





## Committee Reports

### Education Committee (Continued)

Given that the number of truly outstanding nominees for the Excellence in Teaching Award has expanded markedly in the last few years, there was a strong sense from the Selection Committee that a second teaching-focused award might be merited. Professor Yvan Saint-Aubin has agreed to chair an ad-hoc committee to explore this issue further.

The Adrien Pouliot Award recognizes individuals or teams of individuals who have made significant and sustained contributions to Canadian mathematics education. This year the very deserving recipient was Dr. John Mighton. Dr. Mighton is an award-winning mathematician, playwright and best-selling author, who founded JUMP Math as a charity in 2002. He is internationally recognized for his ground-breaking work building children's confidence, skills, and success in math.





## Committee Reports

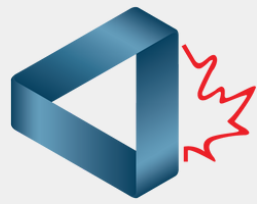
### Equity, Diversity and Inclusiveness

#### **Chair: Kseniya Garaschuk (Fraser Valley)**

The members of the EDI committee come from diverse backgrounds and hold varying positions, ranging from students to full professors. Their mathematical interests range, they reside in different regions of Canada and have diverse experience in teaching, research, and service across many institutions. During 2022, EDI committee membership was in flux with the departure of Habiba Kadiri as the chair and several position vacancies that remained open until 2023. We thank Habiba Kadiri for her important work on spearheading several of the committee's projects. We also are grateful to David Pike for his commitment in overseeing the committee work during this time and hence ensuring the continuations of ongoing initiatives.

This year too, the Committee continued to have discussions on what demographic information is available about CMS meeting participants and what information we would like to have. This discussion resulted in a MOSAIC piece by Habiba Kadiri "[About the necessity of collecting data to improve EDI in mathematics.](#)" The column examines some available statistics about CMS meetings and they are not very encouraging. For example overall 30–49% of conference participants are women, but in individual scientific sessions fewer than 30% are female speakers. In the statistics for awards, the situation is even more concerning: out of the 10 awards distributed by the CMS, 4 awards have had 0 female recipients since 2012.

The Equity, Diversity, and Inclusiveness Committee also organized a Special Topics Luncheon on Overcoming Fear of Failure in Mathematics during the CMS Summer Meeting in 2022. During the luncheon, a panel comprised of diverse mathematicians across Canada discussed various aspects of the fear of failure and answered audience questions. The lunch was well attended with over 100 attendees.



## Committee Reports

### Finance Committee

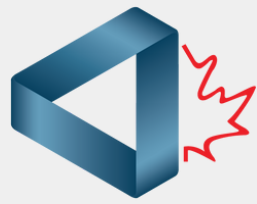
#### **Chair: Adam Clay (Manitoba)**

The finance committee met twice in 2022, once in April and once in October. Most significantly, over the last year The Society achieved its goal of finding a permanent home, having taken possession of 616 Cooper St. in Ottawa as of July 20, 2022 for a final price of 1.1 million. The Society now operates out of the new "Canadian House of Mathematics" at this address, a move which will significantly strengthen our long-term financial position.

Alongside this, the financial climate of 2022 led to our investment portfolio to suffer unsurprising losses, though things have already turned around and are significantly better in Q1 of 2023. However thanks to publication revenues, grants and other significant revenue streams, The Society had a healthy surplus at the end of 2022.

Of continuing concern is the anticipated steady decline in publication revenues over the long term; though there is an ongoing effort to offset this decline through new revenue streams and increased engagement and outreach. As examples of this effort, The Society is actively experimenting with new meeting formats (for example, an online-only education session at the Winter 2023 meeting), and new outreach and student-centred initiatives (such as summer day camps) which we expect to increase The Society's impact and engagement within the Canadian mathematical community.

As such, The Society stands in a healthy financial position at the end of 2022, with a positive outlook for the coming year.



## Committee Reports

### International Affairs Committee

#### **Chair: Edward Bierstone (Toronto)**

The IAC is Canada's National Committee representing our Adhering Organization to the IMU. The National Research Council is the Adhering Organization, and the IAC is its vehicle for communication between the IMU and mathematics community.

The IMU organizes the quadrennial ICM, and promotes international cooperation in mathematics, in large part through the work of its Commissions and Committees, including the Commissions on Mathematical Education, Developing Countries and the History of Mathematics, and the Committees on Electronic Information, Women in Mathematics, and the newly formed Ad Hoc Committee on Diversity.

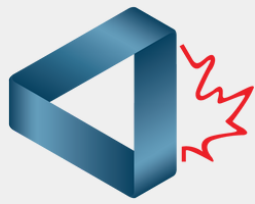
ICM 2022 was scheduled to take place in St. Petersburg in July. Its organization over the last couple of years already presented great challenges to the IMU because of the global pandemic, and it was completely upended by Russia's war on Ukraine.

The IMU decided almost immediately after the invasion of Ukraine in February to cancel the ICM in St. Petersburg, and establish a completely virtual format for ICM 2022. It also decided that the IMU General Assembly, which normally precedes the IMU, would be held live at the beginning of July in Helsinki.

Canada has 5 delegates to the GA as a Group 5 IMU member. Our delegation this year was selected by the IAC. The members were Edward Bierstone, Henri Darmon, Deirdre Haskell, Javad Mashreghi, and Sujatha Ramdorai. Bierstone, Darmon and Haskell attended the GA in Helsinki.

