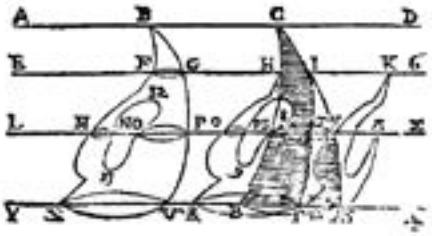
BULLETIN

CSHPM SCHPM



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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: **Maria Zack**, Point Loma Nazarene University, San Diego, CA 92106, USA, MariaZack@pointloma.edu
Vice-President: **Craig Fraser**, University of Toronto, Toronto, ON M5S 1K7, CAN, craig.fraser@utoronto.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** (see above). 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

I am not sure where the last two months have gone, but the fall term is well underway for all of us. With it comes the joy of working with students and the hours filled with grading, meetings and research. I hope that each of you are finding time to enjoy the many facets of your job or life in retirement.

It is hard to believe that it was five months ago that we were together in Montreal. I am thankful for all of those in our society and in CPA who arranged for such an interesting and stimulating meeting. Each time we gather I learn something new. I hope that you have marked your calendars for our 2019 meeting in Vancouver. Please watch for the call for papers in this issue and coming information about the special session on astronomy.

The newest volume of our *Proceedings* (2017) is hot off the presses and contains a great deal of interesting scholarship. As I write, the 2018 papers are going out to the referees for review and the whole looks to be another interesting volume with some really good work from a number of graduate students.

I have been working on an interesting project looking at the mathematics of the architect Daniele Barbaro (en.wikipedia.org/wiki/Daniele_Barbaro). I was drawn into this project by a friend who is an architect and an expert on Barbaro's architecture. This research is completely out of my area of expertise, and it is a constant reminder of the great pleasure that comes from learning something new and/or working out a difficult calculation. I hope that you have something as intriguing with which to fill your fall.

Maria Zack

Announcements

Peace to the memory of Michel Serfati, long-time member who passed away on his 80th birthday, September 30. Several CSHPMers spoke at his Séminaire d'épistémologie et d'histoire des idées mathématiques at the Institut Henri Poincaré over the 25 years Michel ran it. His most recent book, *Leibniz and the Invention of Mathematical Transcendence*, appeared this year from Studia Leibnitiana.

A full memorial is planned for our May 2019 issue. The first meeting of the seminar was held as scheduled on 17 October, featuring Michèle Artigue (Paris-Diderot), "Identifier et comparer le lexique pédagogico-didactique des enseignants de mathématiques : le projet international Lexicon."

Congratulations to Eamon Darnell and Aaron Thomas-Bolduc, recipients of the 2017 CSHPM Award for their paper, "Takeuti's Well-Ordering Proof: Finitistically Fine?"

Michael Cuffaro co-edited *Physical Perspectives on Computation, Computational Perspectives on Physics* (Cambridge, 2018). Robert H. C. Moir wrote one of the chapters. A 20% discount is available until April 2019 via `www.michaelcuffaro.com/files/pccp_discount.pdf`.

Jeremy Gray received the 2018 London Mathematical Society Hirst Prize for his research and books on the history of mathematics, especially differential equations and geometry in and around the 19th century. His most recent book is *A History of Abstract Algebra: From Algebraic Equations to Modern Algebra* (Springer, 2018).

Anthony J. Turner received the 2018 Paul Bunge Prize from the German Chemical Society and German Bunsen Society for Physical Chemistry for his long career of publication on the history of scientific instruments.

The *Wikipedia* article for the Archives of American Mathematics includes a listing for collections at 40 institutions outside the AAM's home at the University of Texas-Austin. This attempts to continue a research tool started by Karen Parshall and Albert Lewis as a project of the MAA-AMS Joint Committee on Archives, which proved to be nearly impossible to update in its previous form. Readers are encouraged to contribute additions as well as mention the locations of personal papers in the articles for individual mathematicians on *Wikipedia*. See `en.wikipedia.org/wiki/Archives_of_American_Mathematics`.

Centaurus 59, no. 4 (2017) is a special issue recognizing D'Alembert's tercentenary. See `onlinelibrary.wiley.com/toc/16000498/2017/59/4`.

Springer has issued David Rowe's *A Richer Picture of Mathematics: The Göttingen Tradition and Beyond*, based on his *Mathematical Intelligencer* columns; *Thābit ibn Qurra's Restoration of Euclid's Data* with text, translation, and commentary by Nathan Sidoli and Yoichi Isahaya; and *Geometry Through History: Euclidean, Hyperbolic, and Projective Geometries* by Meighan I. Dillon.

The American Mathematical Society published volume 1 of *A History of Mathematics in the United States and Canada*, by David E. Zitarelli; *Never a Dull Moment: Hassler Whitney, Mathematics Pioneer*, by Keith Kendig, and *American Mathematics 1890–1913: Catching Up to Europe*, by Steve Batterson (under the MAA Press imprint). Recent volumes in the MAA Notes series are available as free ebook downloads to MAA members by clicking on Member Library at the left of the member profile page. These titles include *The Courses of History: Ideas for Developing a History of Mathematics Course*, edited by Amy Shell-Gellasch and Dick Jardine, and *Using the Philosophy of Mathematics in Teaching Undergraduate Mathematics*, edited by Bonnie Gold, Carl E. Behrens, and Roger A. Simons.

Dominique Bernard completed *The collection of scientific instruments of the Faculty of Sciences of Rennes (1840–1900)*, in French, and featuring cartoons by NONO.

Information on Fall 2019 site testing for the TRIUMPHS project is available on `webpages.ursinus.edu/nscoville/TRIUMPHS.html`. 28 full-length Primary Source Projects and 21 "mini-PSPs" are posted on the website.

IUHPST and other organizations are conducting a survey in 7 languages on the gender gap in mathematics, computing, and the natural sciences. Visit `gender-gap-in-science.org/` before 30 November. This is a unique opportunity to learn about the demographics and experiences of the global research community. The Commission on Gender and Women Studies in STM of the DHST recently raised concerns about a session at ESHS in which four senior male scholars ran over their time, forcing a female PhD student to deliver her talk during the coffee break, and urges scholarly societies to not only be mindful of all colleagues but to engage in formal mentoring programs.

HOMSIGMAA News: HOM donated US$3500 toward processing 30 boxes of historian of mathematics Uta Merzbach's papers, which also include materials from Olive C. Hazlett, known for her research in algebra. A gift next year of approximately $2500 is planned. HOM also intends to team up with the Math

Circles SIGMAA to prepare materials for math circles with historical topics. Secretary Cynthia Huffman relaunched the newsletter and is particularly seeking reviews of museums or library collections; contact *cjhuffman@pittstate.edu*. Dorothee Blum resigned as Prize Coordinator.

Calle Lane (UMKC) won the 2018 Student Writing Contest for "Race to Refraction: The Repeated Discovery of Snell's Law." Second place winners were Christen Peters (Lee), "The Reality of the Complex: The Discovery and Development of Imaginary Numbers," and Rachel Talmadge (UMKC), "Francois Viète Uses Geometry to Solve Three Problems." The 16th annual contest is underway with entries due to *ashellge@emich.edu* by 23 March.

BSHM News: Robin Wilson received the 2017 Stanton Medal, awarded every two years by the Institute of Combinatorics and its Applications for outreach activities in combinatorial mathematics. Congratulations also to the winners of the 2018 Schools Plus Competition: Pippa Wakelin, "History and Uses of Infinity," and Charles Austin, "Calculating Risk: Where would we be without the mathematics of risk?" The Undergraduate Essay Prize went to Kamilla Rekvenyi for "Paul Erdös' Mathematics as a Social Activity." The BSHM AGM was October 24 at the University of London. Its Gresham Lecture comprised a series of talks on "Mathematics in War and Peace" by June Barrow-Green, Tony Royle, and David Aubin.

A workshop on Mathematical and Astronomical Practices in Pre-Enlightenment Scotland and Its European Networks will be held 23–24 November at the University of St Andrews. The Christmas Meeting will be 8 December at the Midlands Institute in Birmingham on the theme The Mathematics of Time. Research in Progress 2019 will be 23 February at Oxford.

The Oxford Mathematical Institute hosted A History of Mathematics Summer Miscellany in July; LMS and the Institute for Mathematics and its Applications held a meeting in September at De Morgan House to celebrate the 100th Anniversary of Emmy Noether's paper on Conservation Laws; a symposium at Cambridge in September recognized Stokes's bicentenary; and the Royal Society marked the centenary of Ramanujan's election as FRS on 15–16 October. The Royal Institution held "The life-changing magic of numbers" on 31 October and "Maths, magic and mystery" on 16 November.

FedCan News: The federal government launched a new program designed to improve equity and diversity in the research community. For 2019, the value of the Canada Prizes, for books that make an exceptional contribution to scholarship and enrich the social, cultural, and intellectual life of Canada, will double to $10,000.

The American Statistical Association has formed a History of Statistics Interest Group. For instructions on how to join, see `community.amstat.org/historyofstats/aboutus/join`. Membership in ASA is not required to join the group.

The first annual Women's Intellectual Network Research Symposium, held in Charlottesville, VA, on 15 September 2018, featured history of mathematics among its special sessions. Della Dumbaugh organized, and speakers included Amy Ackerberg-Hastings, Cathy Shi, Ying Wu, Nancy Hall, and Karen Parshall. During the day, Kim Sellers and Emily Riehl gave plenary lectures, and a poster session, tutorials, and career panel were also presented. Over 50 undergraduates, graduate students, and career scholars attended; approximately 80% of registrants were women.

On 27 September, the American Philosophical Society Library, Gladys Krieble Delmas Foundation, and Association of Research Libraries hosted a conference on the past, present, and future of research libraries and special collections.

A meeting on Practice-Based Approaches in Science, Mathematics, and Logic: Challenges and Prospects was at Vrije Universiteit in Brussels, 28–29 September.

The 40th meeting of the ORESME Reading Group was 12–13 October at Xavier University in Cincinnati. Attendees continued a reading begun in January 2018 of the first four chapters of *Theorie Der Algebraischen Zahlen* (Theory of Algebraic Numbers), published in 1908 by Kurt Hensel (1861–1941), in an English translation produced by Danny Otero for the group. The work includes Hensel's first substantial presentation of his p-adic numbers, which received a mixed reception at their introduction but have since become an important tool in investigations in number theory.

'Faithful to our task': 175 Years of Macmillan Publishing was held 22 October at the University of London.

The Central States Philosophical Association met at the University of Buffalo, 26–27 October.

The History of Science Society met 1–4 November in Seattle. The Forum for the History of the Mathematical Sciences gathered for fellowship and to discuss the Program Committee's decision to leave all full sessions on the history of mathematics off the program. HSS President Bernie Lightman also raised the issue at the Executive Committee meeting. A proposal developed there was taken to the Committee on Meetings and Programs, where members decided that, at the next meeting (in Utrecht in July 2019), one morning will be reserved for interest groups, caucuses, and possibly roundtables. Interest groups will be guaranteed one one-hour time slot. (They may also propose other sessions for the regular program.) Sessions in Seattle of interest to historians and philosophers of mathematics included: "All Coherence Gone? A New Isaac Newton," "Climate Cartography from Maps to Models," "Art-Science: Premodern Theory and Practice Entangled" (organized by Adam Fix), "Storytelling with Collections" via Experiences in Libraries and Museums (including panelists Daniel Lewis and Lilla Vekerdy) and Beyond Institutional Walls (including speaker Peggy Kidwell), "Reweighing Antiquity: Material Practices of Precision between Science and Humanities," "Astronomy and Physics in Early Modern World," "Physics in the Twentieth Century," "Measurement and Calculation," and "All Too Human: Formalizations, Models, and Algorithms in the 20th Century Human Sciences." Alix Hui and Matt Lavine will become co-editors of HSS for a 5-year term beginning 1 July 2019, with Carin Berkowitz as Book Review Editor. Stephanie Dick was elected to the Council for a term running from 2019 to 2021.

The Gerard Turner Memorial Lecture is 9 November at the Society of Antiquaries in London. Simon Schaffer will speak on "Instruments and ingenuity between India and Britain." Pre-registration is not required.

The 29th Novembertagung on the History of Mathematics will be 28–30 November in Seville, Spain. The invited speakers are Karine Chemla and José Ferreirós. For the program, see `novembertagung.wixsite.com/conference`.

A conference on David Eugene Smith and the Historiography of Mathematics will be held at CNRS in Paris, 9–10 January 2019.

The Jerusalem 4th Advanced School in the Humanities will focus on Textual Practices across Manuscript and Early Print, ca 1400–1700, during its session on 13–17 January. Textual practices in books in Hebrew and European languages will be studied. Ann Blair is one of the organizers.

The Western Society for Eighteenth-Century Studies will meet at Arizona State University, 15–16 February.

The Third International Seminar on the Material Culture of Physics, aimed at students, will be at the Deutsches Museum in Munich, 18–22 February.

The Third International Conference of the German Society for Philosophy of Science will be in Cologne, 25–27 February, on the theme "The Global Eighteenth Century." See `www.wsecs.org`.

The History of Science Division of the German Physical Society will focus on the theme "The Tools of Physics" at its spring meeting in Munich, 18–20 March.

A conference for book historians on The 1820s: Innovation and Diffusion will be held at the University of Glasgow, 11–12 April. Submissions are due 30 November. See `1820s.net`.

The British Society for the History of Philosophy will hold its annual conference at King's College London, 24–26 April.

The Seventh Annual Symposium on Medieval and Renaissance Studies will be at Saint Louis University, 17–19 June. Proposals deadline is 31 December. See `www.smrs-slu.org`.

