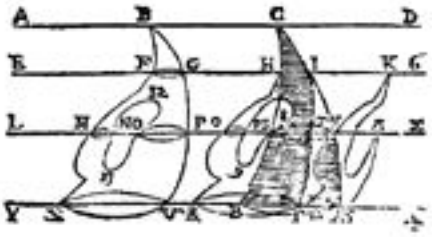
BULLETIN

CSHPM SCHPM



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WHAT'S INSIDE

Canadian Society for History and Philosophy of Mathematics

Société canadienne d'histoire et de philosophie des mathématiques

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ABOUT THE SOCIETY

Founded in 1974, the Canadian Society for History and Philosophy of Mathematics/Société canadienne d'histoire et philosophie des mathématiques (CSHPM/SCHPM) promotes research and teaching in the history and philosophy of mathematics. Officers of the Society are:

President: **Craig Fraser**, University of Toronto, Toronto, ON M5S 1K7, CAN, craig.fraser@utoronto.ca
Vice-President: **Nicolas Fillion**, Simon Fraser University, Burnaby, BC CV5A 1S6, CAN nfillion@sfu.ca
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Volunteer Positions

The Society's Web Page (www.cshpm.org) is maintained by **Michael Molinsky**, University of Maine at Farmington, Farmington, ME 04938, USA, michael.molinsky@maine.edu. The Proceedings of the Annual Meeting are edited by **Maria Zack** and **Dirk Schlimm**. The Society's Archives are managed by **Eisso Atzema**, University of Maine, Orono, ME 04469, USA, eisso.atzema@maine.edu. **Hardy Grant**, hardygrant@yahoo.com, and **Amy Ackerberg-Hastings**, aackerbe@verizon.net, edit the CSHPM Notes column for *Notes* of the Canadian Mathematical Society. **Maritza Branker**, Niagara University, Lewiston, NY 14109, USA, mbranker@niagara.edu, serves as CMS Liaison.

New Members are most cordially welcome; please contact the Secretary.

President's Message

Successful online meetings have be held over the past six months, including the BSHM Christmas meeting, the CMS winter meeting, and the joint AMS/MAA meetings. Although such meetings are not a perfect substitute for in person events, they still provide a valuable forum for the presentation and discussion of work in mathematics and the philosophy and history of mathematics. Evidence of how scholarly exchange has continued under full or partial COVID lockdown is evident in the fine series of monthly CSHPM online talks organized by Vice-President Nic Fillion.

Our Annual CSHPM meeting will be held online, jointly with the BSHM, from 12-15 July 2021. See program information included in this issue for more details. During this conference, CSHPM will hold its Annual General Meeting. Papers at the conference will be delivered as twenty-minute pre-recorded presentations with live Q&A following.

In the fall, Blackboard Collaborate on Canvas was how lectures were delivered for virtual courses. Using this system to pre-record a talk I gave at the BSHM Christmas meeting in December, I was able to trial run the recording to fine-tune the presentation.

The International Congress of Mathematics is currently scheduled to take place in-person in St. Petersburg 16-22 July 2022. The arrests of members of the Russian mathematical community have led to calls for a boycott of ICM 2022. In a statement released in February the International Mathematical Union expressed support for the universal right to peaceful expression. However, the IMU also opposes "all boycotts of scientific events and all attempts to link scientific activities to political and societal issues, since boycotts are viewed to be harmful for all concerned." Some historians and philosophers of mathematics have supported the broader position of the IMU, while questioning the implied suggestion that scientific activities are independent of societal matters. The ICM statement may be accessed at mathunion.org/membership/circular-letters-adhering-organizations.

Craig Fraser

Announcements

CSHPM member Judith Grabiner has been awarded the 2021 Albert Leon Whiteman Memorial Prize. The award cited her contributions to the history of mathematics, in particular her works on Cauchy, Lagrange, and MacLaurin; her widely-recognized gift for expository writing; and a distinguished career of teaching, lecturing, and numerous publications promoting a better understanding of mathematics and the significant roles it plays in culture. The full citation can be read at `ams.org/news?news_id=6494`.

CSHPM member Jacqueline Feke has been honoured by the BSHS. The 2020 Prize for Best Monograph in History of Science has been awarded by the British Society for the History of Science. *Vernacular Medicine in Colonial India: Family, Market and Homoeopathy* (Cambridge: Cambridge University Press, 2019) by Shinjini Das is the winner of the 2020 Pickstone Prize. The jury also highlighted the excellence of three remaining short-listed titles. Jaqueline Feke's *Ptolemy's Philosophy: Mathematics as a way of life* (Princeton: Princeton University Press, 2018), was one of those highlighted titles.

University of Oklahoma offers MAs and PhDs in the History of Science, Medicine, and Technology, and is accepting applications in all areas of specialization within the history of science, especially including our core areas of focus: early modern science, history of technology (modern), history of medicine, and modern American science. These programs work in close collaboration with the OU History of Science Collections `libraries.ou.edu/content/history-science-collections`, the resources provided by the Bizzell Library's Western History Collection of rare books and manuscripts, as well as in partnerships with the Beinecke, Newberry, Huntington, and Linda Hall Libraries. Persons wishing to pursue further study at OU are invited to contact Dr. Hunter Heyck, Professor and Chair, Department of the History of Science at `hheyck@ou.edu`.

CHSTM *Perspectives* is a new library of podcasts, videos, and essays, along with resources for further learning and opportunities to engage in ongoing conversations. Accessible through the Consortium's website, *Perspectives* provides discussions with leading scholars, interviews with recent authors, and archival highlights from renowned history of science collections. To find out more visit *Perspectives* at `www.chstm.org/perspectives`

As a part of Association of Women in Mathematics' (AWM) 50th Anniversary in 2021, the AWM has created a deck of cards featuring sixty-four women mathematicians. The decks can be used to play five mathematical games. Check out `awm-math.org/publications/playing-cards/` for more.

We remember Peter Neumann who died in December 2020. Peter was a major international figure in algebra, the history of mathematics, and mathematics education. He was the long-term organiser of "Research in Progress", the Society's Annual Conference for research students in the history of mathematics, usually held in The Queen's College, Oxford, and he was one of the founders of the lively History of Mathematics Forum, based at Queen's. Peter was a Tutorial Fellow at The Queen's College and a lecturer in the Mathematical Institute, Oxford, where he was co-founder of the Oxford Mathematical Institute's undergraduate module in the history of mathematics. These are just a few of Peter's many accolades and appointments. He will be missed.

Dr. A. E. L. Davis died in November. Davis was an eminent historian of mathematics and astronomy, specialising in the theory of Johannes Kepler's astronomical laws. Davis was, until recently, Honorary Research Associate at University College London and an Honorary Visiting Fellow at the Mathematical Sciences Institute, Australian National University. As a member of the International Astronomical Union she took part in a number of Commissions regarding the History of Astronomy, serving as Vice-Chair for eleven years until 2019. While working at the Open University, Davis compiled a database of female mathematics graduates in the British Isles during 1878-1940. This invaluable archive is readily available at `mathshistory.st-andrews.ac.uk/Davis/`. Davis assembled an extensive library of books written by and about women who studied or worked in mathematical subjects in the nineteenth and early twentieth centuries. She named it the Philippa Fawcett Collection and donated it to the London Mathematical Society where it is available for consultation by all.

Former president of the MAA, Jerry Anderson, passed away on 16 December 2020. Jerry was a prolific contributor to and an exemplary leader in

the mathematics community and the MAA. More details about the many contributions he made can be found at newsroom.maa.org/121385-obituary-for-gerald-jerry-l-alexanderson.

Ed Edwards, co-founding editor with Bruce Chandler of *The Mathematical Intelligencer* passed away in 2020. He was a mathematician working in number theory, algebra, and the history and philosophy of mathematics. He taught at Harvard and Columbia and New York University where he was professor from 1966. He won the Leroy P. Steele Prize for Mathematical Exposition of the American Mathematical Society the Albert Leon Whiteman Memorial Prize by the American Mathematical Society. His breadth of knowledge was recognized as broad and deep.

Conferences, Talks & Workshops

Join the HOM SIGMAA for its new virtual First Wednesday spring lecture series in the history of mathematics. Information is available at www.homsigmaa.net.

Check out six Gresham College lectures entitled Mathematics in Music and Writing, by Professor Sarah Hart, currently the BSHM's President and Gresham Professor of Geometry. Lectures include "The Mathematics of Bell Ringing", "The Sound of Mathematics", "Mathematical Structure in Fiction", "The Mathematics of Music Composition" and "Mathematical Journeys into Fictional Worlds". The last of these lectures will occur 27 April on the topic of "Where Do Symbols Come From". See www.gresham.ac.uk/series/maths-music/.

Marriages, Couples, and the Making of Mathematical Careers is scheduled for 29-30 April 2021. This workshop will explore the role of marriage and other domestic partnerships in the lived practice and constructed memory of mathematics. Confirmed speakers include Brigitte Stenhouse, David Dunning, Ursula Martin, Reinhard Siegmund-Schultze, Jenne O'Brien, and Donald Opitz.

In these isolated times, the CSHPM online colloquium series via Zoom continues. Sessions are open to CSHPM members as well as the broader scholarly community. Regular updates on our activities can be found on Facebook, www.facebook.com/cshpmschpm. Each talk will last 30 minutes, followed by a Q&A. Our next speaker is Emmylou Haffner, the talk will take place on 7 May 2021, on the subject of what we can learn from Dedekind's drafts and how to navigate such a corpus.

An event on History of Decision Mathematics is scheduled for 15 May 2021. The 2021 event will be the sixth of these conferences. The day will include six speakers on various aspects of decision mathematics. To register and attend, go to www.bshm.ac.uk/events.

The Canadian Society for the History and Philosophy of Science (CSHPS) is holding its annual conference as part of the Congress of the Humanities and Social Sciences in partnership with the University of Alberta. The meeting will take place entirely virtually from 29 May-2 June 2021. The preliminary program is available at www.yorku.ca/cshps1/meeting.html.