The important decisions of the GA included the awarding of ICM 2026 to Philadelphia, with the GA to take place in New York beforehand, and also the creation of an IMU Reserve Fund, financed by donations from IMU members and third-party organizations, to help cover membership dues of countries that are in temporary financial difficulties.





## Committee Reports

### International Affairs Committee (Continued)

Following are the Canadian mathematical scientists who served in official organisms of the IMU in 2022:

**Christiane Rousseau** (Université de Montréal), Chair of the International Day of Mathematics Governing Board;

**Alejandro Adem** (UBC), member of the Committee for Women in Mathematics;

**Matilde Lalín** (Université de Montréal) has joined the Committee as a new member; Stephen Watt (Waterloo), member of the Ad Hoc Committee for Permissions;

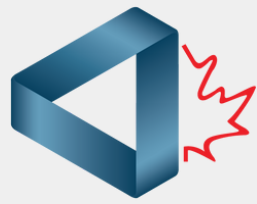
**Caroline Lajoie** (UQAM), member of the International Commission on Mathematical Instruction;

**Craig Fraser** (University of Toronto), ex-officio member as Past Chair of the International Commission on the History of Mathematics;

**John L. Berggren** (SFU), member of ICHM.

All members of the CMS and the mathematics community are encouraged to become involved in the activities of the IMU





## Committee Reports

### Invested Funds Committee

#### **Chair: David Saunders (Waterloo)**

The IFC Committee met on April 22 and October 14, and October 18, 2022. Representatives from TD attended the October 14 meeting to discuss the performance of the investment portfolio.

Owing to general economic conditions and market volatility, the portfolio has suffered losses. At December 31, 2022 (the most recent date for which TD had a full report), the return over the past calendar year being  $-7.69\%$ . Returns were significantly negative in all risky sectors, with our investments tracking those of the market benchmarks. In particular returns on the Canadian Index Bond Fund were  $-11.69\%$ , for the Canadian Equity Index Fund returns were  $-5.82\%$ , and for the global equity index fund returns were  $-12.17\%$ . The returns on money market investments (a short-term Canadian investment fund) were slightly positive ( $1.78\%$ ), as expected. The current weights in the investment portfolio are approximately 25% in Canadian Bonds, 25% in Canadian Equities, 35% in global equities, and 15% in money market instruments (a short-term Canadian investment fund). These weights were adopted in the meeting of October 18. We note that this allocation is also more in line with standard allocations for portfolios of this type, as we have been over-weighted in our position in cash and equivalents in recent years. (The previous portfolio weights were 30% in Canadian Bonds, 15% in Canadian Equities, 30% in global equities, and 25% in money market instruments).





## Committee Reports

### Mathematical Competitions Committee

#### Chair: Dorette Pronk (Dalhousie)

The Mathematical Competitions Committee (MCC) oversees the Society's involvement in mathematics contests. The Society currently sponsors and runs four competitions: the Canadian Open Mathematics Challenge (COMC), the Canadian Mathematical Olympiad (CMO), the Canadian Junior Mathematical Olympiad (CJMO) and the Canada Jay Mathematical Competition (CJMC). The MCC is also responsible for Canada's participation in the Asian Pacific Mathematics Olympiad (APMO), the European Girls Math Olympiad (EGMO), the Pan-American Girls Math Olympiad (PAGMO) and the International Mathematical Olympiad (IMO) with the related training camps and oversees the CMS National Math Camp. Most of the work of the MCC is done by its four subcommittees (the COMC, CMO, EGMO and IMO Committees). Further information, including press releases, on most of the items in this report can be found through the CMS Competitions web pages [here](#) and [here](#). The MCC and (especially) its subcommittees have been very active this year, with a large number of deadlines throughout the calendar.

#### The European Girls' Mathematical Olympiad



The 11th European Girls Math Olympiad was held in a hybrid format in Eger, Hungary April 6-12, 2022. The Canadian team participated remotely for the third consecutive year due to the COVID-19 pandemic. The competition lasted 2 days, with 4.5 hours to work on three problems each day, just as at the IMO. Each country participates with a team of up to four students. This was Canada's fifth year participating in EGMO.



## Committee Reports

### Mathematical Competitions Committee (Continued)

The students on the team were:

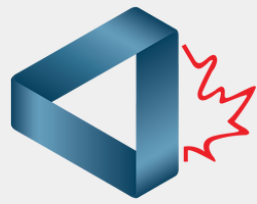
Jiaqi Tang (Pierre Elliott Trudeau High School, Toronto, Ontario) : Silver Medalist  
Yifan (Emma) Tang (University of Toronto Schools, Toronto, Ontario) : Bronze Medalist  
Kathryn Dou (University of Toronto Schools, Toronto, Ontario) : Silver Medalist  
Miranda Zhao (Marc Garneau C.I., Toronto, Ontario) : Silver Medalist

The leader was Dr. Mariya Sardarli from the University of Chicago and the deputy leader was Elnaz Hessami Pilehrood from the University of Toronto; the observer with the deputy leader was Diana Castañeda Santos. All of our leaders this year are Olympiad alumni: Mariya participated in the 2011 IMO where she won a bronze medal, Elnaz participated in the 2018 EGMO where she won a silver medal. We are extremely grateful to our principal sponsor, the Faculty of Mathematics at the University of Waterloo, for financially supporting our training program and participation in the contest. The team members trained with potential IMO students at the winter training camp, early in January, and the second round of training was provided over several weekends leading up to the EGMO contest dates.