Mathematics and Its Connections with the Arts and Sciences will take place at McGill University in Montréal, 18–21 June. See `mcgill.ca/macas2019/`.

The International Society for the History and Theory of Intellectual Property will meet at the University of Technology Sydney, 4–6 July. Submissions are due to *Isabella.Alexander@uts.edu.au* by 23 November.

The biennial conference of the International History, Philosophy, and Science Teaching Group will be in Thessaloniki, Greece, 15–19 July.

The Society for the History of Authors, Readers, and Publishers will meet 15–19 July in Amherst, Massachusetts. Abstracts are due 30 November. See `sharp2019.com`.

HSS will hold its annual meeting in Utrecht, The Netherlands, 23–27 July. Abstracts are due 2 January.

Figure 1: Vatican Maria Agnesi Stamp

Tom Drucker and Dan Sloughter are organizing a special session on Recent Work in the Philosophy of Mathematics for the AMS Central Section meeting at Madison, Wisconsin, 14–15 September. Abstracts are due July 16.

The Third International Conference on Mathematics Textbook Research and Development will be 16–19 September in Paderborn, Germany. One of the conference themes is historical perspectives on textbooks. See `icmt3.math.upb.de`.

The Sixth International Conference on the History of Mathematics Education will be held at CIRM, Marseille, France, 16–20 September. Abstracts are due 15 March. See `conferences.cirm-math.fr/2038.html`.

The next Symposium of the Scientific Instrument Commission will be in Havana, Cuba, 23–27 September.

The October 2018 HPS&ST Note is online at `www.hpsst.com/hpsst-note.html`. A new section invites readers to submit information on submitted and awarded doctoral theses. (See link at the top of the page.)

Colm Mulcahy started a blog on The Irish Presence at the International Congress of Mathematicians before WWII, `www.mathsireland.ie/blog/2018_09_cm`. It might be read in concert with Michael J. Barany's PhD dissertation on postwar ICM meetings, `mbarany.com/Barany-Distributions-Dissertation.pdf`.

The Vatican issued stamps honoring Maria Agnesi and Fr. Angelo Secchi, who founded astronomical spectroscopy. The Società Italiana di Storia delle Matematiche will be awarding 2.500 euros for a young scholar's original research paper on female mathematicians in history.

The PhilPapers Foundation has established PhilPeople, a directory for individual philosophers and departments that includes social media features for connecting with other scholars. To create a profile, visit `philpeople.org/wizard`.

Women Also Know History is a searchable resource that promotes the work of women historians to other scholars and journalists. One of the areas of expertise is history of science.

As a result of its NSF grant, the Poincaré Institute for Mathematics Education at Tufts University offers three online graduate courses for schoolteachers and two reports on teacher performance and outcomes by ethnic group. See `sites.tufts.edu/poincare/`.

The University of Hawai'i at Manoa College of Education offers an 11-month graduate certificate in ethnomathematics, aimed at schoolteachers in all subjects. Application deadline is 15 February. See `www2.hawaii.edu/~lfuruto`.

H-NET's Commons has moved to `networks.h-net.org/`.

A tool called "Astrolabe Explorer", utilizing *Wikidata*, is under development at the Museum of the History of Science, Oxford. See `glam-discovery.bodleian.ox.ac.uk/astrolabes/`.

Digital Mappa 1.0 is a new digital humanities resource for creating research workspaces, editions, scholarship, collaboration, and open access publications. It allows for the linking and annotating of a small set of images and texts. Get started on a project at `digitalmappa.org`. Participating and funding institutions include the National Endowment for the Humanities, the University of Wisconsin-Madison, and the British Library. UWM also offers two short-term research fellowships in the history of print and digital culture. The deadline is 1 May; look under the Programs tab at `www.wiscprintdigital.org`.

A database of "Les auteurs de l'Association Française pour l'Avancement des Sciences 1872–1914" has been posted at `prosopo.ahp-numerique.fr/s/afas/page/accueil`. Hélène Gispert used this data in her 2002 *Par la science pour la patrie – L'Association française pour l'avancement des sciences, 1872–1914 : Un projet politique pour une société savante.*

The Transactions of the Grolier Club (1885–1919) and *The Gazette of the Grolier Club* (1921–present)

are now digitized and searchable via New York Heritage, a research portal devoted to the people, places, and institutions of New York State.

The Adler Planetarium has joined Google Arts & Culture, an online platform that provides access to images of works in the collections of participating institutions. See `artsandculture.google.com/partner/adler-planetarium`. The Adler also hosted the 28th meeting of the Artefacts Consortium on 14–16 October.

A photo archive of the Cavendish Laboratory has launched within the Cambridge Digital Library. Malcolm Longair and Isobel Falconer are serving as co-curators. For more information, see `cudl.lib.cam.ac.uk/collections/cavendish/`.

The *Private Libraries in Renaissance England* project is tracking book ownership by early modern women and maintains a database at `plre.folger.edu`.

The French Book Trade in Enlightenment Europe digital project has resulted in monographs by Mark Curran and Simon Burrows that "radically revise current understandings of publishing, print culture and the dissemination of ideas in the eighteenth-century." See `fbtee.uws.edu.au/main/`.

The American Historical Association's blog, AHA Today, has merged with its monthly newsletter, *Perspectives on History*. See `www.historians.org/perspectives`.

Podcasts with some relation to history of science include Historically Thinking, Time to Eat the Dogs, Memory Palace, Ben Franklin's World, Doing History, Long Story Short, American History Tellers, Hardcore History, Lore, Stuff You Missed in History Class, Ridiculous History, and BackStory.

Mathematics Teaching-Research Journal is an open access, peer-reviewed journal sponsored by the Hostos Community College of CUNY. Teaching-research investigations and teaching experiments are welcomed. See `hostos.cuny.edu/mtrj`.

The Southampton Centre for Nineteenth-Century Research has launched an open access, peer-reviewed journal on the long 19th century, *Romance, Revolution and Reform*. See `www.rrrjournal.com/`.

An international journal on math education in Indonesia has been established; see `ejournal.unsri.ac.id/index.php/jme`.

The World Federation of National Mathematics Competitions invites submissions to its journal, *Mathematics Competitions*. Contact Editor Alexander Soifer, *asoifer@uccs.edu*.

The Scientific Instrument Society took over the running of London's Antique Scientific Instrument Fair, beginning with the event on 8 July.

The Department of the History of Science at Oklahoma University seeks graduate students, particularly in early modern science, history of modern technology, history of medicine, and modern American science. *Isis Current Bibliography* and *Technology & Culture* are located in the department. Previous students have won numerous prizes, and OU's library collections are strong. (Travel money is available for outside researchers; see Collections Overview at `www.ou.edu/cas/hsci/`.) Faculty with excellent undergraduate or master's students may contact Heather Heyck, *hheyck@ou.edu*.

The American Council of Learned Societies offers Frederick Burkhardt Residential Fellows for recently tenured scholars that carry a US$95,000 stipend. This year's awardees included Katherine Epstein's study of computers and defense contracting. Each year, ACLS provides more than $20 million to over 350 scholars across a variety of humanistic disciplines.

The Chemical Heritage Foundation now offers 2-year 80/20 postdoctoral fellowships in addition to one-year and short-term fellowships in the history of science, medicine, technology, and industry. See the Research tab at `www.sciencehistory.org`.

Submissions for the Hakluyt Society's annual essay prize are due 30 November.

The Willison Foundation Charitable Trust is accepting funding bids for research in all the varieties of book history until 30 November.

The Curran Fellowships accept proposals for any type of research on the Victorian press in the British Empire until 1 December. Funding is for up to US$5000. See `rs4vp.org/curran-fellowship/`.

Applications for the Marie Tremaine Medal, offered by the Bibliographical Society of Canada, are due 7 December.

IUHPST/DHST is receiving applications for its Prize for Young Scholars (recent PhDs) until 10 December. See `dhstweb.org/awards/youngscholarsprize`.

The American Geographical Society offers 4–8 short-term library fellowships each year at the University of

Wisconsin-Milwaukee. Deadline is 16 December. See uwm.edu/libraries/agsl/.

Applications for the ALA's Phyllis Dain Library History Dissertation are due 11 January; the award is only offered in odd-numbered years.

The Linda Hall Library accepts fellowship applications until 18 January. See www.lindahall.org/fellowships.

The application deadline is 1 March for Library Company of Philadelphia short-term, dissertation, and Mellon post-doctorate fellowships. Look under Academic Programs at librarycompany.org.

The prize question for the International Union of History and Philosophy of Science and Technology's 2019 competition is, "What is the value of history of science for philosophy of science?" Submissions are due by 15 December 2018. Guidelines are listed under Joint Commissions in the menu on the left side of iuhps.net/.

The Science Museum Group journal writing prize submission deadline is 1 March. Recent issues are posted at journal.sciencemuseum.ac.uk/.

Applications for short-term fellowships at the Boston Athenaeum are due 15 April. Visit bostonathenaeum.org. Scott Guthery, who has written about readership patterns at the Athenaeum, provided the editor with suggestions for potential book projects. Email *aackerbe@verizon.net* for more information.

Shirley Gray announces that the National Curve Bank and the website for Maria Agnesi, established at California State University, Los Angeles, both have new online homes. The updated URLs are nationalcurvebank.org and witchofagnesi.org, respectively.

The Lewis Walpole Library at Yale funds 4-week visiting fellowships and 2-week travel grants for research in its rich collections of 18th-century materials. Doctoral students and postdoctoral scholars are encouraged to apply. Applications are due by January 7. See bit.ly/2AHpJXF.

Upcoming talks at the Media History Seminar at Senate House in London include "Periodical Collections, Austerity and Grassroots Action: A Greek Example," by Alex Jones, and "Collecting News," by Luke McKernan, on December 4; "Media Culture and the Periodical Press: Raising a Few Points on Methodological Issues," by Evanghelia Stead, on February 5; and "The Magazines of Modernism: Challenges and Perspectives," by Andrew Thacker, and "Switching: Creating Reference Works for Nineteenth-Century Serials," on March 12.

Submissions are due by January 6 for the Inaugural Research Library Conference, "Libraries, Learning and Religious Identities: Britain, Ireland and the European Context, c. 1100–c. 1900," to be hosted by Durham University and Ushaw, 10–13 September 2019. Durham is in the process of establishing a Residential Research Library to allow scholars to utilize the collections of both institutions and the Durham Cathedral Library. For more information, see www.dur.ac.uk/imems/ under Events.

The International Congress on the History of Science in Education will be held May 30–June 1, 2019, in Vila Real, Portugal. This is the third gathering, and the conference is expected to be held every two years henceforth. Research and reflections on the history and teaching of anthropology, astronomy, biology, chemistry, educational sciences, ecology, economics, engineering, geology, mathematics, medicine, nanosciences, pharmacy, physics, psychology, sociology, and other natural or social sciences are welcome. Similarly, the organizers invite a wide variety of historiographical approaches. Michael Matthews, whose HPS&ST Note is at hpsst.com is one of the plenary speakers. Abstracts are due by January 31.

The Commission on Women and Gender Studies in History of Science, Technology, and Medicine is holding a conference on Gender and Science in War and Peace in Tel-Aviv and Ra'anana, Israel, 17–20 June 2019. Abstracts are due by January 15 to *WGS.DHST.2019@gmail.com*.

CIRMATH at UVA

Since 2014, Hélène Gispert, Philippe Nabonnand, and Jeanne Peiffer, along with an international group of scholars, have organized a series of colloquia under the rubric, "Circulations des mathématiques dans et par les journaux" (CIRMATH), as well as sessions at other conferences. The aim is to consider various ways that mathematical knowledge has been exchanged via periodicals since the 17th century, and the group is in the process of building a database to facilitate comparisons of types of communications. For meeting programs, publications, and project proposals and documents, see cirmath.hypotheses.org/.

This past May 28–30, Gispert, Nabonnand, and Peiffer joined with Karen Parshall and Sloan Despeaux to organize CIRMATH's first meeting in the United States, at the University of Virginia. The goals were to foster communication and cooperation between European and American researchers, to build collaborations between early-career and established scholars, and to consider the role of journals in the circulation of mathematics within the Americas and between the Americas and Europe from 1850 to 1950.

Deborah Kent provided an overview of American mathematics journals from 1804 to 1878, leading to discussion about how we define terms such as "mathematical practitioner". Jemma Lorenat looked at the content of *The Monist* under Paul Carus's editorship (1890–1906), focusing especially on magic squares and how authors used them to show a popular audience that mathematics is philosophical but not mystical. Della Dumbaugh then reviewed Solomon Lefschetz's tenure as editor of *Annals of Mathematics* (1928–1958), tracing the influence of international events on available contributors. Laura Turner discussed George Abram Miller's efforts from 1917 to the late 1930s to have the MAA sponsor the development of a mathematical dictionary. Michael Barany argued for a methodology of classifying and analyzing abstracts that might better reveal patterns in the circulation of mathematical ideas. Chris Phillips closed the first day by demonstrating another methodology, using the open source software Cytoscape to graph citation networks.

Amy Ackerberg-Hastings considered the audiences for Charles Davies's 1850 *The Logic and Utility of Mathematics*, while Caroline Ehrhardt showed a variety of techniques and questions for making international comparisons between mathematics education journals. Samson Duran reported on his research into the reception in other countries of American projective geometry published in *Transactions of the AMS* and elsewhere in the first quarter of the 20th century. Adrian Rice traced the development of the Hardy-Littlewood Circle Method through the publication of eight separate but related journal articles, raising questions such as the mathematicians' expected readership. Thomas Preveraud looked at similarities and differences in articles on using descriptive geometry in coach-making in journals for practitioners published in Paris and New York City just after the American Civil War. Emily Redman presented her work on changing understandings of the role of recreational mathematics in mathematics education in the second half of the 20th century by videoconference.

