

SCHPM

November/Novembre 2011

Number/le numéro 49

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Canadian Society for History and Philosophy of Mathematics

Société canadienne d'histoire et de philosophie des mathématiques

ISSN 0835-5924

ABOUT THE SOCIETY

Founded in 1974, the Canadian Society for the 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: Jean-Pierre Marquis, Université de Montréal, Montréal, QC H3C 3J7, CA, jean.pierre.-marquis@umontreal.ca

Vice-President: Glen Van Brummelen, Quest University, Squamish, BC V8B 0N8, CA, gvb@questu.ca Secretary: Patricia Allaire, 148-18 60 Ave., Flushing, NY 11355, USA, PatAllaire@gmail.com

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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 **Tom Archibald**, Simon Fraser University, Burnaby, BC, V5A 1S6, tarchi@math.sfu.ca. The Society's Archives are managed by **Michael Molinsky** (see above). **Tom Archibald** (see above) serves as CMS Liaison.

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

From the President

As I sit down in front of my computer to write this Report, I cannot help but reminisce about our last Annual Meeting. Indeed, the 5th Joint Conference of the BSHM and CSHPM was held last July 15–17 in the elegant surroundings of Trinity College, Dublin. More than 50 participants came together to share their research and listen to the findings of others. In order to accommodate all the talks, there were often two, and sometimes even three, parallel sessions, as well as a series of plenary talks.

The scientific program was launched by Robert Thomas, who gave a very interesting and stimulating talk with the aim of putting to the historical test various philosophical theses regarding "ideal mathematicians." Using the *Spherics* of Theodosios, Robert introduced a distinction between the real mathematical agent and what he called the epistemic mathematical agent, an agent who is capable of superhuman cognitive tasks. An epistemic agent seems indeed implicitly assumed in various proofs and notions of classical geometry.

A busy day of multiple sessions, interspersed with coffee and tea breaks, and a well-catered lunch followed, culminating in a closing presentation in which Gregg De Young gave a fascinating talk on the historical voyage of a manuscript, namely the Rome 1594 Arabic Redaction of Euclid's *Elements*.

If you ever wanted to know why ellipses are not elliptic curves, then Adrian Rice's talk the next morning offered a crystal clear explanation, in which the history of various subjects came beautifully into play, while June Barrow-Green took a close look at Oswald Veblen's letters to George Birkhoff to reconstruct a picture of Europe at the turn of the 20th century from the point of view of a young American mathematician. After another excellent lunch, we held the CSHPM Annual General Meeting. The organizers had thoughtfully given participants Saturday afternoon off to explore Dublin and sample the various wares it had to offer before a fine conference banquet in the evening.

Reconvening Sunday morning, it was only fitting that the next talk, given by Karen Hunger Parshall, carried on from June Barrow-Green's earlier generation of mathematicians to look at the role of the American Mathematical Societies during World War II. If American mathematicians were still looking up to Europe at the turn of the 20th century, by the time of WWII some of them thought that they were the "best pure mathematicians."

After another full day, the last talk was left to V. Frederick Rickey, who discussed the life and work of Jan Lukasiewicz, a more than fitting topic since the latter moved from Warsaw to Dublin, where he spent the last years of his life. Robin Wilson and Glen Van Brummelen gave closing remarks.

The well-attended conference had a wide range of stimulating and interesting talks spanning both the history and philosophy of mathematics. (See also the group photo published elsewhere in this issue.) The organizers, Tony Mann and Adrian Rice, are to be congratulated on pulling together an excellent and smoothly-run conference. We look forward to the next joint meeting of BSHM and CSHPM.

During our AGM, various issues were discussed and decided. Our next meeting will be with the Congress of the Humanities and Social Sciences at Wilfrid Laurier University and the University of Waterloo, in Waterloo, Ontario, next May 27–29. The Special Session will be organized by Sylvia Svitak on the topic "Mathematics and Computer Science," and Maria Zack is organizing the General Session. Since 2012 marks the 100th anniversary of Alan Turing's birth, the Council has decided to mark the occasion by inviting Professor Andrew Hodges from Oxford, who wrote a biography of Turing, to deliver our Kenneth May Lecture. I have the pleasure to inform you that he has agreed to do so. I should also mention that it is a joint invitation with the Canadian Society for the History and Philosophy of Science. I hope to see you there.

Thanks to Mike Molinsky, our Webmaster; Dirk Schlimm, our Treasurer; and Pat Allaire, our Secretary, members who wish to do so will be able to renew their 2012 membership completely online. This should simplify the life of our Secretary as well as those of some of our members, particularly those residing outside Canada and the United States.

As usual, there are many interesting and stimulating meetings coming up in the fall and winter. Here are some of the highlights. You might have had the chance to visit San Diego for the HPM-Americas meeting in early October or, if you prefer, you will have followed our fellow member Gregg De Young to Lisbon, Portugal, to take part in the Second International Conference of the History of Mathematics Education. But then again, you might have preferred to go to London, England, at the Science Museum for the Autumn Meeting of the British Society for the History of Mathematics. Before you consider going to Paris for the International Conference Celebrating the Bicentennial Birth of Evariste Galois (where you will certainly meet a normal (sub)group ...), you should stop in Philadelphia to hear our very own Patricia Allaire speak about D. F. Gregory. In fact, you might want to stay in Philadelphia, since the Philadelphia Area Seminar on the History of Mathematics is very active. Ghent University will hold the International Conference on the History and Philosophy of Com-The CMS winter meeting will take place puting. in Toronto, and the Meeting will have a session on History and Philosophy of Mathematics. If you like Boston in January, you won't want to miss the 2012 MAA-AMS Joint Mathematics Meetings, where you will be able to recover from the holidays by attending a series of lectures on the history of mathematics, the philosophy of mathematical practice, on the writing of the history of mathematics, etc., etc.

It is hard to believe, but one could easily jet-set around the world just following meetings in history and philosophy of mathematics! That sounds too good to be true.

Jean-Pierre Marquis, with a special thanks to Duncan Melville

Announcements

James T. Smith has received a Lester Ford award, which recognizes expository excellence in articles published in the *American Mathematical Monthly*, for his 2010 article, "Definitions and Nondefinability in Geometry."

Springer-Verlag has published a German translation of Len Berggren's *Episodes in the Mathematics of Medieval Islam*, under the title *Mathematik im mittelalterlichen Islam*. There are a number of changes in the German translation, which Len describes as "significant but not major"; new illustrations; and most



Figure 1: Most of the participants in the joint CSHPM/BSHM Meeting at Trinity College Dublin (July 15–17, 2011). Also see page 12.

photos are now in color.

Dick Jardine and Amy Shell-Gellasch edited *Mathematical Time Capsules* for the MAA. The book contains historical modules designed for immediate implementation into undergraduate and secondary mathematics classrooms. CSHPMers who contributed capsules include: Lawrence D'Antonio, Daniel J. Curtin, Glen Van Brummelen, Victor J. Katz, Robert E. Bradley, Amy Shell-Gellasch, Andrew B. Perry, Clemency Montelle, Joe Albree, Jim Tattersall, Daniel E. Otero, Janet L. Beery, Adrian Rice, and Fernando Q. Gouvea.

Glen Van Brummelen was principal lecturer for the 2011 Summer Seminar of the MAA's North Central Section, held at Bemidji State University on July 24– 29. The topic of the seminar was "Heavenly Mathematics: The Birth of Mathematical Astronomy and Spherical Trigonometry."

In November 2010, Len Berggren delivered an invited talk, "Some Common Elements of Chinese and Medieval Islamic Mathematics and Their Possible Connections," at the conference on Chinese History of Science and Its Interaction with other Civilizations (sponsored jointly by UNESCO and the Chinese Academy of Sciences) held in Beijing last November 10–11.

Tom Drucker directs our attention to a memorial fund in honor of Mike Mahoney established by the Computers, Information and Society Special Interest Group of the Society for the History of Technology. The fund at present supports graduate student travel awards to the annual SHOT meeting, promoting the kind of scholarship among young researchers that Mike encouraged. For logistical reasons, contributions by cheque are preferred over online donations. For more information, see www.sigcis.org/mahoney.

Additionally, Harvard University Press has published a collection of Michael Sean Mahoney's articles on the history of computer science. Thomas Haigh edited the collection, which is titled *Histories of Computing* and includes essays dealing with evolutions of the technology and the business of computing. Haigh's preface describes the role Mahoney played in the creation of the discipline of history of computer science and suggests how he was uniquely placed to do so.

Princeton University Press announces a new under-

graduate textbook that uses art to teach math and math to teach art. *Mathematical Perspective and Fractal Geometry in Art*, by Marc Frantz and Annalisa Crannell, is suited for math-liberal arts courses and mathematics courses for fine arts majors. The Press has also issued the third volume of a series edited by Donald J. Albers and Gerald L Alexanderson, titled *Fascinating Mathematical People: Interviews and Memoirs*. Interviewees include Dusa McDuff, Tom Banchoff, Arthur Benjamin, and Donald G. Saari.