The Canadian team placed 11th (joint with Poland) out of 57 countries. The top three countries were USA, Peru, and Australia in that order. EGMO Math team Canada was awarded with three Silver Medals, and one Bronze Medal.

#### **The Canadian Mathematical Olympiad**

Nearly 90 Canadian students from close to 50 different schools wrote the 54th Canadian Mathematical Olympiad (CMO) on March 9, 2022, partly in the presence of tutors and proctors and partly online via Crowdmark. Most were invited on the basis of their performance in the most recent Canadian Open Mathematics Challenge or the CMO Qualifying Repêchage (a set of 8 problems posted online in the first half of February). Invited participants had just one week to submit solutions.



## Committee Reports

### Mathematical Competitions Committee (Continued)

The Repêchage was assembled by a group of volunteer experts, chaired by Lino Demasi, who was helped with the grading by Shawn Godin, Graeme Kemkes, and Mark Saaltink. A small number of additional invitations were made, in particular to winners of the Concours de l'Association mathématique du Québec and the Alberta High School Mathematics Competition. In addition, 9 students wrote the CMO as unofficial participants, through a special agreement with ASDAN and the Thai-Canadian Alumni Association that gives Chinese and Thai students the opportunity to attempt the CMO. Thanks are due to the members of the CMO Committee, who created and fine-tuned the problems, and graded the exams. The Matthew Brennan Award for the Best Solution to a CMO problem was awarded to Marvin Mao of Bergen County Academies (Hackensack, NJ, USA) for his solution to problem 3.

The top score this year was 35/35, the median score was 8/35. The following students received prizes:

Gold: Zixiang Zhou (London Central Secondary School, London, ON)

Silver: Warren Bei (Homeschool, Vancouver, BC)

Bronze: Alec Le Helloco (Lycée Blaise Pascal, Orsay, France)

Honourable Mentions:

Kaixin Wang (Magee Secondary, Vancouver, BC)

Evan Lu (Vincent Massey Secondary, Windsor, ON)

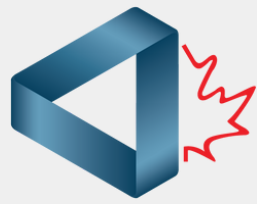
Kevin Min (Cupertino High, Cupertino, CA, USA)

Cordelia Hu (Farragut High, Knoxville, TN, USA)

Jason Zhang (Canton High, Canton, MI, USA)

A full report of the 2022 CMO, including the question paper, solutions and analysis of the marking can be found on the [CMO page](#).

The Society is indebted to its sponsors and partners for the success of the CMO.



## Committee Reports

### Mathematical Competitions Committee (Continued)

#### The Canadian Junior Mathematical Olympiad

This was our third year to hold the Canadian Junior Mathematical Olympiad for top-scoring students in grade 10 or below who do not qualify for the CMO. The contest is written at the same time and date as the CMO. This year twenty-one students wrote the contest. The 2022 CJMO Champions are:

##### Gold

Christopher Li (William Berczy Public School, Markham, ON)

##### Honourable Mentions:

Joshua Wang (Brookfield Central High, Brookfield, USA)

Daniel Ye (William Lyon Mackenzie CI, Toronto, ON)

Emily Ma (Mark Garneau CI, Toronto, ON)

Carol Wu (Port Moody Secondary, Port Moody, BC)

Silver and Bronze were not awarded this year.

Further details regarding the CJMO are available through the [CMO page](#).

#### The Asian Pacific Mathematics Olympiad (APMO)

The 34th Asian Pacific Mathematics Olympiad (APMO) was written on Monday March 14th, 2022 in North and South America, and on Tuesday March 15th, 2022 in the Western Pacific and Asia, with Canada serving as the coordinating country. Of the thirty Canadian students who wrote the four-hour competition with five problems, ten were Canada's official participants.

The 2022 APMO Champions are:

Gold: Warren Bei

Silver: Kaixin Wang and Andrew Wen

Bronze: Zixiang Zhou, Ming Yang, Kevin Min, and James Yang

Honourable Mentions: Evan Lu, Marvin Mao, and Xuezhi Wang

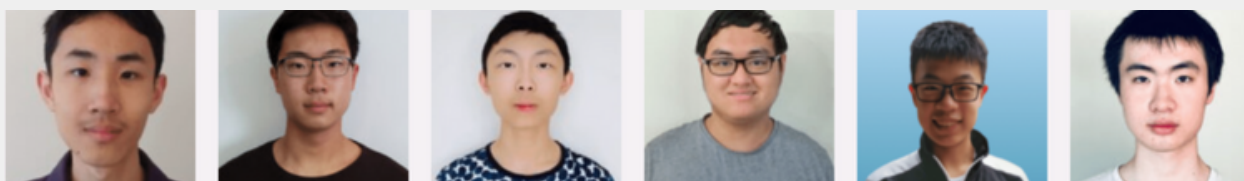


## Committee Reports

### Mathematical Competitions Committee (Continued)

Canada ranked 8th among 35 participating countries. Further details regarding the APMO are available [here](#).

