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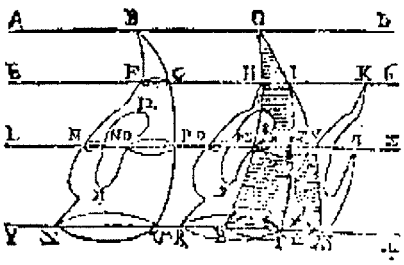
WHAT'S INSIDE



Canadian Society for History and Philosophy of Mathematics

Société canadienne d'histoire et de philosophie des mathématiques

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ABOUT THE SOCIETY

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

President: **Glen Van Brummelen**, Bennington College, Bennington, VT 05201,USA, gvanbrum@bennington.edu
Vice-President: **Len Berggren**, Math. Dept., Simon Fraser Univ., Burnaby, BC V5A 1S6, Canada, berggren@sfu.ca
Secretary: **Pat Allaire,** Dept. of Math. & C.S., Queensborough C. C., Bayside, NY 11364, USA, pallaire@qcc.cuny.
Treasurer: **Robert Thomas**, Dept. of Math., University of Manitoba, Winnipeg, MB R3T 2N2, Canada thomas@cc.umanitoba..ca

Members of Council:

Rebecca Adams, Mathematics Department, Vanguard Univ., 55 Fair Drive, Costa Mesa, CA 92626, USA, radamsca@yahoo.com
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Alexander Jones, Department of Classics, University of Toronto, 97 St. George Street, Toronto, ON M5S 2E8, Canada ajones@chass.utoronto.ca

The Society's Web page, is maintained by **Robert Bradley**, Adelphi Univ. Garden City, NY 11530, USA www.Adelphi.edu/cshpm or www.cshpm.org.

The Proceedings of the Annual Meeting is edited by **Michael Kinyon,** Dept of Mathematics, Western Michigan Univ., Kalamazoo, MI 49008 mkinyon@wmich.edu

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

Frederick V. Pohle Colloquium Series

The Frederick V. Pohle Colloquium Series on the History of Mathematics, organized by Pat Allaire and Rob Bradley, is now in its fourth year. The colloquia feature many fine historians and mathematicians, most of whom are members of CSHPM/SCHPM.

Speakers earlier this year were **John McCleary** (*The Porism of Poncelet: Jacobi , Poncelet, Abel, Steiner*) and **John Glaus** (*Euler: Mathematician and Diligent Bureaucrat -- The Great Balancing Act*).

Here's what's to come for the rest of 2001-2002:

December - **Paul Pasles**, *The Lost Squares of Dr. Franklin*
February - **William Dunham**, *Volterra and the Limits of Pathology* (Bill is also giving a public lecture earlier the same day.)
March - **Antonella Cupillari**, *Maria Gaetana Agnesi: Myths and Mathematics*
April - **Steve Gimbel**, *Poincaré, the Language of Mathematics, and the Intuitionist/Formalist Debate*
May - **Greg Moore**, *What is Magnitude?: Paper Tigers, Cholera Bacilli, and a 19th-Century Debate about Infinitesimals*

All talks are at Adelphi University, Garden City, NY on the first Wednesday of the month at 4:00 pm, preceded by coffee at 3:30 pm, and followed by dinner at a local restaurant.

Abstracts, links to the digital video, contact information for the speakers and the organizers, and almost anything else you might want to know may be found at the website, www.pohlecolloquium.org .
Pat Allaire

Report from the Treasurer *Robert Thomas*

One of the co-editors of the Bulletin has asked me to write something on the dues increase and the reasons for it. This is something I think needs to be done, and so I am taking a piece of cottage time to do it.

In my financial report on the year 2000 (in the May Bulletin) I pointed out that our 2001 results would be different and significantly so. Because Providence College kindly paid for the printing and mailing of the proceedings for several years during which administrative grants from SSHRC (essentially the Canadian Government) were phased out we were allowed to get away with something for nothing. Just paying for what we have been getting in recent years will make 2001 the deficit year that my predecessor was already predicting. This can be covered by our nestegg once, but only once. As I said then, we need either to increase dues by $15 or increase them by less and make the proceedings optional (at their cost).

Naturally, this matter was discussed at length by the Executive Council at its meeting on May 25, and it decided to put forward to the membership the latter choice, an increase of $5 ($4 U.S.) for all categories of member, and a charge of $12 ($9.50 U.S.) for the proceedings, to be paid for at the time of paying dues. The Council thought it important to make the proceedings available to all members, but in the end (after some discussion, which had begun by e-mail before the meeting) decided that there was no justification for making those not wanting the proceedings pay for them by including the cost in everyone's dues. The wisdom of this has been borne out by the fact that, given the opportunity, some members have opted out of receiving the 2000 proceedings this year in spite of not having to pay for them (thus saving the Society some money, thank you). Had this choice been rejected by the membership at the AGM, the Executive would have proposed the $15 increase with the proceedings included. But the AGM passed the lesser increase easily without much discussion.