Amirouche Moktefi, Mark Richards, and Robin Wilson organized a one-day meeting exploring Charles Dodgson's interests in and contributions to science on August 17 at London School of Economics. The meeting's website is www.lewiscarrollmanofscience.com.

The Commission on Women in Science, Technology, and Medicine of the International Union of History and Philosophy of Science held an international symposium on "Women and Gender Studies – Where Do We Stand?" at the Ecole Normale Supèrieure on September 14–17. The Commission's website is dhstwomen.ntua.gr.

The ORESME Reading Group held its fall seminar on September 23–24 at Xavier University in Cincinnati, Ohio. The meeting explored Evariste Galois' writings on solvability of polynomial equations by radicals via the Galois group concept. The discussion focused on his famous posthumous paper of 1831, Mémoire sur les conditions de résolubilité des *équations par radicaux* (published by Joseph Liouville in his Journal de mathématiques pure et appliquées (1846): 417–433; an English translation appears as an appendix in Harold Edwards's Galois Theory (Springer, 1984)). The group's website is www.nku.edu/ curtin/oresme.html. For upcoming activities, contact Danny Otero, otero@xavier.edu, or Dan Curtin, curtin@nku.edu.

Michel Serfati announces the first semester program for the annual seminar on Epistemology and History of Mathematical Ideas, held Wednesdays at 2:00 pm at the Institut Henri Poincaré in Paris: Serge Grigorieff (CNRS & Liafa-Université Paris VII), "Opérationnel versus dénotationnel: Après la formalisation de la notion de fonction calculable par Turing, peut-on formaliser celle d'algorithme?" on October 19; Brigitte Grugeon-Allys (LDAR, Université Paris Diderot-Paris 7), "L'algèbre élémentaire: une approach didactique" on November 16; Joseph Kouneiher (CRHI & Univ. Paris VII & LUTH), "De Descartes à Hamilton et Clifford: Quelle représentation algébrique de l'espace?" on November 30; Michel Serfati (IREM-Univ. Paris VII), "Les mathématiques du triangle harmonique" on January 18; Jean Delcourt (Université de Cergy-Pontoise et Archives Henri Poincaré), "Histoire des courbes gauches, de Clairaut à Darboux" on January 25; and Liliane Alfonsi (Labo EST-GHDSO, Université Paris Sud), "Aspects de l'évolution d'une théorie mathématique: l'élimination de 1748 à 1853" on February 8.

The Forum for the History of the Mathematical Sciences (FoHoMS) again held a luncheon, sponsored by the Legacy of R. L. Moore Project, during the 2011 History of Science Society Annual Meeting in Columbus, Ohio, November 3–6. This was a co-located meeting with SHOT and 4S. History of mathematics (and statistics) on the HSS program included: a session on "New Views of the Antikythera Mechanism," with participation by Alexander Jones and Jim Evans; a session on "Making Mathematics: Models, Machines, and Materialities," sponsored by Fo-HoMS and including a talk by David L. Roberts; a session on "Early Astronomy and Astrology"; a session on "How Physicists Learned to Love Abstraction, From Helmholtz and Poincaré to Robb, Planck, and Einstein," including a talk by Tom Archibald; and sessions on "Natural History of the Heavens: Classification, Development and Structure in Nineteenth Century British Astronomy," "Defending Science Against Standardization," "The 'State' of Science and Religion: Ingenuity and Institution in the Age of Galileo and Kepler," "Consuming Bodies: Statistics and the Human Sciences in the Nineteenth and Early Twentieth Centuries," and "Sensing Tones: Hermann von Helmholtz at the Intersection of Sound, Music, and Science." Other individual talks of interest included Joan Richards, "The Astronomical Club [of Victorian England]." Jaime Parada presented a poster on "Mathematics and the Engineering Community: The Social Value of Scientific Discourse in 19th-Century Chile." The Women's Caucus of HSS sponsored a roundtable workshop and planning session on Gender and Science, Technology, Medicine, and the Environment.

The ARITHMOS Reading Group met at Western Connecticut State University on November 5–6 to study Viete's Analytic Art. See arithmos.org.

An International Conference on the History and Philosophy of Computing was held at Ghent University in Belgium on November 7–10. The conference particularly celebrated the 75th anniversary of the famous 1936 papers by A. Church, E. L. Post, and A. M. Turing. The conference website is computingconference.ugent.be.

Tom Archibald (SFU), Craig Fraser (Toronto), and Menolly Lysne (Toronto) are organizing a special session on the History and Philosophy of Mathematics at the 2011 Winter Meeting of the Canadian Mathematical Society, held in Toronto December 10–12. Speakers include: Tom Archibald, David Bellhouse, William Hackborn, Deborah Kent, Alex Koo, Jemm Lorenat, Sylvia Nickerson, Bruce Petrie, Josipa Petrunic, and Aaron Wright. See cms.math.ca/Events/winter11/.

The Southern Association for the History of Medicine and Science has received more than 80 abstracts for its fourteenth annual meeting on March 2–3, 2012, at the Emory Conference Center in Atlanta, Georgia. For registration information, see www.sahms.net.

An international colloquium on The Didactics of Mathematics: Approaches and Issues, A Hommage to Michéle Artique, will be held in Paris, May 31 to June 1, 2012. Session organizers include Michael Otte and Christine Proust, while Jeremy Kilpatrick and Abraham Arcavi are helping organize one of the roundtables. There will also be seven workshops on research in mathematics education. Presentation proposals are due January 31, 2012. See www.lar.univparis-diderot.fr/colloque/artigue.

The International Congress on Mathematical Education, ICME 12, will be held in Coex, Seoul, Korea, July 8–15, 2012. There will be 37 Topic Study Groups (TSG) on various aspects of mathematics education, including the history of the teaching and learning of mathematics. Each TSG will have six hours for presentations. There will also be 17 Discussion Groups, each with three hours for interaction. Paper proposals were due on November 30. For more information, see www.icme12.org.

The seventh joint meeting of the British Society for the History of Science, the Canadian Society for the History and Philosophy of Science, and the History of Science Society will take place in Philadelphia, Pennsylvania, July 10–13, 2012. The Philadelphia Area Center for the History of Science is helping with the arrangements. Papers on all topics in the history of science are welcome. Session proposals and abstracts are due by December 5, 2011. See www.hssonline.org.

The eighth quadrennial meeting of the International Study Group on the Relations between the History and Pedagogy of Mathematics (HPM) will be held in Daejeon, South Korea, July 16–20, 2012. HPM is affiliated with the International Commission on Mathematics Instruction, and this conference is a satellite meeting of ICME 12. Abstracts were due on June 30, 2011. For attendance information, see www.hpm2012.org.

A number of articles have recently been published in the *BSHM Bulletin* that are of special interest to teachers. Taylor & Francis have collected those articles into a Virtual Special Issue, History of Mathematics in Teaching, and made that special issue free to view until December 31. Visit www.tandfonline.com/BSHM and click on "News and offers."

Taylor & Francis Online is the new online platform for Taylor & Francis Journals and Reference Works. The interface and searching mechanisms are improved over Informaworld, and the new website is accessible via mobile applications. Existing passwords remain the same, but usernames will be email addresses. The URL is www.tandfonline.com.

Mark Huber and Gizem Karaali announce that the July 2011 issue of *Journal of Humanistic Mathematics* is now available at scholarship.claremont.edu/jhm.

The Journal of Interdisciplinary History of Ideas was founded in 2010 as an Open Access Journal. It focuses on the bonds that connect more general historical study in the field—and special fields such as the history of science—that are usually severed in research works, though connected in the real course of intellectual history. Submissions are accepted in English and French. Instructions for authors and further information about the journal, which is hosted by the University of Turin, may be found at www.jihi.eu.

Janete Bolite Frant and Rosana Nogueira Lima introduce the *International Journal for Studies in Mathematics Education*. This publication is intended for the mathematics educator who is aware that the learning and teaching of mathematics are complex enterprises about which much remains to be revealed and understood. Languages include Portuguese, English, French, and Spanish. See periodicos.uniban.br/index.php/JIEEM/index.

Renuka Vithal and Ole Skovsmose seek papers for a special issue of *Pythagoras* on mathematics education, democracy and development. Full papers are due March 15, 2012. For more information, see www.pythagoras.org.za.

Philosophy Study, a new monthly academic journal from David Publishing Company of Chicago, seeks contributions of papers, members of the editorial board, and reviewers. See www.davidpublishing.com.

The European Society for History of Science solicits nominations for its new Gustav Neuenschwander Prize, $\in 10,000$ to be awarded for outstanding life-long achievements and major contributions to the discipline of the history of science. Any member of the ESHS may nominate a candidate by 1 February 2012. For the requirements of the prize and instructions for nominations, see www.eshs.org.

Lee Stemkoski, Erik Tou, and Dominic Klyve announce the movement of the Euler Archive to MathDL, the MAA Mathematical Sciences Digital Library. There are still Euler papers available to help translate, and the MAA has the five books from their Euler Tercentenary series on sale for only \$20 each. The new website is eulerarchive.maa.org.