### International Mathematical Olympiad (IMO)



The 63rd International Mathematical Olympiad (IMO) was held in Oslo, Norway, and was the first in-person IMO in three years due to the pandemic. The Team Leader was Caleb Ji of Columbia University, and the Deputy Leader was Alex Song of Citadel LLC. The six high school students on the Canadian team were:

#### Gold

Zixiang (Peter) Zhou, London Central Secondary School, London, ON  
Warren Bei, Vancouver Learning Network, Vancouver, BC

#### Silver

Kaixin Wang, Magee Secondary School, Vancouver, BC  
Kevin Min, Cupertino High School, CA, USA

#### Bronze

James Yang, Iroquois Ridge High School, Oakville, ON

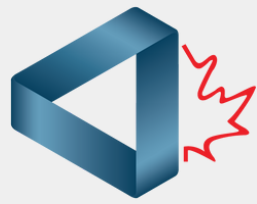
#### Honourable Mention

Evan Lu, Vincent Massey Secondary School, Windsor, ON

The IMO winter training camp was held online from January 2th to 6th 2022. It was attended by 17 students from across Canada and abroad. Trainers at the camp included Alex Song, Thomas Guo, Howard Halim, Edgar Wang, Eric Shen, Dani Spivak, and Caleb Ji.

The Canadian team placed 14th out of 104 countries. The top three countries were China, South Korea, and the USA in that order. Math Team Canada was awarded with one gold, two silver, one bronze, and one honourable mention. The team trained this year virtually, both for the win training camp, and throughout the summer. The CMS's Media Release on the 2022 IMO can be found [here](#).





## Committee Reports

### Mathematical Competitions Committee (Continued)

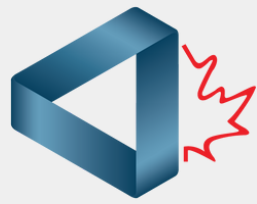
#### The Canada Jay Mathematical Competition (CJMC)

This was our third year of running the CJMC. This contest is based on Canadian math curriculum from grades 5 to 8 and is open to students in grades K-8. A total of 2,800 students wrote the contest on November 18 and 19, 2022. Due to the pandemic situation, the Canada Jay was offered, for the second year in a row, in two formats: paper and online. The contest was popular both in Canada and abroad and we used this to form new partnerships with international organizations in over ten countries to offer the contest to more students.

The overall median score this year was 45/80 with a top quartile score of 60/80. 84 students obtained perfect scores this year, this includes one student in grade 4 and three students in grade 5. The grade-specific medians in the Canadian division were: grade 4 or lower: 33 grade 5: 31 grade 6: 36.5 grade 7: 44 grade 8: 47. Thanks to the financial support of the Actuarial Foundation of Canada and the RBC Future Launch program, the Canadian Mathematical Society could offer free registration to Black and Indigenous students as well as to a number of female-identifying students. Further information can be found on the [CMS website](#).







## Committee Reports

### Mathematical Competitions Committee (Continued)

#### The Canadian Open Mathematics Challenge

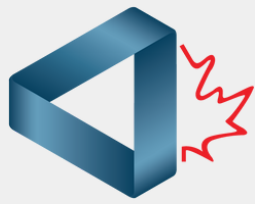


The 26th writing of the COMC, the fourth sponsored by the Casualty Actuarial Society and the Society of Actuaries, took place on October 28, 2022. The contest was again supported by a partnership of universities from across Canada. We are very grateful for the efforts of the CMS office staff to set in place the possibility of on-line administration of the contest to respond to the pandemic threat.

For the second year in a row the contest was offered in both paper and electronic format. For the 2022 COMC, in partnership with the Award Scheme Development and Accreditation Network (ASDAN – Beijing), more than 700 high school students in China registered to write the competition.

The CMS extends a special note of thanks and appreciation to all the volunteers, at several locations across the country, who helped to mark the competition papers. This was our fifth year working with Crowdmark. The competition questions were developed by the 2022 Problem Committee which consisted of Margo Kondratieva (chair), Lino Demasi, Adrian Tang, Shawn Godin, Yuliya Nesterova, Alex Song. We thank them for all their hard work and welcome the new members to the committee.

The COMC has several purposes. First and foremost, it aims to encourage students in their exploration of mathematics and problem solving. Second, the COMC provides an enrichment activity for teachers to use with their students during the fall term. Third, the COMC is used by the CMS to identify students who will write the Canadian Mathematical Olympiad



## Committee Reports

### Mathematical Competitions Committee (Continued)

and who will attend, among other events, the Winter Training Seminar and the Canada Math Camp. It is also used in the team selection for Canada's EGMO team.

The 2022 COMC had 5944 students participating (4787 in Canada and 1066 international). There were 2 perfect papers this year.

As in previous years, the top awards in the 2022 COMC were given in two categories. The first category this year is Canadian-schooled students and Canadian citizens/PR-card holders at schools outside Canada. The top competitors in this category were:

#### Gold Award

Cordelia Hu (Farragut High School, Knoxville, TN, USA)

#### Silver Award

Hongyi Huang (Olympiads School, North York, ON)  
Joshua Wang (Brookfield Central High School, USA)  
Oliver Zhang (Crescent School, Toronto, ON)

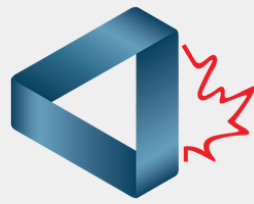
#### Bronze Award

Haozhe Yang (Walter Murray Collegiate, Saskatoon, SK)

#### Honourable Mentions

William Dai (Marc Garneau C.I., Toronto, ON)  
Andrew Wen (Phillips, Academy, Exeter, NH, USA)  
Joshua Zhang (Canton High School, Canton, MI, USA)

In addition, hundreds of awards at the provincial level and at various regional and grade levels were received, and gift certificates were given out through random draws.