The Society, as I remember pointing out at meetings when I was president, does a fair amount with little money and a lot of help; I think that that makes it a better society. And I'm happy to help. But I am too busy editing *Philosophia Mathematica* to do full justice to my paid job as well as being treasurer of CSHPM / SCHPM, and so I am not standing for re-election as treasurer next spring. The jobs of secretary and treasurer are now adequately distinguished, and I shall be able to explain to my successor what needs to be done without much difficulty.

I was asked at the AGM to look at the original purpose of the K.O.May fund. The flyers advertising the creation of the fund specifically state the purpose (as one would expect): "It is hoped that the fund will be sufficiently subscribed to by Professor May's friends and colleagues to provide for an annual lecture to be given in conjunction with the Annual Meetings of the Society, or at some other appropriate gathering of historians and philosophers of mathematics." Based on this I think we ought to start calling our invited talk The Kenneth O. May Lecture in the History and Philosophy of Mathematics, it being understood that only an unusual lecture would deal with both topics. The income is so far not up to more than half of our usual honorarium; we have some way to go. I think that we should put some of our surplus (if there is one) at the end of each year into the fund.

By the way, I attended the AGM of the CSHPS/SCHPS which followed right after ours. They too increased affiliate dues as we had just done (and as I told them we had just done); I found no opportunity to report this to those at Laval before the meeting broke up. The Society is good value for money still.

President's Report

Terror, the History of Mathematics, and the Box

At the American Mathematical Society meetings in Hoboken, NJ last May, several of us from the history session strolled along the shore admiring the New York skyline. This past weekend, as I drove past the same skyline — minus two monuments — the impact was chillingly, and by now familiarly to all of us, reversed. In the face of this carnage and its profound impact on the human race, my research work and our little corner of academia seemed by comparison trivial and inconsequential.

Thankfully there was still a long drive ahead of me back to Vermont; I did not have the opportunity to chuck it all and join the Peace Corps. It's easy to get caught up in day-to-day and career concerns; this event caused me to reflect on why I chose to take up this unprofitable profession. Some of my reasons were philosophical; others were not. First among them is all of you. My first CSHPM meeting back in 1988, and the twelve or so I've attended since, have been special occasions: we are truly a band of friends, supportive, kind, and generous to each other amidst our great diversity. I see none of the rivalries, academic politics, or back-biting that seem to plague every other academic institution I've been associated with. First-time visitors to our meetings have remarked to me on the upbuilding and welcoming spirit that pervades them. It is a gift that I cherish, a role model to the scholarly and broader community, and one that we must preserve.

I don't think our camaraderie is an accident. One does not choose to enter the history of mathematics in North America with ambitions of money and power, huge research grants and academic prestige. Our motives for such an apparently disastrous career choice tend to be genuinely intellectual: curiosity for what is "out there", beyond the box; what it might tell us in contrast about ourselves, about humanity, and about the universe. If it gets us a job, so much the better, but if we were not paid we would do it anyway. For me, the box was at first disciplinary: my undergraduate training in pure mathematics was dominated by a blind pursuit of more and more mathematics with no concern for context. In mathematics departments, context doesn't get you respect or, eventually, tenure.

My frustration with the tunnel vision of my mathematical training led me to a belated teenaged rebellion. I had the great fortune to find an advertisement for a summer undergraduate research assistant position in (horrors) the history of mathematics, with a professor at Simon Fraser University named Len Berggren, who became my graduate supervisor, my mentor in the deepest sense, and a great friend. I soon found that my box was not merely disciplinary; it was also temporal. Mathematics has not always meant the same thing. It grows, shifts its ground, and alters itself through time — both internally, and in the role it plays in its societal environment. This may be axiom for us, but a revelation for a recent mathematics graduate. Working in Arabic mathematics, a conscious choice, is pushing me out of a cultural box, a shove that is now suddenly being inflicted harshly on all of us.

Acts of terror arise from boxes. The Muslim militants suspected of the 9/11 events live within the box of a particular interpretation of sacred text; to inhabitants of those

carefully controlled and continually thickening walls, the World Trade Center bombings make some sort of sense. We North Americans, boxed in by geographical and media isolation, are even now unable to comprehend how we are seen from outside. Studying the history of mathematics will not change the world overnight. But it is a step, and I believe an important one, to overcoming the walls that keep us apart.

News

On the news front, several matters are occupying our time at the moment. First among them is our annual meeting for 2002, a promising special event that will return us to Victoria College at the University of Toronto after only a three-year absence. 2002 is the 25th anniversary of the passing of our founder, Kenneth O. May, who also founded the Society's official journal *Historia Mathematica* and was a prominent member of the Institute for History and Philosophy of Science and Technology at the University of Toronto. A happy coincidence brings the HSSFC Congress (the "Learneds") to Toronto this coming May, and we are celebrating Ken May's life and work with a special session in his honour. Current IHPST faculty member Craig Fraser is bringing together a number of Ken May's former students; additionally, Ivor Grattan-Guinness will speak on Ken May and the historiography of mathematics, and Albert C. Lewis on Ken May, bibliography, and information retrieval. Of course, we will hold a general session, this year organized by Amy Shell, and another special session on numerical mathematics, hosted by Roger Godard. A full program and a special occasion!

Various other conference-related activities grace our horizon over the next year or two. The annual joint AMS-MAA conference in January, this year in San Diego, contains several historical sessions. Tom Archibald and David Zitarelli are organizing an AMS-MAA Special Session on the History of Mathematics; Janet Beery and Ed Sandifer are organizing an MAA Session on History of Mathematics in the Second Millennium; there is an AMS session on history and logic; and David Pengelley is presenting an MAA Invited Address entitled "Sophie Germain's Grand Plan for Proving Fermat's Last Theorem". Perhaps most significantly, we look forward to the founding of a SIGMAA on the history of mathematics. This summer, the Euler 2K+2 Conference will be held in Rumford, ME; see www.euler2007.com (no typo) for details. Adrian Rice is our liaison for a possible third joint meeting with the British Society for History of Mathematics in 2004 or 2005, this time in England.

In other matters, elsewhere in this issue, our treasurer Robert Thomas discusses our recent decision to restructure annual dues. This, our first increase in about a decade, was held off as long as possible, but loss of two major sources of funding (the phasing out of the SSHRC administrative grants program and local funding for production of the *Proceedings*) made it impossible to avoid this year. The *Proceedings* of 2001 were delayed by various cost considerations and the relocation of our editor (congratulations, Michael!), but should be included in this mailing. I'm sure you'll agree that this handsome volume was worth the wait. We shall turn our attention next to a formally published book arising from recent *Proceedings* papers; the precise form of this book has not yet been decided. (Cont. p. 16)

Meeting of the Executive Council CSHPM/SCHPM, May 25, 2001
Université Laval, Quebec City

Present:
Pat Allaire, Rob Bradley, Roger Godard, Hardy Grant, Michael Kinyon, Jim Tattersall, Robert Thomas, Glen Van Brummelen (presiding)

The minutes of the June 2000 Executive Council meeting were passed.

Annual General Meeting Agenda

Treasurer's Report:
Robert Thomas will present proposals for an increase in dues.
Option (a) $5 increase in annual dues for all categories of membership; *Proceedings* optional for an additional $12
Option (b) $15 dues increase, *Proceedings* to all, as now.

The treasurer has several cartons representing the archives of the Society. He suggests that an archivist be recruited, who will organize and maintain this material.

Ken May Fund: The present investment comes due in January. Robert will collect and reinvest at a more favorable rate.

President's Report:
Glen Van Brummelen will note the following:

- Next year's meeting will be with CSSH at University of Toronto/Ryerson, with tentative dates of Sat.-Mon., May 25-27, 2002. The Council suggested that we request dates of Fri.-Sun, May 24-26.
- There is a possibility of a joint meeting with BSHM, perhaps at Cambridge in 2004. The Council recommended that such a joint meeting should not replace the CSHPM/SCHPM annual meeting and that it should be timed so as not to affect attendance at our own meeting.
- A publisher has expressed interest in producing a book of excerpts from our *Proceedings*. The volume would be designed as secondary resource for upper level undergraduate math courses, and the selection of articles will be made with this audience in mind.
- Three suggestions for new logos have been received.
- It is most likely that there will be an MAA SIGMAA on History of Mathematics. If members of our organization wish to have input, it will be necessary for them to act quickly.

The secretary, *Bulletin* editor, Proceedings editor and webmaster will make brief reports to the membership.

Other Business

- Organizers for the 2002 meeting:
  Amy Shell--general session,
  Roger Godard—a short sub-session on "Numerical Methods"
  Craig Fraser – special session, "The Legacy of Ken May," as well as local arrangements
- The nominating committee for the next Council:
  Rob Bradley, Hardy Grant, Jim Tattersall
- The Ken May Fund. Glen will check into any restrictions that may exist on the ways in which the Ken May fund may be used. We might consider using some of the money for an endowed Ken May talk at the annual conference. Donations to the fund might be solicited from the membership by an optional supplement to dues.

The meeting was adjourned. *Pat Allaire*

AMS Williamstown Meeting

Members of the Society were prominent both in the organization and on the program of a history-of-mathematics session at the AMS meeting in leafy Williamstown, Massachusetts, on the weekend of October 13-14. Participants savoured a delightful ambiance: the campus is charming, the much-touted fall foliage did not disappoint, and the first day in particular was bathed in an "Indian summer" sunshine that Williams College must have ordered from room service. Cesar Silva of WC's mathematics department presided ably over local arrangements, and the department laid on a reception which seemed to evoke universal applause.

Early arrivers were treated on Friday evening to a public lecture by Sir Roger Penrose, whose stature and reputation guaranteed a full house. Sir Roger dispensed the heady mix of mathematics, computer science, quantum physics and brain research that is familiar to readers of two of his recent books.

The organizers of the history session included CSHPM stalwarts Jim Tattersall and Glen Van Brummelen, along with Della Fenster and Shawnee McMurran. The program was very full -- 21 talks in all. There was no special theme, although by coincidence a number of papers focussed on what could be broadly termed "social" -- institutional, educational, journalistic -- aspects of 19th- and 20th-century mathematics. Also much in evidence was the great Euler, not only as the subject of two presentations but also in advance word spread by Rob Bradley, John Glaus and Ed Sandifer of an Euler conference to be held next August at the conference centre which John owns and operates in Rumford, Maine. (details at www.euler2007.com). But the range of talks at Williamstown was impressively wide. Indeed the rich intellectual fare on offer defies quick summary here, but luckily a most welcome initiative by Roger Cooke has put on a new website, www.emba.uvm.edu/~cooke/amsmtg/amsmtg.htm (or ".pdf" or ".doc" as desired), all the titles and abstracts, and even photographs of the speakers holding forth.

Society members who gave talks, and their topics, are as follows:

* **Fran Abeles**, *H.J.S. Smith and Prime Numbers*
* **Pat Allaire**, *Robert Murphy -- Cork, Cambridge and London*
* **Eisso Atzema**, *'Irresistible to the boys': The Introduction of Graphical Techniques in Mathematics Teaching and the Creation of a New Class of Standard Problems, 1900-1920*
* **Rob Bradley**, *Propriety, Polemic and Priority: The Euler-D'Alembert Correspondence*
* **Sloan Despeaux**, *The Development of a Publication Community: Nineteenth-Century Mathematics in British Scientific Journals*
* **Alejandro Garciadiego**, *Agustín Aragón, Mexican journalist and historian of science*
* **Hardy Grant**, *Some history of class numbers*
* **Danny Otero**, *On using a table of logarithms*
* **Adrian Rice**, *Mathematics at the Universtity of Virginia, 1825-1900*
* **Fred Rickey**, *Calculus at West Point in the 19th Century*
* **Ed Sandifer**, *Euler and the Gamma Function*
* **Amy Shell**, *A Description and History of the Olivier String Models at the United States Military Academy*
* **Jim Tattersall**, *How I Met Mary Cartwright*
* **Paul Wolfson**, *Christoffel, the Equivalence Problem, and the Origins of Tensor Calculus*

Hardy Grant

Meeting of the Annual General Meeting May 25 and 26, 2001
Université Laval, Quebec City

1. The minutes of the June 2000 Annual General Meeting were approved.

2. Representatives of HSSFC visited the meeting, soliciting suggestions and offering assistance.

3. ***Treasurer's Report:***
Motion: To approve the 2000 financial statement. **Carried.**

Rationale for dues increase: Cost for printing and mailing *Proceedings* is US$18/copy. The *Bulletin* costs US$400 to mail. SHRCC funding for administrative expenses has dried up.

Proposals for an increase in dues:
Option (a) $5 increase in annual dues for all categories of membership; *Proceedings* optional for an additional $12 (Glen: $5/$12 regardless of the currency?)
Option (b) $15 dues increase, *Proceedings* to all, as now.

Motion: To approve Option (a). **Carried.**

Archivist: An archivist is needed to organize and maintain the archives of the Society. This material now resides in several cartons in the Treasurer's office.

Proceedings: The membership discussed the possibility of publishing the *Proceedings* on-line only as a cost-saving strategy. It was decided to continue to produce paper *Proceedings* for the present. However, the new dues structure will make the *Proceedings* optional beginning with the 2002 membership year (2001 *Proceedings*). In an additional effort to save money by not sending the *Proceedings* to those who are not interested, 2001 members will asked to indicate by an email response if they do NOT wish to receive the 2000 proceedings.

Ken May Fund: The present investment comes due in June. The treasurer will collect and reinvest at a more favorable rate. If there are no restrictions on the ways in which the fund may be used, we might consider using some of the money for an endowed Ken May talk at the annual conference.

4. ***President's Report:***
- The president thanked session organizers Amy Ackerberg-Hastings, Louis Charbonneau, and Adrian Rice, keynote speaker Jean Dhombres; local arrangements coordinator Bernard Hodgson; session chairs Amy Ackerberg-Hastings, Robert Thomas, Jim Tattersall, Hardy Grant, Roger Godard, Rob Bradley, Pat Allaire, Louis Charbonneau, Tom Drucker; Executive Council members; *Bulletin* editors Tom Drucker and Sharon Kunoff; *Proceedings* editor Michael Kinyon; HSSFC representative Ed Cohen.
- Next year's meeting will be with CSSH at University of Toronto/Ryerson, with tentative dates of Sat.-Mon., May 25-27, 2002. The Council suggested that we request dates of Fri.-Mon, May 24-26. The 2003 meeting will be at Dalhousie in Halifax.
- We may meet jointly with the BSHM, perhaps at Cambridge, perhaps in the winter of 2004.
- Other upcoming meetings:
  History of Undergraduate Mathematics Education in America, West Point, NY June 21-24, 2001
  AMS/SMF, Lyons, July 17-20, 2001
  AMS Sectional, Williamstown, MA Oct. 13-14, 2001
  Joint meetings, San Diego, January 2002
  AMS Sectional, Montréal, Spring 2002
- A publisher has expressed interest in producing a book of excerpts from our *Proceedings*. The volume would be designed as a secondary resource for

upper level undergraduate math courses, and the selection of articles will be made with this audience in mind.

- Three suggestions for new logos have been received, one based on the Fields medal, a second on the Spiral of Archimedes, and a third on Euclid's diagram for the Pythagorean theorem. Additional suggestions made included logos based on Poincaré's hyperbolic plane diagram, manifold maps with charts, a "neater" looking proof of the Pythagorean theorem, and the Pythagorean theorem diagram shown in projection with calipers. Members suggested that it is important that the logo be aesthetically pleasing and that there be a bit of mystery about it. Additional suggestions may be sent to the Council at:
  CSHPMcouncil@yahoogroups.com
- It is most likely that there will be a MAA SIGMAA on History of Mathematics. If members of our organization wish to have input, it will be necessary for them to act quickly.
- The nominating committee for the next Council will be Rob Bradley, Hardy Grant, and Jim Tattersall

5. ***Secretary's Report:***
Pat Allaire reported that there are 201 paid members for the year 2001.

6. ***Bulletin Editors' Report:***
Tom Drucker requested that members submit articles for future issues of the *Bulletin* as early as possible. Deadlines for the next issues are October 30, 2001 and March 31, 2002. Contributions may be sent to druckert@mail.uww.edu or cshpm@cwpost.liu.edu

It was decided that, because the cost of overseas airmail is prohibitive, all members will receive the *Bulletin* by regular mail.

It was decided to continue to include the minutes as part of the *Bulletin.*

7. ***Proceedings Editor's Report:***
Michael Kinyon announced that the 2000 *Proceedings* will be mailed at the end of August. All submissions have been typeset, using AMS default settings, so that the *Proceedings* will have a uniform appearance throughout.

The deadlines for submissions for the 2001 *Proceedings* are Nov. 30,2001 [now Dec. 30] if the submission is in any other format other than TeX and Feb. 15, 2002 [now Feb 28] if the submission is in TeX. The appropriate style file will be available at the CSHPM website.

As mentioned above, the 2001 *Proceedings* will be published in paper form only.

8. ***Webmaster's Report:***
Rob Bradley reminded the membership of the existence of a CSHPM/SCHPM website at www.cshpm.org He requested that members put a link to this site on their own home pages and that he be advised of the web addresses of members' home pages.

Members did not express an interest in the formation of a CSHPM/SCHPM on-line discussion group.

9. ***Old business:*** none

10. ***New Business:***
Greg Moore asked if there was a public repository for past issues of the *Proceedings.*

Because the copyright remains with the author, policy may not be changed retrospectively to place sets of *Proceedings* in libraries or to place previous issues on the web.

The meeting was adjourned. – *Pat Allaire*

Web Review

cedar.evansville.edu/~ck6

Prof. Robert Emmett Bradley
http://www.adelphi.edu/bradley

Incenter, Centroid, Circumcenter and Orhtocenter: these four competing notions of the center of a triangle have been known since classical Greece. Other triangle centers have been proposed in the modern era; by Fermat, for instance, and Euler, Gergonne, and even the emperor Napoleon. More recently, dozens -- hundreds, even -- of triangle centers have been discovered, and the study of these objects has been simplified and systematized by the use of homogeneous trilinear coordinates.

There may be nobody better qualified to expound on the subject of triangle centers than Clark Kimberling, professor of mathematics at the University of Evansville. Kimberling has published scholarly articles on the subject, written a book (with an introduction by Douglas Hofstadter) and, more to the point for this column, constructed a delightful website at cedar.evansville.edu/~ck6. Kimberling's website is loaded with mathematical content. Just as importantly, he supplies historical and biographical context for the study of triangle geometry, including biographies of mathematicians who contributed to the subject, and descriptive pages, with diagrams, of the more famous classical and modern triangle centers.

In many ways, however, the centerpiece of the website is the Encyclopedia of Triangle Centers (ETC), an amazing catalog of 1114 Triangle centers, each one described in trilinear coordinates and barycentric coordinates, and described in words, where appropriate. For example, the last center, called simply X(1114), is a point of intersection of the Euler line and the circumcircle, and the antipode of X(1113). ETC begins with definitions and some notes on the coordinate systems, and then starts in with the catalog, which begins with same list of four that I used to start this column. Most of the first hundred points have names, but some, like X(28) and X(79) are identified only by their position in the list.

The material on triangle centers alone would make this a notable website, something a geometer or historian would want to visit, and something a teacher could use as a reference for student projects. However, it constitutes only one of three parts of Kimberling's home page. Also included is a section on integer sequences and arrays, reflecting Kimberling's interest in Fibonacci and related sequences (he's on the board of directors of the Fibonacci Association). For those of you who might be interested in making a little pocket money, this portion of the website also includes a list of unsolved problems on integer sequences, with cash prizes, a la Paul Erdos, offered for their solution.

Finally, there's a biographical section on Kimberling's website. Not surprisingly, there are subsections dedicated to mathematicians who contributed to the study of triangle and geometry and of integer sequences. In addition, there's a portion dedicated to Emmy Noether, and her mentors and colleagues, and another on the town of New Harmony, Indiana, located a short distance from Evansville. In this section, Kimberling spins the tale, by means of two dozen or more biographies of scientists, educators and artists, of a nineteenth century experiment in social

(see **Web Review** p.11)

Back to Yonge Street

The 2002 meeting of the Canadian Society for the History and Philosophy of Mathematics/ Société Canadienne d'histoire et de philosophie des mathématiques will take place in Toronto over the weekend of 24 - 26 May 2002. This will be in conjunction once again with the organization formerly known as the Learneds.

The contributed papers session is being organized by Amy Shell of the United States Military Academy. Abstracts should be sent to her at the Academy, West Point, New York 10996 or aa7423@usma.edu. She has requested that abstracts arrive by the 1st of February so that she can spend Groundhog Day rereading them.

Roger Godard has kindly agreed to organize a collection of talks about numerical analysis/numerical mathematics and has already procured at least one distinguished speaker for the session. Those interested in contributing to that session should send their abstracts to Roger at 92 Florence Street, Kingston, Ontario K7M 1Y6 Canada or at godard-r@rmc.ca. The deadline for abstracts in this session will be the same as for the talks in the contributed session. (Special thanks are due to the organizer for also agreeing to have his name placed in nomination for the office of treasurer of the society.)

The site for the meeting makes it especially appropriate for the topic of the special session **– the legacy of Kenneth O. May**. K.O. May was one of the first historians of mathematics to recognize the potential that changes in technology brought to the retrieval of information in the subject. In addition to his influence on the world community and the creation of *Historia Mathematica*, he was also one of the faculty who left the most profound imprint on the Institute for the History and Philosophy of Science and Technology at the University of Toronto.

This meeting commemorates the semidemicentenary of Ken's death in late 1977. There are two invited speakers for the special session: Ivor Grattan - Guinness, who will discuss 'Ken May and the Historiography of Mathematics', and Albert Lewis, who will take up 'Ken May and Bibliography, Computers and Information Retrieval in the History of Mathematics'. In addition to the invited speakers, we expect many of those who came to Toronto and to the Institute to study with May to talk about aspects of his teaching and personality. Titles and abstracts of papers intended for this session should be sent to Craig Fraser at the IHPST, University of Toronto, Toronto M5S 1K7 Canada or at cfraser@chass.utoronto.ca.

The last time the CSHPM met in Toronto, it was in conjunction with the British Society for the History of Mathematics and the result was a memorable gathering. While Craig Fraser may be hard put to assemble outside the formal sessions a programme as entertaining as 1999's, his willingness to try deserve the thanks of all members. Those who have never been to Toronto have missed one of the cities in North America richest in cultural attractions. We hope many of you will plan to attend the meeting.

Web Review (Cont. from p.10)

reform, which led to this remarkable community of scholars and thinkers in the Midwest.

Kimberling, who has been at Evansville since completing his Ph.D. in mathematics at IIT in 1970, and has also published a number of musical compositions, established his website in 1998. He considers most of it now to be in its final form. However, the unsolved problems section is an ongoing project, as is ETC. So don't be surprised of there are more than 1114 encyclopedia entries by the time you receive this newsletter.

Conference on the History of Undergraduate Mathematics in America

A conference on the History of Undergraduate Mathematics in America, was held at the United States Military Academy (USMA), West Point, NY on June 21-24. This conference was one of many events planned for the bicentennial celebrations of USMA to take place in 2002. You may ask, if the bicentennial is in 2002, why was this conference held in 2001? Well, a little known fact is that we had a math department (of one) a year before the Academy was officially founded!

Fred Rickey and I, with the Herculean efforts of Maj. Darryl Ahner, hosted approximately fifty mathematicians and historians of mathematics for four days of history and, of course, food and drink. The event kicked off Thursday afternoon with a mini-course conducted by Fred introducing participants to the old and rare mathematics texts owned by the West Point library, along with a crash course on how to do research in a rare books environment. That evening we enjoyed an opening banquet in the Officers Club, overlooking the Hudson River.

Over the next two and a half days we heard both invited as well as contributed papers on topics such as the evolution of calculus texts in America and the history of several American undergraduate institutions. Several biographical pieces were given on such mathematical favorites as Norbert Wiener, D.E. Smith, Benjamin Peirce, and West Point favorites Charles Davies and Alden Partridge. Many of the talks were related to West Point, or at least had some connection to the academy.

One of the fun parts of the conference (and hopefully why our funding sources allow us to do this) was that as the weekend went on, we noticed many connections between the various talks, leading to more avenues of inquiry and discussion.

The unofficial keynote speaker of the weekend was Ivor Grattan-Guinness, who delivered a wonderful and at times irreverent talk on the École Polytechnique. On Saturday night we also celebrated Ivor's sixtieth birthday while on a two-hour boat tour north on the Hudson.

Fred and I had a wonderful time, and hope that all involved did too. Our department head is talking about a repeat in a few years, so keep your ears open.

