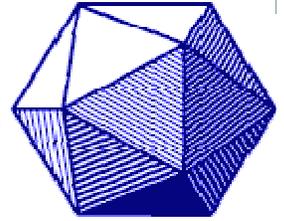


# NEWSLETTER



Volume VI, Number 1

December 2011

## Greetings from the HOM SIGMAA Chair

### *Date to Remember:*

January 4-7, 2012  
Joint Meetings in  
Boston

### *Robert Bradley, Adelphi University*

I've been reading a delightful book by Benjamin Wardhaugh of Oxford University called *How to Read Historical Mathematics* (Princeton U. Press, 2010). It's brief and very readable. It includes historical text passages and also refers the reader to many other readings in the various available sourcebooks. It's addressed to students and could be used with great success in an upper division undergraduate or a masters-level history of math course, in which the instructor wants to incorporate original sources. Although written to students, it could also be read with great benefit by any mathematician who is interested in the history of the subject and wants to approach original sources the way a historian would. The many HOMSIGMAA members who attended the IHMT institutes run by Victor Katz and Fred Rickey in the 1990s and early 2000s may already be familiar with the historiographic issues in the history of mathematics, but even they might appreciate a fresh look at those issues.

Historians who want to read original sources are well served by sourcebooks and by an increasing number of resources available on the internet. There are some long-established reading circles, such as ORESME and ARITHMOS, that make good use of these resources. However, language is often a limiting factor. A lot of important historical documents were written in languages other than English and only a small number have been translated into English.

Possibly the largest number of important non-English European sources in the history of mathematics was written in Latin. Those of us who don't read mathematical Latin well enough could benefit from a Minicourse designed by HOMSIGMAA members that is being offered at the upcoming Joint Mathematics Meeting (JMM) in Boston, organized by Amy Shell-Gellasch and Dominic Klyve and presented by Kim Plofker and Stacy Langton. Called "Reading original sources in Latin for the historian and mathematician," it's intended to help readers of historical mathematics to decode the technical Latin of the late medieval, Renaissance, and post-renaissance periods.

Of course, that's just one of the *many* historical activities that will be going on at the Boston JMM this January 4-7. There will be an MAA Contributed Paper Session on History of Mathematics and its Uses in the Classroom, as well as the customary AMS-MAA Special Session on the History of Mathematics. Another event not to be missed is the HOMSIGMAA annual meeting and reception on Wednesday evening, January 4, followed by Bill Dunham's lecture on "Newton, Heron, Euler and Barney." I'm looking forward to the Boston meeting and I hope to see many of you there!

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# 2012 Joint Mathematics Meetings, Boston, January 4-7

The JMM 2012 is just around the corner and many exciting events lie in store for HOM SIGMAA enthusiasts, including a long awaited minicourse on “Reading Original Sources in Latin for the Historian and Mathematician.” This year’s annual guest speaker will be William Dunham who will discuss “Heron, Newton, Euler, and Barney.” In celebration of the 100<sup>th</sup> anniversary of Alan Turing’s birth, the Association for Symbolic Logic (ASL) will sponsor a special session: “The Life and Legacy of Alan Turing.” Read more about these exciting events and many others below. Hope to see you there!

## **HOM SIGMAA Annual Invited Lecture: “Heron, Newton, Euler, and Barney” William Dunham, Koehler Professor of Mathematics, Muhlenberg College**

Heron's formula, giving the area of a triangle in terms of the lengths of its sides, is one of the great, peculiar results of plane geometry. It is thus to be expected that, over the years, there have been many demonstrations of this remarkable formula. Here, I consider four such proofs. Heron's original was a clever if convoluted exercise in Euclidean geometry. Centuries later, Isaac Newton gave a demonstration whose heavy lifting was done by algebra rather than geometry. Leonhard Euler's proof was geometric and exhibited his characteristic flair. Then in 1990 Barney Oliver, a former recipient of the National Medal of Science, shared with me an elegant trigonometric argument where the symmetry of the formula was mirrored by the symmetry of the proof itself. The first two of these – Heron's and Newton's – I'll mention only briefly. The second pair – Euler's and Barney's – I'll prove in detail. Taken together, these should remind us why the history of our discipline is such a fine source for wonderful mathematics.

## **MAA Minicourse: “Study the Masters: Using Primary Historical Sources in Mathematics Teaching”**

This minicourse will familiarize participants with the use of primary historical sources as a way to engage mathematics students across a variety of courses. In the first session the organizers will share their experiences with this pedagogy. Participants will discuss in groups how one such unabridged text can be used to teach the relevant mathematics contained therein. In the second session already-developed classroom modules will be examined to illustrate how others have implemented this practice. Participants will also discuss their responses to two articles reflecting on this methodology. Finally, we share resources for locating primary historical texts.