In the final morning, Rogerio Monteiro de Siqueira catalogued the engineering journals available in Brazil in the late 19th century and suggested that the contents of articles by Brazilians indicate the authors they were reading and whose ideas they understood as related to one another. Brit Shields described the US Office of Education's Engineering, Science, and Management War Training Program, which enrolled 1.8 million civilians at 227 colleges and universities, including 86,000 mathematics students.

Each speaker had 30 minutes to speak and 20 minutes for questions, allowing for detailed and lively discussion. Some of the larger themes were revisited in a dialogue session that closed the meeting. Participants all stayed in one of UVA's small foreign language dorms, making the conference feel like "history of math summer camp". Collegiality was further created through a delicious sampling of Charlottesville's restaurants at conference breakfasts and lunches, a walking tour of the campus's historical highlights, and an off-campus trip to Orzo for the conference dinner. All presentations are posted under the "Evènements et manifestations" tab on the CIRMATH website.

Amy Ackerberg-Hastings

Russell Archives Semicentennial

On 22 June 2018, McMaster University in Hamilton, Ontario, celebrated the 50th anniversary of acquiring the Bertrand Russell Archives with a garden party on the grounds of the Archives' new home that also coincided with the annual meetings of the Society for the History of Analytical Philosophy and of the Bertrand Russell Society. Previously housed in the windowless basement of the university's main Mills Memorial Library, the Bertrand Russell Archives has moved to a converted mansion on the east edge of campus. Dating from the early 20th century, it's the second oldest building on campus, sporting a built-in garage and surrounded by a wide swath of lush lawn. The event drew Russell scholars from as far away as San Antonio, Texas, and Lund, Sweden, and as close as Hamilton and Toronto. These scholars' conviviality over a full *al fresco* dinner, supported by an open bar and jazz combo, eventually paused for some more formal proceedings.

McMaster University's Chief Librarian, Vivian Lewis, began by reminiscing about when the house belonged to Mrs. Simpson who maintained a superb rose garden, now long gone. She also announced a major new accrual for the Library from the Bertrand Russell Peace Foundation of material regarding the U.S.A.–Vietnam War. Additionally, she emphasised how the Archives enrich academic life at McMaster and of course she expressed her gratitude for the ongoing support of the university administration.

This support was personified by the next speaker, McMaster's President, Patrick Deane, who welcomed us to this 104-year-old former residence. For him the 1968 acquisition of the Russell archives exemplified McMaster's tradition of courageous ambitions also shown by the 1957 building of a nuclear reactor "but only for peaceful purposes." He was succeeded at the podium by Honorary Russell Archivist Kenneth Blackwell, who was hired by Russell in 1966 to catalogue the papers and followed them to McMaster where he continues his work despite technically retiring in 1997.

Ken took us back fifty years ago when a Canada Council grant allowed him to catalogue the Bertrand Russell Archives. But "[his] best day at the Archives" was when William Ready, McMaster's Chief Librarian at the time of the acquisition, hired him to be the Russell Archivist, for this was an opportunity to find and publish everything that Russell wrote. His current ambition is to build the BRACERS online search aid to the Russell correspondence and allow keyword search.

He gave way to Nicholas Griffin, the Director of the Russell Research Centre, who began by stating, "Ken and I go back a long way." For Griffin the value of preparatory material for Russell's publications is that the unpublished material helps us to understand the published: "Everything we thought we understood about Russell was wrong." Griffin closed with a tribute to the long-time past editor of the Russell publication project, Louis Greenspan, who had passed way the previous month.

Finally, Deane and Lewis presented a Certificate of Extraordinary Service to McMaster University to Blackwell.

I made it a full day of celebration by first touring the new quarters for the Archives in the morning. The mansion's basement houses conservation grade storage for the Archives, a reading room and lounge are on the main floor, and the research centre is on the second floor. Visitors enter off a short hallway through a door that announces opening hours: Monday to Thursday, 10–4. The whole floor is well lit by many vertically-paned windows. Through the door is the principal lounge area with a well-upholstered couch, two armchairs, dark wooden end tables, and an ottoman. Drinks, snacks, and packed lunches may be enjoyed in this kitchenette equipped with refrigerator, electric kettle, and coffee maker, abundantly supplied with coffee pods from the ubiquitous pan-Canadian *Tim Horton's*.

Researchers then pass through an archway with an Archives banner on the right to a smaller lounge area with larger windows to the south and west. There's another pair of plush armchairs and a mahogany tea table with a period style table lamp. To the west a poster stands on an easel with a copy of a full-page article from the Saturday, September 14, 1968, *New York Times"*: "Russell Papers Being Catalogued," by Edward Cowan. To the east a video "Bertrand Russell Archives: a selection of images" is on continuous play.

A small room at the southwest corner is largely empty at present but will house the furnishings from Russell's Welsh home in Plas Penrhyn, now on display at the Museum. Books on the north wall are from the Russell Archives Library (as distinct from Russell's own library, stored in the basement) and are almost all translations of Russell's works, including 44 volumes of *The History of Western Philosophy*.

Three consecutive left turns lead to the Reading Room with its central mahogany double table and eight well-padded green swivel chairs. The north and south walls have a full array of well-stocked built-in dark wooden bookshelves, as does the ledge under the west-facing windows. Here we find the major part of the Russell Archives Library arranged in Library of Congress order. For example, there are three copies of *The Philosophy of Bertrand Russell* (1941) from Paul Schlipp's series *The Library of Living Philosophers* and, of course, many other volumes from that series. I also noticed the *Dictionary of Nineteenth-Century British Philosophers*, whose editors included the University of Toronto's John G. Salter, York University's (and current HSS President) Bernard Lightman, and the late Ivor Gratton-Guinness, known to

many of us in CSHPM. On the window ledge is a Russell Photo Album and hidden in the north corner are hard copies of the old Russell Archives Catalogue.

To the south, between bookends is a twelve-volume miscellany, which includes *The Legacy of Mario Pieri* (2007) by our very own James T. Smith and co-author Elena-Anne Marchisotto and the chapbook *A WILD ROSE and other Poems* by G. Lowes Dickinson and published in 1910 by the London County Council School of Arts and Crafts. That morning the Reading Room was busy with other researchers casually reading books, reading typescripts, making laptop computer entries, or photographing a diary.

Before attending the early evening reception, that afternoon I viewed the exhibit "Undying Hope for this Dangerous World: Bertrand Russell in perspective," at the McMaster University Museum of Art and curated by the Archives. It's on view until 22 December 2018. This wide-ranging selection of personal, scholarly and political materials includes one case dedicated to Russell's incarceration in Brixton Prison in 1918 for pacifist activities during World War I. Its centennial is being marked by the appearance online of Russell's correspondence from that time, including the documents in the exhibit. See `russell-letters.mcmaster.ca/`.

But that's another story.

David Orenstein

2019 May Lecture

Professor Alexander Jones, Leon Levy Director and Professor of the History of the Exact Sciences in Antiquity of the Institute for the Study of the Ancient World at New York University as well as a longtime CSHPM member, will be the May Lecturer at the 2019 annual meeting of the Canadian Society for History and Philosophy of Mathematics, which will be part of the HSSFC Congress at the University of British Columbia, 2–4 June 2019 (also see announcement elsewhere in this issue). CSHPM members should receive registration information via email from the Federation in early 2019. The May Lecture is named after Kenneth O. May, one of the founders of the history of mathematics community in North America.

This year's special session is on the theme Mathematical Astronomy, and the title of Alex's talk is "Sexagesimal Mathematics in Babylonian and Greek mathematics and astronomy." His undergraduate degree is from UBC and Alex previously delivered the May Lecture in 1996, so this meeting will be a bit of a double homecoming for him. For additional biographical information, see `isaw.nyu.edu/people/faculty/isaw-faculty/alexander-jones`. We look forward to welcoming Alex.

Figure 2: Alexander Jones

Annual Report *SCIAMVS*

The staff of *SCIAMVS: Sources and Commentaries in Exact Sciences* includes: **Chief Editor:** Nathan Sidoli; **Managing Editor:** Taro Mimura; **Editors:** Charles Burnett, Takao Hayashi, Hideki Kawahara, Takanori Kusuba, Nobuo Miura, Ken Saito, Takanori Suzuki, Ken'ichi Takahashi, Michio Yano; **Associate Editors:** Annick Horiuchi, Alexander Jones, Jamil Ragep, Jacques Sesiano.

New Developments

In 2017, a significant development was that the journal entered into an official association with the British Society for the History of Mathematics (BSHM) and the Canadian Society for History and Philosophy of Mathematics (CSHPM), through which these societies promote the journal to their members who may then subscribe at a discounted rate. This has been rather successful at attracting new submissions.

Also, I added to the website a downloadable style file, setting out the journal's stylistic standards, and a number of (Xe)LaTeX templates—using the work of some of our authors, with their permission—which

show potential authors how (Xe)LaTeX can be used to create critical editions.

Submissions and Papers

In 2017, we received 12 papers, which is a high number for us. Of these, we published two long papers, one of which was a resubmission of a paper that had been submitted and favorably reviewed some years ago.

Of the other 10 papers, 4 were rejected, 1 more will probably be rejected, 2 are under review, 2 are under revision, and 1 has been reviewed and revised and will appear in the next issue.

Subscriptions and Dissemination

In 2017, we were able to attract a number of individual subscriptions through our association with BSHM and CSHPM. We also had five new institutional subscriptions including all back issues.

We applied to be included in the JSTOR databasing and electronic distribution platform, but our application was rejected. The stated reason was that JSTOR collects journals grouped into disciplines and *SCIAMVS* was considered to be either a history of science journal or a mathematics journal, but each of these categories is already full and not accepting any new journals.

We still have to figure out how to disseminate electronic copies of the journal. This is becoming a pressing issue because many of the databasing services, such as the Web of Science and Elsevier's Scopus, require access to electronic files. I have submitted the journal for consideration in Clarivate Analytics' Web of Science, but this will be a long process for us, because they make their decision only after three issues of the journal have appeared after the application has been filed. Nevertheless, it is vital that we be listed in such databases, because many universities are now making representation in these databases a criterion for evaluating their faculty.

Issues and Concerns

We are not quite financially self-sufficient through subscriptions alone. For the last couple of years, including 2017, we have supplemented this by selling a few institutional subscriptions, including all back issues. These five one-time purchases of back issues means that we are solvent for this year and can afford to print and ship the next issue, but because these are one-time purchases, we cannot consider these funds as part of our annual budget. Nevertheless, if we continue at the current rate of increasing annual subscriptions, we will be self-sufficient in a few more years.

Goals for 2018

We will continue to promote the journal amongst our colleagues, and try to sell a few more institutional subscriptions, including back issues. We will expand the editorial board by asking a number of well-established scholars to join us.

Nathan Sidoli

Status of JMM

Elsewhere in this *Bulletin*, you will find the history and philosophy events scheduled for this year's Joint Mathematics Meetings. In September, the AMS and MAA announced that the agreement they signed in 1998 to co-manage JMM will terminate after the gathering in Washington, DC, in 2021. The finances of JMM and the costs to attendees were contributing factors in the decision, which was reached after more than five years of discussions. MAA will continue to participate in joint sessions, lectures, and awards, but all MAA committee meetings and other annual meeting activities will be held during the MAA MathFest summer meeting. MAA also expects to build up its sectional meetings since it is often easier for scholars to attend local conferences.

The AMS commented on the JMM going forward: "Several mathematical organizations already participate in the Joint Mathematics Meetings, including the Association for Symbolic Logic (ASL), Association for Women in Mathematics (AWM), National Association of Mathematicians (NAM), Society for Industrial and Applied Mathematics (SIAM) and the mathematics institutes, as well as many exhibitors and the National Science Foundation. We will continue to welcome the diverse mathematical community from around the world to JMM to present research, share insights on mathematics education, see the wide range of exhibitors, and meet colleagues old and new." Additionally, AMS travel grants, the Employment Center, short courses, and the like will continue.

For full statements by the two organizations, see `www.ams.org/news?news_id=4582` and p. 10 of the

CALL FOR PAPERS / DEMANDE D'EXPOSÉS

Canadian Society for History and Philosophy of Mathematics
Société canadienne d'histoire et de philosophie des mathématiques

Annual Meeting / Colloque annuel
University of British Columbia (UBC)
June 2-4, 2019 / 2 juin – 4 juin 2019

Special Session / Séance Spéciale
Mathematical Astronomy

Kenneth May Lecturer / Conférence Kenneth May
Dr. Alexander Jones, Institute for the Study of the Ancient World, New York University

The CSHPM will be holding its 2019 Annual Meeting at the University of British Columbia in conjunction with the 2019 Congress of the Humanities and Social Sciences. The meeting will be held Sunday through Tuesday, June 2-4, 2019.

Members are invited to present papers on any subject relating to the history of mathematics, its use in the teaching of mathematics, the philosophy of mathematics, or a related topic. Talks in either English or French are welcome, as are presentations about work in progress. Graduate students are especially welcome to present their work. All graduate students who present are eligible for the CSHPM Student Award.

Please send your title and abstract (200 words or less) in Word, (non-scanned) PDF, or in the body of an email by February 1, 2019 to:

GENERAL SESSION / SÉANCE GÉNÉRALE:

Eisso Atzema
Department of Mathematics & Statistics
University of Maine
Orono, ME 04469, United States
eisso.atzema@maine.edu

La SCHPM organise son colloque annuel de 2019 à l'Université de British Columbia, dans le cadre du Congrès des sciences humaines et sociales 2019. Le colloque aura lieu du dimanche 2 juin au jeudi 4 juin 2019.