Stephen P. Weldon announces that the *Isis Cumulative Bibliography* for 2000 to 2009 may now be searched in WorldCat, www.worldcat.org. Use keyword "xisi2", in addition to any other search words, to filter just the *Isis* data. Data from 2004 to 2009 is also available in searchable PDF documents at www.hssonline.org under /publications/current_bibliography_oclc.html. Both databases are freely available to nonmembers of the History of Science Society.

The latest International History and Philosophy of Science Teaching Group newsletter is available at ih-pst.net/newsletters/.

Clark A. Elliott's website of research aids for history of science in the United States in the nineteenth century has a new URL: historyofscienceintheunitedstates-19thcentury.net. The design and layout have been refurbished by Andrew J. Elliott, although the resources date only through 2007.

The Burroughs Wellcome Fund provides Collaborative Research Travel grants of up to \$US15,000 to Ph.D. candidates, postdoctoral fellows, and faculty researchers traveling to laboratories in order to acquire new research techniques, facilitate or begin collaborations, or attend courses. Eligible candidates may come from mathematics, physics, chemistry, computer science, statistics, or engineering, and they must be interested in investigating research opportunities in the biological sciences. The deadline is December 1. See www.bwfund.org/pages/481/Collaborative-Research-Travel-Grants/.

The Department of History & Politics at Drexel University invites applications for up to two full-time, tenure-track positions in History, beginning Fall 2012. Candidates may be considered to direct Drexel's Program in Science, Technology, & Society. Review of applications begins on November 15. See www.drexeljobs.com.

The L'Oréal USA Fellowships for Women in Science program announces its 2012 call for applications. Each year, it recognizes five U.S.-based women researchers beginning their careers with up to \$US60,000 for postdoctoral research. Applicants must be involved in life or physical/materials sciences, engineering, technology, computer science, or mathematics. Applications close on December 15. See lorealfwis.aaas.org.

Oxford University Press are delighted to offer members of the Canadian Society for the History and Philosophy of Mathematics, an exclusive **20% discount** on our philosophy and mathematics books. Please visit the promotion page at www.oup.com under /uk/sale/websocshpm for more information.

Paulus Gerdes and Ahmed Djebbar announce the publication of *History of Mathematics in Africa: AMUCHMA 25 Years.* The two volumes reproduce the 37 newsletters published by the African Mathematical Union Commission on the History of Mathematics in Africa since 1986. Craig Fraser and Elena Ausejo contributed one of the prefaces for this compilation. The volumes may be ordered via stores.lulu.com/pgerdes.

Save the Date: 2013 Joint Meeting at Mathfest

I am pleased to announce that the CSHPM's annual meeting in 2013 will be an international occasion. The CSHPM, along with the History of Mathematics Special Interest Group and Philosophy of Mathematics Special Interest Group of the Mathematical Association of America (HOMSIGMAA and POMSIGMAA), will hold their first-ever joint meeting in the United States, in conjunction with the MAA's Mathfest summer meeting. The dates are August 1–3, 2013; the location is the beautiful new Connecticut Convention Center in Hartford, Connecticut, on the shore of the Connecticut River and next to the new Connecticut Science Center. The theme of the special session is still under discussion, but it will involve topics important to all three societies.

More details to follow. I look forward to meeting you all in Hartford!

Glen Van Brummelen

AGM of CSHPM/SCHPM

The Annual General Meeting of the Canadian Society for History and Philosophy of Mathematics took place at Trinity College, Dublin, Ireland, on July 16, 2011. The meeting was called to order at 1:35 pm by Jean-Pierre Marquis, President, with 25 members in attendance. Robin Wilson, President of BSHM, attended as a guest.

Agenda for the General Meeting

- Approval of agenda
- Approval of minutes of 2010 AGM
- Treasurer's report
- Secretary's report
- Proceedings Editor's report
- Bulletin Editor's report
- Webmaster's report
- Archivist's report
- 2012 meeting
- Future meetings
- Other business

^{1.} The agenda for the general meeting was approved.

- 2. Motion: To approve the minutes of the 2010 Annual General Meeting as printed in the November 2010 *Bulletin*. Carried unanimously.
- 3. a) Dirk Schlimm referred the membership to the May 2011 Bulletin for the Treasurer's report. He noted that balances are skewed because of the timing of journal bills. b) Robert Thomas asked about our current GIC investment. It is in a three-year certificate of deposit. It was noted that we do need to keep a fair amount of liquidity in order to pay the bills for journal subscriptions, etc., which come in at unpredictable times. c) Robert moved that another \$4000 from our surplus be invested for three years. The motion was seconded and passed unanimously.
- 4. The Secretary, Patricia Allaire, provided comparative membership data for 2010 and 2011. Please refer to the CSHPM Executive Council Minutes in this issue of the *Bulletin* for this data and the Secretary's comments.
- 5. a) Tom Archibald will be the next editor of the Proceedings. Information for authors will be posted on the website. Those wishing to submit to the *Proceedings* are reminded that membership is required. For this meeting, membership in either BSHM or CSHPM is sufficient. b) A formal declaration of thanks to Antonella Cupillari was made. c) In order to reduce costs and to avoid having to fill out a customs form for each issue being mailed to Canada, Antonella sent the Canada-bound copies to Greg Lavers in bulk, and Greg mailed the issues to Canadian recipients. d) Janet Beery asked about switching to electronic distribution of the *Proceedings*. David Bellhouse noted that there are copyright questions if we do so. Jean-Pierre will discuss the matter with the Editor and with the Webmaster. e) Fred Rickey said that CSHPM members Dominic Klyve and Jim Evans live in Washington state, so perhaps one of them could arrange to meet Tom so that the Editor can continue to avoid having to fill out a customs form for each issue of the *Proceedings* that goes to the USA.
- 6. a) *Bulletin* Content Editor, Amy Ackerberg-Hastings, noted that all went well this year, other than the error at the production stage of the May issue, which was immediately remedied. Amy solicited news, photos, brief articles, etc., for upcoming is-

sues. b) Jean-Pierre expressed thanks to Amy, Eisso Atzema, and Maria Zack.

- 7. a) The Webmaster, Mike Molinsky, sent word that a webform option will be available for voting in the next Society election. Assuming we trust members not to try to "stuff the ballot box" with multiple votes, an anonymous voting form can be set up very easily; setting up electronic voting that is still anonymous but prevents multiple votes would be more difficult but could still be done if that is a concern. b) Later this summer, a PayPal account will be created to allow annual membership renewal fees to be submitted using PayPal or credit cards as well as by check/money order. Once the PayPal account is active, Dirk, Pat, and Mike will work together to determine the most efficient way to streamline the membership renewal process, either by using a webform or by creating a more automated PDF membership form. c) Jean-Pierre expressed thanks for the efficient way Mike manages the website.
- 8. Mike Molinsky also submitted the Archivist's report electronically. He expressed thanks to Robert Thomas for contributing a collection of documents from the 1970s and 1980s to the Society archives this year. Mike is slowly putting together an inventory of all documents currently in the entire archives (both paper and digital). Jean-Pierre asked that questions or suggestions about the archives or website be sent to Mike.
- 9. In 2012, we will meet with HSSFC (the Learneds) at Wilfrid Laurier University and the University of Waterloo, May 27–29. Our meeting dates will overlap with those of CSHPS and CPA. David De-Vidi will be the local organizer. The topic for the Special Session will be "Mathematics and Computer Science." It was noted that 2012 is Turing's 100th anniversary. Session organizers were solicited. Maria Zack and Sylvia Svitak volunteered to organize the General and Special Sessions respectively. Sylvia asked for suggestions for a keynote speaker.
- 10. In 2013, the Learneds will meet in Victoria. We do not know where CMS will meet. The Executive Council (Exec) suggests that we investigate the possibility of meeting with the HOMSIGMAA at MathFest in Hartford, Connecticut, in 2013. Janet Beery noted that this would be our first meeting

in the US. Fred Rickey will contact MAA. He suggests that we meet independently for 2 days and overlap with HOMSIGMAA and POMSIGMAA for 1 day. Glen, who first made the suggestion, recommended that we explore the entire question further.

2014 is the next ICM meeting. If that meeting is in Canada, that may influence our decision about a location. The Learneds will meet at Brock in Ontario in 2014. [Since the meeting, we learned that ICM will meet in Korea in 2014.]

The question of the pattern of future meetings was discussed. a) In recent years, the cycle of meeting with the Learneds, BSHM, and CMS has been an informal one. The Exec suggests that the cycle be extended, with the Learneds being the default. b) Bruce Petrie said it is good to meet with BSHM in Europe about every 5 years so that graduate students get an opportunity for international travel once during their programs. c) Maria Zack noted that cost can be the determining issue and suggested that we investigate less expensive venues for joint meetings in either country. Examples would be a small college with dorm housing. If it were to be the local organizer's institution, there could be further cost reductions. d) Jean-Pierre emphasized the importance of leaving options open so that meeting decisions can be made on an *ad hoc* basis. e) Robert Thomas suggested that a joint meeting with BSHM might take place in the US. Adrian Rice said that the US and Canada are not feasible locations for BSHM members at present due to budget cuts and other financial constraints on British universities. f) Fred asked if some of the money in our treasury could be used to fund graduate students' attendance, as they have the greatest financial difficulty. g) Adrian said there are research meetings of BSHM in the winter at which graduate students present their research. Perhaps we could fund the travel of one or two from North America to attend Robin Wilson said that BSHM might be able to help in that regard.) It was suggested that we fund an award to a graduate student who speaks at our meeting. This award would be in the form of a stipend to present at other meetings. i) Sylvia Svitak suggested that the membership form allow for donations earmarked for graduate students. j) Jean-Pierre said that the

Exec needs to research all options.

