Mathematical Association of America History of Mathematics Special Interest Group

HOM SIGMAA News

Volume XV, Number 1 — February 2025

Greetings from your HOM SIGMAA Chair

I want to acknowledge how much it means to me to have been reelected to serve as your HOM SIGMAA chair for a second term. Eugene (Bud) Bowman, emeritus professor at Penn State Harrisburg, is our newly elected Electronic Resources Coordinator. Welcome, Bud! Many thanks to Antonia Cardwell, associate professor at Millersville University, our past Electronic Resources Coordinator for her first-rate commitment to HOM SIGMAA.

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19

Kaktovik vigesimal numerals from Alaska. Catepillán & Huffman, *Focus* February/March 2025

This past fall, we continued our HOM SIGMAA Virtual Speaker Series presentations with several excellent talks. Mark your calendars for this spring since we have three speakers scheduled for February 7, March 7, and April 4 at 2PM ET. If you have any suggestions for speakers for our Virtual Speaker Series, please contact Abe Edwards, our HOM SIGMAA Program Coordinator.

Please encourage your students to participate in the **Student Paper Contest in the History of Mathematics**, the deadline, April 30, 2025, is approaching fast. A big thank you to Amy Shell-Gellasch for coordinating the contest. The **Al-Khwarizmi Student Paper Contest in the History of Mathematics during the Islamic Civilization, "8th - 16th Century"** is also receiving submissions. The deadline is November 17, 2025. See contests' fliers included in this newsletter.

The 2025 Canadian Society for History and Philosophy of Mathematics (CSHPM) will have its annual meeting at George Brown College in Toronto May 31 – June 2, 2025. The meeting will be held as part of the Congress of the Humanities and Social Sciences. The congress registration website is open at https://www.federationhss.ca/en/congress2025.

Save the date for MathFest 2025 in Sacramento, CA, August 6 – 9. We will have an invited speaker for the Annual HOM SIGMAA Business meeting. Additionally, HOM SIGMAA is planning on having numerous events including talks, sessions, workshops, panels, readings, and a trivia contest.
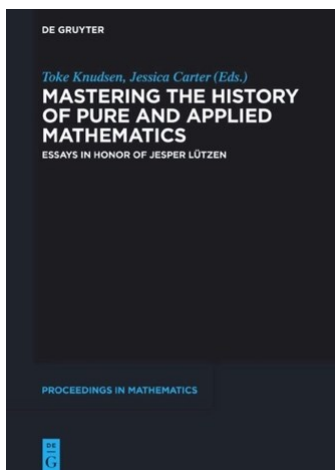
Best regards from Ximena

Book Announcement

Mastering the History of Pure and Applied Mathematics
Essays in Honor of Jesper Lützen

Toke Knudsen
Professor of Mathematics
State University of New York at Oneonta
(SUNY Oneonta)
toke.knudsen@oneonta.edu

Author's note: Another version of this announcement was published in the *Seaway Current* (48:1 (Fall 2024), 3 –5), the newsletter of the Seaway Section of the Mathematical Association of America. That announcement was accompanied by a review by Dr. Bob Rogers (SUNY Fredonia).

I am proud to announce to the members of HOM SIGMAA the publication of a festschrift[1] in honor of Jesper Lützen, Professor Emeritus at the University of Copenhagen, Denmark. Dr. Jessica Carter (Aarhus University) and I co-edited *Mastering the History of Pure and Applied Mathematics: Essays in Honor of Jesper Lützen*, which was published by De Gruyter in May 2024.[2] The festschrift was formally presented to Professor Lützen in October 2024.

Left: Cover of *Mastering the History of Pure and Applied Mathematics: Essays in Honor of Jesper Lützen*. Right: The festschrift is presented to Professor Lützen. Photo: Jessica Carter.