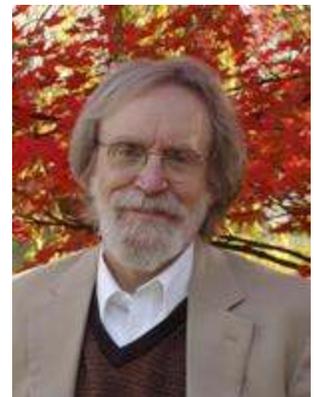
## **MAA Minicourse: “Reading Original Sources in Latin for the Historian and Mathematician”**

Historians of mathematics as well as mathematicians often find it important to their research to read original mathematical and scientific sources in Latin. Technical Latin of the late medieval, the Renaissance and post-renaissance periods is slightly different than the classical Latin taught in schools. In this minicourse, participants will learn of these differences, and will receive direct instruction in the reading of original sources in Latin from these time periods. Specialists from the field of the history of mathematics will facilitate the readings. Attendees should have a basic knowledge of Latin; review material can be acquired from the organizers in advance.

## **What HOM Sessions Would You Like to See at Future MAA**

**Meetings?** Keeping in mind that paper sessions, panel discussions, and special lectures are approved about a year in advance, please share your ideas for HOM events at the JMM and Mathfest with HOM SIGMAA Program Coordinator Amy Shell-Gellasch at [shella@beloit.edu](mailto:shella@beloit.edu). Also, please contact her if you are willing to organize or co-organize such an event, or are interested in helping out in any way, big or small, with HOM. All suggestions are welcome!

**William Dunham (right)**



# 2012 Joint Mathematics Meetings, Boston, January 4-7

## MAA Contributed Paper Session: “The History of Mathematics and its Uses in the Classroom”

This session will present talks in the history of mathematics as well as talks on using history in mathematics courses. Talks may address original historical research as well as ideas for the inclusion of the history of mathematics in math courses or ideas for history of mathematics courses.

The history of mathematics has grown into a very prominent field in the last decade. Historians and non-historians alike are both consumers and contributors to the field. In particular the history of mathematics is widely used to enhance the teaching of college mathematics. The History of Math SIGMAA is sponsoring this session.

## MAA Contributed Paper Session: “Writing the History of the MAA”

In preparation for the MAA centennial celebration in 2015, it is important to fill in gaps in the history of the organization and its sections. Many sections do not have written histories, and there are many facets of the MAA's history that have not been fully explored. We invite section historians or other officers or individuals to begin research on the histories of their sections and present their preliminary findings at this session. We also invite members to begin research and present their findings on other topics related to the history of the MAA, particularly in the last 50 years. Examples of topics include the history of any MAA sponsored projects, the history of electronic services in the MAA, the changes in membership over the years, the development of the publication program, or the history and accomplishments of a particular committee. This session is sponsored by the History Subcommittee of the Centennial Committee.

## EVENTS OF INTEREST AT THE JMM 2012 IN BOSTON

### Wednesday, January 4

AMS –MAA Special Session on the History of Mathematics, Parts I and II (8:00 – 10:50 and 2:15-6:15)  
Organizers: Sloan Despeaux, Craig Fraser, Deborah Kent

AMS-ASL Special Session on the Life and Legacy of Alan Turing, Parts I and II (8:00-10:40 and 2:15-5:55)  
Organizers: Damir Dzhafarov, Jeff Hirst, Carl Mummert

AMS Session on History and Philosophy of Mathematics (8:00-9:25)

MAA Minicourse 7, Part A (2:15-4:15)

“Study the Masters: Using Primary Historical Sources in Mathematics Teaching”  
Organizers: Danny Otero and David Pengelley

MAA-AMS Invited Paper Session on the Philosophy of Mathematics  
(2:15-6:40)  
Organizers: Thomas Drucker, Bonnie Gold, Daniel Sloughter

HOM SIGMAA Reception and Business Meeting (5:30-6:30)

HOM SIGMAA Annual Guest Lecture (6:30-7:30)  
“Heron, Newton, Euler, and Barney” by William Dunham



# EVENTS AT THE JMM 2012

Thursday, January 5

AMS –MAA Special Session on the History of Mathematics, Parts III and IV (8:00 – 11:50 and 1:00-3:50)  
Organizers: Sloan Despeaux, Craig Fraser, Deborah Kent

AMS-ASL Special Session on the Life and Legacy of Alan Turing, Parts III and IV (8:00-11:40 and 1:00-3:40)  
Organizers: Damir Dzhafarov, Jeff Hirst, Carl Mummert

MAA Minicourse 9, Part A (1:00-3:00)  
“Reading Original Sources in Latin for the Historian and Mathematician”  
Organizers: Amy Shell-Gellasch and Dominic Klyve  
Presenters: Kim Plofker and Stacy Langton