## Committee Reports

### Mathematical Competitions Committee (Continued)

In the International category the top competitors were:

#### Gold Award

Kavan Doctor, Springlight Education Institute, United States.

#### Silver Award

Jason Mao, Bergen County Academy, United States.

#### Bronze Award

Alexander Wang, Bergen County Academy, United States.

#### Honourable Mentions

Lu Chang, Shanghai Stariver Biligual School, China;

Rohan Das, BASI Independent Silicon Valley, United States;

Preston Fu, Saratoga High School, United States;

Jeffrey Hu, Saratoga High School, United States; Lincoln Liu, Sha Tin College, China.

Coming up in 2023...

*Introducing...*

**THE CANADA LYNX  
MATHEMATICAL  
COMPETITION**

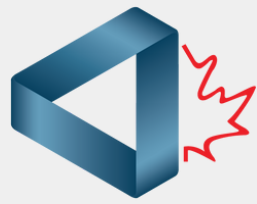
**SEPTEMBER  
28TH,  
2023**

**ATTACK  
MATH THIS  
AUTUMN!**

**#CLMC2023**

**CLMC.MATH.CA**

**CMS  
SMC**



## Committee Reports

### Nominating Committee

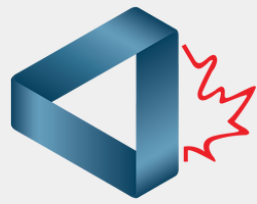
**Chair: Megan Dewar (Tutte Institute for Mathematics and Computing & Carleton University)**

The CMS Nominating Committee actively solicits and recruits individuals to volunteer with the CMS to support the society with respect to its goal of enhancing the perception and strengthening the profile of mathematics in Canada. The Nominating Committee ensures that the elections to the Executive and Board of Directors are conducted in accordance with the society's general operating by-laws and that the Executive and Board receive all necessary nominations required to fill vacancies in CMS standing committees. The Committee also periodically reviews the terms of reference for all CMS standing committees.

In 2022 the Nominating Committee established a Call of Interest methodology to fill committee vacancies. The change was motivated by a desire to establish a more transparent and open process aimed at encouraging diversity in CMS committee membership. This methodology will also allow the CMS to be more proactive in anticipating and filling committee vacancies. As a result of this year's call, sixteen (16) individual expressions were received and each was placed to fill a vacancy on a committee which they were interested in serving. Going forward, every fall the Nominating Committee will announce upcoming vacancies in order to fill positions commencing the following January. To supplement the process, the committee will continue to solicit applications and fill vacancies throughout the year as needed.

Overall, individuals supported the work of the CMS through Board membership and/or by serving on one or more of the CMS's standing committees, subcommittees or editorial boards over the course of 2022.

Looking forward to next year, the bi-annual CMS Election will take place in April 2023, with members to elect fourteen (14) officers and directors to the CMS Board of Directors and Executive Committee.



## Committee Reports

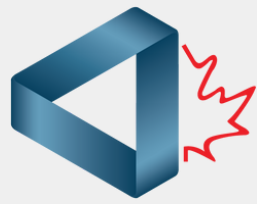
### Publication Committee

#### **Chair: Patrick Ingram (York)**

The two scientific journals of the society, the Canadian Journal of Mathematics and the Bulletin of the CMS, continue to receive a wealth of high-quality submissions. Acceptance rates are low, and many good papers are rejected, prompting the committee to increase page counts in both publications, gradually over the next three years. Correspondingly, the committee has also moved to increase the size of the share board of associate editors, with new appointments to exceed attrition over the next few years. This year the committee welcomes new (or returning) associate editors Philippe Gille, Guillaume Chapuy, Dmitry Panchenko, Dmitry Jakobson, Alex Iosevich, Michelle Delcourt, Julia Plavnik, Shawn Wang, Jingyi Chen, Robert Osburn, and Frédéric Rochon. In addition to serving the mathematical community with an increased capacity, without sacrificing standards, this shift should also prove beneficial in the foreseen change of business model under which revenue is more directly tied to publication volume. The committee also continues to move ahead with the proposed new publication, Transactions of the CMS.

The (relatively new) CMS/CAIMS Books in Mathematics series continues to be very active, with five volumes published in the first two years, and up to six more in development. CRUX continues to publish top-quality, problem-solving oriented content for undergraduate and secondary level students, with several new feature columns introduced. An increase in submission to CRUX has put some strain on resources, and started a discussion about spinning-off a separate publication. The CMS Notes continues to keep the community up-to-date on various happenings, and is in search of new research and education editors. The digitization of International Mathematics Olympiad solutions, with plans for an archive available on the society's website, continues.

Finally, the committee would like to welcome new members Alina Stancu and Daniel Panario.



## Committee Reports

### Student Committee

**Chair: Alice Lacaze-Masmonteil (Ottawa)**

#### **Canadian Undergraduate Mathematics Conference (CUMC)**

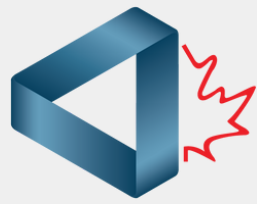
The 2022 edition of the CUMC took place at Université Laval (Québec). This marked the first in-person edition since the start of the pandemic. The conference welcomed 161 participants, 75 of which presented, and six keynote speakers.

The 2023 edition of the CUMC will be taking place at the University of Toronto on June 19–23. This will mark the 30th edition of the conference. This year, we only received one bid to host the CUMC. We intend to find new ways to call for bids next year.