11. a) In other business, Jean-Pierre announced that the Executive Council is working on PayPal as a payment alternative. There is a possibility that it will be in place for 2012 membership renewals, but it will certainly be available for 2013. b) A nominating committee is needed for the next election of officers. The following people volunteered to serve: Rob Bradley, Greg Lavers, and Duncan Melville.

The meeting was adjourned at 2:30 pm.

Patricia Allaire, Secretary

HPM Americas Section in San Diego

For its second annual fall West Coast Meeting, the Americas Section of the International Study Group on the Relations Between History and Pedagogy of Mathematics accepted the warm hospitality of Point Loma Nazarene University and local organizer, Maria Zack. On October 1–2, twenty-three registrants (plus two toddlers) enjoyed twelve talks on parallels between the historical creation of mathematics and modern learning of mathematics, the use of history in teaching mathematics, the history of mathematics teaching, and the history of mathematics.

Rob Ely suggested that paying attention to how seventeenth-century mathematicians made sense of infinitesimals can help us clarify the fundamental theorem of calculus for students. Jessica Pierson Bishop and Ian Whitacre reported on how their research group at San Diego State University realized that taking a historical perspective enabled them to understand how children reason about integers. Kathy Clark shared experiences from teaching a historical problem solving course to prospective teachers, and Kurt Kreith described his course for talented high school students on "The Mathematics of Global Change."

Nicole Enzinger explained the evolution of subtraction algorithms in the eighteenth and nineteenth centuries, while Pat Baggett traced a story problem about privateers through nineteenth-century calculus texts. Gizem Karaali surveyed the content of *Educational Studies in Mathematics*. Jim Smith updated the audience on his research into Alfred Tarski,

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 Wilfrid Laurier University & University of Waterloo/ L'université Wilfrid-Laurier et L'université de Waterloo Waterloo, Ontario May 27-29, 2012 / 27- 29 mai 2012

> Special Session / Séance Spéciale Mathematics and Computer Science / Mathématiques et Informatique

Kenneth May Lecturer / Conférence Kenneth May Dr. Andrew Hodges, Wadham College, Oxford University

The CSHPM will be holding its 2012 Annual Meeting at Wilfrid Laurier University and Waterloo University in Waterloo, Ontario in conjunction with the 2012 Congress of the Humanities and Social Sciences. The meeting will be held Sunday through Tuesday, May 27-29, 2012.

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.

Please send your title and abstract (200 words or less) in Word or in the body of an email by February 10, 2012 to:

SPECIAL SESSION / SÉANCE SPÉCIALE or/ou

Sylvia Svitak 85–51 169th Street Jamaica, NY, 11432 USA Tel: (718) 658–2155 smsvitak@earthlink.net La SCHPM organisera son colloque annuel de 2012 à l'Université Wilfrid Laurier et l'Université de Waterloo, au sein du Congrès des sciences humaines et sociales 2012. Le colloque aura lieu du dimanche 27 mai au mardi 29 mai 2012.

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. Les présentations en anglais ou en français sont bienvenues.

Veuillez envoyer le titre de votre exposé, ainsi qu'un bref résumé de 200 mots ou moins en format Word ou à l'intérieur d'un courriel avant le 10 fevrier 2012 à:

GENERAL SESSION / SÉANCE GÉNÉRALE

Maria Zack Department of Mathematical, Information and Computer Sciences Point Loma Nazarene University 3900 Lomaland Drive San Diego, CA 92106 USA <u>mzack@pointloma.edu</u> Janet Beery demonstrated animations of historical problems, including Thomas Harriot's models of projectile motion, and Stacy Langton illustrated Daniel Bernoulli's method for the numerical solution of polynomial equations. Kishore Marathe introduced the audience to his recent book, *Topics in Physical Mathematics*.

On Saturday afternoon, the group clambered aboard the six ships that comprise the San Diego Maritime Museum for a guided tour as well as a narrated ride around the Bay on the 1914 *Pilot* boat. Although a planned lecture on navigational mathematics was cancelled, attendees were ably compensated by their encounter with a marauding band of pirates—buried treasure and all—in the midst of a birthday party.

Section officers David L. Roberts, Kathy Clark, and Amy Ackerberg-Hastings served as meeting organizers. Dave also chaired the sessions. The Americas Section will next meet jointly with the AMS Eastern Section in Washington, DC, 17–18 March 2012. To be added to an email list that distributes information about future meetings, please contact Kathy Clark, *drkclark@gmail.com*. Information about the Section may also be found at www.hpm-americas.org.

Amy Ackerberg-Hastings

Dublin Photo

A group photo from the joint BSHM-CSHPM meeting appears on a full page in this issue. Thanks to Tony Mann for making the photo available. Here, we provide an effort to identify all of those pictured. Corrections may be sent to the Content Editor.

Front row: Bruce Burdick, George Heine, Adrian Rice, Pat Allaire, Michiyo Nakane, Michel Serfati, Shunshi Koyama, Paolo Rocchi, João Caramalho Domingues, Della Fenster, Amy Ackerberg-Hastings.

Second row: Bruce Petrie, Maria Zack, Jim Kiernan, Glen Van Brummelen, Raymond Flood, Reginald Hill, Janet Heine Barnett, Gavin Hitchcock, Eileen Donoghue, David Bellhouse, Sylvia Svitak, George Rousseau, Maurice OReilly, June Barrow-Green, Karen Parshall, Hannah Flatau, Ameli Gottstein, Janet Beery, Robert Thomas, Hardy Grant, Andy Perry, Danielle Macbeth, Charlotte Simmons, Susan Vineberg, Joy Rickey, Madeline Muntersbjorn, Fred Rickey.

Back row: Staffan Rodhe, Reinhard Siegmund-Schultze, James Howe, possibly Ken Lord, Gregg De Young, Tony Mann, Daniel Botelho, Travis Williams or Christopher Hollings, Terry Froggatt, Robin Wilson, Jean-Pierre Marquis, Dirk Schlimm, Steven Weintraub, Tony Crilly.

Olivier Bruneau, Nigel Heys, Molly Kao, Greg Lavers, Duncan Melville, Richard Simpson, and Pat Touhey were not present for the photo.

Joint AMS/MAA Meetings in Boston

A number of events in history and philosophy of mathematics have been planned for the Joint Mathematics Meetings, to be held in Boston, Massachusetts, January 4–7, 2012. More information can be found on the MAA or AMS websites: www.maa.org or www.ams.org.

Boston has long had a special place in the history of American philosophy. It has also seen a fair amount of work on mathematics, helping to put American contributions on the world map. Perhaps it is not surprising that the location of the joint meetings in Boston this year is bringing out a particularly strong line-up of events in the philosophy of mathematics. We are fortunate that the POMSIGMAA invited speakers (see the listing for Wednesday afternoon) are all within a commuter train ride to the meeting site.

Wednesday, 4 January, 8:00–10:50 and 14:15–18:05, and Thursday, 5 January, 8:00–11:50 and 13:00–15:50: AMS-MAA Special Session on History of Mathematics, organized by Sloan Despeaux, Craig Fraser, and Deborah Kent.

Wednesday, 4 January, 8:00–10:40 and 14:15–17:55, and Thursday, 5 January, 8:00–11:40 and 13:00–15:40: AMS-ASL Special Session on the Life and Legacy of Alan Turing, organized by Damir Dzhafarov, Jeff Hirst, and Carl Mummert.

Wednesday, 4 January, 14:15–16:15, and Friday, 6 January, 13:00–15:00: MAA Minicourse on "Study the Masters: Using Primary Historical Sources in Mathematics Teaching," organized by Daniel Otero and David Pengelley. (NOTE: You must preregister for

this course.)

Wednesday, 4 January, 14:15–18:40: MAA-AMS Invited Paper Session on the Philosophy of Mathematics (sponsored by POMSIGMAA), with Arthur Jaffe, "Is Mathematics the Language of Physics?" (Harvard); Charles Parsons, "Structuralism and its discontents" (Harvard); Stephen Yablo, "Explanation and Existence" (MIT); Agustin Rayo, "A Trivialist Account of Mathematics" (MIT); Jody Azzouni, "Formal logic and informal-rigorous mathematical proof" (Tufts); and Juliet Floyd, "Turing and Wittgenstein" (Boston).

Wednesday, 4 January, 17:30–19:15: HOMSIGMAA Reception, Business Meeting, and Guest Lecture, "Heron, Newton, Euler, and Barney," by William Dunham.