POM SIGMAA Reception and Business Meeting (5:45-6:15)

POM SIGMAA Annual Guest Lecture (6:15-7:15)  
“Why is it Plausible?” by Barry Mazur

Friday, January 6

MAA Session on Writing the History of the MAA, Part I (8:00-10:55)  
Organizers: Victor Katz, Janet Beery, Amy Shell-Gellasch

MAA Minicourse 7, Part B (1:00-3:00)  
“Study the Masters: Using Primary Historical Sources in Mathematics Teaching”  
Organizers: Danny Otero and David Pengelley

MAA Session on the Philosophy of Mathematics and Mathematical Practice (1:00-4:55)  
Organizers: Dan Sloughter and Bonnie Gold

MAA Session on the History of Mathematics and Its Uses in the Classroom, Part I (3:20-5:35)  
Organizer: Amy Shell-Gellasch

Saturday, January 7

MAA Session on the History of Mathematics and Its Uses in the Classroom, Part II (8:00-10:55)  
Organizer: Amy Shell-Gellasch

MAA General Contributed Paper Session: History and Philosophy of Mathematics (8:30-9:55)  
Organizers: Jennifer Beineke, Lynette Boos, Aliza Steurer

MAA Minicourse 9, Part B (1:00-3:00)  
“Reading Original Sources in Latin for the Historian and Mathematician”  
Organizers: Amy Shell-Gellasch and Dominic Klyve  
Presenters: Kim Plofker and Stacy Langton

Popular mathematics and science writer Martin Gardner, who passed away in 2010, requested that in lieu of memorials his fans continue to meet annually to celebrate his work and carry on his pursuit of a playful and fun approach to mathematics, science, art, magic, and puzzles. MAA and [ThinkFun](#) hosted the second annual [Gathering for Gardner Celebration of Mind](#) on October 21, which would have been Gardner’s 97th birthday (see below).

*Bruce Torrence's Penrose Tiling of Martin Gardner as seen through the windows of the MAA Carriage House (image from the MAA website)*



# 2012 Meeting and Conference Calendar

## AMS-MAA Joint Mathematics Meetings

January 4-7, 2012, Boston, Massachusetts

## Philadelphia Area Seminar on the History of Mathematics (PASHoM)

September 2011 – April 2012, Villanova, Pennsylvania

PASHoM is a set of mathematicians, historians, and others interested in history of mathematics who meet monthly to share their common interest. The meetings are at Villanova University and begin at 6 p.m. with a light supper and casual conversation about mathematics, history, current events, personal stories, etc. This is followed by a lecture and discussion.

January 19 “A Tentative Look At American Postulate Theory” by Thomas L. Bartlow, Villanova

February 16 “Tales of Nineteenth Century Russian Mathematics” by Marina Vulis, Fordham University

March 15 Robert E. Bradley, Adelphi University

April 19 Francine F. Abeles, Kean University

Updates will be posted at <http://www1.villanova.edu/villanova/artsci/mathematics/pashom/schedule.html>.

To add your name to an email list for notices, send a request to [thomas.bartlow@villanova.edu](mailto:thomas.bartlow@villanova.edu).

## ARITHMOS Reading Group

Danbury, Connecticut

Readings in the History of Mathematics from Original Sources seminars are 24-hour workshops on the classics of mathematics, read in the original or in a English translation. A dozen pages of mathematics is typically covered per session, which usually runs from 2 – 6 p.m. on the first day, and 9 a.m. to 12:30 p.m. on the second. Organized by Rob Bradley, Ed Sandifer, and Chuck Rocca, ARITHMOS meets three to five times per year at Western Connecticut State University. The first meeting of 2012 is scheduled for February 25-26 and the topic of discussion will be Chapter 3 of Lagrange’s *Lectures on Elementary Mathematics*. For more information, visit <http://www.arithmos.org/>.

## Frederick V. Pohle Colloquium in the History of Mathematics

October 2011 - May 2012, Garden City, New York

This colloquium series is held at Adelphi University and usually meets on the first Wednesday of the month at 4 p.m. Each talk is generally preceded by a coffee at 3:45 and followed by dinner with the speaker.

February 1 “An Ancient Greek Analog Computer: The Antikythera Mechanism” by Alexander Jones, New York University

March 7 Larry D’Antonio, Ramapo College

April 4 Jean-Pierre Marquis, Université de Montreal

May 2 T.B.A.

## Sixth Smoky Mountain Undergraduate Conference on the History of Mathematics (SMURCHOM)

Cullowhee, North Carolina

This biennial conference features talks and posters by undergraduate and graduate students on the history of mathematics and on mathematics informed by its history. Victor Katz will be the keynote speaker.