The (relatively new) CMS/CAIMS Books in Mathematics series continues to be very active, with five volumes published in the first two years, and up to six more in development. CRUX continues to publish top-quality, problem-solving oriented content for undergraduate and secondary level students, with several new feature columns introduced. An increase in submission to CRUX has put some strain on resources, and started a discussion about spinning-off a separate publication. The CMS Notes continues to keep the community up-to-date on various happenings, and is in search of new research and education editors. The digitization of International Mathematics Olympiad solutions, with plans for an archive available on the society's website, continues.

#### **Student Activities at the 2022 Summer and Winter Meetings**

With the 2022 Summer Meeting being the first in-person meeting since the start of the pandemic, we had great student engagement in all of the proposed activities. In St John's, we hosted a poster session, a student research session, a student social, and a writing workshop. We received many abstracts for the student research session and had to turn away some submissions.



## Committee Reports

### Student Committee (Continued)

The 2022 Winter Meeting was also well attended by students. We organized four events: a poster session, a student research session, a student social, and a writing workshop. Since there are many universities near Toronto, we once again had strong student engagement. In total, we had 17 posters for the poster competition. We also received 14 abstracts for the student research session. For the student social, we organized a board games night at a local board game cafe that was attended by over 30 students. Unfortunately, the writing workshop was not well attended. However, this seemed to be a trend for all activities held on the Friday of the conference.

#### Funding for student activities

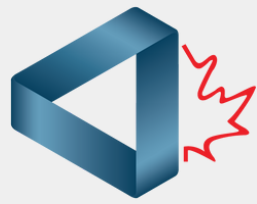
With in-person activities back, we received several funding applications. We funded the 15th Edition of the Ottawa Mathematics Conference (University of Ottawa), the Alberta Graduate Mathematics and Statistics Conference (University of Calgary), Math to Power Her Life (University of Ottawa), Truth Values (University of Ottawa), the 29th Edition of the Canadian Undergraduate Mathematics Conference (Université Laval), and Le Colloque Panquébécois de l'ISM (Université Laval).

Given that the cost of hosting events has significantly increased in 2022, it was decided at the 2022 Winter Meeting to increase the funding amounts that student organizations could apply for. Therefore, student organizations seeking funding for conferences are now invited to apply for 750\$ of funding instead of 500\$.

#### Change in Membership

In June, the student committee welcomed two new members: Courtney Allen and Alexander Clow. The committee also thanked Alex Kirillova, Sébastien Lord, and Amar Venga for their service. Lastly, William Verreault's role as chair ended and Alice Lacaze-Masmontell took over as chair of the Committee.





## Committee Reports

### Women in Math Committee Report

#### **Chair: Karen Meagher (Regina)**

Our major event of 2022 was an on-line Career Workshop. The on-line events we have organized have been affordable and effective, but we are looking forward to holding an in-person events this summer. In the future we will plan to alternate between on-line and in-person event, to try get the advantages of both. In this coming year our big goal is to build a network across Canada of Women in Math. Below is a list of our activities in 2022.

#### Career Workshop – June 1, 2022

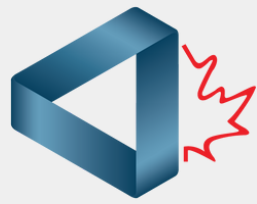
Our major event of 2022 was a day-long on-line career workshop. The website for this event is [Careers Workshop Website](#). We had two panels that each featured three women who have math degrees and interesting jobs. The first panel was Maryam Haghghi (Director, Data Science, Bank of Canada), Tara Small (Communications Security Establishment), Sarah Smellie (reporter with the Canada Press), The second panel was Kelly Boothby (D-Wave Systems, Inc.), Jane Butterfield (teaching professor at U. Vic), Malabika Pramanik (Professor at UBC and Director of BIRS). We also invited a representative from PIMS and the Fields Institute to talk about opportunities at their institutes. Heather Vooys from AERIUM Analytics gave a presentation about moving from academia to industry. We ended with Jennifer Hyndman (Professor at UBC) and Wanlin Li (post-doc at CRM) about applying for jobs and interview skills, this presentation included several interactive components.

The event was held on June 1st, at the end of the event we had a meet up in GatherTown. We had 130 people register for the event, but actual attendance was much closer to 40 people per session. We scheduled it to be an all day event to accommodate all the different time zones, so many people attended only the events held at times that worked for them.

#### Career Panel for NSERC Science Literacy Week – Sept. 22, 2022

Our committee assisted with the organization of a career panel, featuring women mathematicians, with other members of the CMS for NSERC Science Literacy Week. Our committee mostly helped





## Committee Reports

### Women in Math Committee Report (Continued)

to find panelists but also assisted with other aspects of the organization. This panel was very interesting, and some challenging topics were raised. One panelist spoke about her experience surviving an abusive relationship. This is an important topic, we need to acknowledge that when we are talking about women in math, that we are also talking about hard things like gender-based violence and sexual harassment. This panelist also said that one of the hardest parts of the experience was that her colleagues had no idea what she was living with. I felt that this was too important to be just left as a comment in the panel, so I put together an article for CMS Notes MOSAICS column giving professors basic information about gender-based violence and advice on how they can support students and colleagues in that situation. This article was difficult, it required several interviews and permission from different interested parties. This article will be in the next CMS notes.