Les membres sont invités à faire une présentation sur n'importe quel sujet de l'histoire des mathématiques, son utilisation dans l'enseignement des mathématiques, de la philosophie des mathématiques, ou tout autre sujet connexe. Des présentations en anglais ou en français sont bienvenues, comme le sont les présentations sur des travaux en cours. Les doctorants, en particulier, sont invités à présenter leurs recherches. Tout doctorant qui fait une présentation est admissible au Prix des Étudiants de la SCHPM.

Veuillez envoyer le titre de votre exposé, ainsi qu'un bref résumé de 200 mots ou moins en format Word, PDF (non-scanné) ou à l'intérieur d'un courriel avant le 1 février 2019 à:

SPECIAL SESSION/SÉANCE SPÉCIALE:

Craig Fraser
Institute for the History and Philosophy of Science and Technology
University of Toronto
Toronto, ON M5S 1K7, Canada
craig.fraser@utoronto.ca

Figure 3: CSHPM at HOPOS

October/November 2018 issue of *MAA FOCUS*, `www.maa.org/press/periodicals/maa-focus`.

HOPOS in Groningen

The 12th biannual meeting of the International Society for the History of Philosophy of Science (HOPOS) was held July 9–12, 2018, in Groningen, The Netherlands. As has become common for this meeting, it again attracted quite a number of symposia and contributed talks on history and philosophy of mathematics, including participation by CSHPM members. A particularly nice surprise was to see the Proceedings of the CSHPM 2016 meeting in Calgary prominently displayed at the Birkhäuser book table.

Here are listed the talks in the four relevant symposia and contributed papers. Symposium on 'The history of logic revisited': Andrea Reichenberger (Paderborn University), *Marie Deutschbein's and Walther Brand's 'Introduction into the Philosophical Foundations of Mathematics'*; Anna-Sophie Heinemann (Paderborn University), *Wilma Papst on Frege*; Francine Abeles (Kean University), *Proof Transformations in the Work of Charles L. Dodgson and Christine Ladd-Franklin.* Symposium on 'The evolution of notations in mathematical practice': David Waszek, Pantheon Sorbonne University, IHPST, *From notational change to substantial discovery: Leibniz, Bernoulli, and the exponential notation for differentials*; Emmylou Haffner, Bergische Universität Wuppertal, *The secret life of notations: what mathematical drafts tell us about choosing and changing notations?*; Dirk Schlimm, McGill University, *The evolution of notations for the algebra of logic.* Symposium on 'Structuralism avant la lettre': José Ferreirós (University of Seville), *Structuralism avant Dedekind?*; Georg Schiemer (University of Vienna), *Transfer principles and Klein's group-theoretic structuralism*; María De Paz (University of Seville), *The double origin of Poincaré's conventionalism: methodological structuralism and hypothetical-deductive method.* Symposium on 'What are implicit definitions?': Marco Giovanelli (University of Tübingen), *Debunking the Myth. Einstein on Implicit Definitions*; Georg Schiemer & Eduardo Giovannini (University of Vienna & CONICET), *Implicit definitions and the development of modern axiomatics*; Francesca Biagioli (University of Vienna), *Federigo Enriques and the philosophical background to the discussion of implicit definitions*; Paola Cantù (Aix-Marseille University), *The role of implicit definitions in the Peano School.*

Contributed papers were: Anna-Sophie Heinemann (University of Paderborn), *De Morgan on Barrett and Tetens: a British-Continental analogy in the history of statistic thinking?*; Ariana Betti (University of Amsterdam) and Hein van den Berg (University of Amsterdam), *Bolzano in Ones and Zeros: A quantitative study in 19th century philosophy of mathematics*; Claudia Cristalli (University College London), *Abstraction and generalization in Charles S. Peirce's graphical logic. A study from the context of nineteenth-century scientific practice*; Dana Jalobeanu (University of Bucharest), *From objects of wonder to "perceptive instruments." The mathematization of natural magic*; Davide Crippa (Université Paris 7–Denis Diderot), *Descartes on the unification of arithmetic and geometry via the theory of proportions*; Miklos Redei, Zallan Gyenis, and Gabór Hofer-Szabó (London School of Economics, Jaggielonian University, and Research Center for the Humanities, Budapest), *Kolmogorov's solution (1933) of the Borel Paradox (1909)*; Henning Heller (University of Vienna), *The Hypergalois Programme of Felix Klein*; Iulia Mihai (Ghent University), *Leonhard Euler on vibrations and the general solution to the problem of the string*; Laura Georgescu (University of Groningen), *Dipping needles and rotating poles: What a mistaken solution tells us about legitimate and illegitimate uses of mathematics in natural philosophy*; Mihnea Dobre (University of Bucharest), *Mathematical controversies around Cartesianism: Clerselier, Fermat, Rohault*; Mirja Hartimo (University of Jyväskylä), *Gödel, Skolem, and Husserl's Crisis*; Robert Dis-

alle (Western University), *The relativity of motion and the mathematical method of Newtonian physics*; Sylvia Pauw (University of Amsterdam/University of Ghent), *Mathematical vs. logical necessity: the case of Bernard Nieuwentijt*; Valérie Lynn Therrien, (Western University), *The axiom of choice and the road paved by Sierpinski*; Viktor Blåsjö (Utrecht University), *A constructivist interpretation of Euclid's principle of superposition*; Vincenzo De Risi (SPHERE, CNRS), *From Definitions to Axioms: The Meaning of Geometrical Principles from Euclid to Hilbert.*

Dirk Schlimm

SCIAMVS Back Issues

In honor of Ken Saito and Michio Yano on their retirements, *SCIAMVS* is holding a sale of its back issues, volumes 1–15, for CAN$590 (¥50,000JPY). To place an order, contact Nathan Sidoli, `sidoli@waseda.jp`, Ken Saito, `ksaito@joy.hi-ho.ne.jp`, or `sciamvs@sciamvs.org`.

Nathan Sidoli

CMS in Vancouver

CMS Liaison Maritza Branker, together with Nicolas Fillion and Glen Van Brummelen, is organizing a scientific session on History and Philosophy of Mathematics for the CMS Winter Meeting at the Sheraton Vancouver Wall Center, 8 December 2018. A full slate of speakers includes: Jim Brown (Toronto); Conor Mayo-Wilson (Washington); Derek Postnikoff (Saskatchewan), John Mumma (Cal State, San Bernardino); Tom Donaldson (Simon Fraser); Len Berggren (Simon Fraser); Dominic Klyve (Central Washington); Victor Katz (UDC); Brenda Davison (Simon Fraser); and Nicolas Fillion (Simon Fraser).

MAA Convergence New Material

MAA Convergence is 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. Founded in 2004 by well-known mathematics historians and educators Victor Katz and Frank Swetz, *Convergence* brings you a variety of interesting articles and teaching tools.

We highlight here some of our newest articles and re-

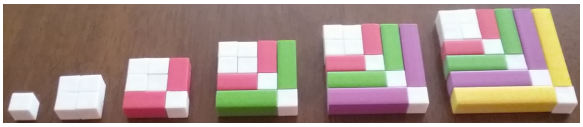


Figure 4: Cuisinaire Square Numbers

sources for use in your classroom. "The Root of the Matter: Approximating Roots with the Greeks," in which authors Matt Haines and Jody Sorensen provide applets for use in geometry and linear algebra courses, is one of our many articles with interactive features. In "More Classroom Activities Based on Ancient Indian Rope Geometry," Cynthia Huffman and Scott Thuong provide activities and applets for students at all levels or for anyone who wishes to better understand the Śulba-sūtra of Baudhāyana.

Adding to "A 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 introduced three mini-Primary Source Projects (mini-PSPs) so far this year:

- "Euler's Rediscovery of e," by Dave Ruch,
- "How to Calculate Pi: Machin's Inverse Tangents," by Dominic Klyve, and
- "Henri Lebesgue and the Development of the Integral Concept," by Janet Barnett.

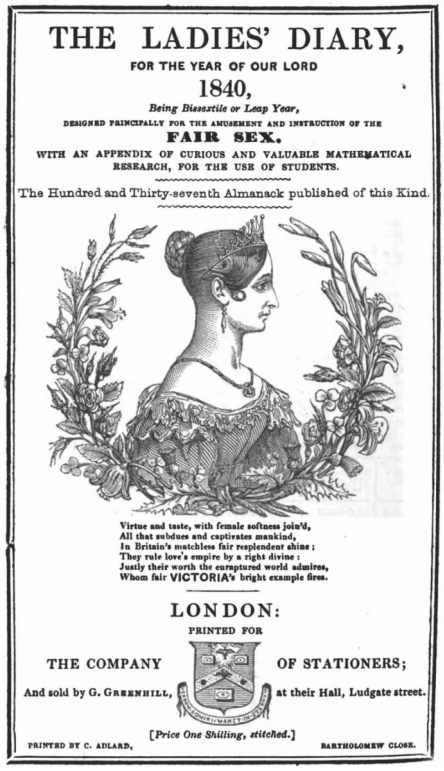
Watch for new projects in this series in *Convergence*!

Two recent articles about history of mathematics courses in particular are:

- "Cuisenaire Art: Modeling Figurate Number Sequences and Gnomonic Structures in a History of Mathematics Classroom," by Günhan Caglayan.
- "A Writing Intensive General Education History of Mathematics Course," in which author Amy Shell-Gellasch offers strategies for engaging students who *think* they don't like math or aren't good at it.

In "*The Ladies' Diary*: A True Mathematical Treasure," author Frank Swetz shows, tells, and explains why the annual *Ladies' Diary*, published in England from 1704 to 1841, "was a milestone in the history of modern mathematics education."

Two recent *Convergence* articles highlight mathematics in Edo Period Japan (1603–1868):



THE LADIES' DIARY,

FOR THE YEAR OF OUR LORD

1840,

Being Bissextile or Leap Year,

DESIGNED PRINCIPALLY FOR THE AMUSEMENT AND INSTRUCTION OF THE

FAIR SEX.

WITH AN APPENDIX OF CURIOUS AND VALUABLE MATHEMATICAL RESEARCH, FOR THE USE OF STUDENTS.

The Hundred and Thirty-seventh Almanack published of this Kind.

Virtue and taste, with female softness join'd,
All that subdues and captivates mankind,
In Britain's matchless fair resplendent shine:
They rule love's empire by a right divine:
Justly their worth the enraptured world admires,
Whom fair VICTORIA's bright example fires.

LONDON:

PRINTED FOR

THE COMPANY OF STATIONERS;

And sold by G. GREENHILL, at their Hall, Ludgate street.

[*Price One Shilling, stitched.*]

PRINTED BY C. ADLARD, BARTHOLOMEW CLOSE.

Figure 5: The Ladies' Diary

Figure 6: Meiji Period Soroban

- "Elementary Soroban Arithmetic Techniques in Edo Period Japan" presents abacus techniques from the *Taisei Sankei* (circa 1700).
- "Japanese Mathematics in the Edo Period" features images from 12 books of the period including a wide range of mathematics.

Our "Index to Mathematical Treasures" includes hundreds of images for use in your classroom from dozens of libraries and archives. Our chief "treasure hunter" is *Convergence* founding editor Frank Swetz. See all of these articles and more at *MAA Convergence*: `www.maa.org/press/periodicals/convergence`.

Janet Beery

Mathematical Ephemera

(Editor's note: This occasional series that was once called a "news of the weird" in the primary sources for the history of mathematics has apparently been dormant since 2013. Presumably this hibernation is good news about the quantity and quality of the available content over the past 5 years, allowing us to reach $4n$ pages for publishing purposes. That milestone was more challenging to achieve with this issue, so below readers will find an item submitted in 2016 by Fred Rickey that apparently was never published and a selection from the numerous mathematical references in *Virginia Gazette*, an 18th-century weekly newspaper that has been digitized by Colonial Williamsburg (see the Online Resources at `research.history.org`). The final item reproduced probably comes the closest to the original aim of this column.)

The magnificent library of the late Prince Baldassare Boncompagni, of Rome, consisting of 18,000 printed works and 600 manuscripts, probably the most valuable private collection on the history of mathematics, will be offered for sale. It had been the Prince's intention to bequeath the whole collection to the library of the Vatican. But it appears that he died before he could accomplish his purpose.

Source: *Bulletin of the American Mathematical Society* 1 (1894): 79.

Mr. *Parks*, I Had answer'd the Question propos'd in your *Gazette*, No. 35, but finding it already answer'd in your last, it is needless to send it to you : However, I have propos'd another Question, which if you think deserves a Place in your next Paper, your publishing thereof, will oblige Sir, Your humble Servant, *P. C. QUESTION.* THREE Ships, A, B, and C, sailed from a certain Port in North Latitude, until they arrived at Three different Ports, all lying under the AEquinoctial : A sailed on a direct Course between the South and the West, 17562 Leagues. C sailed 133 Leagues between the South and the East. And B sailed a Course between A and C 102 Leagues, making the Angle or Rhumb with A, equal the Angle that C made with the AEquinoctial. Hence it is required to find the Port sailed from, each Ship's Course and Distance from each other, and their respective Ports? And to solve it by an Equation, not higher than a Quadratic.

Source: *Virginia Gazette*, April 15, 1737, p. 1.

JOHN BRUCE, *M. A.* Has opened a PUBLICK

SCHOOL over against the Church, at the Head of *Cumberland* Street, *Norfolk*; and proposes to teach the Greek, Latin, and English Languages, Navigation, Bookkeeping, Arithmetick, and Mathematicks; where those who choose to favour him with the Instruction of their Children may depend on all due Attention being paid to their Education.

Source: *Virginia Gazette*, July 11, 1771, p. 3.