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The November issue of the Bulletin of the Canadian Mathematics Society reports the death of **Mohamad Abdul Malik**, long time member of this organization. He was active in this Society for over 20 years, serving as treasurer for several terms ending his tenure in office in1994.

Dr. Malik began a thirty year career when he joined the Mathematics Department at Sir George Williams in 1967, after receiving a Ph.D. at the Université de Montréal. He was a scholar of the history of mathematics, a most active researcher in functional analysis, and also served the department in many in many administrative positions, including Chair.

Under One Sky: Astronomy and Mathematics in the Ancient Near East,

British Museum, London, 25-27 June 2001.

The Under One Sky conference, organized by Annette Imhausen, John Steele and Christopher Walker brought together the largest gathering of specialists in Egyptian and Mesopotamian mathematics and astronomy for many years. In a packed three-day schedule the approximately 100 participants were treated to over thirty presentations spanning the breadth of ancient Near Eastern mathematics and astronomy. For brevity here, we concentrate only on the mathematical talks. The full list of presentations is available at the conference web site http://star-www.dur.ac.uk/~jms/uos.html. A proceedings volume is planned.

Eleanor Robson, in her talk *More than Metrology: Evidence for Maths Education from an Old Babylonian School House*, gave a whirlwind analysis of over 1400 educational tablets and fragments re-used as building material in a house in Nippur. Among the surprises were that three-quarters of the mathematical tablets dealt with multiplication and there were no problem texts.

Karen Nemet-Nejat gave a presentation on the contents of an interesting collection of *20 Square Tablets in the Yale Babylonian Collection.*

Jens Høøyrup discussed *The Apparent Absence of a Culture of Mathematical Problems in Ur III*, giving a technical analysis of Sumerian and Akkadian mathematical vocabulary and tying the absence of problems to the social conditions of Ur III scribes.

Annette Imhausen presented an analysis of *The Structure of the Egyptian Mathematical Problem Texts,* analyzing the structure of the underlying algorithms.

Jim Ritter gave a powerful discussion on *Closing the Eye of Horus: The Rise and Fall of Horus Eye Fractions*, arguing that the hieratic forms were not necessarily derived from hieroglyphic.

There was one other mathematical talk, but your correspondent confesses he was not in the audience to hear it.

The British Museum made a wonderful location for a conference on ancient mathematics. The new Great Court has transformed the entrance to the Museum and is a tourist attraction in its own right. Anyone visiting London and planning to go to the museum should note that the Great Court is open an hour before the Museum proper, and is also open later in the evenings. It is a splendid space to wander in on a summer evening.

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Fermat's Last Tango was a musical that played in New York in the year 2000. It was written by Joshua Rosenblum and Joanne Sydney Lessner and is a fictionalized account of the travails of Andrew Wiles in proving the result for which he is best known. The music is a mixture of genres, and the production in New York was both economical and well performed. The Clay Mathematical Institute has made available a videotape of the musical that comes with a booklet discussing the production and some mathematical history. (It does not include the proof of the theorem as the margins were too small to contain it.) The tape (in both VHS and DVD formats) can be ordered from the Institute by visiting their web site at http://www.claymath.org. The cost runs a little over $20 (US) in either format with a hefty shipping fee for the first copy. If you are looking for a holiday gift, this may be a good alternative to Harry Potter, as it includes more mathematicians than monsters (with apologies to finite group theorists).

ARITHMOS

Rob Bradley

ARITHMOS (Adirondack Readings In The History of Mathematics from Original Sources) came into existence as the result of an after-dinner conversation among participants in the History of Mathematics Session at the AMS meeting in Hoboken, NJ in April 2001. Organized by Rob Bradley (Adelphi University), Ed Sandifer (Western Connecticut State University), and Andy Perry (Springfield College), the group has already held three meetings, and will meet again at Western Connecticut State in Danbury, CT, February 16 and 17, 2002.

ARITHMOS is fairly accurately described by the expanded form of its acronym, with the exception that all meetings so far have been in the Taconics, which are southern foothillls of the Adirondacks. Each seminar is held over the course of two days, beginning in the early afternoon, and continuing through midday of the next day. This allows for ample travel time for those living in most parts of the northeast. Dinner on the first day and lunch on the second have been considered integral to each meeting. Also included have been an optional run in the morning of Day 2 (Ed and Andy are marathoners), and a fluid dynamics seminar (nudge, nudge, wink, wink) before dinner on Day 1.

ARITHMOS met three times in 2001, in July, August, and October. These seminars were held in Hillsdale, NY, just west of the Berkshires. The organizers are delighted to have an institutional sponsor for the February 2002 meeting, thanks to the efforts of Ed Sandifer and his colleague Charles Rocca, also of Western Connecticut State. Readings for the 2001 meetings were all drawn from Ron Calinger's book, *Classics of Mathematics.* Topics for July were algebra and logarithms, with readings by Cardano, Viète and Napier. The August readings concerned the foundations of analysis, with Taylor, Berkeley, MacLaurin and Cauchy as sources. In October, readings by Kepler, Fermat and Newton were used to illuminate the early history of integration theory.

Readings for the February 2002 meeting will be drawn from Euclid's Elements. The focus is Book X, and readings include the Definitions and Propositions 1 through 9. Additional readings from either Book X or Book XII may be added, well in advance of the meeting. The reading list for the February 2002 meeting can be found at www.arithmos.org, along with contact information, and summaries of the first 3 meetings.

If imitation is the sincerest form of flattery, then the organizers are happy to acknowledge their shameless flattery of the ORESME Reading Group (Ohio River Early Sources in Mathematical Exposition). Organized by Daniel J. Curtin (Northern Kentucky University) and Daniel E. Otero (Xavier University), ORESME has held September and January meetings dating back to January 1998, employing a format similar to that of ARITHMOS. For more information on ORESME, visit their website www.nku.edu/~curtin/oresme.html.

ARITHMOS welcomes participants in the February 2002 meeting. For further information, visit www,arithmos.org or send email to Rob Bradley bradley@adelphi.edu or to Ed Sandifer esandifer@earthlink.net.

Report of the Nominating Committee

The Nominating Committee (Rob Bradley, Hardy Grant (chair), and Jim Tattersall) respectfully submits the following slate of candidates for next spring's elections:

President: Len Berggren
Vice-President: Rob Bradley
Secretary: Pat Allaire
Treasurer: Roger Godard
Council: Amy Ackerberg-Hastings, Adrian Rice, Israel Kleiner

The committee recognizes that eyebrows may rise over the nomination of a candidate (Rob Bradley) from within its own ranks. In fact, however, Rob had no role in initiating the move, and he resigned from the committee while considering the offer. As all members know, propriety is a hallmark of this organization at *all* times.
-- Hardy Grant

In 1952 I realized that the straight line leads to the fall of mankind. But the straight line has become absolute tyranny. The straight line is something cowardly drawn with a rule, without thought or feeling; it is the line which does not exist in nature. And that line is the rotten foundation of our doomed civilization. Even if there are places where it is recognized that this line is rapidly leading to perdition, its course continues to be plotted. ... Any design undertaken with the straight line will be stillborn. Today we are witnessing the triumph of rationalist knowhow and yet, at the same time, we find ourselves confronted with emptiness. An esthetic void, desert of uniformity, criminal sterility, loss of creative power. Even creativity is prefabricated. We have become impotent. We are longer able to create. That is our real illiteracy.

Friedensreich Hundertwasser

New Delhi Conference on the history of mathematics

The Indian Society for History of Mathematics and Ramjas College, University of Delhi, in collaboration with other national institutions, will be hosting what they are calling The First International Conference of the New Millennium on History of Mathematical Sciences, on December 20-23 2001 at Ramjas College, University of Delhi, Delhi, India.

Speakers have been invited from many countries including India, the US, Canada and the UK. The conference will cover all aspects of the history of mathematical sciences including mathematics, statistics, operations research and computer science and applications thereof to societal needs. In particular the conference will focus on the following areas:

1. General Histories, Source Books and Biographies of Mathematicians
2. Mathematics and indigenous Cultures of the World
3. Ancient Indian Mathematics
4. The Origin of Mathematics
5. Mathematics in 15th to 18th Centuries (Renaissance)
6. 19th and 20th Centuries Mathematics and Mathematical Sciences
7. History of Mathematics as a subject in Educational Curricula

The Registration fee is US $200 for foreign participants. Further information at this late date can be obtained by contacting Professor Y P Sabharwal, the Organizing Secretary by email at: ichm2001rjc@yahoo.com or indianshm@yahoo.com.

Congratulations to the following new members of the society. We look forward to your contributions. A warm welcome to all.

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ABOUT THE BULLETIN

The *Bulletin* is published each May and November, and is co-edited by Tom Drucker druckert@mail.uww.edu and Sharon Kunoff cshpm@cwpost.liu.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 either of the editors; submissions should be sent to Tom Drucker and Sharon Kunoff at the above e-mail addresses, or by post to Tom Drucker, Department of Mathematical and Computer Sciences, University of Wisconsin--Whitewater, Whitewater, Wisconsin 53190.

Presidents Report (Cont.from p.5)

Our field continues to show its vitality and increasing presence. In one of my other roles as abstracts editor of *Historia Mathematica*, I am finding it more and more difficult to keep up with the ever-increasing wave of activity. Our spirited work, the continued production of research in the history of mathematics, and the formation of the SIGMAA (which will also promote history of mathematics in the classroom) are hopeful signs of future potential for the impact of our field.

Best holiday wishes to you all!
Glen Van Brummelen

Personals

Use the following doodle space to write up what you might have sent of interest for this issue, and then send it on for our May Bulletin.

For example:

Tom Drucker has taken a position in Department of Mathematical and Computer Sciences at the University of Wisconsin-Whitewater. Whitewater is 80 miles northwest of Chicago. A colloquium series on the history of mathematics is pending.

STOP PRESS

The news has just arrived that the Mathematical Association of America has approved the proposal to establish a special interest group in history of mathematics. The first meeting will take place at the annual mathematical meetings to take place in January 2002 in San Diego. More information is available from the Society's Webmaster.