#### EDI Event at the Winter CMS Meeting 2022

For the Winter 2022 CMS meeting, we acted as a liaison between a local women in math group and the CMS, to support the group's organizing an EDI event at the meeting. This is the sort of role our committee would like to have in the future, specifically, supporting local groups in organizing events, rather than organizing events ourselves. Our plan is to build up a network of Women in Math groups across Canada and then help them in organizing events at the CMS when the conference is held in their communities. This will ensure that there is a diversity of EDI related activities at CMS meetings.

#### Mentoring Event at the Summer CMS Meeting 2023

We are planning on hosting a mentoring lunch at the summer CMS meeting. We are just in the earlier planning stages, but our plan is to match more senior mathematicians with younger ones and to have a conversation around mentoring. This will be a first stage in helping younger mathematicians to build networks, this is particularly important since over the last three years it has been difficult to make connections.



## Committee Reports

### Women in Math Committee Report (Continued)

#### Committee Nomination Process – Fall 2022

We worked with the nominating committee to re-think how we find new members for committees. We have helped to develop a new process to find new members that respects EDI principles. We applied this new method when we added new members to our committee and we have also put together a MOSAICS article about this change. This article was meant to be published in the fall with the annual recruitment of new committee member, but should be published fall 2023.

#### Building a Network of Women in Math Groups

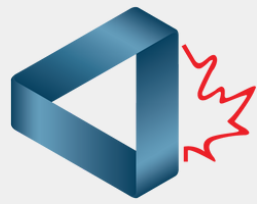
We have recently created an on-line survey to collect information about the different Women in Math groups across the country. We are currently in the process of promoting this survey (we have sent it to the CMS's math department heads email list) and have received some responses. We will distribute this survey more widely, depending on the responses we get. Our plan is to have an on-line summit this summer, where representatives of these groups can meet and connect. This is a project that we are doing with Emily Korfanty, who is a graduate student at the University of Alberta who currently has a formal teaching assistantship where her task is to promote women in math.

#### Mailing List

At our Career Workshop we collected emails from participants and we are building an updated email list. Over the last year we have been sending out regular emails promoting events or announcing opportunities. Our plan is to build this mailing list and use it for regular communications. This is a first step in building a network of women mathematicians.

#### New Committee Members

We welcomed two new members to the committee; Hermie Monterde, a PhD student at the University of Manitoba, and Fahimeh Bayeh, a PhD student



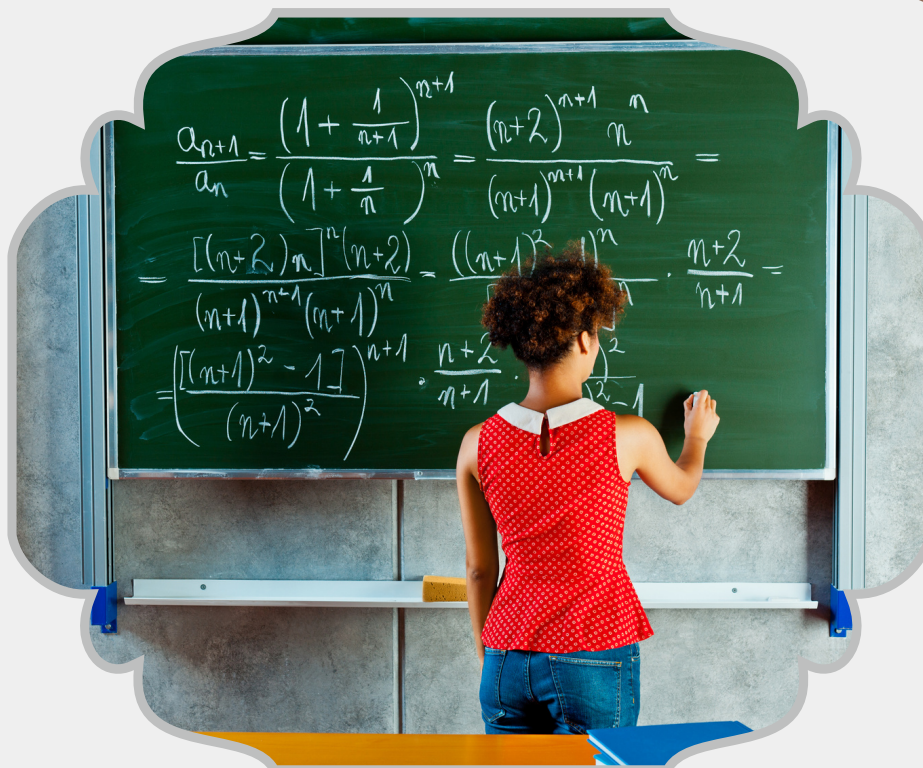
## Committee Reports

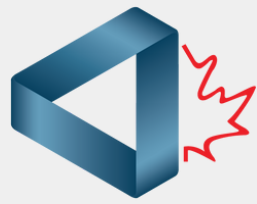
### Women in Math Committee Report (Continued)

at Dalhousie University. We are expecting a third member to be confirmed shortly.

#### Cute Buttons

Inspired by a sticker on the school bag of the main character in the popular movie "Turning Red", we have made cute and fun "This Girl Loves Math" buttons to distribute at conferences. (So far they have been a hit!)





# Grants Awarded by the CMS

Projects that promote the discovery, learning and application of mathematics in Canada are funded through the CMS' Competitions and Endowment Grants Programs.