Wednesday, 4 January, 20:30–21:30: AMS Josiah Willard Gibbs Lecture, "A 250-Year Argument: Belief, Behavior, and the Bootstrap," by Bradley Efron.

Thursday, 5 January, 13:00–15:00, and Saturday, 7 January, 13:00–15:00: MAA Minicourse on "Reading Original Sources in Latin for the Historian and Mathematician," organized by Amy Shell-Gellasch and Dominic Klyve and presented by Kim Plofker and Stacy Langton. (NOTE: You must preregister for this course.)

Thursday, 5 January, 17:45-19:00: POMSIGMAA Business Meeting and Guest Lecture, "What is a heuristic?" by Barry Mazur.

Friday, 6 January, 8:00–10:55, and Saturday, 7 January, 15:00–16:55: MAA Contributed Papers Session on "Writing the History of the MAA," organized by Victor J. Katz, Janet Beery, and Amy Shell-Gellasch.

Friday, 6 January, 13:00–16:55: POMSIGMAA Contributed Papers Session on "Philosophy of Mathematics and Mathematical Practice," organized by Dan Sloughter and Bonnie Gold.

Friday, 6 January, 15:00–17:35, and Saturday, 7 January, 8:00–10:55: MAA Contributed Papers Session on "History of Mathematics and Its Uses in the Classroom," organized by Amy Shell-Gellasch.

Bonnie Gold, Tom Drucker, & Amy Shell-Gellasch

Quotations in Context

"The advancement and perfection of mathematics are intimately connected with the prosperity of the State."—Napoleon

The story of Laplace's presentation of his work *Mécanique céleste* to Napoleon is well known. According to Augustus De Morgan in *A Budget of Paradoxes* (first published in London in 1872):

Napoleon, whom some wags had told that this book contained no mention of the name of God, and who was fond of putting embarrassing questions, received it with—'M. Laplace, they tell me you have written this large book on the system of the universe, and have never even mentioned its Creator.' Laplace, who, though the most supple of politicians, was as stiff as a martyr on every point of his philosophy or religion (ex. qr. even under Charles X. he never concealed his dislike of the priests), drew himself up, and answered bluntly, 'Je n'avais pas besoin de cette hypothèse-là.' Napoleon, greatly amused, told this reply to Lagrange, who exclaimed, 'Ah! c'est une belle hypothèse; ca explique beaucoup de choses.'

Several years later, in 1812, Laplace also presented Napoleon with a copy of his work *Théorie analytique des probabilités*, although this time he did not do so in person. In the summer of 1812, Napoleon had begun his ill-fated invasion of Russia, and by the end of July he had captured the city of Vitebsk (which is located today in the northeastern corner of Belarus, near the Russian border). On August 1, 1812, it was from this city that Napoleon sent a brief letter to Laplace acknowledging the receipt of his work.

Napoleon began the letter by admitting that (not surprisingly under the circumstances) he didn't have the time to read the work at present; however, he praised Laplace for both this and his other works that had helped to develop and extend knowledge of mathematics, the "first of sciences." The letter concluded with the subject quotation of this column.

The full text of the letter, which is shown below, appears on page 112 of volume 24 of *Correspondance de Napoléon* (originally published in 1868 in Paris, and reprinted in 1974 in New York):

AU COMTE LAPLACE CHANCELIER DU SÉNAT ET MEMBRE DE L'INSTITUT, A PARIS

Vitebsk, 1^{er} août 1812 Monsieur le Compte Laplace, je reçois avec plaisir votre traité du calcul des probabilities. Il est un temps où je l'aurais lu avec intérêt; aujourd'hui je dois me borner à vous témoigner la satisfaction que j'éprouve toutes les fois que je vous vois donner de nouveaux ouvrages qui perfectionnent et étendent cette première des sciences. Ils contribuent à l'illustration de la nation. L'avancement et la perfection des mathématiques sont intimement lies à la prospérité de l'État.

Napoléon

Mike Molinsky

Dunsink & Broom Bridge Excursion

The joint BSHM-CSHPM conference in Dublin in July had for some delegates a finale at once wholly unexpected and entirely delightful, thanks to the generous initiative and the organizing skills of Maurice OReilly of St Patrick's College in the host city. About 30 of us took part. We began with a bus ride 20 kilometres west of Dublin, to Dunsink Observatory, founded in 1785. The director there from 1827 until his death in 1865 was William Rowan Hamilton, some of whose papers are now displayed over a fireplace. The centrepiece is a venerable (1868) 12-inch refracting telescope, made by the renowned family-run Grubb company of Dublin; in well earned retirement this instrument now serves mainly for public stargazing. Hilary O'Donnell, one of the observatory's astronomers, very kindly travelled some 200 kilometres to open the building for us and to offer genial hospitality. On leaving Dunsink, whose gates in our intended direction were then all locked, we were obliged to scale several walls and fences, an interlude not without some merriment. Those hurdles cleared, we walked about four kilometres, eventually along the Royal Canal, to Broom Bridge ("Brougham" in the 19th century), where in 1843 – the tale needs no detailed repetition here! – Hamilton famously carved the laws of quaternion multiplication. The original inscription does not survive, but a commemorative plaque was unveiled by

Eamon de Valera in 1958. The anniversary (16 October) is still celebrated every year, with talks at the observatory and group walks like ours to the bridge; an entertaining account of earlier excursions can be found at www.maths.nuim.ie/hamiltonwalk. Tradition now dictates that any such group write that historic bit of mathematics somewhere on the bridge, and during our visit this ritual was ably carried out by two 12vear-old nephews of Maurice, Cameron from Dublin and Tom from Paris, who had tagged along. One was tempted, in that tranquil and evocative setting, to fancy that not much has changed there in all the intervening years; and (however that may be) our little pilgrimage seemed a wonderfully appropriate ending to a splendid conference. Back in Dublin, many of the outing's participants enjoyed a late but excellent dinner (also arranged in advance by Maurice) at the improbably named Gotham Café, a stone's throw from Trinity College, so wrapping up an evening to savour in memory.

Hardy Grant

Executive Council Meeting CSHPM/ SCHPM

The meeting of the Executive Council of CSHPM/-SCHPM took place at Trinity College, Dublin, Ireland, on July 15, 2011. The following members were present: Amy Ackerberg-Hastings, Patricia Allaire, Greg Lavers, Jean-Pierre Marquis, Duncan Melville, Adrian Rice, Dirk Schlimm, Sylvia Svitak, Glen Van Brummelen, and Maria Zack. Jean-Pierre Marquis, President, called the meeting to order at 12:30 pm.

Treasurer's Report: Dirk Schlimm referred the Council to the Treasurer's Report in the May 2011 *Bulletin.* He noted that balances are skewed because of the timing of journal bills, bills for reciprocal memberships, etc.

Jean-Pierre asked for ideas about how to best utilize what appears to be a large surplus. It was noted that we need to maintain a large float to cover the expenses mentioned above, but we still have surplus funds at the moment. Glen suggested that a small honorarium might be given to the *Bulletin* and *Proceedings* editors. Amy suggested that we might pay a stipend, should graduate students assist in the production of the *Proceedings*. The Council decided to consider these suggestions further via the Council email list.

Secretary's Report: Patricia Allaire provided comparative subscription and membership data for 2010 and 2011:

	2010	2011
Subscriptions		
Historia	79	76
Philosophia	40	40
Proceedings	77	74
Paid	50	42
Complimentary	26	31
Federation	1	1
Bulletin		
Electronic	127	130
Paper	60	45
Donations		
No. Donors	27	23
Amount	\$731.50	\$652.00

	2010	2011
Total Members	187	175
By Pay Method		
\$Can	43	41
\$US	94	104
BSHM	32	22
Complimentary	9	4
CSHPS	9	4
By Status		
Active	133	119
Retiree	33	39
Student	9	9
Developing nation	3	4
Student Associate	8	4
New	23	17
Reciprocal		
To BSHM	43	49
To CSHPS	23	21

"Payment method" provides a rough approximation of nationality, although members from outside the US and Canada usually pay in \$US. The number of Student Associates includes the finalists in the HOMSIG-MAA writing contest. We are making progress with the number of members accepting electronic delivery of the *Bulletin*. It continues to be more difficult to work out this matter with the reciprocal members from BSHM and CSHPS. Donations are sometimes provided in the form of retirees preferring to pay for their complimentary *Proceedings*.

Proceedings Editor's Report: In the absence of both the outgoing and incoming editors (Antonella Cupillari and Tom Archibald, respectively), the Secretary conveyed thanks from Antonella for the cooperation of the Society during her tenure as Editor and to Tom Archibald for assuming the responsibility of Editor. In order to reduce costs and to avoid having to fill out a customs form for each issue being mailed to Canada, Antonella sent the Canada-bound copies to Greg Lavers in bulk, and Greg mailed the issues to Canadian recipients.