La Société canadienne d'histoire et de philosophie des sciences (SCHPS) tiendra son congrès annuel dans le cadre du Congrès des sciences humaines en partenariat avec University of Alberta. Le congrès aura lieu le 29 mai - 2 juin 2021 dans un format complètement virtuel www.yorku.ca/cshps1/meeting_fr.html.

Canada's largest online gathering of academics will occur in partnership with the University of Alberta and the Federation for the Humanities and Social Sciences. Congress 2021 will be held entirely online May 27 to June 4. All conference activities including academic sessions, creative performances, book launches, networking and social events will be offered virtually.

We are pleased to announce that the 2021 online symposium Governing Science and Technology, Governing through Science and Technology: What was at Stake for Women? (From the late 19th to the early 21st Century) will take place on 1-2 July. To register write to the following address: gst2020@sciencesconf.org (with copy to ilemonon@gmail.com). For conference program, see gst2020.sciencesconf.org/.

People, Places, Practices, is the 5-yearly joint conference of the British Society for the History of Mathematics and Canadian Society for History and Philosophy of Mathematics/La Société Canadienne d'Histoire et de Philosophie des Mathématiques, in collaboration with HOM-SIGMAA, the History of Mathematics Special Interest Group of the MAA. The conference this year will be virtually held on 12–15 July 2021. The most up to date program details are available later in this issue of the *Bulletin*. To register and for the latest details see bshm.ac.uk/events.

HPM 2020 is the tenth quadrennial meeting of the International Study Group on the Relations Between the History and Pedagogy of Mathematics. The HPM Group is an affiliated study group of the International Commission on Mathematical Instruction (ICMI). HPM 2020 – Satellite Meeting of ICME-14 previously scheduled for 21–25 July 2020 has new dates of 20–22 July 2021, and will be held in a hybrid manner both virtually and in person at the University of Macau. The website is available at www.um.edu.mo/fed/HPM2020/.

The 14th International Congress on Mathematical Education (ICME-14) will occur 11-18 July 2021 in a hybrid mode, both online and in Shanghai, China. For more details on the complete scientific programme of ICME-14 and its structure and time-schedule, as well as on practical details, the registration process, the venue and social events, visit the official ICME14 website www.icme14.org.

The International Union for the History and Philosophy of Science and Technology/Division of History of Science and Technology will hold its annual conference virtually this year. The 26th International Congress of History of Science and Technology will be held 25–31 July 2021. The theme of the Congress is "Giants and Dwarfs in Science, Technology and Medicine". For information about this, see www.ichst2021.org/.

The ICHME7 (Seventh International Conference on the History of Mathematics Education) will be postponed from the previously scheduled dates 20-24 September 2021 to 19-23 September 2022. The conference venue remains Mainz in Germany. The ICHME conferences have so far been characterised by a lively personal exchange not only during but also between and after the conference talks during excursions and shared meals. We would like to keep this characteristic feature of the conference and have therefore refrained from an online forum this year.

The BSHM event History of Mathematics and Flight will occur 11 September 2021 at Manchester Airport, UK. A day of talks about the history of mathematics and flight, broadly conceived to cover the flight of man-made objects, animals, and even fugitives; flight formation, navigation and control. The day will include an optional tour of the Concorde flight deck.

The 27th International Meeting of Collectors and Researchers of Slide Rules and other Historic Computing Instruments, or IM2021 for short, will be held on 11 and 12 September 2021 as a Zoom online conference. For more information see www.im2021.org.

Future MAA meetings will take place in upcoming years at MathFest 2021 in Sacramento, CA, on 4-7 August; MathFest 2022 in Washington, DC, on 3-6 August; MathFest 2023 in Tampa, FL, on 2-5 August; MathFest 2024 in Indianapolis, IN, on 7-10 August. See maa.org/press/periodicals/convergence/convergence-calendar for a list of events and meetings around the world which relate to the History of Mathematics.

Beginning in 2022, the AMS will solely manage the Joint Mathematics Meetings (JMM). The AMS is committed to the principle that JMM will strive to represent the full spectrum of interests of the mathematical community, and we hope that future JMMs will be as broad as they are now. Beginning in 2022 we will handle all sessions and talks on the AMS model. The AMS has widened the MSC (MathSciNet) classification system to include several new categories: 101: Teaching and learning, 102: Recreational mathematics, 103: Professional development and professional concerns, 104: Wider issues. These categories have a large number of subcategories. Complete information about the new categories can be found at www.ams.org/journals/notices/202010/rnoti-p1602.pdf.

Publications

New books coming in spring 2021 from Princeton University Press include *The Doctrine of Triangles: A History of Modern Trigonometry* by CSHPM member Glen Van Brummelen and *Encounters with Euclid: How an Ancient Greek Geometry Text Shaped the World* by Benjamin Wardhaugh. See press.princeton.edu/

Glen Van Brummelen also published recently *Trigonometry: A Very Short Introduction* (Oxford, 2020): global.oup.com/.

Two new publications in the history of mathematics appear from the 'Reading Euclid' project at Oxford: *Reading Mathematics in Early Modern Europe. Studies in the Production, Collection, and Use of Mathematical Books*, edited By Philip Beeley, Yelda Nasifoglu, and Benjamin Wardhaugh was released by Routledge in fall 2020. The other title of interest is *Euclid in print, 1482–1703: A catalogue of the edi-*

tions of the Elements *and other Euclidean works* by Benjamin Wardhaugh with the assistance of Philip Beeley and Yelda Nasifoglu, released in November 2020. This work is freely available in pdf format courtesy of The Bibliographical Society at `www.bibsoc.org.uk/content/euclid-print-1482`.

CSHPM President Craig Fraser has published a new article extending the theme of classification to an historical examination of Mathematical Reviews and the Mathematics Subject Classification scheme. It is "Mathematics in Library and Review Classification Systems: An Historical Overview," *Knowledge Organization* V. 47 No. 4 (2020), 334-356. It is available online as "Mathematics in classification systems," in Birger Hjørland and Claudio Gnoli (Eds.) *Encyclopedia of Knowledge Classification* (2019) `www.isko.org/cyclo/mathematics`. This new publication expands upon Fraser's earlier publication "Mathematics in Library Subject Classification Systems," in *Research in History and Philosophy of Mathematics: The CSHPM 2016 Annual Meeting in Calgary, Alberta*, pp. 181-197, 2017, Birkhäuser, Basel.

In 2020 CMS moved the *Notes* to an all-digital format, which resulted in new URLs for all pre-2020 material. To view all CMS *Notes* back to 1998, visit `notes.math.ca/en/issues/`, click on Previous Issues, and scroll to the bottom of the page.

An English translation of Herbert Bruderer's book *Milestones in Analog and Digital Computing* has been published. See `springer.com`.

In 1997 Scott Williams created the website Mathematicians of the African Diaspora to document the history of Black mathematicians. The "MAD Pages," are more than 1,000 pages featuring over 700 biographies documenting the lives of African-descended mathematicians, computer scientists, and physicists. It has seen more than 20 million visitors since its creation. After Williams' retirement a team of Black mathematicians formed to continue his legacy by updating the site. They invite you to explore the updated site `www.mathad.com/home`.

UNC Press announces the paperback publication of *Nathaniel Bowditch and the Power of Numbers: How a Nineteenth-Century Man of Business, Science, and the Sea Changed American Life* by Tamara Plakins Thornton. Bowditch was a mathematician, astronomer, navigator, seafarer, and business executive whose Enlightenment-inspired perspectives shaped nineteenth-century capitalism while transforming American life more broadly. Discover more about the book, see `uncpress.org`.

Calls for Submission

A new peer-reviewed journal, *Euleriana*, has been launched. Dedicated to the life and work of Leonhard Euler with secondary foci on Euler's legacy and the wider world of scholarly work in the 18th century the journal aims to be a leader in the expanding world of Euler scholarship. *Euleriana* is now accepting submissions, including translations, historical and archival notes, and book reviews. Potential authors are encouraged to contact the editors (Erik R. Tou, `etou@uw.edu`, and Christopher Goff, `cgoff@pacific.edu`) to inquire about papers before submission.

The BSHM's 2021 T&F essay for the Taylor & Francis Biennial Early Career Research Prize is due to be submitted by the deadline of 31st December 2021. The prize, £1000, will be given to an essay of up to 8000 words on any aspect of the history of mathematics. Winning essays may be published in *The British Journal for the History of Mathematics*. See `bshm.ac.uk/2021-taylor-and-francis-early-career-research-prize` for more info.

The Royal Society 6th Notes and Records Essay Award is open to researchers in the history of science, technology and medicine who have completed a postgraduate degree within the last five years. This is a chance to win £500 (or local currency equivalent) and publication of your winning essay in the Royal Society's history of science journal *Notes and Records*. One runner-up will also receive £250 and there will be £100 prizes for an additional three honourable mentions. All winning categories will benefit from a free online subscription to *Notes and Records* for one year. Deadline for entries is 28 February 2021. Further information available at `royalsocietypublishing.org/rsnr/essay-award`.

The Thirteenth French Philosophy of Mathematics Workshop (FPMW) takes place 7-9 October 2021 at the Université Côte d'Azur in Nice, France (with possible modifications for the ongoing health crisis). Five talks by invited speakers will be given by Hourya Benis Sinaceur, Valeria Giardino, Patrick Popescu-Pampu, Dominique Pradelle and Dirk Schlimm. Submissions for the five contributed talks are welcome. Contributed talks may cover topics in the philoso-

phy of mathematics or philosophical talks presenting a link to mathematics that do not fall under the philosophy of mathematics in a strict sense. Anonymous proposals (15 000 characters max) may be sent in format DOC, PDF or RTF to the address mailto:fpmw13@sciencesconf.org in an email with the title "FPMW13" by 1 April 2021. Young researchers as well as doctoral students are particularly encouraged to submit a proposal.