For more information, see

[http://paws.wcu.edu/despeaux/SMURCHOM\\_VI](http://paws.wcu.edu/despeaux/SMURCHOM_VI) or contact Sloan Despeaux at [despeaux@wcu.edu](mailto:despeaux@wcu.edu).

## Midwest History of Mathematics Conference

April 27-28, 2012, Whitewater, Wisconsin

This conference will be held on the University of Wisconsin-Whitewater campus and will feature invited talks by David Richardson and Amy Shell-Gellasch. Talks in any area of the history of mathematics are welcome. Please send abstracts to Thomas Drucker at [druckert@uww.edu](mailto:druckert@uww.edu).

(2012 Calendar Continued on page 6)

# 2011 HOM SIGMAA STUDENT PAPER CONTEST

## 2011 HOM SIGMAA Student Paper Contest

*Herbert Kasube, Prize Coordinator*

I am very pleased to announce the results of the 2011 HOM SIGMAA Student Paper Contest. The submissions were all excellent. It is wonderful to see so many students get excited about the history of mathematics.

Thanks to all of the judges and SPECIAL THANKS to Amy Shell-Gellasch. Amy had done such a wonderful job in past years and helped me tremendously during my first year at this.

### WINNER

#### Paul Stahl

University of Missouri - Kansas City

*Kepler's Development of Mathematical Astronomy*

### RUNNERS-UP

#### Sarah Costrell

Brandeis University

*Mathematics and Mathematical Thought in the  
Quadrivium of Isidore of Seville*

#### Rick Hill

University of Missouri - Kansas City

Thomas Harriot's *Artis Analyticae Praxis* and the  
Roots of Modern Algebra

All three papers are posted on the HOM SIGMAA website at <http://www.homsigmaa.org/>. Details regarding the ninth annual Student Paper Contest will be posted on the HOM SIGMAA website when they are available.

## Canadian Society for the History and Philosophy of Mathematics (CSHPM) Annual Meeting

May 27-29, 2012, Waterloo, Ontario

This meeting will be held in conjunction with the Learned (CFHSS) at the University of Waterloo and Wilfrid Laurier University. The Kenneth O. May Lecture will be delivered by Andrew Hodges of Wadham College, Oxford. 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, for consideration in either the General Session or a Special Session on "Mathematics and Computer Science." Talks in either English or French are welcome. Abstracts are due by February 10.

## MAA Mathematical Study Tour of Italy

June 9-22, 2012

Join MAA on a tour that explores Italy's mathematical history and meets its present-day rising stars in the field of mathematics and science. Discover where the great minds such as Lagrange, Giovanni Benedetti, and Amedeo Avogadro lived and worked and enjoy visits to top university mathematics departments and discussions with faculty.

The **Seventh Joint Meeting of the British Society of the History of Science, the Canadian Society for History and Philosophy of Science, and the History of Science Society** will be held in Philadelphia, Pennsylvania on July 10-13, 2012.

## History and Pedagogy of Mathematics and Quadrennial Meeting (HPM 2012)

July 16-20, 2012, Daejeon, South Korea

HPM 2012, the quadrennial meeting of the International Study Group on Relations Between History and Pedagogy of Mathematics will be a satellite meeting of the 12th International Congress on Mathematical Education (ICME-12) and will be held the week after ICME-12. HPM 2012 will bring together those interested in the relation between the history of mathematics and mathematics education. For more information, see <http://www.hpm2012.org>.

# The Archimedes Palimpsest Exhibit—See It Until January 1

In the following email excerpt, sent to HOM SIGMAA members on November 9th, **Fred Rickey** describes his recent visit to the **Walters Art Gallery to see the Archimedes Palimpsest exhibit**. Thank you, Fred, for such a wonderful account!

“The Walters Art Gallery in Baltimore, Maryland, has mounted a magnificent show on The Archimedes Palimpsest, revealing the twelve years of conservation, imaging, and scholarship that has been lavished on the codex. I encourage everyone interested in the history of mathematics to try to see it.

I visited this exhibit on November 2 and will describe some of what I saw, but there is no way that I can do justice to what is there. For additional information, including some very nice videos, see <http://thewalters.org/exhibitions/archimedes/>.

As one would expect of an exhibit designed for the public, there is not a great deal of discussion on the mathematics of Archimedes. But there are three items of interest:

- (1) The stomachion is featured, with a folia of the codex, a nice explanation, and a large model that one can try to rearrange.
- (2) There is a new reading of a passage from On Floating Bodies. Heiburg read the passage as “this was proved by earlier mathematicians,” but the palimpsest actually has “This was proved by Euclid,” giving definitive evidence that Euclid preceded Archimedes.
- (3) Most importantly, some text is quoted that shows that Archimedes compared two infinite sets of slices of a solid, putting the lie to the standard view that the Greeks avoided infinity.