A renowned historian of mathematics, Professor Lützen has had a long and productive career at the University of Copenhagen. His scholarly contributions include the monumental *Joseph Liouville 1809–1882: Master of Pure and Applied Mathematics* (Springer, 1990)[3] and, more recently, *A History of Mathematical Impossibility* (Oxford University Press, 2023). Professor Lützen is also a masterful teacher, who is celebrated for his influ-

---

[1]For those who may be unfamiliar with the term, a festschrift (a loanword from German meaning "celebration writing") is a book containing a collection of academic articles written to honor a noted scholar by their colleagues, former and current students, and other well-wishers. The articles in a festschrift can be reflections on the scholar's published works, but the volume can also be a collection of articles without any central theme with a focus instead on celebrating the scholar's career.

[2]T. Knudsen and J. Carter (Eds.), *Mastering the History of Pure and Applied Mathematics: Essays in Honor of Jesper Lützen*. De Gruyter, 2024. https://www.degruyter.com/document/doi/10.1515/9783110769968/html

ential course on the history of mathematics. Through that course, many Danish mathematicians were exposed to his passion for the history of mathematics, including secondary-level mathematics educators who in turn have brought the material into their own classrooms. Professor Lützen retired in January 2022. More information about Professor Lützen's research and teaching is found in the introduction to the festschrift.

Professor Emeritus Jesper Lützen in 2012. Photo: Katja Thorseth.

The work on the festschrift began in 2020, and the book was published in May 2024. The festschrift contains 11 articles written by esteemed scholars, including colleagues and former students of Professor Lützen; an introduction written by the two editors; and a comprehensive list of Professor Lützen's publications.

The festschrift was presented to Professor Lützen at a celebratory meeting hosted by the Department of Mathematical Sciences, University of Copenhagen, on October 11th, 2024. Besides Danish well-wishers, attendees came from the Czech Republic, the United Kingdom, and the United States.

Group photo taken at the beginning of the gathering on October 11th, 2024. Left to right: Davide Crippa, Mikkel Willum Johansen, Hanne Eggert Strand, Toke Knudsen, Henrik Kragh Sørensen, Jesper Lützen, Bjarne Toft, Jessica Carter, Tinne Hoff Kjeldsen, June Barrow-Green, Jeremy Gray, and Jed Buchwald. Photo: Jim Høyer.

The meeting featured two talks: Dr. June Barrow-Green (Open University) spoke on "Ronald Ross and Hilda Hudson: A collaboration on the mathematical theory of epidemics" and Dr. Davide Crippa (Czech Academy of Sciences) spoke on "Bernard Bolzano and the foundations of elementary geometry." After the talks and a break, the festschrift contributors attending the meeting were invited to say a few words about their article and their

---

[3]The title of the festschrift, suggested to us by Dr. Tom Archibald (Simon Fraser University), alludes to this work.

relationship to Professor Lützen. Insightful and moving speeches were given by Dr. Jed Buchwald, Dr. Karine Chemla (via Zoom), Dr. Jeremy Gray, Dr. Mikkel Willum Johansen, Dr. Tinne Hoff Kjeldsen, and Dr. Henrik Kragh Sørensen. The meeting concluded with a well-attended reception filled with conversations and laughter.

To introduce the festschrift itself, I am grateful that HOM SIGMAA's own Dr. Jemma Lorenat (Pitzer College) kindly agreed to read the book and share her impressions with the readers of the HOM SIGMAA newsletter.

Acknowledgements

- - - - - - - - - - - - - - - - - - - -

Book Review
Mastering the history of pure and applied mathematics:
Essays in honor of Jesper Lützen

Jemma Lorenat
Associate Professor of Mathematics, Pitzer College

This is a remarkably handsome book. In a genre that produces bound volumes with unfortunate resemblances to textbooks, the aesthetic appeal is an exciting novelty. *Mastering the history of pure and applied mathematics: Essays in honor of Jesper Lützen* has a black background, white font, and blue accents, is novel-sized in its dimensions, and has a very grippable matte texture. This is the kind of book that you want to be seen reading in public — you will look smart in multiple senses of the word.