PRINCETOWN, *New Jersey, November 1, 1773.* The Publick is hereby informed that at the COLLEGE here young Gentlemen are instructed in all the Branches of LITERATURE, with the utmost Care. There has been lately brought from *London* a complete philosophical Apparatus, every Part of which was examined and approved by Persons eminently skilled in Natural Philosophy, Mathematicks, and Astronomy, to which is added the Orrery constructed by *David Rittenhouse*, Esq; of *Pennsylvania.* The greatest Attention is paid to the Improvement of the Youth in the *English* Language, and pronouncing *English* Orations. All such as desire it, may also learn the *French* Language. The Place is remarkably healthy and pleasant, and so small as greatly to favour the Order and good Government of the College. There is also a Grammar School, in which young Boys are perfected in the *English*, and taught the *Latin* and *Greek* Languages, Writing and Arithmetick, preparatory to the College. Those also who desire their Children only to be instructed in the *Latin* and *French*, Geography, and the practical Branches of the Mathematicks, without going through a full College Course, may have them so taught; and they have the Liberty of attending the publick Lectures on Composition and Criticism, and on Chronology and History, and of residing in College, provided they conform themselves exactly to the College Regulations, as to the Hours of Study and Recreation. The Expense of Board and Education, unless they are placed at a high Board, will not exceed twenty Pounds Sterling a Year, to which must be added Clothes, Books, and Pocket Money, which Gentlemen may acclimate for themselves, according to the Way in which they choose their Children should be supported.

Source: *Virginia Gazette*, November 18, 1773, p. 2.

WANTED, A Schoolmaster who understands *Latin*, Mathematicks, &c. and will undertake to teach from ten to fifteen Scholars, or more if agreeable, in a publick School situated in a good Neighbourhood. Also a Master properly qualified to teach *English*, Writing, and Arithmetick; this School will consist of near thirty Scholars. Any Persons properly recommended will meet with Encouragement from John Cocke, James Belsches. Cabin Point, December 12, 1773.

Source: *Virginia Gazette*, December 23, 1773, p. 2.

To the PUBLICK. A very natural but [*illegible*] thought, and the first that occurred to the subject, a considerable number of years ago, led me directly to a discovery of what, I was soon satisfied, must be a solution of that problem, by which the circle was to be measured. My researches for a demonstration, where all the difficulty lay, have had their desired effect, by the following, and some other discoveries. 1st. A square has the same proportion to its inscribed circle, as that circle has to a square whose perimeter is equal to its circumference. A professor, in an university in Europe, having read as above, stopped to observe that it could not be demonstrated; before, however, it came to his turn to make observations, a Gentleman of undoubted abilities had approved of it. 2d. In a circle, the rectangle contained under the sides of the inscribed and circumscribed squares is equal to the inscribed octagon. These two have been published. 3d. The double sector, a new mathematical instrument, which measures heights and distances by inspection, without calculation. A description of this was read before the Royal Society in London. 4th. If a cube is cut parallel to its base, at a certain altitude, the sections will be parallelopipedons, and the greater of them equal to the sphere inscribed in the cube. 5th. The rectangle contained under half the circumference of a circle and another certain line is equal to the square of the diameter. When this proposition is announced in its proper dress, and the relation of the certain line made known, a Geometrician, who understands Euclid's 6th book, can be at no loss for the demonstration, which is direct, easy, and short. 6th. The diameter and circumference of a circle are to each other in the ratio of number to number, and commensurable. The first part of this has an indirect demonstration, like that used by Euclid 117. 10. [*sic*] 7th. If the cylinder inscribed in a cube is continued till its altitude is equal to a certain line, then the cylinder and cube will be equal. Several years ago, a Gentleman of distinguished character and rank, as a Mathematician, in Britain, being applied to, and having perused what I laid before him on this

subject, gave for answer, that, if I could prove the circumference of a circle to be a number, those numbers pointed out by my demonstration would express the proportion which the diameter of a circle has to its circumference. This proof is completed; and I am ready to produce the demonstrations for examination, upon terms that may easily be agreed on. ANDREW MARR. Williamsburg, *March* 13, 1780.

Source: *Virginia Gazette*, March 18, 1780, p. 3

HoM at MathFest 2018

A Contributed Paper Session (CPS) entitled *Teaching Undergraduate Mathematics with Primary Historical Sources* was held at the 2018 MathFest conference in Denver, Colorado. Due to the unexpectedly large number of abstracts submitted, organizers Maria Zack, Dominic Klyve, and Jeff Suzuki extended the session to two full afternoons of talks. The entire session was well-attended and included talks on a variety of aspects related to teaching with primary sources, ranging from direct classroom practice to pedagogical philosophy to educational research efforts. For the benefit of those who were not able to attend, we briefly describe each of the talks here. While many of the talks in the session defy easy classification, most can be reasonably classified as focusing on a single activity, on an entire class in which primary sources play an important role, or on the benefits of teaching with primary sources.

Several of the talks devoted to specific activities concerned Primary Source Projects (PSPs) written under the auspices of the NSF-sponsored TRIUMPHS (TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources) grant. These included the talk by Jerry Lodder (New Mexico State University) about his PSP *The Radius of Curvature According to Christiaan Huygens*, in which students explore the motivation behind the notion of "curvature," and a talk given by Dave Ruch (Metropolitan State University Denver) and his students Joshua Gonzales and Ahern Nelson entitled "Should we call it the Abel-Dirichlet theorem?" In this talk, the speakers discussed their experience teaching and learning from an 1826 paper of Abel that includes his proof of the theorem: if a power series $f(x)$ converges for $x = 1$, then $f(x)$ will converge to $f(1)$ as x tends to 1.

A surprising range of talks described other projects and activities devoted to primary sources. Maria Zack (Point Loma Nazarene University) described her experience teaching students to find the determinant of matrix using a method due to Charles Dodgson (Lewis Carroll). Carl Lienert (Fort Lewis College) explained a project he has written that leads students through Desargues's work on projective geometry, and Andrew Leahy (Knox College) discussed a range of sources from Archimedes to Isaac Barrow that he uses to introduce his classes to the prehistory of calculus. Shawna Mahan (Pikes Peak Community College) explained her work on writing projects for Calculus 2 students based on John Wallis's *Arithmetica Infinitorum* and *De Algebra*. Finally, Matthew Haines (Augsburg University) shared his experience in introducing students to the importance of correspondence in the history of mathematics by having students quite literally engage in mathematical correspondence (via the United States Postal Service!) with their classmates.

Several of the speakers took a broader view rather than a focus on an individual project, as they discussed incorporating primary sources throughout one or more of their classes. Adam Glesser (California State University, Fullerton) surprised many in the room with a description of his efforts to teach Abstract Algebra entirely from primary sources—efforts that are likely to lead to a textbook in the near future (stay tuned, gentle readers!). Meagan Herald (Virginia Military Institute) shared her experience in increasing student interest in both Linear Algebra and a topics course with primary sources, and Qin Yang (Metropolitan State University Denver) presented on her successful integration of two TRIUMPHS PSPs into her Calculus 1 course. Two presenters described their use of primary sources in History of Mathematics classes. While Dan Kemp (South Dakota State University) used a wide range of sources (including Euclid, Ptolemy, Diophantus, Tartaglia, Descartes, Wallis, Leibniz, Newton, Euler, Cauchy, Riemann, Dedekind, Cantor, and Andrew Wiles), Anne Duffee (Sewanee: The University of the South) went a step further and used only Primary Sources as readings in her class!

The final major category of presentations in the session concerned general benefits for students from the use of primary sources. Abe Edwards (Michigan State University) was pleased at the extent to which primary sources helped his students bridge C.P. Snow's "Two Cultures." Matthew Cathey (Wofford College)

described the unexpected benefits with regard to reading and writing that his students experienced after working through a TRIUMPHS project on "Gaussian Elimination" based on *The Nine Chapters on the Mathematical Art*. Ed Bonan-Hamada (Colorado Mesa University) shared his similar experience—that using the TRIUMPHS PSPs had contributed noticeably to his students' growth mindset. Finally, Janet Barnett (Colorado State University - Pueblo) shared some TRIUMPHS on-going research work, done jointly with Cihan Can (Florida State University) and Kathy Clark (Florida State University), on the role of primary source projects in supporting student learning of the "meta-discursive rules" of mathematics.

Rounding out the session, Zoë Misiewicz (SUNY Oneonta and ISAW-NYU) presented a detailed description of an activity with an old Babylonian procedure text that she conducts regularly with her students, and Kenneth Monks (Front Range Community College) described his use of 21st-century technology (in the form of the shared-LaTeX document program Overleaf) to guide students in their exploration of primary source documents.

The *Teaching Undergraduate Mathematics with Primary Historical Source* CPS was not the only MathFest session that included presentations related to the use of primary source projects! Danny Otero (Xavier University) shared an overview of what he and his TRIUMPHS colleagues Dominic Klyve (Central Washington University), Nick Scoville (Ursinus College) and Diana White (University of Colorado Denver) are learning about instructors' experiences using PSPs in the *Encouraging Effective Teaching Innovation* CPS, while Mark Koester (Metropolitan State University of Denver) spoke on his experiences using a TRIUMPHS PSP on Pythagorean Triples with K–12 teachers in his talk in the *Great Circles, Great Problems* CPS. Other HoM-related presentations in the MathFest Program included a talk by Nell Rayburn (Austin Peay State University) on using writing ideas from English teachers in a History of Mathematics course in the *Developing Mathematical Thinking and Communication Through Writing* CPS and several poster presentations (including a poster from the TRIUMPHS group) in MAA's new Contributed Poster Session:

- The "Lost" Books of Euclid's Elements, presented by Chuck Lindsey (Florida Gulf Coast University)
- Using History to Integrate a Faith-Based Mission into the Mathematics Classroom, presented by Caira Bongers (Bryn Athyn College)
- Using History to Motivate Calculus, presented by Dan Kemp (South Dakota State University).

We hope that CSHPM members will attend future MathFest meetings in increasing numbers and will contribute to the growing number of HoM talks at the conference!

Janet Barnett & Dominic Klyve

ESU-8

The 8th European Summer University on History and Epistemology in Mathematics Education took place in Norway July 20–24, 2018, at the Oslo Metropolitan University. It was the 25th anniversary of the first ESU meeting in Montpellier, France. The scientific program committee consisted of Évelyne Barbin, Tinne Kjeldsen, Uffe Jankvist, Bjørn Smestad, and Constantinos Tzanakis. Trude Sundtønn, Lars Reinholdtsen, Eyvind Martol Briseid, Nikos Kapelonis, and Bjørn Smestad comprised the local arrangements committee. There were 114 participants from 27 countries of which 17 were European. As with previous ESU meetings the participants consisted of an interesting mix of researchers, practitioners and historians of mathematics. Each day began with a plenary lecture based on one of the six themes of the conference:

1. Theoretical and/or conceptual frameworks for integrating history and epistemology of mathematics in mathematics education;
2. History and epistemology in students and teachers mathematics education: Curricula, courses, textbooks, and didactical material of all kinds—their design, implementation and evaluation;
3. Original historical sources in teaching and learning of and about mathematics;
4. Mathematics and its relation to science, technology, and the arts: Historical issues and sociocultural aspects in relation to multidisciplinary teaching and learning;
5. Topics in the history of mathematics;
6. History of mathematics in the Nordic countries.

The morning plenary lectures were followed by parallel workshops related to the six themes. Lunch was provided on the first three days. Most afternoons consisted of parallel sessions of oral presentations or workshops. There was a panel discussion on theme 2 and a poster exhibition on symmetries in mathematics, nature, and art. The last day of the conference began and ended with a plenary lecture. On Sunday the plenary lecture was followed by a panel discussion. That afternoon three excursions were offered: the Viking Ship Museum, the Fram Museum, or the Kon-Tiki Museum. That evening participants enjoyed a splendid conference dinner held at a local restaurant. More details on the meeting can be found at `esu8.edc.uoc.gr/short-programme/`. The proceedings of the meeting will appear next summer. The next ESU meeting is scheduled for 2022 at a location yet to be determined. If it is as well planned as the Olso meeting, participants will be in for a rewarding educational and historical experience.

Jim Tattersall

HPM-Americas in Boston

The Americas Section of the International Study Group on the Relations Between History and Pedagogy of Mathematics met as a special session during the AMS Eastern Section meeting held at Northeastern University, on April 21–22, 2018. Attendees, as well as session organizers David L. Roberts and Amy Ackerberg-Hastings, enjoyed a program of 21 talks exploring aspects of the history of mathematics, the use of history in teaching mathematics, and the history of the pedagogy of mathematics. The afternoon of April 20, a group of about ten were delighted by a behind-the-scenes tour of the slide rules collection at the MIT Museum, led by Debbie Douglas. Many of the participants meandered to B Good for a collegial lunch on April 21. A few took in Central Square Theater's production of "The Women Who Mapped the Stars," about five women astronomers at Harvard at the turn of the 20th century, and several used the lunch break on April 22 to see an exhibition on M. C. Escher at the Museum of Fine Arts.

Talks on history of mathematics included: Maria Zack's examination of "Christopher Wren, John Wallis and the Cycloid"; Chris Rorres's work on "Finding the Center of a Circular Starting Line in an Ancient Greek Stadium"; Brit Shields's look at federally-funded and university-run educational programs for engineers during World War II; Scott Guthery's efforts to better understand American mathematical practitioners' mathematical knowledge by identifying the books they read; Clare Kim's research into "Forms of Perception, Perceptions of Form: Mathematics and the Arts at Black Mountain College"; and Marina Vulis's biography of Ukrainian Volodimir Levitsky (1872–1956).