Some 18 (of 74) folia of the codex are on display. The most interesting of these are bifolia mounted so that both sides of the sheet of parchment is visible.

Considerable information about the history of the palimpsest in the twentieth century is provided. Sometime in the twentieth century a forger added pictures of the four evangelists over four pages of the manuscript and one of these is on display. These pages proved to be some of the most difficult to image and the Stanford accelerator provided the essential tool.

The forger has been identified, not by name, but by the sources used.

This show runs until 1 January 2012. However, as of now, there are no plans for it to travel to other cities (although some are being worked on). A virtual exhibit is also under consideration.”



Congratulations to Fred, who retired this past spring from the USMA, West Point. HOM SIGMAA wishes you the very best, Fred, and we all look forward to seeing you at future meetings to hear about your exciting adventures!

## 2012 HOM SIGMAA Executive Committee

**Chair:** Robert Bradley, Adelphi University

Email: [bradley@adelphi.edu](mailto:bradley@adelphi.edu)

**Secretary/Treasurer:** Charlotte Simmons, University of Central Oklahoma

Email: [cksimmons@uco.edu](mailto:cksimmons@uco.edu)

**Program Coordinator:** Amy Shell-Gellasch, Beloit College

Email: [shella@beloit.edu](mailto:shella@beloit.edu)

**Electronic Resources Coordinator:** Andrew Perry, Springfield College

Email: [perryand@yahoo.com](mailto:perryand@yahoo.com)

**Prize Coordinator:** Herbert Kasube, Bradley University

Email: [hkasube@bradley.edu](mailto:hkasube@bradley.edu)

**Past Chair:** Daniel Curtin, Northern Kentucky University

Email: [curtin@nku.edu](mailto:curtin@nku.edu)

# Become A Convergence Consumer and Contributor!

Janet Beery, University of Redlands

Kathy Clark, Florida State University

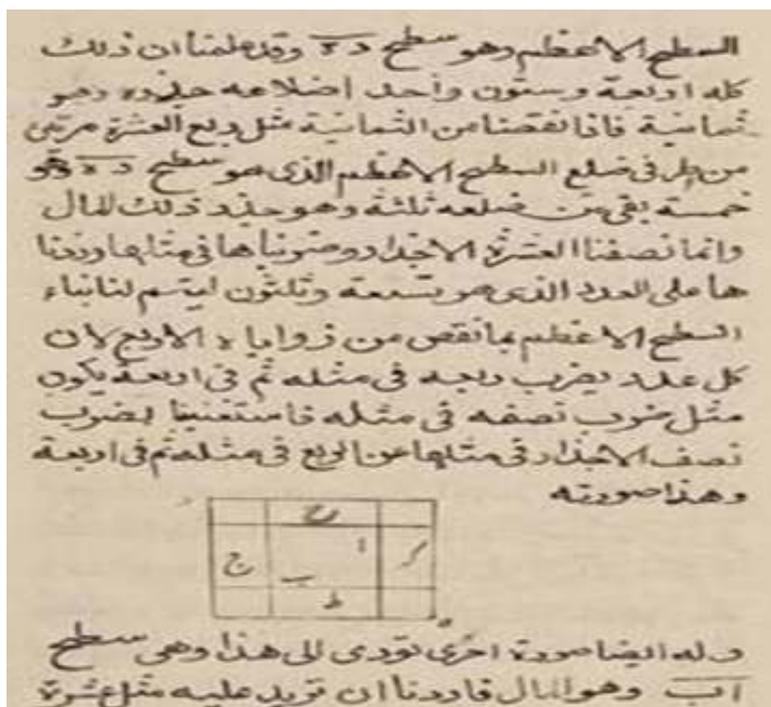
*Convergence* is the Mathematical Association of America's free online journal about the history of mathematics and its use in teaching. Serving teachers and students of mathematics at both the secondary and collegiate levels, we emphasize the history of topics from grades 8-14 mathematics: algebra, combinatorics, synthetic and analytic geometry, trigonometry, probability and statistics, elementary functions, calculus, differential equations, and linear algebra.

We encourage you to visit *Convergence* at <http://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
- Features Items = our newest articles and classroom activities
- On This Day in Mathematics History
- Problems From Another Time
- Quotations from mathematics 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) of *Convergence*

Be sure to keep your eye on *Convergence* for a new feature to debut in autumn of 2011, the Paul R. Halmos Photograph Collection. The HOM SIGMAA is funding digitalization of the large collection of photos Halmos snapped of mathematicians during his lifetime.

According to Carol Mead, Archives of American Mathematics (AMA), the Halmos Project "will consist of scanning approximately 350 photographs (front and back), entering into a computer database dates and other identifying information found on the backs of the photographs, and adjusting the images for web publication... Thanks to these gifts from HOM SIGMAA and Mrs. Halmos, the AAM will have a unique, rich, and widely accessible resource for students and researchers of mathematics history." (from the June/July 2011 issue of the *MAA Focus*)



This page from al-Khwarizmi's algebra text, *Kitab al-jabr wa l-muqabala*, depicts and describes his method of "completing the square." Al-Khwarizmi wrote his text in about 825; the date of this copy is not known. (Photo from "Mathematical Treasures," *Convergence*, is used courtesy of the Columbia University Library George Arthur Plimpton Collection.)

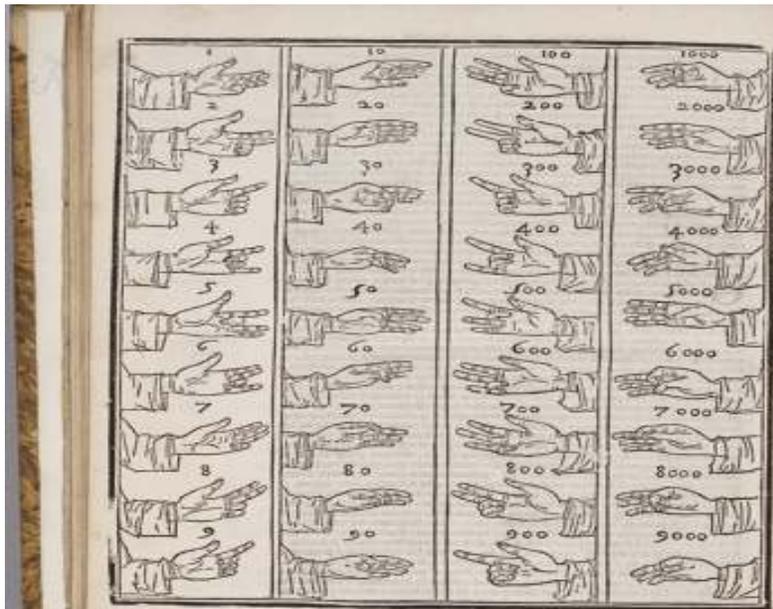
We invite you not only to read *Convergence* and use it in your classes, but also to submit for publication articles of the following types.

- 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.

*Convergence* founding editors Victor Katz and Frank Swetz continue to serve the journal as advisors and as authors of the ongoing “Mathematical Treasures” project. The current editors are Janet Beery ([janet\\_beery@redlands.edu](mailto:janet_beery@redlands.edu)) of the University of Redlands and Kathy Clark ([kclark@fsu.edu](mailto:kclark@fsu.edu)) of Florida State University. *Convergence* is now part of *Loci*, the online journal of the MAA’s Mathematical Sciences Digital Library (Math DL). The *Loci* Editor is Tom Leathrum of Jackson State University and the MathDL editor is Lang Moore of Duke University.



This depiction of finger counting is from Luca Pacioli’s (1445-1509) *Summa de arithmetica, geometrica, proportioni et proportionalita*, published in 1494. The *Summa* was the most comprehensive mathematical text of its time and one of the earliest printed mathematical works. (Photo from “Mathematical Treasures,” *Convergence*, is used courtesy of the Columbia University Library.)



This 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. (Photo from “Mathematical Treasures,” *Convergence*, is used courtesy of the Columbia University Library.)

# MAKE A DEPOSIT TO THE NATIONAL CURVE BANK

*Shirley Gray, California State University, Los Angeles*

In 2011 the NCB capitalized on the Huntington Library being near our campus. We focused on using its magnificent collection of original publications joined with modern computer and calculator techniques to offer what many web sites are unable to do, namely mixing original sources, not just references, combined with contemporary methods for producing comparative figures, modern calculations and graphics. Fascinating discoveries followed and are certainly worth a visit to the NCB web site for students of all ages.

For example, as of July 4, 2011, our founding anniversary, we had 104 deposits in the NCB. Interestingly, this is less than one-half of the number of curves published by Gabriel Cramer in his *Introduction à l'analyse des lignes courbes algébriques* in 1750! This is the same Cramer known today for Cramer's Rule taught in all linear algebra courses for finding solutions to systems of equations.

**Like Agnesi, who published her *Instituzioni analitiche* almost at the same time (1748), Gabriel Cramer considered the exploration of curves, especially the algebraic foundations of curves, as a necessary background for the emerging calculus.**

Moreover, a student working in MATHEMATICA© decided we should animate one of the more complicated equations, the Devil's Curve. This parallel investigation of original sources and contemporary calculating software produced some humbling surprises. Cramer's calculations had to be done by hand and in Cartesian coordinates. Moreover, he had neither the parametric nor polar forms of the equations. Invite your students to try this, especially having not seen the graph. Have students try all three forms of the equations using MATHEMATICA© and graphing calculators. A novice will react by saying this is trivial but invite a closer inspection of all graphics. To close the curve in certain areas of the domain will invite ques-

tions. The name *Devil's Curve* was probably chosen because the calculation is so diabolical. [The NCB is searching for the origin of the name for it is not found in Cramer or later publications by Lacroix (1797)]. See <<http://curvebank.calstatela.edu/doubledevil/doubledevil.htm>> after September 1.