The contents of the book are readable, informative, and well-balanced. In 260 pages divided into eleven chapters, plus an introduction, the book spans antiquity to the twenty-first century, pure and applied mathematics, and sociological and philosophical methods. Though any one chapter of the book could stand alone, the volume collectively impresses the current landscape of the history of mathematics across these different contexts.

As the editors (Toke Knudsen and Jessica Carter) note in their introduction, Lützen is a particular expert of "the history of analysis and mechanics between 1800 and 1950" as well as impossibility theorems from ancient to modern times (pp. 3–4). Several chapters hew close to Lützen's scholarship — Jed Buchwald's textually detailed investigation of Heinrich Hertz's progress in field-mapping, Leo Corry's overview of Von Neumann's varied encounters with impossibility, Jeremy Gray's comparative study of the contents and contributors of Joseph Liouville's *Journal de mathématiques pures et appliquées* and the *Journal de l'École polytechnique* in the mid-nineteenth century. Other contributions honor Lützen through emulating his successful efforts "communicating the history of mathematics to a broader community" (p. 4). The book will be read with profit by mathematicians and curious enthusiasts. As it can be challenging to find histories of twentieth-century mathematics without excessive pre-requisites, I was especially delighted to find many fine examples in this category, like Tinne Hoff Kjeldsen and Andrea Loettgers' timely piece on mathematical modeling in biology, that could inform an undergraduate classroom.

Just as the cover's inviting style assures us that this is not a textbook, the contributing scholars capture the history of mathematics as a living field with open questions. unresolved controversies, and emerging tools of analysis. Though in reading this volume, I had no intention to supplement any ongoing research project, I was pleasantly surprised in this regard and my copy is now heavily annotated with relevant passages to consider and further texts to read. I imagine other historians of mathematics will be similarly gratified.

HOM SIGMAA Student Travel Grants Available

HOM SIGMAA is pleased to announce travel grants to graduate and undergraduate students. Money is available to help students travel to meetings to present a paper or poster in the history of mathematics. Details can be found in the HOM SIGMAA community on MAA Connect, www.connect.maa.org.

2025 HOM SIGMAA Executive Committee

Chair: Ximena Catepillán, Millersville University,
Ximena.Catepillan@millersville.edu

Secretary/Treasurer: Cynthia Huffman, Pittsburg State University,
cjhuffman@pittstate.edu

Program Coordinator: Abe Edwards, Lyman Briggs College within Michigan State University,
aedwards@msu.edu

Electronic Resources Coordinator: Eugene (Bud) Boman, Penn State, Harrisburg (Emeritus),
budboman@gmail.com

Prize Coordinator: Amy Shell-Gellasch, University of Michigan,
ashellg@umich.edu

Past Chair: Amy Shell-Gellasch, University of Michigan,
ashellg@umich.edu

Save these dates for future MAA meetings!

MathFest 2025	Sacramento, CA	August 6-9
MathFest 2026	Boston, MA	August 5-8
MathFest 2027	New Orleans, LA	August 4-7
MathFest 2028	San Diego, CA	August 2-5
MathFest 2029	Chicago, IL	August 8-11

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.

Small grants for the history of mathematics classroom are available

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.

Convergence, Both Old and New

Daniel E. Otero and Amy Ackerberg-Hastings

Editors*, MAA Convergence*

*MAA Convergence* wrapped up 2024—its last full year at https://old.maa.org/press/periodicals/convergence —with a flurry of new historical material for use in mathematics classrooms. For example, Spanish-language readers now have access to the 2013 article by John C. D. Diamantopoulos and Cynthia J. Huffman on how the Maya made extensive use of geometry in architecture and art and the three student activities based on Mayan geometry that accompany the essay, thanks to the translation by Ximena Catepillán, "Geometría Maya en la Sala de Clases." Instructors whose students are ready to develop their identities as mathematicians by wrestling with stereotypical depictions in literature can utilize "'A Magazine of all perfection': Mathematics in the Early Modern Satire Histrio-Mastix," by Laura Søvsø Thomasen and Henrik Kragh Sørensen. The authors explicate references to mathematics in this English play produced around 1600 and offer suggestions for classroom discussions or exercises.
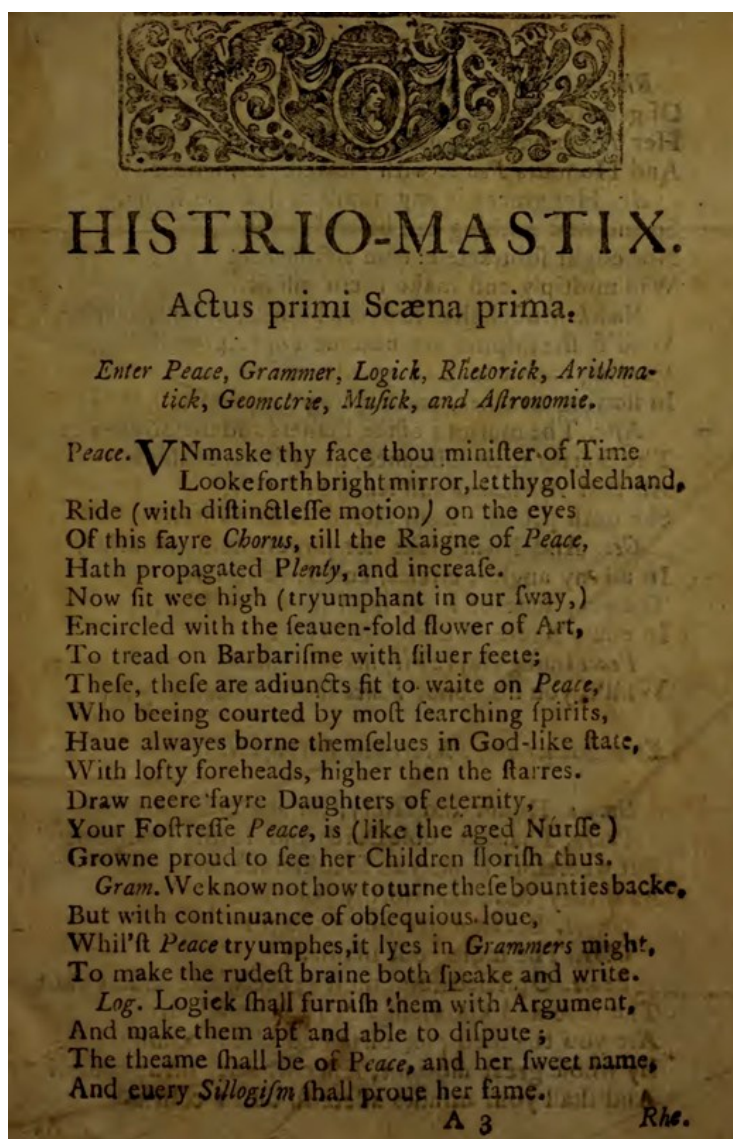
The first page of John Marston's *Histrio-Mastix; Or, the player whipt* (1610),
a comedy in which a mathematician is one of the main characters. Internet Archive.

Recent additions to our various article series include:

- L'Hôpital's Rule: A Mini-Primary Source Project for Calculus 1 Students, by Daniel E. Otero, the 33rd installment in the TRIUMPHS team's "A Series of Mini-projects from **TR**ansforming **I**nstruction in **U**ndergraduate **M**athematics via **P**rimary **H**istorical **S**ources";

- George Washington and Mathematics Education, by Edmund E. Ingalls with commentary by V. Frederick Rickey, in the "Historically Speaking" reprint series edited by Betty Mayfield;

- Six more of Mike Molinsky's examinations of "Quotations in Context":

  - "By studying the masters and not their pupils"—attributed to Niels Henrik Abel, who uttered this memorable line in the midst of an encomium for Laplace's accomplishments;

  - "I never came across one of Laplace's 'Thus it plainly appears,' without feeling sure that I have hours of hard work before me to fill up the chasm and find out and show how it plainly appears"— attributed to Nathaniel Bowditch due to the years he invested translating *Traité de mécanique céleste*;

  - "The moving power of mathematical invention is not reasoning but imagination"—attributed to Augustus De Morgan, an English mathematician, in reference to the Irish discoverer of quaternions, William Rowan Hamilton. Molinsky relates how this man was one of three near-contemporaries who shared the name William Hamilton!