The following activities that were awarded grants took place in 2022:

## Endowment Grants

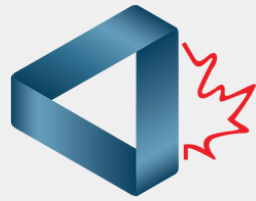
AQM - Université Laval  
University of Toronto  
Fields Institute  
Université Laval  
University of Ottawa

## Competition Grants

University of Alberta  
Competitive Kids (STEM)  
Mount Royal University  
Caribou Contest

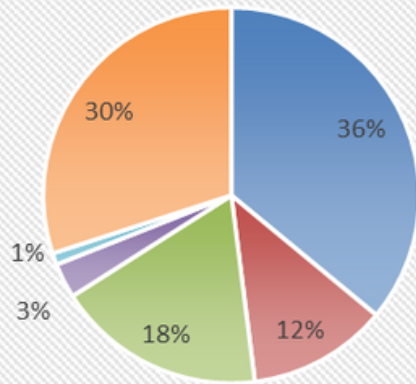
## Student Committee Support

Seminars in Undergraduate Mathematics  
University of Ottawa 2022 Conference  
Mathtopower2022  
ISM  
CUMC  
University of Ottawa Truth Values  
University of Calgary



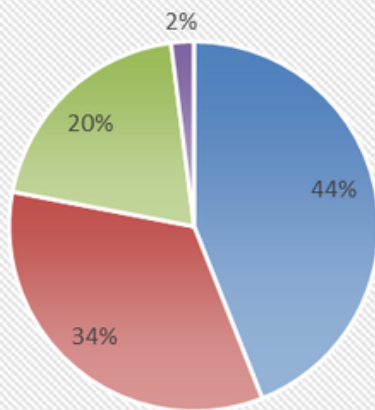
# 2022 Financial Overview

## Revenue \$1,469,255



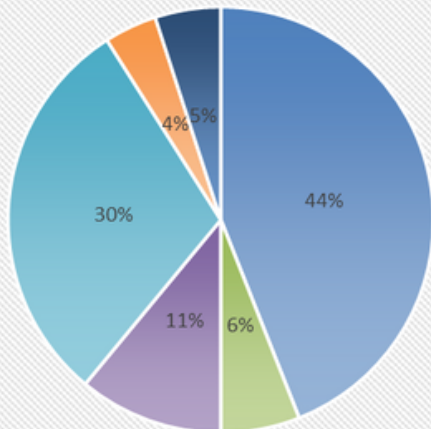
- Registration fees, other sales
- Membership fees
- Grants
- Other
- Services, advertising and sales
- Subscriptions and publications

## Expenses \$1,308,582



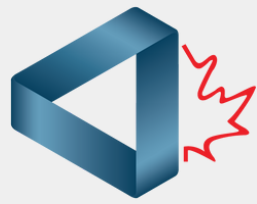
- Learning
- Discovery
- Operations
- Other

## Invested Funds \$2,531,920



- Legacy
- Operations
- Olympiads
- Endowment
- Spearman Doctoral Prize
- Borwein Distinguished Career





## Donors

The Canadian Mathematical Society is greatly appreciative of the financial support and encouragement received from all individual donors, including those who wish to remain anonymous.

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### Friends (Up to \$250)

(John) Richard Barreca, Alain Pinel, Alessandro Malusà, Alexander Brudnyi, Alexandra R. Gall, Anthony C. Thompson, Askold Khovanskii, Bill Sands, Cameron Sorlie, Charles R. Diminnie, Chrystal Smith, Claudia Mahler, Dale Preston Odin Rolfsen, David Ryeburn, Davoud Abdi, Deirdre Haskell, Dominick J. DelCasale, Douglas Farenick, Edgar G. Goodaire, Ehsaan Hossain, Elena Braverman, Eric Mendelsohn, Francis Calingo, François Bergeron, François Bergeron, Frank Sottile, Gavin Jeffrey Orok, Gena Hahn, Hadi Kharaghani, Hans Jacob Kummer, Hugh Thomas, Igor Babchine, J. Concepcion Loredó-Osti, J. Harley Weston, Jack Wang, Jan Minac, Jean-Marie De Koninck, Jenny Sun, Jinzhi Yang, John Chakkour, John D. Dixon, John G. Heuver, Kenichi Mori, Kexue Zhang, Kieka C.M. Mynhardt, L. Lorne Campbell, Laurence Britt Schweitzer, Len Gallagher, Liliana Simion, Mark N. Ellingham, Martin Légaré, Maryam Haghighi, Matilde N. Lalin, Michael Doob, Mihai Halic, Mike Newman, Mikhail Kotchetov, Monica Nevins, Mustafa A. Akcoglu, Nancy M. Reid, Neil Julien Ross, Neranga Fernando, Noriko Yui, Patrick J. Ryan, Patrick Speissegger, Peter A. Fillmore, Peter Freyd, Petter Wiberg, Pinaki Mondal, Rafat Nabi Siddiqi, Richard J. Nowakowski, Robert J. McCann, Robert P. Morewood, Roshan Tajarod, Shengda Hu, Sherman D. Riemenschneider, Sijia Wang, Sofia Arturo, Sooyeong Kim, Stephen S. Kudla, Sujatha Ramdorai, T M G Ahsanullah, Walter Burgess, Woldegebriel Assefa Woldegerima, Yael Karshon.

*Thank you*





# Sponsors and Partners

The Canadian Mathematical Society receives support for its activities from various corporations, governments, mathematical societies, and institutions. The CMS would like to express its sincere gratitude to the following organizations for their partnership and for their generous support of the Society's programs:

