

HOM SIGMAA News

Volume XI, Number 2

September 2021

Dates to Remember:

- January 5 – 8, 2022, JMM, Seattle, WA
- August 3 - 6, 2022, MathFest, Philadelphia, PA

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Greetings from the HOM SIGMAA Chair

As we launch into the new academic year, I hope many of you are back to in-person classes. Though the last year+ has been very challenging, I think we all learned many new skills. Perhaps some we never really wanted to learn, like teaching online! The upside for me is that I now have many more skills and ideas I will incorporate into my classes. And with all my lessons recorded, I can now miss class for a conference without having to cancel! We took some of those lessons into other areas of our professional lives, such as sections and SIGMAAs. This past spring we launched our virtual lecture series with wonderful talks by Rob Bradley, Jessica Otis, and Fred Rickey. We hope to continue these lectures, and perhaps some workshops, in the fall. If you have any ideas for programming you would like to see, please contact myself or Jemma Lorenat.



This summer, we participated in the joint CSHPM/BSHM/HOM meeting “in” Scotland. I want to thank the other organizers of the meeting, especially Isobel Falconer of St. Andrews. She was the glue that kept the whole thing together! The HOM SIGMAA was pleased to be able to contribute \$1400 towards the technical costs of the meeting.

As you know, the MAA is no longer officially involved in the JMM, but we do still plan to have a limited presence at JMM with a HOM guest speaker. Starting summer 2022, our annual meeting and the majority of our live programming will switch to MathFest. Let’s hope that one will be in person!

Finally, HOM elections are right around the corner, including Chair. We are always looking for people to be involved. If you would like to get involved with the SIGMAA, in ways big or small, please contact myself or our past chair, Danny Otero.

I’m looking forward to seeing you all as soon as we have a chance, virtually or in person.

Cheers!

Amy Shell-Gellasch
Chair, HOM SIGMAA

2022 JMM, January 5 - 8, HOM SIGMAA

The 2022 Joint Mathematics Meeting, managed by the American Mathematical Society, is scheduled to take place in person, on January 5 - 8, 2022, in Seattle, WA. HOM SIGMAA will be hosting an invited speaker, Dr. Adrian Rice, Randolph-Macon College. An award-winning teacher and author, Dr. Rice will be presenting "Beyond the strength of a woman's physical power: Mathematics, Machines, and the Mind of Ada Lovelace." This invited HOM SIGMAA address will be on January 5, at 5 pm.

Speaker: Dr. Adrian Rice

When: Wednesday, January 5, 2022, at 5 pm at JMM 2022 in Seattle, WA

Title: "Beyond the strength of a woman's physical power: Mathematics, Machines, and the Mind of Ada Lovelace"

Abstract: Ada Lovelace is widely regarded as an early pioneer of computer science, due to an 1843 paper about Charles Babbage's Analytical Engine, which, had it been built, would have been a general-purpose computer. Her paper contains an account of the principles of the machine, along with a table often described as 'the first computer program'. However, over the years there has been considerable disagreement among scholars as to her mathematical proficiency, with opinions ranging from 'genius' to 'charlatan'. This talk presents an analysis of Lovelace's extant mathematical writings and will attempt to convey a more nuanced assessment of her mathematical abilities than has hitherto been the case.



HOM SIGMAA Elections

Every fall the members of HOM SIGMAA elect at least one new member to our Executive Board. Each of these executives – Chair, Secretary/Treasurer, Program Coordinator and Electronic Resources Coordinator – serve a three-year term, appropriately staggered so as to preserve continuity of governance. Nominations are being solicited for the executive positions of Chair of HOM SIGMAA and Electronic Resources Coordinator. Elections of candidates will be held later this fall, with the winners' terms set to begin on January 1, 2022. Both positions are held for a three-year term, renewable.

The Chair presides at all HOM SIGMAA business meetings, organizes and directs the activities of the SIGMAA, acts as its chief spokesperson, and is the liaison with the MAA Committee on SIGMAAs and with other organizations. Amy Shell-Gellasch, who has been involved in the governance of HOM SIGMAA since its first years, is now completing her second term as Chair. The Electronic Resources Coordinator is responsible for dissemination of information to the HOM SIGMAA membership, primarily through electronic media, assisting the Secretary/Treasurer in recording and disseminating activities of the SIGMAA with the membership. Andrew Perry, our current coordinator, is completing a term he was appointed to serve out. If you yourself, or a HOM SIGMAA member you know, has worked recently with web publishing platforms and is willing to provide their expertise in service to our SIGMAA, please consider submitting their name in nomination for this post.

As immediate Past Chair of HOM SIGMAA, it is my responsibility to organize these officer elections with the MAA staff. To this end, I am soliciting from you, the members, names of candidates you think would be ideal to stand for election to these posts. Self-nominations are also welcome. **Please send nominations to me at otero@xavier.edu, by September 13, 2021.**

--Danny Otero

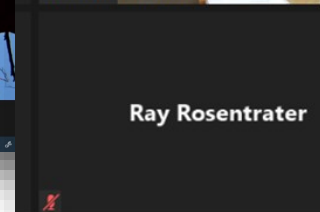
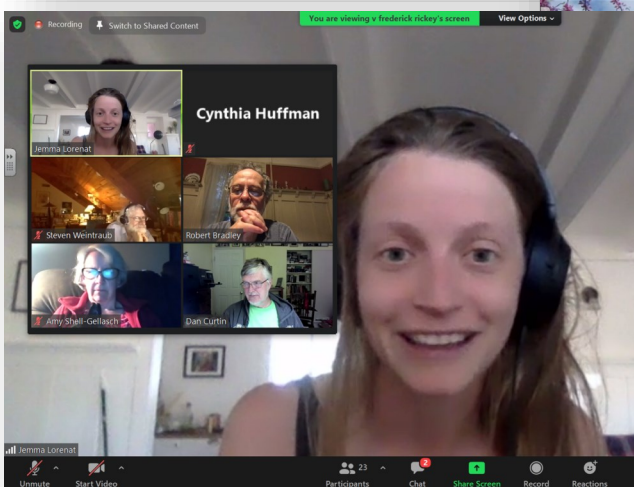
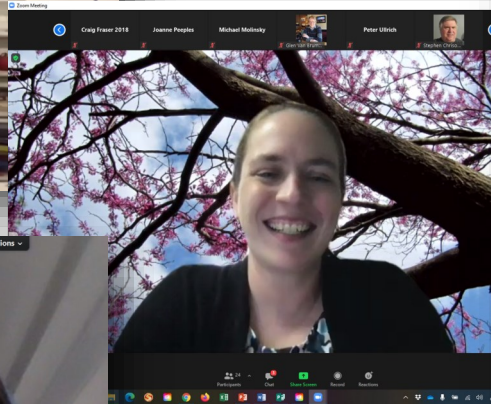
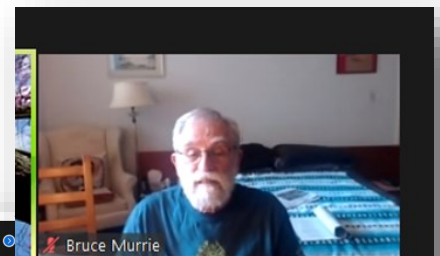
FIRST WEDNESDAYS VIRTUAL SPEAKER SERIES

HOM SIGMAA began a new speaker series during Spring 2021, organized by Jemma Lorenat, HOM SIGMAA Program Coordinator.

Speakers and presentations included:

- Robert Bradley, Adelphi University, *Who Wrote l'Hôpital's Calculus Book?*, March 3
- Deborah Kent, University of St. Andrews, *Mathematics at The Old Course: P.G. Tait and the Magnus Effect*, April 7
- Jessica Otis, Roy Rosenzweig Center for History and New Media at George Mason University, *For to Avoide Mistaking': Trust and the Function of Numbers in Early Modern England*, May 5
- V. Frederick Rickey & Wendy Alexander, *Continued Fractions, Differential Equations, and Euler's Proof of the Irrationality of e* , June 2

Watch the HOM SIGMAA community on MAA Connect for information on upcoming speakers during Fall 2021.



Euleriana Releases 2nd Issue

We are happy to announce that Volume 1, Issue 2 of *Euleriana* has just been published. You can find the full list of articles and translations on our home page (<https://scholarlycommons.pacific.edu/euleriana>). We hope you find something interesting and meaningful in its pages.

As always, we'd love to hear from you for future issues! *Euleriana* is accepting submissions, including translations, historical and archival notes, and book reviews. Submissions need not be tied directly to Euler's life and work, though they should fit within or near the 18th century.

Potential authors are encouraged to contact the editors Erik Tou (etou@uw.edu) and Christopher Goff (cgoft@pacific.edu) to inquire about papers before submission.

Managing Editors: Erik Tou (Univ of WA Tacoma), Chris Goff (Univ of the Pacific)

Editors: Rob Bradley (Adelphi Univ), Lawrence D'Antonio (Ramapo College of NJ), Cynthia Huffman (Pittsburg State Univ), Dominic Klyve (Central WA Univ), Michael Saclolo (St. Edward's Univ).



2021 HOM SIGMAA Executive Committee

Chair: Amy Shell-Gellasch, Eastern Michigan University

Email: ashellge@emich.edu

Secretary/Treasurer: Cynthia Huffman, Pittsburg State University

Email: cjhuffman@pittstate.edu

Program Coordinator: Jemma Lorenat, Pitzer College

Email: jemma_lorenat@pitzer.edu

Electronic Resources Coordinator: Andrew Perry, Springfield College

Email: aperry@springfieldcollege.edu

Past Chair: Daniel Otero, Xavier University

Email: otero@xavier.edu

Winner of the 2021 Student Writing Contest

First place in the 2021 HOM SIGMA Student Writing Contest goes to Megan Ferguson of Adelphi University. Her winning paper was titled “The Suan shu shu and the Nine Chapters on the Mathematical Art: A Comparison”. Megan will receive a student membership to the MAA and a selection of MAA books.

Copies of winning papers are available on the HOM SIGMA website: <https://homsigmaa.net/>

You can also find the winning paper on Convergence: <https://www.maa.org/press/periodicals/convergence/hom-sigmaa-2021-student-paper-contest-winner>

Congratulations to our winner Megan Ferguson and all students who submitted for the contest.

Thank you to Amy Shell-Gellasch for running this year’s contest and to the contest judges for your service!

The flyer for this academic year’s contest can be found at the end of the newsletter.

Convergence Calendar

Visit <https://www.maa.org/press/periodicals/convergence/convergence-calendar> for a list of events and meetings around the world which relate to the History of Mathematics.

Save these dates for future MathFests!

2022	Philadelphia, PA	August 3-6
2023	Tampa, FL	August 2-5
2024	Indianapolis, IN	August 7-10

Small grants for the history of mathematics classroom

HOM members who need some help to purchase items for use in the teaching of the history of mathematics are encouraged to apply for a small grant. Information on how to apply can be found on our website <https://homsigmaa.net/> and at the end of this newsletter.

MAA Convergence

History for Teaching in Stand-Alone Articles and Series from Convergence

Janet Barnett and Amy Ackerberg-Hastings

Editors, *MAA Convergence*

MAA Convergence is both an online journal on the history of mathematics and its use in teaching, and an ever-expanding collection of online resources to help its readers teach mathematics using its history. We highlight here some of our newest articles and features.

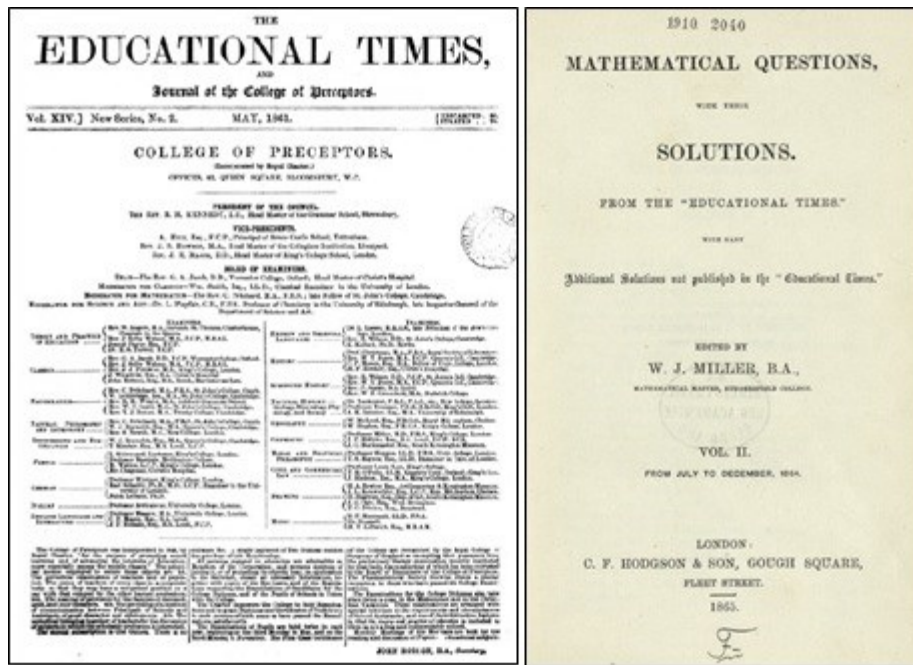
The articles that have appeared so far in 2021 represent the breadth of *Convergence's* resources for bringing history into classrooms. Student activities as well as historical and mathematical background can be found in "[Mathematical Mysteries of Rapa Nui with Classroom Activities](#)," by Ximena Catepillán, Cynthia Huffman, and Scott Thuong. An English translation of Mark Kac's first mathematics article, written on a new derivation of Cardano's formula while he was still in high school, is available in "[Mark Kac's First Publication: A Translation of 'O nowym sposobie rozwiązywania równań stopnia trzeciego'](#)," by David Derbes.



Above: Archaeological remains of an elliptical *hare paenga* on Rapa Nui (Easter Island).

Instructors may explore primary sources with their students directly with the aid of "[The Educational Times Database: Building an Online Database of Mathematics Questions and Solutions Published in a](#)

[19th-Century Journal](#),” by Robert M. Manzo, and through biography and book ownership in [“The Life of Sir Charles Scarborough,”](#) by Michael Molinsky. Our reprints from NCTM’s *Mathematics Teacher* have been augmented by [“The Evolutionary Character of Mathematics,”](#) by Richard M. Davitt, which includes commentary by Judy Grabiner. The 2021 winner of the HOM SIGMA Student Paper Contest, [“The *Suan shu shu* and the *Nine Chapters on the Mathematical Art: A Comparison*”](#) by Megan Ferguson, is available for perusal as well as for beginning to motivate students for next year’s competition.



Above: *The Educational Times* and its sister publication, *Mathematical Questions*.

Convergence continues to expand its practice of offering article series. New to the group is [“Keys to Mathematical Treasure Chests,”](#) for which submissions are welcomed from the journal’s readers. Peggy Aldrich Kidwell outlined the series concept and offered the first installment, on 19th-century string models. Erik Tou has wrapped up his successful [“Math Origins”](#) series with [“The Language of Change.”](#) Danny Otero continued his series of curricular units based on primary source texts for use in teaching and learning trigonometry, [“Teaching and Learning the Trigonometric Functions through Their Origins,”](#) with Episodes 3 and 4, on Ptolemy’s use of a table of chords to help determine the position of the sun on the ecliptic circle and Varāhamihira’s table of sines in poetic verse, respectively.

And, three additions have been made to the ongoing [“A Series of Mini-projects from TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources,”](#) which presents mini-Primary Source Projects (PSPs) from the TRIUMPHS team:

[Wronskians and Linear Independence: A Theorem Misunderstood by Many – A Mini-Primary Source Project for Students of Differential Equations, Linear Algebra and Others](#) (by Adam E. Parker)

[Bhāskara’s Approximation to and Mādhava’s Series for Sine: A Mini-Primary Source Project for Second-Semester Calculus Students](#) (by Kenneth M Monks)

[The Logarithm of -1: A Mini-Primary Source Project for Complex Variables Students](#) (by Dominic Klyve)

मख्यादि रहितं कर्म वक्ष्यते तत्समासतः ।
 चक्रार्धाशक समूहाद्विशोध्या ये भुजांशका ॥ १७ ॥
 तच्छेष गुणिता द्विष्ठाः शोध्याः खाभ्रेषुखाब्धितः ।
 चतुर्थांशेन शेषस्य द्विष्ठमन्त्य फलं हतम् ॥ १८ ॥
 बाहु कोट्योः फलं कृत्सनं क्रमोत्क्रम गुणस्य वा ।
 लभ्यते चन्द्रतीक्ष्णांश्वोस्ताराणां वापि तत्त्वतः ॥ १९ ॥

(*Mahābhāskarīya*, VII, 17–19)

Above: Printed reproduction of Bhāskara's Sanskrit description of his sine approximation.

See all of these articles and more at *MAA Convergence*:

<http://www.maa.org/press/periodicals/convergence>.

Interested in contributing? We'd love to hear from you! *Convergence* publishes expository articles on the history of topics in the grades 8–16 mathematics curriculum; translations of primary sources; classroom activities, projects, or modules for using history to teach mathematics; and classroom testimonials after applications of such activities, projects, or modules. Additionally, we welcome submissions related to the following *Convergence* features:

- “[Problems from Another Time](#),” highlighting historical problems.
- “[Mathematical Treasures](#),” images and descriptions of texts and objects significant to the history of mathematics.
- “[Conference Calendar](#),” an up-to-date guide to conferences and events online and around the world that feature or include the history of mathematics and its use in teaching.

For more details about *Convergence*'s submission and refereeing process, see our Guidelines for Authors at

<https://www.maa.org/press/periodicals/convergence/guidelines-for-convergence-authors>.

A feature of the HOM SIGMAA Newsletter is a review of a museum or library with an exhibit or collection related to the History of Mathematics. If you would like to submit an article for HOM on Display, please send it to Cynthia Huffman at cjhuffman@pittstate.edu. The HOM on Display for this issue is a look at the MathHappens Foundation.

MathHappens Foundation: Taking Inspiration from Local History Museums

by Lauren Siegel, Director, MathHappens Foundation

What we want to do:

- Bring math enthusiasts and the public together
- Share the mathematical ideas in a novel way
- Create a positive and memorable experience

But what's the first step?

- ◇ Visit a museum.
- ◇ Enjoy the central exhibit and view the artifacts.
- ◇ Ask the question: "What role do mathematics or mathematicians play in this story?"
- ◇ Pursue the answers.
- ◇ Seek out primary documentation and related materials
- ◇ Use tools for making things like laser cutters, 3D printers, Cricut, and others to design and make replicas that can be touched, used and explored for demonstrations.
- ◇ At the museum, train as a docent, or obtain their guides for volunteers and inquire about opportunities for participation in public programming.
- ◇ Incorporate the museum's practices and protocols in the idea you share with museum staff and ask for an opportunity to present to the public at one of their events. Or you might offer your concept to a local school that may take field trips to that museum.

Inspiration and Ideas - Examples from The Texas State History Museum

With the idea that mathematics and history offer intriguing insights, connections and opportunities to explore the role of mathematics in life's events, in the spring of 2015 Mathhappens' team of four UTeach Interns explored the Texas State History museum's primary exhibit, viewing artifacts from the ship, La Belle, as well as their other exhibits on land surveying, early maps, and original land grants.



The Ship, La Belle

La Belle was discovered off the coast of Texas in Matagorda Bay in 1995. As part of La Salle's final expedition, La Belle's voyage tells a story connecting the Age of Exploration with the foundations of Texas as a nation and a state. Competition among sovereign nations, pirates, colonists, sailors, soldiers, priests, indigenous people, and writers are all a part of this history. The journey was recorded by Henri Joutel in his diary which was published in Paris. It offers a first hand account of the voyage that informs the exhibit presentation.



Credit for above photo and lower left photo go to Emily Morris at Bullock Creative.

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La Belle was a 54 foot kit ship meant to be assembled after crossing the Atlantic as part of the cargo. She was nonetheless assembled in France for the voyage crossing over 2,400 miles of open water. To help visitors understand, contextualize, and better appreciate the magnitude of the journey, the museum produced a dramatic film and MathHappens made a scale model that was 1/120th of the size of the ship. Watching the museum's film where actors recreated La Salle's command, his companions, naval and military officers, and the experience of the colonist passengers tells the story one way. Holding this model in your palm, imagining an endless open sea with the perspective of a 1/2" tall sailor that must make a voyage of over 20 miles offers a different kind of connection that compliments the first.

The scale model also includes an attachment to represent a device to measure speed called a log line that was in use at the time. A log line was not among the objects recovered from La Belle, but there were a number of broken glass sand timers, a critical tool used with the log line. For hundreds of years even after La Belle sailed, the log line appeared in navigation textbooks like the one below from 1827 by Thomas Kerigan. Embedded in his text and discussion are some interesting concepts that have implications in applied mathematics today related to the error of the device and also the imbalance in consequences if the reckoning is "a-head of the ship" or not. The practice problem that follows is also taken directly from Kerigan's book.



SOLUTION OF PROBLEMS RELATIVE TO THE ERRORS OF THE LOG-LINE AND THE HALF-MINUTE GLASS, BY LOGARITHMS.

The instruments generally employed at sea, for finding the distance run by a ship in a given time, are the log-line and the half-minute glass. Now, since a ship's reckoning is kept in nautical miles, of which 60 make a degree, the distance between any two adjacent knots on the log-line should bear the same proportion to a nautical mile that half a minute does to an hour; viz., the *one hundred and twentieth part*. And, since a nautical mile contains 6080 feet, the true length of a knot is equal to 6080 divided by 120; that is, 50 feet and 8 inches: but, because it is advisable at all times to have the reckoning a-head of the ship, so that the mariner may be looking out for the land in sufficient time, instead of his making it unexpectedly, or in an unprepared moment, 48 feet, therefore, is the customary measure allowed to a knot. And, to make up for any time that may be unavoidably lost, in turning the half-minute glass, its absolute measure should not exceed *twenty-nine seconds and a half*.

The method of finding the hourly rate of sailing, or distance run in a given time by the log-line and the half-minute glass, is subject to many errors: thus, a new log-line, though divided with the utmost care and attention, is generally found to contract after being first used;

PROBLEM I.

Given the Distance sailed by the Log, and the Number of Seconds run by the Glass; to find the true Distance, the Line being truly divided.

RULE.

To the arithmetical complement of the logarithm of the number of seconds run by the glass, add the logarithm of the distance given by the log, and the constant logarithm 1.477121*; the sum of these three logarithms, abating 10 in the index, will be the logarithm of the true distance sailed.

Example 1.

Let the hourly rate of sailing be 11 knots, and the time measured by the glass 33 seconds; required the true rate of sailing?

Seconds run by the glass = 33, Log. ar. comp. =	8.481486
Rate of sailing, by log = 11 knots, Log. =	1.041393
Constant log. =	1.477121
<hr/>	
True rate of sailing = 10 knots, Log. =	1.000000

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Using the ship and the log-line to engage field trip participants.

As part of a suite of activities students “sailed a ship” by hoisting a 6 foot table in teams of 8 to 10 students and moving to various “islands” which were topic and theme based. We shared that the log line in the model was a “new technology” which replaced an older technique that cleverly allows a reading of speed with no frame of reference. To measure the ship's speed, a piece of equipment - pencil, notepad or other item was tossed overboard and the students counted seconds as they propelled their table past the object. In this way they recreated an early technique for estimating the speed in feet per second of a vessel using the length of the ship and the time to pass an object.



Build a Parallel Ruler station.

A key tool for navigators to plot a course on a mercator map is the parallel ruler. Used also by land surveyors, it is a simple mechanical device that students can make for themselves as part of their field trip experience. Here again we can find old texts that refer directly to the object in question. The ruler as described in texts like one written by Benjamin Martin in 1771 is identical to the parallel ruler still used today.



The description and use of a case of mathematical instruments; particularly of all the lines contained on the plain scale, the sector, the gunter, and the proportional compasses. With a practical application

Benjamin Martin



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V. Of the PARELLEL RULER.

The *Parallel Ruler* is so called, because as it consists of two straight Rules, connected together by two brass Bars, yet so as to admit a very free Motion to each; the One Ruler must always move *parallel-wise* to the other, that is, one Rule will be every where equidistant from the other, and by this Means it becomes naturally fitted for drawing one or more Lines *parallel to*, or equally distant from any Line proposed. The Manner of doing which is thus.

Let it be required to draw a straight Line, parallel to a given Line AB, and at the Distance AC from it. (Fig. 4.) First open the Rulers to a greater Distance than AC, and place the Edge of one of the Rules exactly on the Line AB, then holding the other Rule (or Side) firmly on the Paper, you move the upper Rule down from A to the Point C, by which (holding it fast) you draw the Line CD, which will be parallel to the given Line AB, as required.

Many very useful Problems in the Mathematics are performed by this Instrument; of which the following are Examples.

Let it be required to find a *fourth Proportional* to three Right Lines given, AB, BC, and AD. (Fig. 5.) To do this, draw the Lines AC, AE, making an Angle at pleasure. Upon AC with the Compasses set off the Lines AB, and BC; and upon AE set off the Line AD; join DB,

Also in use today, as described on Boatsafe.com in an advertisement: Parallel rulers are used to plot direction on your nautical chart. They are, essentially, two straight-edges hinged so that they maintain the same angle. By alternating the moving edge, and securely holding down the non-moving edge, you can move the rulers about the chart while still maintaining the same angle.

To determine the direction between two positions or points on a chart, line up the rulers with the two points and then step the rulers to the nearest compass rose.



- ❖ The top ruler is from 2017, and has the added advantage of clear bars so a map can be read through.
- ❖ In the middle is one we purchased on ebay that is stamped 1788. Some students were skeptical that anything can exist today from so long ago.
- ❖ At the bottom is the small wooden working model that students construct and keep.

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Our conclusion is that making history connections can be a powerful source for mathematics topics, inspiring and informing thematic field trip experiences with ideas and learning opportunities. By engaging with original texts written by mathematician makers, making working replicas, and exploring their use with a hands-on activity combined with the exhibit contents and artifacts we can bring math into new and interesting contexts for students and teachers.

Dear math happens, thank you for letting me look at math from a new perspective. I thought it was really cool to see how math was associated with the LaBelle.

Dear Math Happens,

Thank you for letting me make a parallel ruler. Thank you for teaching me how to navigate using a quadrant. I learned so much on that field trip.

"Thank you so much for showing us your exhibits and La Belle. It was pretty cool learning about the history, which surprised me because I usually don't like history. Thanks



Lauren Siegel has been director of MathHappens Foundation since 2014, and served as a University of Texas UTeach Maker Mentor for 4 years. She currently serves on the board of the Austin Museum Partnership. Model making has huge potential to help us understand the concepts we study today and also to interact with and celebrate the mathematical gadgetry of the past. MathHappens Foundation is based in Austin, Texas.

<https://www.mathhappens.org/>

The History of Mathematics Special Interest Group of the Mathematical Association of America

is pleased to announce its eighteenth annual

Student Paper Contest in the History of Mathematics

This contest is open to all undergraduate students^π

Papers will be judged by a panel of specialists for content, originality, and presentation. Typically first and second place winners are chosen.

Submission Guidelines

- Topics can be drawn from any field of mathematics.
- Papers can address a single person or topic, or be an historical survey of a topic or school of thought.
- Submissions should be approximately 5000 words (approximately 12 double-spaced 12 pt. pages) in length with font that is easy to read.
- Submissions should be in a single PDF file, including a title page with title of paper, the author, school, and complete contact information.
- Papers should include a full citation list.
- Papers should not draw too heavily from web sources.[§]
- Students submitting a paper need not be currently taking a history of mathematics course.
- All papers should be single-authored.
- Eligible papers are those written in the past year and while the author was an undergraduate.

Submission Deadline: Thursday, March 31, 2022

Results will be announced via email
and on the HOM SIGMAA website in May.

Submissions and questions can be directed to
Dr. Amy Shell-Gellasch ashellge@emich.edu

^π Students who have graduated less than a year ago but wrote their paper while still an undergraduate may also participate. Graduate and high school students may also submit for an honorable mention.

[§] Web sources that give access to print material, such as JTSOR, are completely acceptable.

HOM SIGMAA Small Grants

Guidelines and Procedures

Purpose: The HOM SIGMAA wants to aid its members in their quest to bring the joys of the history or mathematics to their students. These small monetary grants will allow HOM SIGMAA members to purchase items that will aid in learning the history of mathematics. For example, a classroom set of abacus or materials to make an historical model.

Guidelines

1. Recipients must be a current member of the HOM SIGMAA
2. The idea is to purchase items, materials to make a historical model, or materials that can be used year after year. (Not supplies that will be used up quickly.)
3. These materials may be used by an individual's colleagues, but belong to the HOM SIGMAA member and not their department.
4. Items or materials must clearly be for the instruction of a historical topic.
5. Grants will be for amounts up to \$100 and considered on a rolling basis (so apply early in the year.)
6. Approval of the grant is at the sole discretion of the HOM SIGMAA executive board.
7. Applications can be made at any time, but may take several weeks to be approved and paid out by the MAA. So plan ahead.
8. Receipts for purchased items is preferable. But if purchase depends on funding, receipts may be required after purchase.
9. Total annual grants dispersed will not exceed \$1000 per year and are subject to HOM SIGMAA funding needs.
10. Preference will always be given to first-time grantees. And the HOM SIGMAA has the right to deny any request if they feel a single member is requesting too often.

How to apply

Please send the application form (available on the HOM SIGMAA website) in Word or PDF to the Chair of the HOM SIGMAA via email.

HOM SIGMAA Classroom Small Grant

Name

Institution

Email

Phone

Address

Funds requested

Item(s) to be purchased

Purpose or use of items