Funding Opportunities

The Research Society for Victorian Periodicals has extended the deadline for the 2021 Curran Fellowships to 15 December. These six awards up to $5,000 each are made to assist the study of British periodicals/magazines/newspapers/serials 1780-1914 as objects of study and not simply as sources. Travel and archival work may be difficult in 2021 but these awards also cover photocopies, scanning, and database subscriptions. Given the uncertainty of travel during the pandemic, a no-cost extension of time may be requested at the end of the award period. More details found here rs4vp.org/awards/curran-fellowship/.

The HOM SIGMAA wants to aid its members in their quest to bring the joys of the history or mathematics to their students. Small monetary grants allow HOM SIGMAA members to purchase items that will aid in learning the history of mathematics. For example, a classroom set of abacuses or materials to make an historical model. To apply send the application form in Word or PDF to the Chair of the HOM SIGMAA via email. For information on eligibility and access to the application form, go to homsigmaa.net/.

The Oklahoma University History of Science Collections has an extraordinary collection of rare books and manuscripts as well as an extensive collection of secondary works in the field. It is a resource almost without parallel in the United States. A travel fellowship program endowed by the Mellon Foundation exists to enable scholars to come use the resources of the History of Science Collections. For more information about the collection and this program, go to ou.edu/cas/hsci/collections-overview.

Q&A with Siobhan Roberts

Siobhan Roberts is a Toronto-based journalist and author, and a senior editor at *MIT Technology Review.* Her work focuses on mathematics and science. She has contributed to *The New York Times, The New Yorker, Quanta, Nautilus,* and *The Walrus.* Her first book, *King of Infinite Space: Donald Coxeter, The Man Who Saved Geometry,* won the Mathematical Association of America's 2009 Euler Book Prize. And her latest book, *Genius at Play,* on the so-called "rock star" mathematician John Horton Conway, won the 2017 JPBM Communications Award for Expository and Popular Books. This Q&A is an edited version of a conversation between myself and Siobhan that occurred virtually at University of Toronto on 25 February 2021 for a course I teach on the history of mathematics.

SN: I learned from your Wikipedia article that you grew up in Belleville, Ontario, before taking a history degree at Queens University and a degree in journalism at Ryerson. What put you on track to write about mathematicians and what they do?

SR: *My background is somewhat unusual for a science writer. Many science journalists have a science degree. I did a degree in history and then a degree in journalism. In grade school, I excelled at math, drills and multiplication tables and geometry. But then unwisely I skipped grade seven math, right when the curriculum starts to get more abstract and complicated. And I struggled after that. I persevered through high school and took all the math classes, and all the sciences, but math was my worst subject overall. My dad was an English Professor who liked mathematics so I had someone who could help me at home. I also had a number of engaging math teachers, and friends who were really good in math. I think all those things kept me coming back to math. But I dropped it once I got to university.*

SN: I sometimes think I'm drawn to history of mathematics because I'm a failed mathematician myself. I studied it as an undergraduate and was preparing to take a M.Sc. in math when I realized I was never going to create any new mathematics, but I loved the world of those ideas. I wanted to stay connected to all these beautiful ideas. What keeps you coming back to write about this subject?

SR: *I like the challenge, the struggle. I think there are similarities between the mathematician's mindset*

and the artist's or writer's mindset. Putting together the pieces of the puzzle, you start with a snippet of an idea and then you explore and try and put the pieces together. Talking to Conway in writing his biography, I found he worked in a similar way mathematically. Peter Sarnak, a mathematician at the Institute for Advanced Study in Princeton, once told me that the steady state of the mathematician is being frustrated and stuck. That's something I certainly relate to as writer. Most of the time I'm stuck and frustrated and it's horrible — writer's love to complain about the misery of writing. I'm also simply motivated by curiosity, by a piece of information or an idea that for whatever reason is intriguing, but that I don't yet understand.

SN: In your career as a writer, have you ever encountered ideas in mathematics you feel are impossible to write about for a popular audience? Have any of your editors ever come back and said, 'Siobhan, I have no idea what you are talking about'?

SR: *I have to get my understanding up to a point where I know more, sometimes quite a bit more, than I'm going to relate to the reader. I'm surprised occasionally by the level of knowledge I've accumulated. This becomes apparent during the editing process because my editor might write something like, "Deadly jargon lives here!" in the margin. To my mind it's not jargon, it's a first iteration translation of what I've learned — or maybe, if I'm honest, I know it's a bit esoteric, but I find the jargon interesting, and reasonably understandable, and I try to convince myself and my editor that the reader will be fine with it. But only rarely can I get away with it. Usually, my editor says, 'Run this through the typewriter again in your own words,' or 'Explain it like you're talking to a savvy eighth grader.'*

SN: Your first book, *King of Infinite Space*, is a biography of Donald Coxeter, an English-Canadian mathematician who worked for his entire career in the mathematics department at University of Toronto. The subtitle is, "The Man Who Saved Geometry." Can you explain what drew you to Coxeter and why you choose this subtitle?

SR: *I encountered Coxeter when I was a reporter at the* National Post *around 2001. I'd written a piece about the Archimedes palimpsest that a couple years prior had been sold at auction, at Christie's in New York, and it was in the news again because it was undergoing extensive restoration. This article reignited my high school passion for science. I started writing at the* Post *about various scientific things. The movie "A Beautiful Mind" had also recently come out. So one day I Googled "Toronto mathematician" and Coxeter's name popped up at the top of the list. While Conway was really a rock star, a flamboyant bombastic mathematician, Coxeter was also a bit of a rock star, or at least famous, if in a much more quiet, Edwardian gentlemen, three-piece suit kind of way. As soon as I started asking around in the mathematical community people said, 'Oh he's the greatest living classical geometer!' He was 93 at the time and still going to conferences. People would also say, 'He's the man who saved classical geometry from near extinction!' He was persevering in the face of the trend towards more purely algebraic abstract mathematics at the time. He shared his love for classical geometry in beautiful work and beautiful books. Initially I wrote a profile of Coxeter for the* National Post *and then I wrote a magazine feature for* Toronto Life magazine. *Then an agent got in touch, and before I knew it I had a book deal on Coxeter's coattails. And essentially, I became a science journalist while doing the research for that book. Coxeterian tangents led me to lots of great subjects, including Conway.*

SN: Your next subject was *Alan G. Davenport and the Art of Wind Engineering.* This is the book of yours I am least familiar with. Is your biography of Davenport a departure from your focus on people who worked on more abstract problems in pure mathematics? Did your Davenport biography take you to any unexpected places as a writer?

SR: *Davenport's colleagues at Western got in touch because he'd been writing a book about his life's work, but then he was diagnosed with Parkinson's disease and couldn't finish it. They hired me to help bring the book into being and to document his pioneering work. At Western University, Davenport established the first wind tunnel for civil engineering structures. The gist of the idea was that building design could be tailored to withstand the forces of the wind. The CN tower, for example, has a sway built into it, so to speak. Among the first projects he worked on was the World Trade Center towers in New York City, with the structural engineer Les Robertson. They tested the structure for wind, and even for the accidental impact of a plane, but sadly not for impact from a plane full of fuel.*

SN: Your most recent book is the Conway biography. He seems like an incredibly playful subject, a person who never grew up. As a lecturer in mathematics at Princeton, he definitely seems like he had more fun than most. Was he as fun a subject to write about, as he seems to have been, as a person?

SR: *It was great fun, but it was also a challenge. A dream come true and a nightmare all at once. He was a playful egomaniac. Deep down, he was quite insecure. But he had an incredible passion, and he was a real magpie, as a mathematician; he wandered all over the place. In what he called his annus mirabilis —which in fact spanned a couple of years, from 1969 to 1971 —he made his three great contributions: In group theory, he discovered his namesake Conway group, and he illuminated the Monster group in various ways. And he had a big discovery with his surreal numbers, which gets into the sets of infinite numbers — that's the work he was proudest of. And he invented the Game of Life — not the board game but the cellular automata, which became a cult classic. Conway was an endlessly fascinating character in terms of his mathematics. But he was curious not only about mathematics. He was also widely and wildly curious about the world at large. He read the* New York Times *front-to-back, and the* New York Review of Books. *He was a tremendous fount of knowledge.*

He was also quite a good storyteller. He loved talking — about himself, primarily, but he would also weave in all sorts of wonderful tales, full of tidbits of trivia. And above all, he was a great populariser of mathematics. I realized at a certain point that the biography needed to capture his voice and personality. So I decided to give Conway his own font, as a narrative stylistic device — my editor thought this was highly suspect at first, very "experimental." But it allowed me to give the reader an experience of Conway holding forth as if you they were sitting there beside him. In the end, I think it worked quite well, and I can't imagine the book without Conway being so prominent and so present on the pages.

The nightmare of the process was that occasionally his sizable ego got in the way, particularly with fact checking. I would run some of my expository passages by him to check the accuracy and he'd object to my word choice and grammar. There were also aspects of his personal life he did not want included. That was a little tricky to navigate.

On the whole it was a wonderful experience and I considered him a friend by the end, which is also territory that is tricky to navigate as a journalist.

SN: Conway died in April of last year of COVID-19. I posted a memorial tribute on the class course pages as the news was something that connected our course to current events and our personal lives as everyone had been impacted by the pandemic. In this course we cover the life and work of great mathematicians in the context of major events like war, political revolution, and technological change. Is there anything about the current pandemic moment that you think will change how you write about mathematics or science, why it is important?

SR: *Inevitably, my focus shifted to some degree in March of 2020. At the time, I was in the middle of a profile of a mathematician and my editor suggested that I might want to do some informative Q&As, as public service journalism, to raise awareness. I wrote a piece about flattening the curve and another on cutting the chain of transmission. I've also taken broader looks at the mathematics of epidemiological modeling; and the inevitability of uncertainty in science, and the necessity of embracing the uncertainties. The historian of science Lorraine Daston, at the Max Planck Institute for the history of science in in Berlin, pointed out that the public lacks an understanding of the importance of uncertainty in science, and lack of understanding in turn impedes how scientists and their work are received. I also looked at some new techniques various researchers are using to get better modeling results, to reduce uncertainty in pandemic modelling. Statisticians at Stanford incorporated Bayesian analysis into epidemiological models and two researchers at the University of Waterloo and the University of Guelph applied game theory to try to generate more realistic projections regarding vaccine prioritization.*

SN: A year or so ago when I met you in person, you were working on a feature piece about the University of Toronto professor emeritus of computer science Stephen Cook. Cook has this connection to one of the six unsolved Millennium Prize problems, the P versus NP problem. In 1971 Cook defined a class of NP problems called NP-complete that appear to be fundamentally unsolvable. He proposed that if just

one of the many NP-complete problems is also in P, then they all are –meaning P = NP. But if just one of the NP-complete problems is not in P, then none are. Can you tell me a little about your work on Cook and where you are with this project?

SR: *This year is the 50th anniversary of the P versus NP problem. Lance Fortnow, who wrote a book on the subject titled "The Golden Ticket," describes it as nothing less than "the most important open problem in computer science, if not all of mathematics." And simply stated, as he describes it, the problem asks whether every problem whose solution can be quickly checked by computer can also be quickly solved by computer. The University of Toronto wisely decided to get ahead of what they anticipated would be a rush of anniversary conferences (now virtual, of course) and had a conference in 2019. So I've been turning that idea over for a while. Soon I'll write a profile of Cook and the problem. At the conference, Cook's students were toasting and roasting him all at once. Somebody got a hold of one of his grant reports, summarizing his progress to date. Working on the intractable P versus NP problem, all he could say, year after year, was, 'Unfortunately, I have still made no progress, but please give me more money.'*

SN: Currently, you are writing a biography of the group theorist Verena Huber-Dyson. What attracted you to Dyson? I note a few things are different about Dyson as compared to your other subjects. Gender, fame, and death: she's a woman who is not that well known and already dead. Can you also tell us what you think makes a biographical subject a good choice for you. For instance, why choose to write about Verena-Huber Dyson, when her ex-husband, the physicist Freeman Dyson, was far more famous? Would you choose someone to help increase their fame and recognition, or choose someone based on someone's prior fame or recognition? Or is choice based on other factors entirely?

SR: *Verena's biography came about in a serendipitous way. I was spending time at the Institute for Advanced Study at Princeton, working on the Conway book, and I got to know Freeman Dyson, and Freeman and Verena's son George, who's an historian of science. For years, Verena, who was a group theorist and logician, had been trying in vain to write her own memoir. George at some point asked me if I might talk to Verena and see if I could help. We started talking on email but then her health declined precipitously and she died, at age 92.*

George then proposed I take a look at her archives — all her files and papers and diaries and letters and endless drafts of this memoir — to see if it might amount to enough material for a book that I'd want to write. Verena was a compelling and mysterious character in many ways. It is unorthodox to be writing a biography about a mathematician who, by conventional standards at least, doesn't have a spectacular piece of work that can be held up and admired and celebrated. But she persisted, despite various obstacles and disruptions to her trajectory, so the story is about a female mathematician in the twentieth century forging her way against the odds. Verena's main written contribution was a monograph, a workbook of sorts, on Gödel's incompleteness theorems. She gave me a mini-tutorial on the subject shortly before her death, saying simply: "There is more to truth *than can be* caught *by proof." That's the philosophical spirit that's guiding the book at the moment.*

SN: Thanks Siobhan for sharing reflections on your past, current and future journalistic writing about mathematics and science.

Sylvia Nickerson

Bayes Business School

On April 21, it was announced that the Business School (formerly Cass) at City, University of London has changed its name to the Bayes Business School effective September 2021, It is named for the Nonconformist minister and mathematician, Thomas Bayes. Bayes's name was chosen from among approximately 150 suggestions and a careful vetting process. The Business School had formerly been named after Sir John Cass (1661 – 1718) who had associations with the slave trade. In view of his 2004 biography of Thomas Bayes in Statistical Science, David Bellhouse was asked by the school to be part of the vetting process that chose Bayes. He wrote a report on Bayes for the school that was structured to answer five questions posed to him by the school: (1) What do we know about Thomas Bayes? (2) What are his values as we understand them from any writings, speeches etc.? (3) Are there any particularly controversial or problematic aspects to his life which may come back to haunt the school either now or in the future? (4) Did Bayes have any particular positions on sub-

jects like slavery, war/aggression, human rights, race, sex/sexuality etc. or anything else which could be cited against him? (5) Give a general assessment of the risks of using his name in a 21st century context.

David Bellhouse

2020 Financial Statements

The following financial statements cover the calendar/fiscal year of 2020.

TD Canada Trust Canadian Funds	
Income	$Can
Dues by Cheque	338.00
Transferred from PayPal	9000.00
Total	9,338.00
Expenses	
Transfer to US account	8,000.00
Student Bursary	500.00
Student Prize (2019)	1000.00
Fees	3.00
Total	9,503.00
Balance	(165.00)

TD Canada Trust US Funds	
Income	$US
Dues by Cheque	1093.50
Transfer form Canadian Acccount	5,537.10
Total	6,630.60
Expenses	
Philosophia Mathematica (Oxford)	792.18
Proceedings (Springer)	1395.81
Reimbursement	29.27
Fees	17.85
Total	2.235.11
Balance	4,395.49

Paypal	
Income	$US
Membership	8,576.00
Total	8,576.00
Expenses	
PayPal Service Charges	339.40
Transfer to Canadian Account	5,537.10
Student Bursary	500
Total	9,839.40
...continued in next column	

...continued from previous column	
Balance	(1263.40)

Assets in Canadian Funds	
Cash, TD Canada Trust Can. Account	$CAN
Balance (12/31/2019)	19,464.40
Income - Expenditure 2020	(-165.00)
Total (Balance as of 12/31/2020)	19,299.49

Comments:

The Society has three accounts. A TD Canada Trust account for Canadian funds (CDN), a TD Canada Trust account for American funds (USD), and a PayPal account. The two bank accounts are used to deposit income or pay expenses in the appropriate currency. For example, journal subscriptions are paid in US dollars. Memberships paid by cheque can be in CDN or USD. The PayPal account is used to collect membership dues and journal subscriptions via the Internet; the PayPal account is kept in Canadian dollars.

Gregory Lavers

CSHPM Online Colloquia

Since summer 2020 the CSHPM has organized an online colloquium series to continue connecting its members with each other and with shared topics of interest. Thanks to the ongoing support of our membership we have maintained an average of thirty-five participants per session as we approach one year of virtually programmed activities. The talks we have held are as follows:

1. Karine Chemla (CNRS), "The shaping and reshaping of languages and texts for mathematical activity: Views from China"
2. Brenda Davison (SFU), "Divergent series and Numeric Computation"
3. Jamie Tappenden (Michigan, Ann Arbor), "Frege on Computation and Deduction: Herbart, Fischer and Aggregative, Mechanical Thinking"
4. Jean-Pierre Marquis (U. Montréal), "On Mathematical Style"
5. Valérie Lynn-Therrien (McGill), "On Counting as Mathematical Progress: Kuratowski-Zorn's Lemma and the Path Not Taken"
6. David Orenstein (Toronto board) & Michael Barany (Edinburgh), "Was the 1924 Toronto International Mathematical Congress a Success? A Debate"

7. Silvia De Toffoli (Princeton), "A Fallibilist Account of Mathematical Justification"
8. Nikita Agarwal (Bhopal), "Life and works of Maryam Mirzakhani: The Master Artist of Curved Surfaces"
9. Andrew Aberdein (Florida IT), "Straight from the Book: Erdős and the aesthetics of proof"
10. Dora Musielak (Texas, Arlington), "Prime Mystery: Sophie Germain and Fermat's Last Theorem"
11. David Wascek (McGill), "Notational differences, exploration and discovery in mathematics"
12. Lauren Siegel (MathHappens Foundation), "Primary sources and mathematical artifacts can inspire creative presentations for outreach projects"

The next talks will take place on 23 April (with Emmylou Haffner, Paris) and on 21 May (with Jemma Lorenat, Pitzer).

Nic Fillion

BSHM/CSHPM 2021 Meeting Program

The following draft schedule and program outlines speakers and titles for live virtual sessions. Q&A sessions follow screenings of the pre-recorded presentations. Please note this schedule and list of speakers is still being finalized at this time. For registration and the most recent information about the meeting go to `http://www.mcs.st-andrews.ac.uk/bshm-cshpm/index.shtml`.

Monday, 12 July 2020

14:00 Plenary talk by Brendan Larvor

16:00 *From Euclidean to Hilbertian practice: the theories of plane area*, Eduardo N. Giovannini; *The mathematical use of graphic position in C. F. Hindenburg's combinatorial school*, Anna Kiel Steensen; *TBA*, Henrik Kragh Sørensen, *Continuing Work on Mario Pieri*, James T Smith, *Thomas Eric Peet, historian of mathematics*, Christopher Hollings; *Mathematical commentary as a mathematical milieu*, Athanasia Megremi, *'As if their knots were letters': Uncovering Analogy in Colonial Accounts of Andean Khipu Mathematics*, Manuel Medrano.

17:00 *Epistolary Mathematics: Production, negotiation, and circulation of mathematical knowledge in letter correspondence*, Dalia Deias, Simon Dumas Primbault, Nicolas Michel and Brigitte Stenhouse; *Bryn Mawr College, 1885-1940: The People, Places, and Practices that Helped One Institution Thrive*, Madeline Polhill; *Carathéodory, the University of the Aegean, and a Sense of Place*, John Barthell and Charlotte Simmons; *Polish and French Mathematical Culture and the Axiom of Choice*, Valerie Therrien; *A geographical seclusion? On the Italian "school" of braids of Oscar Chisini between the 1930s and 1950s*, Michael Friedman.

18:00 *Mathematics and the Dialogue*, Deborah Kant and Benjamin Wilck; *Life of pie: William Playfair and the advent of statistical diagrams*, Chris Pritchard; *Napier's Rules in US H.S. Trigonometry, a history*, Hagiopian; *Corrupt Land Inspectors: Solving equations with picture-language in ancient Mesopotamia, a dialogue*, Hitchcock; *Analysis and Synthesis in Robert Simson's The Elements of Euclid (1756)*, Amy Ackerberg-Hastings, *Agnesi vs. Colson: Did Place Matter?*, Cynthia Huffman; *From Proclus to Albertus Magnus: Transmission of a collection of "proofs" of Euclid's postulates*, Gregg De Young.

19:00 Plenary talk by Valeria Giardino

Tuesday, 13 July 2020

14:00 Plenary talk by Evelyne Barbin

15.00 *"Entrance into All Obscure Secrets": A 90-minute workshop on bringing episodes in the history of mathematics to the classroom by means of theatre, incorporating a short play set in an ancient Egyptian scribal school*, Gavin Hitchcock;

16:00 *Informal Formalization*, David Dunning, Henning Heller, Jenne O'Brien and Tabea Rohr; *British and German applied mathematics around 1900: Some commonalities and some differences as exemplified by Henrici, Whittaker, and von Mises*, Reinhard Siegmund-Schultze, June Barrow-Green and Alison Maidment.

17:00 *Clairaut Repeals the Inverse Square Law*, Lawrence D'Antonio; *Euler's expansion of cos x function*, Biaszczyk; *Leading to Poncelet: A story of collinear points*, Christopher Baltus; *The Practices of Mathematical Antiquaries in Early Modern Britain*, Richard Oosterhoff, Alexander Corrigan, Lewis Ashman and Louisiane Ferlier.

18:00 *Notational naturality in Leibniz and Lagrange*, David Waszek; *Making sense of complex numbers: A case study of explanation and understanding in mathematics*, Joachim Frans; *Formal Rigor and Mathematical Environments*, Zoe Ashton; *Feature Lan-*

guage and the History of Algebra, Madeline Muntersbjorn; *The role of faculty development in supporting adoption of curricular modules to teach undergraduate (tertiary) mathematics using primary historical sources*, Diana White; *Teaching a course in complex variables with Primary Source Projects (PSPs)*, David Ruch; *Using the Story of Calculus to Teach Differential Calculus*, Robert Rogers; *A Story of Real Analysis: An Open Educational Resource Textbook*, Eugene Boman; *From the Local to the Global: The Evolution of Statistical Thought and Practice in the Eighteenth Century*, Adam Dunn; *"Any scheme of allowing for errors is a makeshift for removing them": Francis Galton, John Venn and the unofficial Cambridge Anthropometric Laboratory*, Lukas M. Verburgt; *Latin squares at Rothamsted Experimental Station in the time of Fisher and Yates*, R. A. Bailey.
19:00 Plenary talk by Robin Wilson

Wednesday, 14 July 2020

14:00 Plenary talk by Colm Mulcahy
16:00 *Karen Hunger Parshall's Studies on Mathematical Invariance: A Historical-Methodological Approach Based on Transduction*, Sandra Visokolskis; *Convergence and Divergence in the Works of François-Joseph Servois*, Robert Bradley; *Algebraic versus geometric thought and expression in the early calculus*, Viktor Blåsjö; *Ghosts of Mathematics Past*, Anne Duffee; *Bibliographic globalization in the history and historiography of modern mathematics*, Michael Barany; *Greek Women in Mathematics: From Antiquity to AI*, Alexandra Kapatou and Mary Gray; *Constantin Carathéodory and the Theory of Canonical Transformations*, Craig Fraser; *The mathematical papers of RFA Lee*, Duncan Melville; *Pedro Padilla and his Military Course of Mathematics (1753-56): Teaching Higher Geometry in Eighteenth-Century Spain*, Monica Blanco; *How Ordinary-Extraordinary? Use of Continued Fractions in 18th-19th c. America*, Marion Alexander.
17:00 *Linguistic hospitality in mathematical works: Arabic, Persian, Chinese, and Sanskrit*, Anuj Misra, Hasan Ameni, Sajjad Nikfahm-Khubravan, Osama Eshera, Miao Tian and Baichun Zhang; *Nordic Cooperation on Modern Mathematics at Primary Level 1960-68*, Kristín Bjarnadóttir; *Developing an online exhibition of selected mathematical works from Marsh's Library, Dublin: An early modern library through the eyes of undergraduate mathematics students*, Maurice Oreilly; *The Genesis of American-mathematics.org: A People, Places, and Practices Classroom Experience*, Dumbaugh & Polhill.
18:00 *Geometry and analysis in José Anastácio da Cunha's fluxionary calculus*, João Caramalho Domingues; *All the Lines: Cavalieri's "Geometria indivisibilibus" and the End of the Jesuits*, Abe Edwards; *Mathematics and Morality*, David Horowitz; *On the first Portuguese book on mathematics*, Jorge Nuno Silva and Pedro Freitas; *Early Computations on the Cycloid*, Maria Zack; *Reading the Culture of Machines Bordering Early Mechanics and Mathematical Practices: Influential Heritages within the Relationship Physics-Mathematics into History*, Raffaele Pisano; *From latitudo formarum to graphs of functions*, Daniel Otero; *'Dr Gregory's scheme': Reforming mathematics at the English universities around 1700*, Philip Beeley; *Exploring the Influence of Colin MacLaurin*, Sam Riley; *A Cambridge Correspondence Course in Arithmetic for Women*, James Tattersall and Shawnee McMurran.
19:00 Plenary talk by Karen Parshall

Thursday, 15 July 2020

14:00 Plenary talk by Edmund Robertson
16:00 *Hugh MacColl's Logic: Christine Ladd-Franklin's Remarkable Opinion*, Francine Abeles; *Hugh MacColl, mathematical reviewer for "The Athenaeum"*, Amirouche Moktefi; *MacColl's reflections on logical notations*, Dirk Schlimm; *Mathematicians, Astronomers and Innovators at the University of St Andrews in the Early Modern Period*, Meredith Houlton, Philippe Schmid, Ella Duréault and Pilar Gil; *Sir William Rowan Hamilton: "a studious and happy life"*, Anne van Weerden; *"On Land Measure": Lincoln's Hobbesian road to Euclidean method*, O'Shea
John Cabot—his places and practices, Gropp; *John Couch Adams - From Neptune to St Andrews*, Kenneth Falconer.
17:00 *Invisible power: Journal editors and the publication of mathematics*, Jemma Lorenat, Della Dumbaugh, Laura Turner, Sloan Despeaux and Marjorie Senechal.
18:00 *Real Numbers in Transition: Aspects of the 18th and 19th centuries*, Eduardo Dorrego López , José Manuel Ferreirós Domínguez and Elías Fuentes Guillén; *The Mathematical Network of Nicolaus Granius (1569-1631): Mathesis, Copernicanism and Scribal Technology in Helmstedt*, Stefano Gulizia; *Circu-*

lation of Auguste Comte's mathematical texts between France, Brazil and Chile at the end of Nineteenth Century, Rogério Monteiro de Siqueira; *Three Generations of Printers and Almanac Authors in Seventeenth Century Mexico*, Bruce Burdick, Verity Allan, Mary Monro, Georgina Ferry, and Ursula Martin.
19:00 Plenary talk on BSHM 50th birthday by Robin Wilson & Raymond Flood
20:00 Conference closing and BSHMs 50th Birthday Party

Report on CSHPM at CMS winter meeting

In Craig Fraser's talk about *Henri Poincaré's Development of Hamilton Jacobi Theory*, we were surprised to find that Jacobi produced an entire program of work in Calculus of Variations in his later life for which he published results without proofs, likely due to ill health. Fraser expects a co-published article with Michiyo Nakane in a year or so. Interested members may wish to read the recent *CMS* Notes column coauthored by Fraser and Nakane on this joint research project (see `notes.math.ca/en/issue/53-2-march-april-2021/`).

Yelda Nasifoglu's talk about the changing nature of mathematical diagrams in the seventeenth century discussed how editions of Euclid were produced and printed. For instance Ratdolt's *Euclid* required several revisions to place the diagrams in the best relationship to their related textual elements. Nasifoglu argued that the manner in which these books combined text and image set a precedent the next two hundred years of mathematical book composition. The editor draws the reader's attention to new book titles released from the *Reading Euclid* project (`http://readingeuclid.org`, of which Nasifoglu is a part), in the new publications section of announcements listed in this issue.

William Dou's talk *What Does Aligning Mean? Practices of Justification across Chinese Logic and Mathematics* suggested that the Mohists, ancient Chinese logicians, borrowed from mathematical practice to develop their systems of logic. While mathematical concepts developed from astronomical instance, ancient Chinese astronomers and mathematicians also shared models of justification or explanation. Using Karine Chemla's account of the practice of justification in Chinese mathematical texts, Dou concludes that justification in astronomy was similar, and that it is probable Mohists modeled their non-mathematical logic on the practices of mathematical justification available to them.

Mariya Boyko delivered a talk from her ongoing research into the history of mathematical education in the former U.S.S.R. Her focus was on the role of socialist competition on the shaping of Soviet mathematics education. Following Khrushchev's broader educational reforms after 1958, Kolmogorov reformed mathematical curriculum to be more conceptual and abstract. Teachers found the reforms challenging to implement while students found it difficult to master. Boyko claimed socialist competition made this failure a political failure rather than an academic one. *Quantum Magazine* was launched to help enrich students with extra mathematical reading material. However, its advanced concepts and the conceptual leaps taken in the presentation of the material only raised, not alleviated, mathematical anxiety in the period.

Maryam Vulis presented a talk about Zygmunt Janiszewski (1888 -1920). One of the main figures in the Polish school of mathematics, alongside Banach, Sierpinski and Josef Pozyna, Vulis argued Janiszewski's vision of Polish mathematics challenged his peers to go beyond being mere receivers or consumers of mathematical research from foreign centers. Through specialization and focus, Poland was able to create a hub of mathematicians leading the world with results in the areas of logic and set theory. Founding of the journal *Fundamenta Mathematicae* and developing the department of mathematics at University of Warsaw were key results of these efforts. Janiszewski died of Spanish flu in 1920 at the age of 31, subsequently donating his body to science.

Tom Drucker's presentation looked at Charles Dodgson's (Lewis Carroll's) *Euclid and His Modern Rivals*. Drucker asked if Dodgson meant this book to be taken seriously given the ghost of Euclid, a typical German schoolmaster, and other curious characters make appearances. These fictional figures disparage the "modern rivals": thirteen or so offending nineteenth century geometry textbooks. Drucker argued Dodgson's defense of Euclid was dead serious despite its humour, and that Dodgson's loyalty to Euclid aligned with his religiously informed belief that its use in math education best suited strengthening not just the mind, but the soul.

Maritza Branker's talk looked at the forgotten legacy of Euphemia Lofton Haynes. Haynes was born into a Washington family earning her M.Ed. from the University of Chicago in 1930. When she graduated with a PhD in algebraic geometry from the Catholic University of America in 1943, she was the first black woman to earn this distinction in the United States. Martha, as she was known, went on to teach mathematics for elementary and secondary school students as well as teaching part-time at Howard University. As a light-skinned black woman of mixed racial heritage, she neither belonged completely to the black or white community. Haynes lobbied to end the tracking system that recreated racial segregation in integrated school settings and worked for better opportunities for future students of colour. Branker concluded Haynes' advocacy for racial equity in education is her most important legacy.

Talks were also given by Juan Fernández González and Dirk Schlimm, *From a Doodle to a Theorem: A case study in mathematical discovery*, exploring the narrative behind the discovery of the Midpoint Path Theorem. In Margaret E. Schotte's talk *'Demonstrate all this with diagrams': Recovering mathematical practice from early modern navigation exams*, the state of mathematics as discovered through reading early navigation exams was described. David Waszek also gave a talk, *From notational change to substantial discovery: Leibniz, Bernoulli, and the exponential notation for differentials*. Unfortunately the author was not present at these talks to prepare a summary of the contents.

Sylvia Nickerson

Homage to Sandford Fleming

Beginning in July 2020 our society has conducted a series of virtual Colloquia. Topics have been fairly evenly balanced between history and philosophy of mathematics.

Most of these talks began at 11:00 a.m. Pacific Time (Daylight or Standard) at the host institution Simon Fraser University in British Columbia. For attendees residing in walking distance of the University of Toronto, talks began at 2:00 p.m. Eastern Time (Daylight or Standard). For members of the BSHM located near the University of St. Andrews or Cambridge University, talks began at their local time of 7:00 pm British Time (Summer or Regular).

In the virtual era audiences are not restricted to any particular part of the world. We can discover time zones beyond North America or the United Kingdom in the Royal Astronomical Society of Canada's *Observer's Handbook*. The section on Time has a World Map of Time Zones appearing in the 2021 edition.

The opportunity for the CSHPM to embrace internationalism was seized on 11 December when Nikita Agarwal from the University of Bhopal, India, delivered a talk on the Iranian mathematician, Maryam Mirzakhani. Prof. Agarwal enlightened us at 7:30 a.m. Indian Standard Time while Nic Fillion chaired the meeting at 6:00 p.m. Pacific Standard Time. This author joined the audience at 9:00 p.m. Eastern Standard Time (EST). Few to no members of the BSHM attended at their local time of 2:00 a.m. British Time, Greenwich Mean Time, or Universal Coordinated Time/Universal Time Coordinated (UTC) on 12 December.

Intercontinental coordination of scholarly events is challenging but possible thanks to the Canadian scientist and engineer Sandford Fleming. Fleming invented the concept of standard time zones. If we lacked UTC every attendee would have had to determine at what local solar time to begin attending an event at 7:30 a.m. Bhopal time or 6:00 p.m. suburban Burnaby time.

The *Observer's Handbook* from 2021 lists times of sunrise and sunset. Without UTC, Nic Fillion would have had to calculate his local time as being 12 minutes earlier than Pacific Standard Time and attendees near University of Toronto would have had to know to begin attending 18 minutes earlier than EST. Audience members from the Université du Québec à Rimouski (UQÀR) would have had to add 26 minutes to EST. In fact without Fleming's efforts there would't be any standard times to compare local times against. For these accomplishments and more, Sandford was knighted by by Queen Victoria in 1897.

David Orenstein

Report on BSHM Xmas Meeting

This year's Christmas meeting for the BSHM took place on 3 December 2020. An unusually impressive view into the home libraries of a number of attendees was on display as around fifty or so participants logged in from the UK, Canada, USA and beyond. Each talk was broadcast from a pre-recording with

live Q&A following the talk. We thank Isobel Falconer for organizing this productive and interesting meeting in which several talks examined the history and legacy of the BSHM and its influence on the historiography of mathematics on the occasion of its fiftieth anniversary year.

Robin Wilson, *The BSHM: The first fifty years* In July 1971 the first meeting of the BSHM took place. Subsequently the society formed with tripartite aims to encourage and share research, to develop a public awareness of history of mathematics, and to promote the use and application of history of maths in education. Wilson summarized events and developments of the society including highlights from meetings and conferences, publications from the BSHM newsletter to BSHM*Bulletin* to *British Journal for the History of Mathematics*, as well as society awards, prizes and competitions. Joint efforts and collaborations with the CSHPM, Greshham College, Birkbeck College and Oxford were noted as significant achievements. Wilson singled out Ivor Grattan-Guinness and John Fauvel (who introduced HIstory of Mathematics in EDucation, or HIMED meetings), as significant figures in the society who shaped and innovated its direction over the years.

Raymond Flood, *John Fauvel: Life, labours and legacy* John Fauvel's life and influence over the BSHM were warmly remembered in Raymond Flood's talk. Fauvel encouraged national and international cooperation in history of mathematics and history of mathematics in education. He edited or co-edited ten books, he took up many international speaking engagements during his career, and his work exhibited a provocative style and wicked sense of humour. Fauvel's approach to teaching history of math was sourced-based, and he contributed significantly to the development of the Open University's course MA290 in history of mathematics. He built the BSHM community while alive and donated generously to the society after his death.

Steve Russ, *Onwards and Outwards* Russ meditated on the history of the British Society for the History of Mathematics over the past fifty years and looked forward to the next twenty-five, when, in 2046, the BSHM will celebrate its seventy-fifth anniversary. Russ reflected on his role in the BSHM organizing of the HIstory of Mathematics EDucation (HIMED) conference in 1990, an event he looked backed on and dissected from today's standpoint.

June Barrow-Green, *"I found out myself by the triangles"* The mathematical progress of Robert Leslie Ellis (1817-1859) was elucidated, from his early tutelage in geometry and coaching at Cambridge to his winning of the Wrangler distinction. Barrow-Green observed that Ellis the student outperformed his early tutors and precociously read Legendre and Peacock on algebra without any particular guidance. At Cambridge he laboured under its proscriptive approach to mathematics. But like many before and after him Ellis saw ultimate success in the Tripos exam as a necessary evil for jumping rank in British society, an agency specially bestowed on the holder of the title, Senior Wrangler.

Philip Beeley, *Whither the history of mathematics? Historical reflections on a historical discipline* Beeley's history of the history of mathematics seminar at Mathematische Forschungs Institut, Oberwolfach examined its leadership by Joseph Hoffman and Oskar Beeker. Hoffman advocated for a precise and internal approach to the subject where the history of mathematics was a careful history of problems and solutions. Hoffman's seminar at Oberwolfach nurtured a whole generation of historians including Henk Bos, Karin Reich, Michael Mahoney and others. Beeley described how the sources for research expanded to include letters, diaries, archives, and a greater emphasis on social and institutional context. Mehrten's work on the history of mathematics under German socialism left some adherents of Hoffman's seminar believing this "son" of Oberwolfach had left the scope of history of mathematics behind.

Tony Mann, *History of Mathematics: Dealing with the past* Mann raised issues about cultural bias and stereotyping in mathematics, history of mathematics and mathematical pedagogy. His questions about weather a cultural revision or purging would be the most ethical course of action given today's culturally diverse student body lead to much discussion during and after the talk. Comments and pointed opinions on the topic surfaced in the chat while Mann's recorded presentation played. The results of polling Mann had done with BAME (Black Asian Minority Ethnicity society) at University of Greenwich revealed students themselves were similarly divided on this aspect of the mathematics curriculum.

Craig Fraser, *John Charles Fields and Canadian Mathematics* Fields is best known as the person after whom the Fields Medal for outstanding mathematical achievement is named. The talk revealed Fields' character as dedicated to his passions of mathematics and international travel. Fraser characterized Fields' career as one of academic entrepreneurship, citing his work as a government lobbyist and ICM 1924 host. Fraser's assessment was Fields was unsuccessful in achieving many of the aims he pursued. Fields' one doctoral student, Samuel Beatty, was able to go farther than Fields ever was able to do, securing Fields' legacy in the next generation. Beatty helped bring about the necessary conditions for a mathematical research community to grow nationally and at the University of Toronto, both as a teacher, researcher, and joint founder of the Canadian Mathematical Society in 1945.