In the presentations on utilizing history in mathematics courses, Bud Boman reported on his success with using the product rule to motivate the derivative in introductory calculus, following that concept's historical development, while Rebecca Vinsonhaler considered the possibilities of employing infinitesimals. Malgorzata Marciniak shared historical projects from her Calculus 3, differential equations, and linear algebra courses, and Maritza Branker gave further examples of how historical material is both content-rich and inspiring by describing her complex analysis course. Stuart Moskowitz argued that Charles Dodgson's use of puzzles and games continues to be a good model for creating a love for mathematics in elementary school students and their teachers. Colin McKinney demonstrated how he used software and video games in student projects on polar coordinates. Cihan Can asked for feedback on his efforts to make sense of the nature of mathematics and mathematical instruction, especially with measuring the impact of teaching with history.

On the history of mathematics education, Walter Meyer discussed "Calculus 1875–1920: The Lay of the Land" (joint work with Tom Bannon), while Andrew Perry looked at the arithmetic textbooks of Nicolas Pike, Nathan Daboll, and Daniel Adams. Eisso Atzema delved into the background, context, and content of an 1834 Irish geometry textbook to identify its author as John Gregory, an Irish immigrant who was a civil engineer, educator, and real estate speculator in Wisconsin. Peggy Kidwell showed examples of mathematical instruments used for teaching that were displayed at the Columbian Exposition of 1893. Larry D'Antonio reflected on historical justifications for employing proofs in classrooms, while Alexander Karp suggested that errors in printing, wording, calculating, and proving are an underdeveloped research area in the history of mathematics education. Emily Redman considered the role of mathematics in the

larger story of American educational reform movements, particularly the writing of standards in the last quarter of the 20th century.

During her talk as well as in an impromptu business meeting, Kathy Clark, the chair of HPM, provided an update on the umbrella group's activities and upcoming conferences. Dave Roberts, the chair of the Americas Section, reminded everyone that he is ready to step down when a successor is identified. A lively discussion of future Americas Section meetings reached consensus that organizing a special session at AMS section meetings is easy and brings out a range of valuable contributions to historical and pedagogical research. To be added to the HPM-Americas email list, please send a message to *rebecca.vinsonhaler@gmail.com*.

Amy Ackerberg-Hastings

Anachronism(s) in the History of Mathematics

On 13–14 April 2018 an international conference was held at Caltech, "Anachronism(s) in the History of Mathematics: The Seventh Biennial Bacon Conference." The conference was organized by Niccolò Guicciardini, Professor at the University of Bergamo and recipient of the 2018 Francis Bacon Award in the History and Philosophy of Science and Technology, under the general direction of Caltech Professor Jed Buchwald. The organization of the workshop was assisted by Caltech staff members Sinikka Elvington and Emily de Araújo as well as by Professor Diana Kormos-Buchwald, Director of the Einstein Papers Project at Caltech. Presenters at the conference came from Canada, France, Germany, Italy, UK and USA.

On the first day of the conference Guicciardini delivered the Bacon lecture, "*Un Altro Presente*: On the Historical Interpretation of Mathematical Texts"; in the evening the Bacon Award was conferred on him at a ceremony.

The subject of the conference was expressed by the organizers as follows: "Anachronism is often declared the greatest failure, almost a mortal sin, a historian can commit. Yet, some have spoken in favor of anachronism, considering it either as an inevitable, or even as a desirable feature of an historical work. The purpose of this two-day international conference is to reflect on the uses and abuses of anachronism in the historical study of the mathematical sciences."

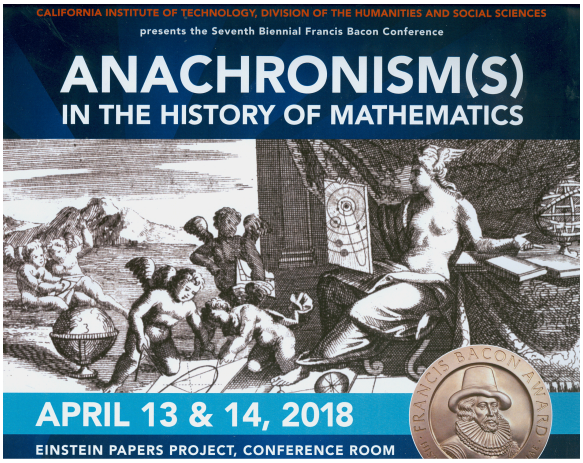


Figure 7: Conference Poster

In some opening remarks Guicciardini called attention to one of the earliest descriptions of historical anachronism, by Jean Leclerc in his *Ars Critica* of 1697. He referred to Quentin Skinner's 1969 essay in *History and Theory*, titled "Meaning and Understanding in the History of Ideas," where Skinner observed (p. 9), "We should not credit a writer with a meaning he could not have intended to convey, since that meaning was not available to him." In his Bacon address Guicciardini discussed the case of Newton's scientific writings and those of his contemporaries, and the narrative tension involved in rendering them comprehensible to a modern reader without compromising their historical character.

A list of the speakers at the conference including a précis of each of their talks is given below.

Karine Chemla (CNRS and University Paris Diderot), "Reading Problems as Problems, Books as Books, and the Like: Discussing a Widespread and yet Little-discussed Form of Anachronism in the History of Mathematics and Beyond": Karine Chemla identified a form of anachronism that is most widespread in the history of mathematics. It consists of taking the forms of text and inscription that we read in ancient sources (like a mathematical problem, an algorithm, a proof, a diagram, a chapter and a book, and also inscriptions on a calculating surface) as being the same as their modern counterparts, and interpreting these forms of text and inscription relying precisely on this tacit assumption. This form of anachronism has caused misinterpretations of several kinds. Chemla examined how ancient Chinese proce-

dures were read successively by Edouard Biot (1803–1850), Mikami Yoshio (1875–1950), Joseph Needham (1900–1995) and Wang Ling (1917–1994). She analyzed how the assumptions about procedures that each of these authors made, and the material conditions of their work, influenced the views they formulated about the mathematics of ancient China. In the last part of her presentation Chemla argued that the development since the 1950s of algorithms by authors such as Donald Knuth, introduced new forms and ideas to interpret ancient texts less anachronistically. A historical approach to the history of reading thus sheds light on the fact that anachronism itself has a history.

Martina R. Schneider (Johannes Gutenberg University), "On Mathematical Reconstruction as a Historiographical Method": Martina Schneider examined a 19th-century European example of mathematical reconstruction in the history of Chinese mathematics. In 1852 the English missionary Alexander Wylie published "Jottings on the Science of the Chinese" in the *North-China Herald*. This article was "translated" into German by K. L. Biernatzki and published in Crelle's journal in 1856. Biernatzki rearranged and changed Wylie's text, thereby adding mistakes. This led to an unfavorable evaluation of Chinese arithmetic by Moritz Cantor and Hermann Hankel. Ludwig Matthiessen, professor of physics in Rostock, spotted two of Biernatzki's mistakes regarding the Dayan rule (Chinese remainder theorem). On the basis of translated original Chinese quotations and the close study of an example, Matthiessen in 1881–1882 was able to reconstruct the Dayan rule for arbitrary moduli and discussed conditions of solvability. He stressed that the Chinese had "exactly the same" method as Gauss had for moduli that were not relatively prime, a finding that led to a more favorable reception of Chinese mathematics. Schneider pointed to the complexity of the time structure ("time-knot", in Achim Landwehr's terminology) at work in the example. She concluded that it showed some common features of mathematical reconstruction (no use of original sources; use of contemporary mathematics; conjectural) and could also be seen as a correction of a contemporary text (Biernatzki's).

Kim Plofker (Union College), "Anachronism/Anachorism in the Study of Infinitesimal Mathematics in India": The lineal descent of fundamental ideas and methods in modern mathematics from classical antiquity makes the concept of "anachronism" a natural concern when studying pre-modern successors to Hellenistic mathematics: are we projecting back onto earlier thinkers our own awareness of modern versions and developments of these ideas? Kim Plofker introduced another fundamental concept. In studying the history of other mathematical traditions such as those of India and China, we should be aware of a form of projection that's more geographical in nature than temporal, which is called "anachorism". For instance, when we label/equate some ancient non-Greek mathematical development with its classical "equivalent", our interpretation is not so much "out of time" as "out of place". Important aspects of this combined phenomenon of anachron/chorism include its potential for both insights and misunderstandings in reading texts (both of which arise in the historiographical controversy about whether the infinitesimal mathematics of the late medieval Kerala school in south India is "calculus"), and its almost entirely overlooked presence in pre-modern mathematical works themselves (as in an example presented by Plofker of an 18th-century Sanskrit synopsis of an Arabic explanation of Islamic algebra in terms of traditional Indian algebra concepts).

Jacqueline Feke (University of Waterloo), "Re-examining the Distinction between Philosophy and the Mathematical Sciences in Greek Antiquity": Jacqueline Feke examined the relationship between mathematics and philosophy in Greek antiquity, and the perspectives brought to the study of ancient Greek thought by modern historians. For the ancient Greeks, mathematics was part of philosophy, along with physics and theology. Modern disciplinary differences between philosophy and mathematics are reflected in the approach that historians of philosophy take today to classical Greek texts. The implicit modern separation of mathematics and philosophy is imposed anachronistically on the study of ancient Greek thought, where no such separation existed. The examination of some ancient Greek mathematical texts, moreover, reveals that some mathematicians were aiming to solve the traditional, most fundamental problems of philosophy.

Joseph W. Dauben (Lehman College CUNY), "Anachronism and Incommensurability: Words, Concepts, Contexts, and Intentions": Joseph Dauben presented examples of anachronism in the history of mathematics, two that involved non-standard analysis and sev-

eral concerning historical accounts of ancient Chinese mathematics. A case study that is perhaps not widely known involves a 1995 attempt by the philosopher Hilary Putnam to use ideas from non-standard analysis (in a suitably qualified form) to illuminate Charles Peirce's conception of continuity, set forth by Peirce in an 1898 lecture at Harvard. Dauben argued that Putnam's study provides an instance of the successful application of anachronism in the history of mathematics. Examples of ancient Chinese mathematics that have given rise to anachronistic historical interpretations include Liu Hui's double-distance method for determining heights, presented in the *Sea Island Mathematical Manual* (Haidao suanjing) of 263 AD, and methods for the extraction of roots found in Hui's famous *Nine Chapters of the Mathematical Arts* (Jiuzhang Suanshu).

George E. Smith (Tufts University), "Reading the *Principia*? Anachronistic Renderings of Newton's Mathematics": George Smith discussed Propositions 39–42 of Book One of Newton's *Principia* (1687 and later editions). Through a close analysis of their content he established the intellectual linkage of this part of the *Principia* with Huygens's *Horologium Oscillatorium* of 1673. Smith pointed out that the danger of introducing anachronism is present not simply in the translation into English from Latin but also in the formulation of Newton's distinctive geometric idiom in terms of later mathematics. He suggested that the tendency to interpret the *Principia* anachronistically was already present in the work of early Continental mathematicians, such as Johann Bernoulli, as they developed Newtonian methods using the calculus. One consequence of this historical practice was to obscure the role played by Huygens's *Horologium* in the genesis of the *Principia*.

Craig Fraser (University of Toronto), "Historiographical Issues in the Interpretation of Euler's Work on Divergent Series": Modern commentators such as Morris Kline believe that the theory of summability—developed at the end of the 19th century by Frobenius, Cesàro and others—may be found in Euler's work on divergent series. This thesis is in line with the view of some historians, such as A. P. Yushkevich, that Euler possessed a kind of visionary intuition of mathematical concepts and lines of development that would only develop much later. Fraser examined the anachronism implicit in this point of view. Euler understood divergent series as things that were given as part of objective reality, and not simply defined as they are in summability theory to be whatever the investigator wishes them to be. The subject of summability grew out of researches in complex analysis within a mathematical framework that was foreign to Euler's mathematics. In the conclusion Fraser commented on some parallels between claims for the historiographical relevance of summability theory and non-Archimedean analysis.

Jemma Lorenat (Pitzer College), "Portraying Projective Geometry: The Presence and Absence of Measurement in Nineteenth Century Pure Geometry": By the early 20th century projective geometry had come to be seen as an approach to geometry that was essentially non-metric. This conception is apparent, for instance, in Oswald Veblen and John W. Young's 1910 book on the subject. While historians and mathematicians anachronistically attributed the conception to Jean-Victor Poncelet, the French geometer in fact employed metric notions such as cross ratio in a fundamental way. Not until Karl Georg von Staudt's *Geometrie der Lage* in 1847 were projective properties defined as properly non-metric. The history of a non-metric projective geometry developed alongside an increased focus on the axiomatic foundations of geometry in late nineteenth and early twentieth-century research. Authors writing at this time tended to read a foundational interest that was not there into the work of early 19th-century authors.

Jeremy Gray (Open University emeritus), "Anachronism: The Case of Non-Euclidean Geometry": Jeremy Gray examined Roberto Bonola's influential history, "La geometria non euclidea. Esposizione storico critica del suo sviluppo" (1905; German translation 1908, English translation 1912), focusing on Bonola's account of Lobachevskii's work. Bonola was writing within an educational tradition prevalent in early 20th-century Italy that made a distinction between elementary and advanced mathematics. Elementary geometry was the geometry in the style of Euclid, perhaps updated to include axiomatic ideas in the manner of Pasch and Hilbert. Advanced geometry was the differential geometry of Riemann and Beltrami. Bonola anachronistically placed Lobachevskii within the tradition of elementary geometry, and in so doing missed the central importance of basing geometry on a primitive concept of distance in Lobachevsky's pioneering work and of establishing non-Euclidean geometry through the formulae of hyperbolic trigonom-

etry.

The organizers plan to publish a volume of essays based on the conference.