## Renie Award

The Renie Award for best deposit of 2010 was announced on March 31, Rene Descartes' birthday. This Renie went to HOM SIGMAA's **Janet Beery** who investigated *The Cannonball Curves of Thomas Harriot: Projectile Motion circa 1600* using the Huntington Library's original sources. Her collaborator was Lou Talman who provided the MATHEMATICA© animations (see <http://curvebank.calstatela.edu/harriot/harriot.htm>>. Janet built upon her earlier publication on Cardano, Faulhaber, Briggs as well as Harriot in *Formulating figurate numbers* BSHM, vol. 24, November 2, 2009, pp. 78-91). The NCB Board also applauded **Andrew Simoson's** "*The Man in the Moone or A Discourse on a Voyage Thither*" Francis Godwin - 1638 (see <<http://curvebank.calstatela.edu/swan/swan.htm>>.

The National Curve Bank is an international database for all kinds of curves. Intended as a resource for both students and teachers, it strives to provide features—for example, animation and interaction—that a printed page cannot offer. If you have a favorite curve and would like to make a deposit, visit the National Curve Bank at [curvebank.calstatela.edu/](http://curvebank.calstatela.edu/) or email Shirley Gray at [sgray@calstatela.edu](mailto:sgray@calstatela.edu).

## JOIN the HISTORY of MATHEMATICS SIGMAA!

The annual HOM SIGMAA membership fee for MAA members is \$12. The MAA membership form has a check-off box for HOM SIGMAA, and we ask you to check this box when you pay your annual MAA membership fees. If you have already joined or renewed for 2012, please contact the MAA at (800) 331-1622 and ask to join HOM SIGMAA.

**Visit [homsigmaa.org](http://homsigmaa.org) today!**

## Cajori Two Project Collects Data on History of U.S. Collegiate Mathematics Education

Walter Meyer, Adelphi University

The Cajori Two Project aims to provide a database for the study of American mathematics curricular history. The database starts out in the form of curricular snapshots over twenty departments at ten year intervals throughout the 20th century, snapshots rendered in the form of Excel workbooks. In the last year we have completed the design work for the classification and computerization aspects of the project. We have also initiated some new, previously unforeseen tasks:

- 1) scanning the catalog material we have received from the archivists at the institutions we are studying;
- 2) follow-up communications with archivists to refine and extend our catalog data;
- 3) discussions with the Archive for American Mathematics at the University of Texas concerning the possibility that a database of our work might be mounted at the Archive to enable anyone to access our data and summaries of it;
- 4) writing database software that will enable users to access the data.

In addition we have continued with the task of classifying courses found in catalogs and entering abbreviated records of the classifications into Excel workbooks for the various departments. We have also continued with the task of writing VBA Excel software for the manipulation of the data in these workbooks.

Ultimately, we hope to join with others to provide interpretative studies of the data we are making accessible. For more information, please contact Walter Meyer at [meyer1@adelphi.edu](mailto:meyer1@adelphi.edu).

This project is named for Florian Cajori, an early president of MAA, who was the first to extensively record American college curricular history for centuries before the 20<sup>th</sup>.

**Visit the HOM SIGMAA website today!!**

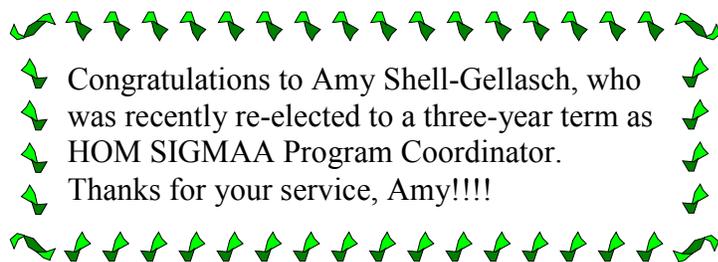
## Join our Electronic Mailing List!

Andrew Perry, Electronic Resources Coordinator

Our website (<http://homsigmaa.org>) includes HOM SIGMAA news, announcements of upcoming conferences, links to other history of mathematics pages, and other resources. Please check the HOM SIGMAA website for news throughout the year. Suggested additions to the website (for example, conference information, links, or photos) are always welcome at [perryand@yahoo.com](mailto:perryand@yahoo.com).