Bulletin Editor's Report: Amy Ackerberg-Hastings reported that, other than the mailing problem with the May issue (which was quickly rectified), all went well this year. Jean-Pierre expressed the thanks of the Society to the three editors of the *Bulletin*.

Webmaster's and Archivist's Report: Mike Molinsky was not present at the meeting, so the Secretary volunteered to contact him for written reports for the Annual General Meeting (AGM).

2012 Meeting: In 2012, we will meet with HSSFC (the Learneds) at Waterloo. David DeVidi will be the local organizer. Maria Zack and Sylvia Svitak expressed an interest in organizing the general and special sessions, respectively. The special session will be Mathematics and Computer Science.

2013 and Later Meetings: The question was raised about the advisability of continuing to meet jointly with CMS and BSHM on a regular basis. One factor to be considered is cost to members for joint meetings with BSHM. Considerations with CMS are that they do not announce a location far enough in advance for our planning and the registration costs are quite expensive.

Glen suggested that, for 2013, we investigate the possibility of meeting jointly with the HOMSIGMAA at the MAA's MathFest. In 2013, MathFest will be in Hartford, Connecticut, August 1–3. The Learneds will meet in Victoria in 2013. The next ICM meeting is in 2014. If the ICM meeting is in Canada, that may influence our decision about a location. The Learneds will meet in Brock that year. [Since the meeting, we learned that ICM will meet in Korea in 2014.] It was recommended that, for future meetings, the default will be to meet with the Learneds. Under special circumstances, we will meet jointly with other organizations.

Other Business: Mike, Dirk, and Pat are working to set up an option for membership payment through PayPal. It may not be ready for 2012 memberships, but it should be up and running for 2013.

A nominating committee is needed for the 2012 Council elections. Volunteers will be solicited at the AGM. Mike is working on electronic balloting as an option for the next election.

The agenda for the AGM was planned.

The meeting was adjourned at 1:00 pm.

Patricia Allaire, Secretary

Call for Nominations: Otto Neugebauer Prize

The European Mathematical Society requests nominations for the Otto Neugebauer Prize for the History of Mathematics, to be awarded to an outstanding historian of mathematics. The prize carries a cash award of \in 5,000, generously provided by Springer-Verlag. The prize will be awarded for the first time at the 6th European Congress of Mathematics in Krakow in 2012. The inaugural prize committee is chaired by Jeremy Gray and consists of Lennart Berggren, Jesper Lützen, Jeanne Peiffer, and Catriona Byrne.

The Prize is to be awarded for highly original and influential work in the field of history of mathematics that enhances our understanding of either the development of mathematics or of a particular mathematical subject in any period and in any geographical region. "History of mathematics" is understood in a broad sense, from the study of mathematics in ancient civilizations to the development of modern branches of mathematical research. There are no geographical restrictions on the origin or place of the recipient, nor are there restrictions on methodological approaches to the subject. The prize may be shared by two or more researchers if the work justifying it is the fruit of collaboration between them. The right to nominate one or several laureates is open to anyone, although self-nominations will not be accepted. Nominations are confidential and should not be made known to the nominee(s). No later than 31 December 2011, submit a nomination letter, CV, description of the candidate's work motivating the nomination, and names of specialists who may be contacted. Nominations should be addressed to the European Mathematical Society and sent to: Ms. Terhi Hautala, Department of Mathematics & Statistics, P. O. Box 68 (Gustaf Hällströmink. 2b), 00014 University of Helsinki, Finland, *ems-office@helsink.fi*, (+358) 9 1915 1503.

Len Berggren

Online Registration/Payment Available for 2012 Membership

The CSHPM/SCHPM membership form for 2012 has been redesigned to allow users to process their membership registration and payment of the annual fee over the internet. The new form is a partially automated PDF file which has been tested in Acrobat Reader version 9 and above; although the form may work on some earlier versions of Acrobat Reader, it might be wiser to upgrade to the most recent version (10.1.1 at the time this article was written) at get.adobe.com/reader/. (Please also note that the automation in the form requires that JavaScript be enabled in the Reader, which by default it normally will be.) An alternative paper membership form is included with this Bulletin for those who need it. Filling out the new Acrobat form can be done in three simple steps:

- 1. Select currency (US\$ or Canadian\$) for your payment and indicate whether your mailing address is inside or outside Canada (which is necessary to determine taxes on journal subscriptions).
- 2. Select from the menu of priced membership options, such as journal subscriptions for *Historia Mathematica* and *Philosophia Mathematica*, reciprocal membership in the BSHM and CSHPS, and the *Proceedings* from 2011. There is also a box for an optional donation. For each selection, prices are automatically filled in and the total membership fee is calculated for you.

3. Fill in personal membership information (name and email address, and also URL and mailing address if they have changed from the previous year), indicate if you would like to receive a paper copy of the *Bulletin*, and, if desired, request a receipt.

Once the form has been filled out, there are two ways to submit it:

- 1. To pay by check, simply print out the completed form and mail it, with your check, to the address provided on the form.
- 2. To pay using a debit/credit card or a personal Pay-Pal account, click on the provided "Submit Form" button on the form. As long as your computer's internet connection is active, this will automatically take you to the PayPal website, where you will be prompted to pay the total membership fee from your form. Once your payment is completed, all of the information from your Acrobat form is automatically sent to the Secretary, and there is no need for you to print out and send the form itself.

The new membership form is available on the Society website at www.cshpm.org/join/.

Midwest History of Mathematics Conference

The Midwest History of Mathematics Conference returns to Wisconsin on the 27th and 28th of April 2012. The University of Wisconsin–Whitewater will be the site for the Friday afternoon and Saturday meeting, the latest in a sequence which originated in LaCrosse twenty-five years ago. This year's version features David Richeson (Dickinson College, author of *Euler's Gem*) and Amy Shell-Gellasch (Beloit College, program director for HOMSIGMAA and former archivist for this Society) as keynote speakers, together with plenty of slots for contributed talks that can range over any area in the history of mathematics. Time slots for speaking will range from twenty to fifty minutes.

Tom Drucker (University of Wisconsin–Whitewater) is serving as the local organizer, with the expert guidance of Dan Curtin and Danny Otero. Those interested in speaking should submit an abstract to Tom (druckert@uww.edu) by the end of February. Details about travel to Whitewater and accommodations and meals there will be available on a Web site, the location of which will be announced via the CSHPM email list. The cost for registration (including dinner Friday) should be about \$80. Those who have never had the opportunity to visit Whitewater can investigate the mystery of where the white water is to be found. There is at least a decent chance that the snow will have melted by the time of the conference.

Tom Drucker

From the Archives

Here is a list of the Special Session topics from the Annual Meetings. The years omitted either had no special sessions or had all contributed papers grouped by topic.

- 2012 Mathematics and Computer Science
- 2010 Mathematics and the Liberal Arts
- 2009 History of the Relationship Between Mathematics and the Physical Sciences
- 2008 Trigonometry and its Applications (also a joint session with CSHPS on Infinitesimals)
- 2007 Three special sessions: The Mathematics of Leonhard Euler, Charles L. Dodgson, and John Fauvel: In Memoriam
- 2006 Mathematics and the Wider Culture
- 2005 History of Mathematics from Medieval Islam to Renaissance Europe
- 2003 Maritime Mathematics (also joint sessions with CSHPS on Ancient and Islamic Mathematics and Mathematical Boundaries: Issues in the Foundations of Mathematics)
- 2002 2 special sessions: The Legacy of Kenneth O. May and Numerical Mathematics (and a joint session with CSHPS on Proof, Prediction and Mathematics in Ancient and Islamic Science)
- 2001 French Mathematics
- 2000 History of Mathematics at the Dawn of a New Millennium
- 1998 Late 19th Century Mathematics
- 1996 Ancient Mathematics (additionally, there was a joint session with CSHPS on Category Theory and the Foundations of Mathematics)
- 1995 Mathematics Circa 1900

- 1994 History of Mathematics in the United States and Canada (additionally, there was a joint session with CSHPS on Hermann Weyl and the Philosophy of Mathematics and the Natural Sciences)
- 1993 Philosophy of Mathematics (additionally, there was a joint session with CSHPS on The Foundations of Mathematics)
- 1992 *Ethnomathematics* (a joint special session with CSHPS)
- 1991 Women in Mathematics
- 1990 *History and Pedagogy* (a joint special session with the Canadian Mathematics Education Study Group)
- 1989 The History of Mathematics in the 18th Century
- 1988 Victorian Science
- 1987 Bertrand Russell
- 1984 300th Anniversary of Leibniz's First Publication on the Calculus
- 1980 *History of Mathematics in Canada* (additionally, there was a joint session with CMS on *Toposes*)
- 1978 Teaching the History of Mathematics

Mike Molinsky

Mathematics Teacher's Book Collection Seeks a Home

Recently, Craig Fraser referred Caprice Boisvert to me:

"My mother was a math and computer science teacher within the Prescott-Russell school board [in eastern Ontario] from 1964 to 1997. She continued to do private tutoring after her retirement... Mom was head of the math department for most of her time, and amassed a rather large collection of math textbooks (and she continued to purchase books after her retirement so she could stay up to date on the curriculum)... She passed away about 2 1/2 years ago and all her books have passed to me."