Craig Fraser

Executive Council Meeting CSHPM/-SCHPM

The meeting of the Executive Council of CSHPM/-SCHPM took place at Université du Québec à Montréal, Montreal, QC, on June 4, 2018. The following members were present: Amy Ackerberg-Hastings, Patricia Allaire, Eisso Atzema, Maritza Branker, Craig Fraser, Elaine Landry, Greg Lavers, Jean-Pierre Marquis, Dirk Schlimm, Joel Silverberg, and Maria Zack. Dirk Schlimm, President, called the meeting to order at 12:20 pm.

The agenda for the meeting was approved, and minutes from the 2017 Executive Council Meeting were accepted as printed in the November 2017 *Bulletin*.

Treasurer's Report: Greg Lavers presented a report for fiscal 2017 (the fiscal year is the same as the calendar year). The 2017 statements were published in the May 2018 *Bulletin*. Greg reported that the issue with PayPal was settled with assistance from the Federation. PayPal eventually understood that although we are a not-for-profit organization, we are not a charity.

Craig suggested that we find a good use for our excess funds. Greg noted that the check paid to the winner of the CSHPM Award was for Can$1,000, but the student's bank cashed it for the Canadian equivalent of US$1,000.

Secretary's Report: Patricia Allaire presented comparative membership data for 2017 and 2018:

	2017	**2018**
Total Members	154	153
Members By Address or Organization		
Can	41	37
US	100	93
Other	21	23
BSHM	13	17
CSHPS	5	5
Complimentary	0	0
Members By Status		
Active	96	67
Retiree	43	49
Student	10	5
Developing Nations	4	5
Student Associate	3	3
Unknown	6	0
Members by Pay Method		
Online	100	110
Snail Mail	30	18
Reciprocal Members	19	22
Complimentary	6	3
New Members	26	16
Reciprocal Memberships		
To BSHM	51	54
To CSHPS	27	28
Journal Subscriptions		
Historia (paper)	57	53
Historia (electronic)	4	8
Philosophia	25	25
SCIAMVS	N/A	8
Proceedings		
Federation	1	1
Hardcover	10	11
Paperback	16	20
Electronic	6	11
Bulletin		
Paper	44	42
Donations		
No. Donors	20	16
Amount	$862.50	$843.00

Pat pointed out that there is some overlap of members in the "by address or organization category" and that the status of reciprocal members from CSHPS and BSHM is not known. 42 paper *Bulletins* were mailed, 38 to current members, 1 to the Federation, and 3 to the winners of the HOMSIGMAA essay contest. She also noted that there have been several additional payments since this report was prepared and that the number of "active" members vs. "retirees" has decreased.

***Bulletin* Editor's Report:** Amy Ackerberg-Hastings reported that publication went smoothly in the past year. She thanked the co-editors, Eisso Atzema and Maria Zack; the Secretary, Pat Allaire; the Webmaster, Mike Molinsky; and all of the 2017 contributors. All 3 editors are willing to continue in their positions. She noted that the editors were asked at last year's AGM to research mobile-friendly layout options. Eisso has been working on this, but he has

yet to find a workable solution. For instance, ePub converters fail with longer documents. He plans to keep trying, but his suspicion is that available freeware is not suitable for this purpose. Members' suggestions are welcome.

As always, the *Bulletin* also seeks submissions for upcoming issues. Members are asked to send reports on conferences attended, professional and personal news, announcements of events or publications of interest to historians and philosophers of mathematics, photographs, and the like to *aackerbe@verizon.net* at any time. Please also contact Amy if you are interested in contributing to our ongoing column series (Models of Mathematics, Off the Shelf, and Mathematical Ephemera) or want to volunteer for a book or web review or request that a book be reviewed. Submissions are closed each April 1 and October 1 to prepare the two issues of the year.

In response to a question, Amy said that the *Bulletin* is available online only to members until the next issue is published; then it is available to anyone visiting the website.

CSHPM Notes Editor's Report: On behalf of co-editor Hardy Grant, Amy Ackerberg-Hastings reported that they continue to have a good working relationship with the CMS staff liaison and that they submitted CSHPM Notes columns for all six issues in 2017. The series now includes 24 columns with 17 different authors/co-author pairs, including two of the three winners of the CSHPM Student Award. (The 2016 winner has not responded to multiple invitations.) Amy and Hardy continue to have a policy that authors be members of CSHPM. There are still about 3 times as many history columns as philosophical ones, mainly due to the availability and interests of potential authors. A couple of items are in the pipeline, but the editors would be happy to discuss topic ideas for upcoming deadlines in August and October 2018 and all of 2019. Hardy and Amy are willing to continue editing the column.

Amy noted that there have been enough submissions from members that it has not been necessary to seek out "high profile" non-members as authors.

***Proceedings* Editor's Report:** Maria Zack reported that the 2017 *Proceedings* will be printed shortly. The chapter authors are currently reviewing their proofs and the volume editors will review the final version in June. It appears that moving to a more aggressive calendar for submission deadlines has resolved the problem with the backlog of production that arrives at Birkhäuser/Springer in the summer months. We will be using the same schedule for the 2018 volume.

Our original contract with Birkhäuser was for three years, encompassing the 2015, 2016 and 2016 volumes of the *Proceedings*. With the provision that Maria Zack remain as one of the editors, the original contract was extended for an additional three years to cover the 2017, 2018 and 2019 volumes. It will soon be time to negotiate with Birkhäuser again. Because they are seeing good success with selling individual articles from the volumes, it is expected that they will extend the contract again, with the same provision. Maria is willing to continue as the lead *Proceedings* editor if the contract is extended.

We have changed editors at Birkhäuser. Ben Levitt, our previous editor, has left for other opportunities, and his assistant editor Chris Tominich has been promoted to being the editor assigned to work with CSHPM. Maria met with both at the Joint Mathematics Meetings in January 2018 and the transition has been a smooth one.

She also noted: 1) Over 3000 articles from our *Proceedings* have been downloaded from the Birkhäuser website. These downloads, at \$20–30 each, are how Birkhäuser makes a profit on the *Proceedings*. 2) Emily Grosholz, this year's May speaker, will include her paper in the *Proceedings*. 3) In response to a question, Maria said that some submitted papers are rejected. 4) The number of student papers included is small because students often don't have time to prepare them for publication.

CSHPM Student Award: Maria Zack reported that the award for 2018 will remain at \$1,000. The award has been intended to be used by the winner to attend a future conference of a professional organization. However, it doesn't appear that the funds have been used in this way because students often have more pressing financial needs. Maria suggested that after this year, the amount of the prize money be reduced and instead we provide financial support for a number of students who present at the annual meeting. This suggestion will be brought up for discussion at the AGM. It was suggested that the prize be Can\$500 and that there be five travel stipends of Can\$250 each.

Webmaster's Report: Mike Molinsky reported via email that he has continued to maintain and update the society website and email listservs.

Archivist's Report: Eisso Atzema reported that last summer Mike Molinsky brought over the CSHPM Archives to his office and that not much has been done with them since. He did handle one request for a copy of an article from the *Proceedings* and he added a copy of the 2016 *Proceedings* to the Archives.

Phil Math Preprint Archive: Elaine Landry explained that the PhilMath Archive went online in May 2017. Coordination and moderation is overseen by Elaine Landry in conjunction with an Advisory Board consisting of philosophers of mathematics, each from a sponsoring Association/Society, namely, CSHPM, BSHM, APMP, PMA and POM SIGMAA. These include: Dirk Schlimm, Dan Sloughter, Colin McLarty, Philip Beeley, and Andrew Arana. There are 12 Subject Areas (with the number of postings in each): Applicability (7); Epistemology (13); Explanation (9); Foundations (20); History (3); History of Philosophy (11); Logic (41), Methodology (7); Ontology (12); Practice (10); Proof (8); and, Values (2).

John Norton of the PhilSci Archive commented, "The opening of PhilMath Archive has had a marked effect on the postings. They have more than doubled since the new Archive opened."

The exact posting numbers are:

Year	Number
2013–2014	10
2014–2015	16
2015–2016	20
2016–2017	19
2017–2018	48

PhilMath-Archive invites submissions in all areas of philosophy of mathematics, including general philosophy of mathematics, history of mathematics, history of philosophy of mathematics, history and philosophy of mathematics, philosophy of mathematical practice, philosophy and mathematics education, mathematical applicability, mathematical logic and foundations of mathematics. Submissions to PhilMath-Archive, `philsci-archive.pitt.edu/philmath.html`, should be made via PhilSci-Archive; instructions can be found here:`philsciarchive.pitt.edu/help/`.

***SCIAMVS* Journal:** Dirk presented the publication's 2017 annual report, submitted by Nathan Sidoli. It is printed elsewhere in this *Bulletin*.

CMS Liaison: Maritza Branker reported that we had a successful afternoon session at the Winter CMS meeting 2017 in Waterloo, Ontario. She is in the process of organizing a full day at the Winter CMS meeting 2018 in Vancouver, BC. At this particular meeting a new policy has been introduced requiring two onsite organizers for each session. Glen Van Brummelen has agreed to serve as one, and Maritza is still looking for a second since she cannot attend the Vancouver meeting. Going forward, if this policy of requiring two onsite organizers to be in attendance (and identified when submitting the program proposal) is fully adopted by the CMS, we may want to reconsider our attendance at the Winter meeting and plan to be part of the AMS/MAA joint meeting in January instead.

There was a discussion: 1) Amy said that Glen Van Brummelen and Tom Archibald had encouraged our participation in CMS meetings as a way to raise our profile in the Canadian mathematics community. This goal would be defeated should we instead have a session at the AMS/MAA Joint Meetings. 2) Craig noted that low attendance at CMS meetings is in part because of the high cost. Maritza noted that the date for the CMS winter meetings (first week in December) conflicts with the last week(s) of the academic semester. 3) Maritza will continue the search for two onsite organizers, as required by CMS. The group suggested some people that Maritza might contact.

Future Meetings: In 2019, Congress will meet at UBC in Vancouver June 1–7. We plan to be part of this meeting. A local organizer, general session organizer, and special session organizer are needed. We require also a topic for the special session. All these needs will be presented to the membership at the AGM.

Maria proposed that in 2020 we meet jointly with BSHM at St Andrews, Scotland. It is our turn to go to BSHM (they last joined us at MathFest in 2015). Maria has been in contact with BSHM, and they have done quite a bit of preliminary work for this meeting. The idea will be presented to the AGM.

Nominating Committee Report: Dirk reported for Chris Baltus, Dan Curtin, and Larry D'Antonio that the following have agreed to let their names stand for nomination to council for the period 2018–

2020 (June to May):
Maria Zack, President
Craig Fraser, Vice-President
Patricia Allaire, Secretary
Greg Lavers, Treasurer
Elaine Landry, Council
Duncan Melville, Council
Andrew Perry, Council
Richard Zach, Council

2018 Election: Pat said that she can accept ballots until the start of the AGM tomorrow. Results will be announced at the AGM.

Other Business: Dirk expressed thanks to the Council, editors, and conference organizers.

The meeting was adjourned at 1:10 pm.

Patricia Allaire, Secretary

Joint AMS/MAA Meetings in Baltimore

A number of events in history and philosophy of mathematics have been planned for the Joint Mathematics Meetings, to be held in Baltimore, Maryland, January 16–19, 2019. More information can be found on the MAA or AMS websites: `www.maa.org` or `www.ams.org`.

Wednesday, January 16

- 8:00–11:00: AMS Special Session on 25 Years of Conferences for African-American Researchers in the Mathematical Sciences, I, organized by William A. Massey.
- 14:15–18:15: AMS Special Session on 25 Years of Conferences for African-American Researchers in the Mathematical Sciences, II
- 18:15–20:15: HOM SIGMAA Reception, Business Meeting, and Guest Lecture, "Crossing the Pond: European Mathematicians in 1920s America," by Karen Hunger Parshall.

Thursday, January 17

- 8:00–12:00: MAA Session on Humanistic Mathematics, organized by Gizem Karaali and Eric Marland.
- 9:00–9:50: MAA Invited Address, "A Dream Deferred: 50 Years of Blacks in Mathematics," by Edray Herber Goins.
- 13:00–15:00: MAA Minicourse on Object-Based Learning and the Smithsonian Learning Lab, I, presented by Amy Shell-Gellasch and sponsored by HOM SIGMAA. (NOTE: You must preregister for this course.)
- 17:30–19:05: POM SIGMAA Reception, Business Meeting, and Guest Lecture, "The Rigour of Proof," by Michele Friend.

Friday, January 18

- 8:00–11:00: HOM SIGMAA Session on Ethnomathematics: Ideas and Innovations in the Classroom, organized by Janet Beery, Antonia Cardwell, Ximena Catepillan, and Amy Shell-Gellasch.
- 8:00–10:55: POM SIGMAA Session on Philosophy of Mathematics (with the special theme Do Choices of Mathematical Notation (and Similar Choices) Affect the Development of Mathematical Concepts?), I, organized by Jeffrey Buechner and Bonnie Gold.
- 8:00–11:00: MAA Invited Paper Session on The Past 50 Years of African Americans in the Mathematical Sciences, organized by Edray Herber Goins.
- 10:05–10:55: AMS Invited Address, "The Roaring Twenties in American Mathematics," by Karen Hunger Parshall.
- 13:00–18:00: AMS-MAA-ICHM Special Session on History of Mathematics, I, organized by Sloan Despeaux, Jemma Lorenat, Daniel E. Otero, and Adrian Rice.
- 13:00–16:00: POM SIGMAA Session on Philosophy of Mathematics, II.
- 13:00–18:00: MAA Session on Good Math from Bad: Crackpots, Cranks, and Progress, organized by Elizabeth T. Brown and Samuel R. Kaplan.