Sylvia Nickerson

Off the Shelf: Algebra textbooks from the 1960s and 1970s

After looking at *Vector and Tensor Analysis* by Homer Vincent Craig from 1943 in the last issue, skip forward about thirty years and hop sideways from analysis to algebra.

My home library's mathematics collection includes several beginning university algebra textbooks from the 1960s and 1970s. Let's look at four of them, two from the United States, one from France (in English translation) and one from what was then the USSR (in French translation).

Godemont's *Algebra*, 1968

There's no better place to start then Roger Godemont's *Algebra*, the 1968 English translation of the 1963 original French *Cours d'Algèbre*. The legendary Book Village on Queen Street West supplied this particular copy. *Infinitesimal Calculus* by Jean Dieudonné (of Bourbaki fame) was issued by the same publisher. In the bibliography Godemont discusses other similar algebra textbooks, with comments on a few collections of exercises. This includes a look at another of our authors, A. G. Kurosh. About Kurosh's *Kurs vysshei algebry*, he writes, "This rather classical account, in which modern concepts (vector spaces, fields, groups) are introduced when there is practically no longer any need for them; some people will find to their liking." He also cites Bourbaki's *Eléments d'histoire des mathématiques*, ending with a pointed comment on Bourbaki: "Rather difficult to read, since the author does not write basic French."

The oldest works cited are A. A. Albright's *Introduction to Algebraic Theories* and G. Birkhoff and S. MacLane's *A Survey of Modern Algebra*, both from 1941. The former is observed as "A classical elementary textbook, highly concentrated and rigourous." The latter is also appreciated, "Covers almost all the ground of the present work, and also the theory of algebraic filed extensions. . . . A very readable modern account, with many (generally very easy) exercises." For exercises, Godemont goes back to the Soviet literature. Most of the numerical exercises were taken from D. K. Faddeev and I. S. Sominski's 1961 *Sbornik zadach povysshei algebre* or I. V. Porskurjakov's 1962 *Sbornik zadach po lineinoi algebre*, 980 and 1753 exercises respectively.

Clearly aimed originally "to meet the needs of French undergraduates, it covers the beginning algebra course in an American University and the average Honours mathematics course in a British University." Instead of perfunctory introductions to set theory from so many calculus, algebra, and statistics textbooks, pages nineteen through one hundred and twelve are devoted to a thorough look at set theory, going back to foundational basics of logic before reaching set membership on page forty two.

Linear Algebra is dealt with in parts four and five, finite dimensional vector spaces and determinants. But then part seven focuses on the reduction of matrices, eigenvalues, canonical forms, Hermitian Forms. Linear Algebra is initiated by homomorphisms and modules over a Noetherian ring. Is this supposed to be for beginners? Godemont's abhorrence for Bourbaki appears suspicious.

Stoll and Wong's *Linear Algebra*, 1968

By contrast Robert R. Stoll and Edward T. Wong deal directly with the practical meat of first year algebra. They both taught in the department of mathematics at Oberlin College. University of Toronto's MAT140 course used it in the year 1969-70 for the course textbook when it cost $9.80 hardcover with a yellow, white, and black dust jacket. Stoll and Wong feel their book will stand out because "whenever possible, definitions and theorems are stated in a form which is independent of the dimension of the vector space"

and because of their early introduction of inner product spaces and associated metric concepts. A familiarity with calculus and linear differential equations was recommended for tackling the exercises. While most of *Linear Algebra* has next to no references, chapter nine has several applications of linear algebra including linear differential equations, economics, chemistry, physics and chemical physics. There's a final, six page appendix on set theory that's a far cry from Godemont. Stoll and Wong impart set equality, set union, intersection and complement; union and intersection of a collection of sets; ordered pairs and thus ordered n-tuples; definitions of relations and functions; partial ordering and Zorn's Lemma.

Kurosh's *Cours d'Algèbre supérieure*, 1973

A. G. Kurosh's *Cours d'algèbre supérieure* saves group theory to its final chapter nine which deals with definitions and examples, subgroups with special subgroups and Abelian groups, focusing on their direct sums and finite Abelians. Kurosh's remaining pages are overwhelmingly devoted to systems of linear equations and polynomials, using matrices, determinants, and vectors to solve them. The preface described the book as providing "a relatively quick way to go from elementary algebra to the abstract methods of modern algebra." It cost $9.95 in 1985 from The Book World on College Street, the bookstore of the Communist Party of Canada. It was wrapped in a red dust jacket.

Fraleigh's *A First Course in Abstract Algebra*, 1967

John B. Fraleigh text offers a dedication, *To my father Percy A. Fraleigh*, in his 1967 *A First Course in Abstract Algebra*. It cost $5 at an annual University College Book Sale. His goal was "to provide a text from which an average student of mathematics can acquire as much depth and comprehension in his study of abstract algebra, exclusive of linear algebra, as is possible in a first course."

John B. Fraleigh (1967), *A First Course in Abstract Algebra*, Addison-Wesley, Reading, Massachusets, xvi + 447 pp. plus 9pp. index and 3pp. biblio.

Roger Godemont (1968), *Algebra*, Hermann, Paris / Houghton Mifflin Boston, 638 pp. , 4pp. annotated biblio., 10pp. index, 3pp. notation index. Translation of *Cours d'Algèbre* (1963), Hermann, Paris.

A.G. Kurosh (1973), *Cours d'algèbre supérieure*, Édtions de Moscou, Moscow, 447 pp., 5pp. index. Translation of *Kurs vysshei algebry* (1971), Moscow.

Robert R. Stoll and Edward T. Wong (1968), *Linear Algebra* x + 326 pp., 1p. symbols, 5pp. index

James Alexander Green (1965) *Sets and Groups*, Routledge and Kegan Paul, London, ix + 84 pp, diagrams.

David Orenstein

Help (Still) Wanted

The Society is looking for an ongoing volunteer: Webmaster.

The responsibilities of the webmaster include hosting and maintaining the CSHPM website (`www.cshpm.org`), updating the online membership form each year, moderating the Council and Announcement list-servs, creating the online ballot for biennial elections, and supervising the CSHPM Facebook and Twitter accounts. For more information or to volunteer, contact Mike Molinsky, *michael.molinsky@maine.edu*.

John Corcoran (1937-2021)

The philosopher and logician John Corcoran died on the 8th of January. He spent almost all his teaching career at the University of Buffalo. Starting in 1970 he was one of the founders of the Buffalo Logic Colloquium whose membership crossed the border with Canada. He had gotten his doctorate in philosophy at Johns Hopkins in 1963 but was at home with highly technical arguments about foundations.

Corcoran was interested in the current state of logic and philosophy of mathematics as well as their history. Among the historical work for which he was best known were accounts of Aristotle and Boole, whom he saw through an Aristotelian lens. He advised eleven doctoral students, among them Cal Jongsma, Michael Scanlan, Stewart Shapiro, and George Weaver. These students became significant contributors to the field. He also sponsored an honorary degree for Alonzo Church from Buffalo.

Remarkably generous with his time and his papers, consulting him on matters to do with Boole one was rarely disappointed. In his later years he could be sharp with those with whom he disagreed, but only over matters of scholarship. He enjoyed spending time in Latin America, and died in Florida, but even on

vacation he was available for communication. Buffalo and the logic world has lost a scholar and a teacher.

Thomas L. Drucker

New Articles and Resources from *MAA Convergence*

Since 2004, *MAA Convergence* has been both an online journal on the history of mathematics and its use in teaching, and an ever-expanding collection of online resources to help its readers teach mathematics using its history. We highlight here some of our newest articles and resources for use in your classroom.

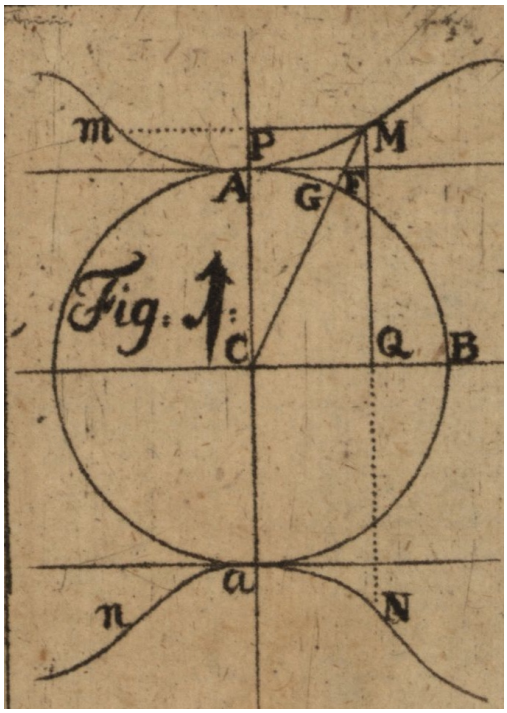

Figure 1: Clairaut's Figure 1.

In "The Four Curves of Alexis Clairaut," Colin B. P. McKinney and former students Taner Kiral and Jonathan Murdock provide a translation of a paper on families of algebraic curves written when Clairaut was only twelve years old. Dominic Klyve's "Euler's Letters to a German Princess: Translation and Betrayal" traces changes in the editions and translations of this well-known volume, offering a story that can be used in the classroom to remind students and instructors of the value of critical thinking. For a hands-on activity designed for preservice schoolteachers and others, check out "Converting the Old Babylonian Tablet 'Plimpton 322' into the Decimal System as a Classroom Exercise," by Antonella Perucca and Deborah Stranen.

Figure 2: Drawing of Babylonian Tablet HS 224.

In the ongoing "Series of Mini-projects from **TR**ansforming **I**nstruction in **U**ndergraduate **M**athematics via **P**rimary **H**istorical **S**ources," the TRIUMPHS team has added two more mini-Primary Source Projects (mini-PSPs):

- "Babylonian Numeration: A Mini-Primary Source Project for Pre-service Teachers and Other Students," by Dominic Klyve;
- "Wronskians and Linear Independence: A Theorem Misunderstood by Many – A Mini-Primary Source Project for Students of Differential Equations, Linear Algebra and Others," by Adam E. Parker.