Caprice has produced a catalogue for the collection that is available from her at *capriceboisvert@hotmail.com*. There are 380 books in the collection: 50 on puzzles and logic, 35 on statistics, 30 on mathematics and pedagogy, 30 computer science textbooks and manuals from the early 1980s, 50 high school mathematics textbooks, and 75 paperbacks about mathematics. The mathematics textbooks are mainly from the 1960s and 1970s, and Canadian publishers are well-represented. The oldest works are G. W. Gaunt's *Introduction to Infinitesimal Calculus* (1924) and Hall and Knight's *Elementary Trigonometry* (1928). There is also a small selection of trigonometry pamphlets dating from 1924 to 1938.

The titles are not rare—the history books include a 1943 printing of *Mathematics for the Million* and a 1951 Dover edition of the first volume of D. E. Smith's *History of Mathematics*, and there are several works by Martin Gardner—but they can be challenging to procure, since they remain under copyright and thus are not freely available in fully-digitized versions, while space-strapped libraries may have discarded their copies. Thus, the collection may be of most interest to a graduate student or small institution building up a historically-focused mathematics education library.

Do you have any suggestions to help Caprice find a good home for the collection?

David Orenstein

Change at the *Proceedings* Helm

After nine years of gently cajoling members to submit their talks given at our annual meetings, flawlessly assembling the articles into a whole record of our Society's contributions to research, navigating the complexities of mailing across national borders, and securing financial support for the enterprise from her institution, Proceedings editor Antonella Cupillari announced her resignation this spring. As President Jean-Pierre Marquis announced via the CSHPM email list in May, "I hope you will join me to thank her for her excellent job. As anyone who has edited anything knows, it is a time consuming job that requires patience, determination, a love of language and a lot of diplomacy. Thanks to her, the Proceedings have appeared year after year, offering our members a channel to disseminate their ideas." We wish Antonella all the best as she embarks on a well-earned rest.

Many of you are also aware that Tom Archibald almost immediately stepped forward to assume the Editor's responsibilities. At this writing, Tom is already deep in the work of producing the thirty-seventh volume of our *Proceedings*. In May, Jean-Pierre wrote, "I am, for one, thankful to Tom for his offer. It is comforting to know that some of our members are willing to give their time and energy for the benefits of our Society and its members. I wish him the best of luck and want to express my gratitude publicly."

Book Review: De la Méthode

De la Méthode : recherches en histoire et philosophie des mathématiques, sous la direction de Michel Serfati, 2nd edition, revue et augmentée, Paris : Presses Universitaires de Franche-Comté, 2011, 356 pp.

This book is a collection of essays based on talks given at the seminar of epistemology and history of mathematics which is organized by Michel Serfati at the Institut Henri Poincaré in Paris. It covers a wide range of topics around the idea of method in mathematics. The book is divided into two parts. The first part is entitled "La force de la méthode." It begins with a paper by Michel Serfati on the mathematical development of the young Descartes, which aims to capture some of the main themes that led him towards his mature work. Three short notes, written in modern mathematical notation, accompany the paper to clarify the mathematics involved. The first part also includes a paper by Adrien Douady on the idea of geometrizing a problem, illustrated by four examples; a paper by Rémi Langevin on the influence of Gaspard Monge's geometric vision on the development and presentation of various mathematical ideas; a paper by André Revuz on the general idea of a mathematical method, in particular the "duality" between methods of proof and methods for discovering fruitful ideas in mathematics; a paper by Olivier Hudry on Turing, his machines, and the notion of algorithmic complexity; and a paper by Ivor Grattan-Guinness, translated from English by Anne Michel-Pajus, on the presence of psychology in the foundations of logic and mathematics, especially in the work of Boole, Cantor and Brouwer.

The second part, entitled "L'existence en mathématiques," contains four papers. The first one, by Alain Michel, examines a thesis presented by the French mathematician Lebesgue, that mathematics is actually constructed by mathematicians, and places the thesis within the foundational studies of mathematics. The next paper, by Michel Serfati, goes in the same general direction by carefully exploring the creation of certain mathematical objects that initially derive from the notational system itself. The third paper, written by Michel Bitbol, considers the question of existence in physics, in particular in particle physics, from a Wittgensteinian point of view. The last paper, by Jean Mosconi, is a critical analysis of some structuralists' positions in philosophy of mathematics. Some of these papers convincingly illustrated how careful historical analysis can be fruitfully used to develop theses in the epistemology of mathematics. Anyone interested in the interaction between history and philosophy of mathematics will find useful, stimulating, and inspiring material in this work.

Jean-Pierre Marquis

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Convergence is the Mathematical Association of America's free online journal about the history of mathematics and its use in teaching. Serving teachers and students of mathematics at both the secondary and collegiate levels, we emphasize the history of mathematics topics from grades 8–16: algebra, combinatorics, synthetic and analytic geometry, trigonometry, probability and statistics, elementary functions, calculus, differential equations, and linear algebra.

We encourage you to visit *Convergence* at mathdl.maa.org/mathDL/46/ to see the many features the journal has to offer, including:

- Mathematical Treasures, digital images of mathematical objects and texts for use in your classroom
- Featured Items. our newest articles and classroom activities
- On This Day in Mathematics History
- Problems from Another Time
- Quotations about mathematics and its history
- Calendar of upcoming mathematics history events
- Reviews of books, websites, and other instructional materials
- What's in Convergence? Tables of Contents for all eight volumes (2004–2011)

Be sure to keep your eye on *Convergence* for a new feature debuting in autumn 2011, the Paul R. Halmos Photograph Collection. The MAA History of Mathematics Special Interest Group is funding digitization of the large collection of photos Halmos snapped of mathematicians during his lifetime.

1 Mr. JILLandling · vilaling Etr Spile ولدانشاموية احرى تؤدى لل هذا وهوالال فاددناان تزيدعا

Figure 2: : Kitab al-jabr wa l-muqabala

We invite you not only to read *Convergence* and use it in your classes, but also to submit for publication articles of the following types:

- Expository articles on the history of topics in the grades 8–16 mathematics curriculum
- Translations of original sources appropriate for grades 8–16
- Classroom activities, projects, or modules for grades 8–16
- Classroom testimonials describing your experiences using a particular teaching aid, article, book,

or website

- Reviews of books, articles, teaching aids, and websites
- Announcements of conferences and events for our Calendar

For further details, please read "Guidelines for *Convergence* Authors" at the *Convergence* homepage or contact the Editors.

Figure 3: The Summa of Luca Pacioli (1445–1509).

Founding editors Victor Katz and Frank Swetz continue to serve the journal as advisors and as authors of the ongoing "Mathematical Treasures" project. Three samples of Mathematical Treasures accompany this article. The first photo, from al-Khwarizmi's algebra text, *Kitab al-jabr wa l-muqabala*, depicts and describes his method of "completing the square." The original was written around 825; the date of this copy is not known. The second photo, from Luca Pacioli's *Summa de arithmetica, geometrica, proportioni* et proportionalita (1494), demonstrates finger counting. The third photo—a classic depiction of Arithmetic supervising a contest between Boethius, performing written calculation using Indo-Arabic numbers, and Pythagoras, using a counting board—is from the Margarita philosophica (Pearl of Wisdom) of Gregor Reisch (1467–1525), first published in 1503. All three items are provided courtesy of the Columbia University Library, and al-Khwarizmi's text is part of the George Arthur Plimpton Collection.



Figure 4: Margarita philosophica

The current editors are Janet Beery, *janet_beery@red-lands.edu*, of the University of Redlands and Kathy Clark, *kclark@fsu.edu* of Florida State University. *Convergence* is now part of *Loci*, the online journal of the MAA's Mathematical Sciences Digital Library (MathDL). The *Loci* editor is Tom Leathrum of Jackson State University and the MathDL editor is Lang Moore of Duke University.

Janet Beery & Kathy Clark

High School Calendrics

If you've been attending CSHPM conferences in recent years, you've probably caught one of Ed Cohen's papers on the variety of world calendars.

He has inspired me to make calendrics a regular part of my high school math teaching.

As I write, it is September 28, 2011. I started today's lesson by writing down the date and some of its many equivalents:

Mercredi, le 28 septembre, 2011

- = Erev Rosh Hashona, 5772
- = 29 Elul, 5771
- = Ontario Leaders' Debate + 1
- = Ontario Election 2011 8
- = October 6, 2011 8
- = Thanks giving, 2011 - 12
- = Monday October 10, 2011 12
- = Thanks giving (USA) 2011 - 58 $\,$
- = Thursday, November 24, 2011 58

I always post the date in French if not another language (preferably provided by a student). After all, Canada is a bilingual country and Toronto is a very multicultural city.

I look to upcoming holidays. Today my students know I will be away for the next two days to celebrate my New Year. Over the school year I enjoy sharing knowledge about a wide range of traditions.

We're in the middle of a provincial election, a very mathematical event. For example, in today's classes we're generating and graphing Ontario election participation data.