Saturday, January 19

- 8:00–12:00: AMS-MAA-ICHM Special Session on History of Mathematics, II.
- 13:15–17:00: AMS-MAA-ICHM Special Session on History of Mathematics, III.
- 13:00–15:00: MAA Minicourse on Object-Based Learning and the Smithsonian Learning Lab, II .

At press time, an MAA General Contributed Paper Session on the History or Philosophy of Mathematics, organized by Emelie Kenney and Melvin Royer, was planned but not yet scheduled.

From the Webmaster

I am considering eliminating two of the resources currently provided on the CSHPM/SCHPM website: the Member Email Directory (`www.cshpm.org/contact/emails.php`) and the list of Member Homepages (`www.cshpm.org/contact/homepages.php`).

One concern with regard to the email directory is maintaining member privacy. A few of you may remember that the full text of the email directory was originally posted openly on the website. Then in 2008, after an instance when the list was clearly used to spam the entire membership with unwanted advertisements, the email list was taken down and replaced by a Flash applet that required users to enter at least part of the last name of the member before any contact information would be provided. Unfortunately, Flash has run into security problems of its own and Adobe has announced that it will stop supporting and distributing the Flash Media Player by 2020 at the latest. It is certainly possible that some other solution could be used to create a (somewhat) protected directory of member email addresses, but it isn't clear if the result would be worth the investment of time and effort.

Unlike the email directory, there are no obvious privacy concerns with regard to homepages, since they are by definition public presentations of information; however, the importance of personal homepages seems to be on the decline. During my time as webmaster, more than half of the members who used to have homepages have eliminated them, and of the ones that remain many have not been updated in years.

The limited "visitor statistics" provided by our web hosting provider show that both directories are not visited very often compared to the rest of the website. I suspect that most members are much more likely to head to their favorite search engine rather than our website when looking for another member's homepage or email address.

Any feedback from members, either for or against the elimination of these two resources can be sent to me at `michael.molinsky@maine.edu`. And I'm happy to receive feedback about any other aspect of the website as well: broken links, incorrect information, additional resources that would be useful, and so on. Thank you in advance for your advice.

Mike Molinsky

AGM of CSHPM/SCHPM

The Annual General Meeting of the Canadian Society for History and Philosophy of Mathematics took place at Université du Québec à Montréal, Montreal, QC, on June 5, 2018. The meeting was called to order at 12:20 pm by Dirk Schlimm, President, with 25 members in attendance.

Agenda for the General Meeting

1. Approval of agenda
2. Approval of minutes of 2016 AGM
3. Treasurer's report
4. Secretary's report
5. *Bulletin* Editor's report
6. CSHPM Notes Editor's report
7. *Proceedings* Editor's report
8. CSHPM Student Award
9. Webmaster's report
10. Archivist's report
11. Phil Math Preprint Archive
12. *SCIAMVS* report
13. CMS Liaison report
14. Future Meetings
15. Nominating Committee report
16. Election results
17. Other business
18. Thanks from the President

1. The agenda for the general meeting was approved.

2. Minutes from the 2017 AGM were accepted as printed in the November 2017 *Bulletin*.

3. Greg Lavers presented the reports described in the Executive Council meeting minutes. He explained to the membership what the problem had been with PayPal and how it was rectified.

4. Patricia Allaire presented comparative membership data for 2017 and 2018. (Please refer to the CSHPM Executive Council Minutes in this issue of the *Bulletin* for the data.)

5. Amy Ackerberg-Hastings, on behalf of co-editors Eisso Atzema and Maria Zack, thanked all who had contributed to the *Bulletin*. She reported that the editors have been unable to find a freeware layout option that will work for the combination of LaTeX, a multipage document, and mobile devices. Technical advice from members is most welcome, but for the present, the *Bulletin* will continue to be produced only as a

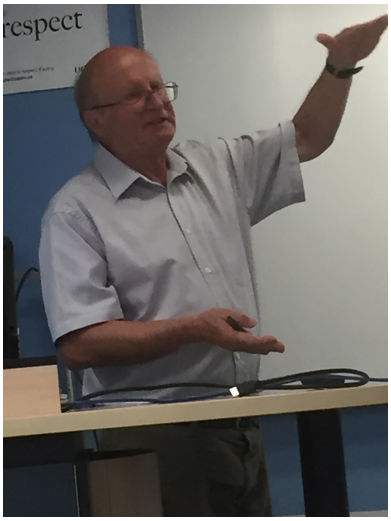


Figure 8: Roger Godard

2-column PDF. She also noted that the editors have had limited success with getting the winners of the Student Award to write about the conferences they attended with the money they won.

6. Amy Ackerberg-Hastings, on behalf of co-editor Hardy Grant, noted that the policy for CSHPM Notes has been to require authors to be members of CSHPM, and to date it has been possible to have a column in each issue of *CMS Notes* without having to solicit non-members to write articles. The editors have been inviting winners of the CSHPM Student Award to submit columns; two of the first three winners did so.

7. Maria Zack announced that the deadline for submissions for the 2018 volume of *Proceedings* will be September 15.

8. The student prize winners for 2017, Aaron Thomas-Bolduc and Eamon Darnell, were introduced.

A motion was made and seconded to restructure the award as follows: Can$500 to the winner and six grants of $250 each to partially reimburse expenses of students who present papers at our annual meeting. After discussion, it was agreed that both undergraduate and graduate students could qualify. If more than six apply (not likely), the students would be asked if they have any other source of funding. The motion was passed.

9. Mike Molinsky continues to maintain and update the society website and email listservs.

Figure 9: George Heine and Janet Barnett

Figure 10: Maritza Branker

10. Eisso Atzema reported that Mike Molinsky brought over the CSHPM Archives to his office last summer and not much has been done with them since. He did handle one request for a copy of an article from the *Proceedings* and he added a copy of the 2016 *Proceedings* to the Archives.

11. See the Executive Council Minutes for an update on the Phil Math Preprint Archive.

12. The 2017 annual report for *SCIAMVS* is printed elsewhere in this *Bulletin*.

13. Maritza Branker said that she now has two onsite organizers for the CMS Winter meeting. Jim Smith said that he was at the last CMS Winter Meeting, and that many attendees at the CSHPM session were students. Jean-Pierre Marquis noted that John Conway had come to his talk in 2013 in Ottawa.

14. In 2019, we will meet at Congress, which will be at UBC in Vancouver, June 1–7. Craig Fraser suggested History of Mathematical Astronomy as a special session topic; this topic has not been a special session

topic in the past. The membership agreed. Craig volunteered to organize and to find a May speaker. Fred Rickey suggested that there be an introductory lecture to bring everyone "up to speed" on what might well be an unfamiliar topic.

In 2020 we will meet jointly with BSHM at St Andrews, Scotland, July 6–8.

15. The Nominating Committee presented the slate of candidates listed in the Executive Council Minutes.

16. Pat Allaire reported that sixty-four ballots were cast electronically, and four paper ballots were mailed. The slate, with no write-in candidates, were all elected. Rob Bradley noted that because of two-term limit for the 4 Council Members, all 4 are new. As a result, there is no continuity on the Council. Should all 4 run for a second term, there will be no continuity 4 years hence. Elaine Landry volunteered to not run in 2020 to help alleviate this problem.

17. David Orenstein announced that there will be an open house at the Bertrand Russell Archives on June 22. Jean-Pierre Marquis offered thanks to Dirk from the membership.

18. Dirk expressed thanks to the Council, editors, and conference organizers.

The meeting was adjourned at 1:17 pm.

Patricia Allaire, Secretary

Quotations in Context

"By studying the masters and not their pupils."

Modern publications that include the quotation above will sometimes provide a bit of context, claiming that the mathematician Niels Henrik Abel made the statement in reply to a question about how exactly he became so adept at mathematics so quickly. However, this version of events appears to trace back only to the writings of Howard Eves [2, p. 106], and no older work that I've found claims that Abel was actually responding to another person's query.

The original source for this quotation is a marginal note Abel made to himself during a tour of Europe. Following an extended stay in Berlin, as well as a bit of sightseeing in the Alps, Abel arrived in Paris in the summer of 1826 and stayed there until the end of the year. Soon after his arrival in Paris, he purchased a bound notebook and wrote "Mémoires de Mathématiques par N. H. Abel" on the cover, although the notebook also goes by the (perhaps less exciting) title of "MS:351:A" in the manuscript collection of The National Library of Norway.

When a collection of the complete works of Abel was published in the late nineteenth century, it did not reproduce the entire Parisian notebook, but a brief summary of the notebook's contents was included at the end of the second volume [1, pp. 286-287]. On pages 75–79 of the notebook, Abel performed a set of calculations under the title, "Sur une espèce particulière de fonctions entières nées du développement de la fonction $\frac{1}{1-v}e^{-xv/(1-v)}$ suivant les puissances de v" [On a particular species of integer functions born of the development of the function $\frac{1}{1-v}e^{-xv/(1-v)}$ according to the powers of v].

In the course of these investigations, Abel was moved to praise the work of Pierre-Simon Laplace in the margin next to the calculations, and it is here that we discover the quotation that is the subject of this column. Shown below is a transcription of the original French text of the marginal notes, together with an English translation:

> Si l'on veut savoir comment on doit faire pour parvenir à un résultat plus conforme à la nature il faut consulter l'ouvrage du célèbre Laplace où cette theorie est exposée avec la plus grande clarté et dans une extension convenable à l'importance de la matière. Il est en outre aisé de voir qu'une théorie écrite par M. Laplace doit être bien supérieure à toute autre donnée des géomètres d'une classe inférieure. Au reste il me paraît que si l'on veut faire des progrès dans les mathématiques il faut étudier les maîtres et non pas les écoliers.
>
> If one wants to know what one should do to obtain a result in more conformity with Nature one should consult the works of the famous Laplace where this theory is exposed with the most clarity and to an extent in accordance with the importance of the subject. It is also easy to see that a theory written by M. Laplace must be much superior to any other written by less bright mathematicians. By the way it seems to me that if one wants to progress in mathematics one should study the masters and not the pupils. [4, pp. 20–21]

A photographic reproduction of the final sentence in Abel's handwriting can be seen in *The Abel Prize: 2008-2012* [3, p. v].

References

[1] Abel, Niels Henrik. *Œuvres Complètes de Niels Henrik Abel*, 4th ed. Vol 2. Edited by Ludvig Sylow and Sophus Lie. Christiania: Grøndahl & Søn, 1881. *Nineteenth Century Collections Online.*

[2] Eves, Howard W. *Mathematical Circles Squared.* Boston: Prindle, Weber & Schmidt, 1972.

[3] Holden, Helge, and Ragni Piene, eds. *The Abel Prize 2008–2012.* Berlin: Springer-Verlag, 2014.

[4] Sørensen, Henrik Kragh. *The Mathematics of Niels Henrik Abel: Continuation and New Approaches in Mathematics During the 1820s.* RePoSS: Research Publications on Science Studies 11. Aarhus: Centre for Science Studies, University of Aarhus, Oct. 2010. `http://www.css.au.dk/reposs`.

Mike Molinsky

New Members

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

Yousuf Hasan
London, ON
Canada

Robert Hudson
Saskatoon, SK
Canada

Aurélien Jarry
University of Wuppertal
Wuppertal
Germany

Jose Antonio Perez Escobar
Zurich
Switzerland

Callie Lane
Desoto, KS
USA

John Lehmann
London, ON
Canada

Jorge M. Lopez
Guaynobo, PR
USA

Lydia Patton
Ona, WV
USA

Christen Peters
Bristol, TN
USA

Jacobus Swarts
Vancouver Island University
Nanaimo, BC
Canada

Rachel Talmadge
Kansas City, MO
USA

From the Editor

One of my more quirky hobbies is observing which cities get chosen as meeting sites by multiple scholarly organizations; sometimes it feels like every society to which I belong rotates through the same locations. As you have read in this issue, in the next several months we have two opportunities to enjoy the delights of Vancouver: our CSHPM special session at the upcoming CMS Winter Meeting and our annual meeting at the 2019 Congress. I hope each of you will be able to attend at least one of those gatherings.

We have also included this fall's announcement about the long-term status of the Joint Mathematics Meetings, which proved to be a lesson in historical memory for me because I always forget that the AMS ended its participation in the summer meeting that is now MAA MathFest as recently as it did. The news thus served not only as a reminder of how quickly practices become established but also of the truth that change is hard work, regardless of whether it is welcome or unwelcome. I think our society does a great job of being willing to try new things and to refresh existing traditions, although of course any activity always has room for growth, and I appreciate the effort all of the members who have participated in the Executive Council throughout our history have invested in making CSHPM vibrant.

Thanks to Pat Allaire for the photos from our 2018 Annual Meeting. Article illustrations and images of CSHPMers always add visual interest to the *Bulletin.* It has been terrific as well to consistently receive reports on conferences relevant to historians and philosophers of mathematics.

Our newsletter's next submission deadline is 1 April 2019. The editors additionally seek news items of in-

terest to historians and philosophers of mathematics and personal and professional announcements. We also welcome suggestions for memorials, book and web reviews, and informative or thought-provoking column-style articles. Ongoing column series include Models of Mathematics (using unique or eye-catching clothing as an entrance point into a historical mathematician), Off the Shelf (revisiting classic or previously-read works in the history or philosophy of mathematics), and Mathematical Ephemera (sightings of oddities in the history and philosophy of mathematics).

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 *aackerbe@verizon.net*. 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.

Amy Ackerberg-Hastings

About the Bulletin

The *Bulletin* is published each May and November by a team of 3 volunteers: Content Editor Amy Ackerberg-Hastings (aackerbe@verizon.net), 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 Amy Ackerberg-Hastings at the above email address, or by postal mail to 5908 Halsey Road, Rockville, MD 20851, USA.