Additionally, Danny Otero has added two episodes, "Ptolemy Finds High Noon in Chords of Circles" and "Varāhamihira and the Poetry of Sines," to his series of curricular units based on primary source texts for use in teaching and learning trigonometry. Our series of reprints from NCTM's *Mathematics Teacher* has been augmented by "The 'Piling Up of Squares' in Ancient China," by Frank Swetz, and "The Evolutionary Character of Mathematics," by Richard M.

Davitt. Both articles feature new guest reflections by Joel Haack and Judy Grabiner, respectively. Visit our home page for access to lists of all of these series, translations of original sources, and other resources: `maa.org/press/periodicals/convergence`.

Interested in contributing? We'd love to hear from you at *convergence@maa.org*! *Convergence* publishes expository articles on the history of topics in the grades 8–16 mathematics curriculum; translations of primary sources; classroom activities, projects, or modules for using history to teach mathematics; and classroom testimonials after applications of such activities, projects, or modules. Guidelines for Authors may be found on the journal's website, linked above.

Janet Barnett & Amy Ackerberg-Hastings

David Charles McCarty (1953-2020)

David McCarty (who sometimes wrote under the name "Charles McCarty") died unexpectedly on the 25th of November. He was active at Indiana University in the Departments of Philosophy, Computer Science, and the History and Philosophy of Science, and his course offerings at IU were equally extensive. He received his doctorate from Oxford and taught at a number of other institutions before coming to Bloomington. David was known for contributions to a variety of areas in logic and philosophy of mathematics, including constructivism, intuitionism, and realizability. His extensive work on the Church-Turing Thesis was put at the disposal of all who asked, and he was proud of the accomplishments of his students. He held visiting appointments in a variety of countries and published over one hundred and twenty papers in the course of his too brief career.

The last few years of his academic life were devoted to the work of Paul duBois-Reymond, and his edition of duBois-Reymond's work is forthcoming from Oxford University Press. His library is being donated to Wolfson College (Oxford) and it will be hard not to think of Korngold's Violin Concerto in years to come without bringing David to mind. An especially enjoyable lunch with him at the Notre Dame Workshop in Philosophy of Mathematics a few years ago will also linger in the memory.

Those interested in more first-hand recollections can find them at the Memory Book created by the Department of Philosophy at Indiana University: `philosophy.indiana.edu/documents/memory-book-david-charles-mccarty.pdf`

Thomas L. Drucker

Quotations in Context

> "It is true that a mathematician, who is not somewhat of a poet, will never be a perfect mathematician."

The Second International Congress of Mathematicians was held in Paris on 6-12 August 1900, and is perhaps best known for the famous speech by David Hilbert promoting a list of unsolved problems to be tackled in the twentieth century. But another speaker was the Swedish mathematician Gösta Mittag-Leffler, and his paper "Une Page de la Vie de Weierstrass" was published on pages 131-153 of *Compte rendu du deuxième Congrès International des Mathématiciens* in 1902. The paper discussed the shared history of Sofia Kovalevskaya and Karl Weierstrass. Many of the letters that Weierstrass sent to Kovalevskaya between 1874 and 1890 were obtained by Mittag-Leffler, and he included excerpts from nine of these letters in the paper, including one from 27 August 1883 which contains the topic quotation of this column.

In the letter to Kovalevskaya, Weierstrass compared various older mathematicians of his experience in an attempt to justify why he had focused so much time on younger mathematicians rather than colleagues of his own generation. He started with Eduard Kummer, who Weierstrass characterized as being entirely focused on his own narrow area of research, and either opposed or at best indifferent to new ideas in the rest of mathematics.

By way of contrast, Weierstrass moved to Leopold Kronecker, who he praised for being widely informed in all areas of mathematics. But while he lauded Kronecker's broad mathematical interests and high intelligence, Weierstrass claimed that Kronecker's depth of understanding in the areas outside of his specialty was lacking. Weierstrass stated that Kronecker's problem was a lack of imagination or intuition, and made the disturbing claim that this deficiency was particularly prevalent among the "Semitic tribe." It was as part of this same sentence in the letter that the familiar quotation appeared:

> "Dazu kommt ein Mangel, der sich bei vielen höchst verständigen Menschen, namentlich

> bei denen semitischen Stammes findet, er besitzt nicht ausreichend Phantasie (Intuition möchte ich lieber sagen) und es ist wahr, ein Mathematiker, der nicht etwas Poet ist, wird nimmer ein vollkommener Mathematiker sein."

Weierstrass followed with several comparisons between mathematicians with and without Jewish ancestry, and asserted that Niels Abel was superior to Carl Jacobi and that Bernhard Riemann was superior to both Gotthold Eisenstein and Johann Rosenhain. He offered a final comparison, where he chose Hermann von Helmholtz over Gustov Kirchhoff (then immediately admitted that the latter had not a "droplet of Semitic blood").

The quotation of this column is one that I've seen repeatedly over my entire professional life, and it had always struck me in the past as very idealistic and uplifting. My naive assumption before beginning the research for this column was that I would find the quotation within a discussion of the importance of the humanities to the study of mathematics, but I obviously found something very different indeed, and learning that the quotation instead appears in a context surrounded by racist stereotyping of Jewish mathematicians was a bitter disappointment.

Mike Molinsky

Peter M. Neumann (1940-2020)

Peter Neumann died of COVID-19 on 18 December 2020. He was the son of mathematical parents, Bernhard and Hanna Neumann, who were mainstays of the Australian mathematical establishment. He did his undergraduate work at Queen's (Oxford) and proceeded to get his doctorate at Oxford in 1966. He spent his academic life at Queen's and served the college in a variety of capacities. He retired in 2008 but remained active in mathematics and its history.

He was the co-author of the Mathematical Institute's module for undergraduates in history of mathematics. In the course of his career he supervised the work of thirty-eight doctoral students. His specialty within mathematics was Group Theory, so it's not surprising that he would turn his attention to the works of Galois. His edition of Galois's admittedly not expansive corpus has been highly praised.

He was a significant presence in the British Society for the History of Mathematics whose Neumann Prize is named for him. I was fortunate enough to be in the audience for his lectures to first-year students in mathematics when I was an undergraduate forty-nine years ago. His lectures were stylish and attentive to detail, qualities that applied to his career at large.

Thomas L. Drucker

New Members

Congratulations to the following new members who have joined the Society since our last Bulletin. We look forward to your contributions.

Dr. Simon Allen
Bexhill-on-Sea
UK

Joseph Auslander
Washington, DC
USA

Dr. John Belling
Middlesex
UK

Robert Corless
London, ON
Canada

Tom Donaldson
Burnaby, BC
Canada

Hermann Josef Eberl
Guelph, ON
Canada

Landon Elkind
Edmonton, AB
Canada

Jacqueline Feke
Toronto, ON
Canada

Ioanna Georgiou
London
UK

Georgios Georgiou
London
UK

Ruoxi Li
Pittsburgh, PA
USA

Jemma Lorenat
USA

Betty Mayfield
Frederick, MD
USA

Hesam Mohamadi
Canada

Dora E. Musielak
Arlington, TX USA

Stephen Perry
USA

Penny Reynolds
Gainsville, FL
USA

Fiontan Roukema
Sheffield
UK

Lauren Siegel
Austin, TX
USA

Muhammed Hamza Waseem
Oxford
UK

Terry Bristol
Beaverton, OR
USA

Peter Ullrich
Bünde
Germany

From the Editor

This issue looks both back and forward, recapping several meetings and talks of the BSHM and CSHPM, as well as noticing the passing of important members of the history of math community. We also have an article remembering the creation of Universal Coordinated Time/Universal Time Coordinated, and how vital time coordination has been in a year of online global conferencing. I have also included a Q&A with science journalist Siobhan Roberts, which I hope you will enjoy.

Our newsletter's next submission deadline is 1 October 2021. The editors continue to seek news items of interest to historians and philosophers of mathematics and personal and professional announcements. We also welcome suggestions for memorials, reports on conferences relevant to historians and philosophers of mathematics, book and web reviews, and informative or thought-provoking column-style articles. I will continue to honor submissions for ongoing column series including Models of Mathematics, Off the Shelf, and Mathematical Ephemera. I am open to new lines of investigation as well that members may wish the *Bulletin* take up. I would be interested to hear from younger scholars who are pursuing new lines of research or re-evaluating well travelled paths in new ways. Contributions of opinion or editorial style articles offering arguments or particular perspectives on the state of the field would be welcome. I am certainly open to the contributions of philosophers and encourage them to make this space their own. Write me your proposals.

Microsoft Word (please turn off its auto-formatting features such as "curly quotes") and LaTeX data files (not compiled PDFs) are easiest for the editors to deal with. We also prefer that image files be sent separately, rather than embedded into a Word or PDF document. Submissions may be sent to *s.nickerson@utoronto.ca*. The *Bulletin* reaches your hands or screen due to the continued labors of Eisso Atzema, Layout Editor; Maria Zack, Production Editor; Pat Allaire, Secretary; and Mike Molinsky, Webmaster. *Sylvia Nickerson*

About the Bulletin

The *Bulletin* is published each May and November by a team of 3 volunteers: Content Editor Sylvia Nickerson (s.nickerson@utoronto.ca), Layout Editor Eisso Atzema (eisso.atzema@maine.edu), and Production Editor Maria Zack (MariaZack@pointloma.edu). Material without a byline or other attribution has been written by the editors. Les pages sont chaleureusement ouvertes aux textes soumis en français. Comments and suggestions are welcome and can be directed to any of the editors; submissions should be sent to Sylvia Nickerson at the above email address. Members, readers and prospective contributors may also contact Sylvia by post. Direct correspondence to 115 Mary Street, Hamilton, Ontario, L8R 1K4, CANADA.