Countries are different, even Canada and the United States who have a common border and language. We wonder, why do Americans celebrate the Fall Harvest Festival in early winter?

So my students have had a short lesson in equivalence relationships without knowing it. A thought they might remember in University Algebra.

David Orenstein

Call for Papers: *Logica Universalis* Special Issue

23 July 2012 marks the centenary of the birth of the historian and philosopher of logic, Jean van Heijenoort (1912-1986), whose anthology From Freqe to *Gödel* helped define the nature and scope of modern mathematical logic for several generations of logicians, while the canon of fundamental works that comprise the text set off the formative period of mathematical logic as we know it today. His influence in the history of mathematical logic was furthered by his work as the editor of the papers of Jacques Herbrand and in his contributions to the publication of the multi-volume Collected Works of Kurt Gödel. The articles, published and unpublished, that were brought together in his Selected Essays articulated his conception of the course of the origin and development of mathematical logic. His El desarrollo de la teoría de la cuantificación provided an exposition of the "family of formal systems" that comprise quantification theory and its proof procedures: the axiomatic method, itself comprised of Frege-type systems and Hilbert-type systems; Herbrand quantification; natural deduction; and the Gentzen sequent calculus, which van Heijenoort enumerated as the four principal approaches to first-order predicate calculus. He briefly examined the history of each; considered them in their classical, intuitionistic, and minimal versions; and compared the strengths and weaknesses of each.

As editor of From Freqe to Gödel, van Heijenoort exercised a critical influence on the historiography of logic through much of the second half of the twentieth century. Although aspects of his views on the nature and scope of mathematical logic have more recently been challenged, as have aspects of his conception of the history of mathematical logic, his ideas continue to influence historians and philosophers of logic and frequently serve as the starting point in discussions which challenge his views, such as his often exaggerated emphasis on the pivotal work of Gottlob Frege and corresponding comparative neglect of the contributions of Frege's contemporaries among the algebraic logicians, particularly Charles Sanders Peirce and Ernst Schröder. Thus, van Heijenoort's work continues to occupy a significant place in the historiography and philosophy of logic. In addition to his historical work, van Heijenoort left a body of manuscripts and typescripts, many of which were distributed to a handful of close colleagues and to his Brandeis University logic students, and in which he explored the model-theoretic properties of the falsifiability tree method, particularly its soundness and completeness, and the relation between the truth tree and falsifiability tree methods and its ancestors, in particular Herbrand quantification and Beth tableaux. In his *Introduction à la sémantique des logiques non-classiques*, van Heijenoort applied the tree method to intuitionistic and modal logic.

We invite contributions to a special issue of *Logica Universalis*, which will be devoted to any and all aspects of van Heijenoort's work in logic, its history and philosophy. Contributions for consideration should be sent in PDF, no later than 31 January 2012, to the guest editor, Irving H. Anellis of Indiana University-Purdue University at Indianapolis, *ianellis@iupui.edu*. The issue is expected to appear in July 2012.

Irving Anellis

Hans Wussing (1927-2011)

Hans Wussing died in Leipzig on April 26, 2011, following a lengthy illness.

Wussing was born October 15, 1927, in Waldheim, Germany. His high school studies were interrupted by the war: at the age of 15 he was drafted to be a "Luftwaffehelfer" in Leipzig. This was an experience shared by many young men born in 1926 and 1927, and among his fellow "helpers" were Günter Grass, Jürgen Habermas, and the present Pope. In 1944, he became an ordinary soldier, aged 17, and he was soon sent to fight in Belgium, where he was captured by the British and imprisoned. His experiences in the war made him a committed antifascist.

On being freed by the British, he returned home to complete secondary school, and he then studied mathematics and physics in Leipzig from 1947 to 1952. Ernst Hölder (son of Otto, of inequality fame) was among his professors, providing a kind of direct link to the world of Weierstrass. He wrote a doctoral thesis in 1957 on the embedding of finite groups. By the mid-fifties, Wussing's interest in history was already well established, and from 1956 until 1966 he was Assistent at the Karl-Sudhoff-Institut für Geschichte der Medizin und Naturwissenschaften at the Universität Leipzig, an institution with its own complex history. In 1966, he completed his habilitation, the contents of which became the basis for his 1968 book, *The Gene*sis of the Abstract Group Concept, a very well-known work that has been translated into English. From 1966 to 1968, Wussing was first a Dozent, then, after 1968, Professor at that institute. He served as its director from 1977 to 1982. He became an emeritus professor in 1992. He received many honours including, in 1993, the Kenneth O. May Prize of the International Commission on the History of Mathematics.

Wussing was married in 1952 to Gerlinde Walter, the constant companion of the rest of his life. The two were fixtures at the Oberwolfach history of mathematics meetings, and Gerlinde usually accompanied him to meetings when possible, especially later in his life, taking notes.

Wussing authored a large number of scholarly and popular studies, both surveys and monographs. Apart from the work on group theory, he is perhaps bestknown for his work on Adam Ries. He served on a variety of editorial boards, for example for the journal *NTM* and for Birkhäuser's Science Networks series. He had a central role in making history of mathematics thrive in the DDR (and in Germany following reunification), and his influence as a mentor and doctoral advisor remains evident in the activities of many former students of the Sudhoff Institute. Here I will mention Sonja Brentjes, Sergio Nobre and Walter Purkert, all still active researchers in our field. However, Wussing's influence transcended that sphere, as the following comment from Len Berggren shows:

"One of the very first things I read [in the history of mathematics] was his book *The Genesis of the Abstract Group Concept*, which I found very informative. My first plan when I became seriously interested in the history of mathematics was to specialize in the history of group theory since group theory was the area in which I did my doctorate... Hans Wussing's work was my first introduction to the whole field of the history of mathematics and I have always been grateful to him for that."

I first met Hans in Leipzig in 1988, and last saw him in April 2010 in the Auerbachs-Keller in Leipzig, famous from Goethe's *Faust*. Surrounded by Chinese tourists feasting on pork hocks and schnitzel, we reminisced about the changes that had come to Leipzig since our first meeting, when Wurst made do as a replacement for Schinken. Hans's humanity was doubtless what helped him to negotiate the transitions from Nazism to Communism to Capitalism, the trajectory of his generation. He will be remembered for his erudition, his contributions and commitment to history of mathematics, and the encouragement he provided others in pursuing the field to which he devoted his life.

Tom Archibald

New Members

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

Sarah Costrell Fayetteville, AR USA **Rick Hill** Mission, KS USA Molly Kao London, ON Canada Jeffrey T. Malotte Knoxville, TN USA Clifton McIntosh Salt Lake City, UT USA Paul Stahl Kansas City, MO USA Susan Vineberg Wayne State University Detroit, MI USA Steven H. Weintraub Lehigh University Bethlehem, PA USA

From the Editor

In this issue, you may read about all of the developments that have taken place in the Society this year, particularly since our successful joint meeting with BSHM in July. One of the long-desired events, perhaps especially for members outside of Canada and the USA who experience currency conversion difficulties every year, is the debut of online payments for membership renewal. On behalf of all members, the Editors heartily thank Mike Molinsky, Dirk Schlimm, and Patricia Allaire for the time and effort they have volunteered to get this system established. Remember that there is a strict deadline for subscribing to the journals affiliated with CSHPM, so please utilize our new form to renew your membership at your earliest convenience. It is also still possible to renew membership via postal mail with a physical cheque, for those who prefer to do so.

In addition to the various reports on the 2011 annual meeting that appear in this issue, Tony Mann, the meeting organizer for BSHM, provided an interview to the Math/Maths podcast by Peter Rowlett and Samuel Hansen. The broadcast worked in some good-natured international rivalry in the history and philosophy of mathematics, and it can be found at www.pulse-project.org/node/357. The interview begins at the 8:40 mark and lasts for almost 12 minutes.

The Editors greatly appreciate the patience of the members who subscribe to the print option of the *Bulletin*. They initially received the May 2009 issue this past spring due to a print shop error. The speedy manner in which Maria Zack resolved the situation illustrates the significant work she and Eisso Atzema invest into our newsletter, even though their efforts are unseen by most members of the Society.

The Editors remind members that they are not able to provide authors with proof copies of their submissions before the *Bulletin* goes to press. According to *Bulletin* editorial practice—which precedes the current editors—each article is lightly edited after it is received. Since LaTeX is used for typesetting, all incompatible characters must be removed. The manual method is the most accurate of the various conversion alternatives. Authors can significantly hasten the production of the *Bulletin* by turning off the automatic formatting features of Microsoft Word. The layout template also places constraints on formatting of submissions, including the length of photo captions. For grammar and clarity, we rely on *The Chicago Manual of Style.* Our aim is to help our authors' texts look their best.

We also want to extend a collective "thanks" to the officers and Councilors for the support they provide the *Bulletin* and for their larger service to the Society. The deadline for contributions to the next issue is April 1, 2012. The Content Editor may be reached at *aackerbe@verizon.net*.

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 (atzema@math.umaine.edu), and Production Editor Maria Zack (Maria-Zack@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.