To subscribe to the HOM SIGMAA list, send an email to [perryand@yahoo.com](mailto:perryand@yahoo.com) with the subject line: subscribe HOMSIGMAA-list ADDRESS, with your own e-mail address in place of the word ADDRESS. See <http://homsigmaa.org/list> for instructions for subscribing to the list in digest form or for unsubscribing from the list.

Please contact Andrew Perry at [perryand@yahoo.com](mailto:perryand@yahoo.com) if you have any problems subscribing, or with any other questions or comments on HOM SIGMAA electronic resources.



Winter 2012	Boston, MA	January 4-7
Summer 2012	Madison, WI	August 2-4
Winter 2013	San Diego, CA	January 9-12
Summer 2013	Hartford, CT	August 1-3
Winter 2014	Baltimore, MD	January 15-18
Summer 2014	Portland, OR	August 7-9
Winter 2015	San Antonio, TX	January 10-13
Summer 2015	Washington, D.C.	August 5-8
Winter 2016	Seattle, WA	January 6-9
Winter 2017	Atlanta, GA	January 4-7
Winter 2018	San Diego, CA	January 10-13

# The Hamilton Walk in Dublin, Ireland, in July 2011

The annual summer meeting of the **Canadian Society for History and Philosophy of Mathematics** was held July 15-17, 2011, at Trinity College Dublin, Ireland, in conjunction with the British Society for the History of Mathematics. Several HOM SIGMAA members made the trip to speak in the contributed paper sessions, including (previous and current) HOM SIGMAA officers Janet Beery, Andrew Perry, and Charlotte Simmons. Fred Rickey gave an invited address entitled “Polish Logic from Warsaw to Dublin: The Life and Work of Jan Lukasiewicz.”

After the conclusion of the conference, Dr. Maurice O’Reilly, a mathematics faculty member at Trinity College, generously agreed to lead interested conference participants on a “Hamilton Walk.” Each year on October 16, faculty members of Trinity lead the community on a “Hamilton Walk” to commemorate the discovery of the quaternions in 1843. The walk begins at Dunsick Observatory and ends at Brougham (Broom) Bridge, where Hamilton carved the infamous equation:  $i^2 = j^2 = k^2 = ijk = -1$  into the stone. Although the actual carvings have long since eroded, a plaque commemorating the discovery was erected at the site in 1958.



Group Photo of “Hamilton Walk” participants inside Dunsick Observatory. (Photo taken by Maurice O’Reilly)



After completing a tour of Dunsick Observatory, the group prepares to set off for Brougham Bridge. (Photo taken by Maurice O’Reilly)

The path for the annual walk involves crossing several cow pastures. Naturally, arrangements are made in advance with property owners for the official walk. As this was an impromptu walk in the evening on a rainy and cold night in Dublin, a few surprises awaited the eager conference participants...





After scaling a few gates, we were on our way...



Time for lots of photographs, including the one above by Maurice O'Reilly.



The Bridge is in sight at last...



Gleeful HOM SIGMAA Secretary/Treasurer at the Bridge



*Julia Robinson and Hilbert's Tenth Problem* will begin appearing on public television stations via syndication by American Public Television (APT) in October 2011 and will continue through September 2014. Preparation of the broadcast version of this film was made possible by support from the MAA and the National Science Foundation. The documentary, narrated by actress Danica McKellar (*The Wonder Years*), is "pieced together by a wide array of archival footage, stills and recordings, recollections from other mathematicians, and warm reminiscences by her sister/biographer, Constance Reid." For more information, including order information for the DVD, visit [www.aptonline.org](http://www.aptonline.org).

**Check out these new books released in 2011:**

*The Great Mathematicians* by Raymond Flood and Robin Wilson, Arcturus Press, outlines the lives of over 100 mathematicians. *Mathematicians in Victorian Britain*, edited by Flood, Adrian Rice, and Wilson, contains 19 chapters written by experts.

CSHPM Participants at Trinity College, Dublin  
(Photo by Tony Mann)

*Taking the Long View: The Life of Shiing-shen Chern* (2011), is a documentary tracing the life and accomplishments of Chern through interviews with prominent mathematicians, friends, and his children. Shot primarily in 2010, this biographical documentary follows Chern through many of the most dramatic events of the 20th century, portraying a man who dedicated his life to pure mathematics with the style of a classical Chinese sage. Chern is regarded as a father of modern differential geometry and is a co-founder of the Mathematical Sciences Research Institute (MSRI). The film, produced and directed by George Csicsery, was completed in time for the 100th anniversary celebrations in honor of Chern, held in October and November at MSRI. For more information, including how to order a DVD, visit [www.takingthelongviewfilm.com](http://www.takingthelongviewfilm.com).

**Interested in a HOM SIGMAA Wiki or e-bulletin board? Contact Amy Shell-Gellasch with comments at [shella@beloit.edu](mailto:shella@beloit.edu).**