  - "Thank God that number theory is unsullied by any application"—attributed to Leonard Eugene Dickson. Molinsky tells us that the attribution may be "legendary," but that Dickson willingly cooperated with the legend!

  - "And perhaps, posterity will thank me for having shown it that the ancients did not know everything"—mused by Pierre de Fermat at the end of a 1659 letter to French scholar and lawyer Pierre de Carcavi;

  - "Algebra is but written geometry and geometry is but figured algebra"—an observation by Sophie Germain that was preserved in her posthumously-published manuscript, *Pensées diverses*.
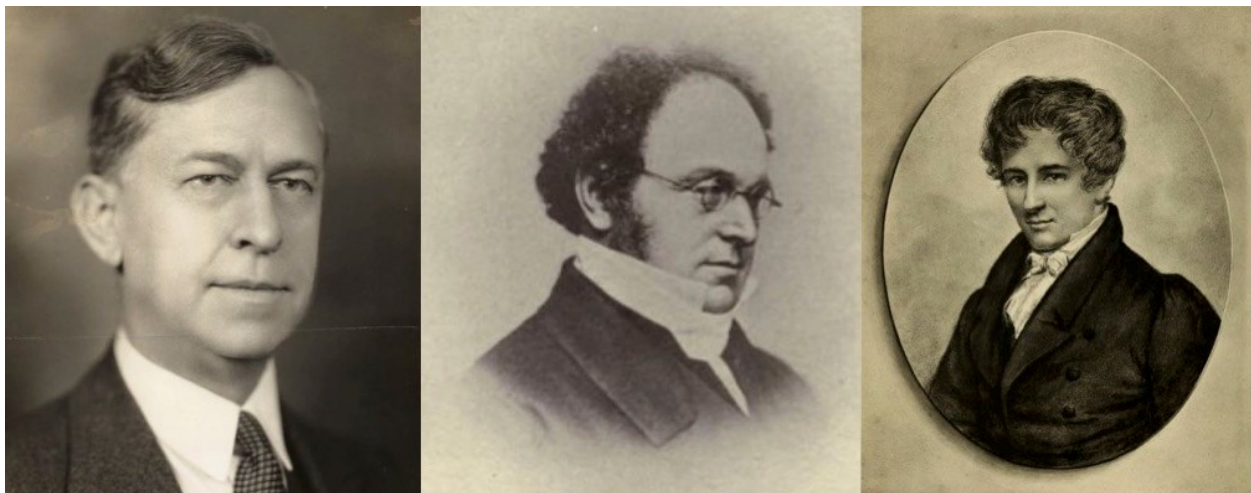
Top: Dickson (University of Chicago Photographic Archive), De Morgan (Internet Archive), and Abel (Wikimedia Commons). **Bottom:** Bowditch (Peabody Essex Museum), Germain (Gallica), and Fermat (Wikimedia Commons).

We were also delighted to close out *Convergence*'s 21 years as a website publication with several new, substantive Mathematical Treasures:

- Gaspar Schott's *Cursus Mathematicus sive absoluta omnium mathematicarum disciplinarum encyclopædia* (1661), by Jacqueline Dewar and Sarah Greenwald;
- Suspension Pantograph by G. Coradi (ca 1928), by Peggy Aldrich Kidwell;
- Vera Sanford's *A Short History of Mathematics* (1930), by Toke Knudsen and Leah Bridgers;
- Mary Ellen Rudin's *Lectures on Set Theoretic Topology* (1975), by Daniel E. Otero.
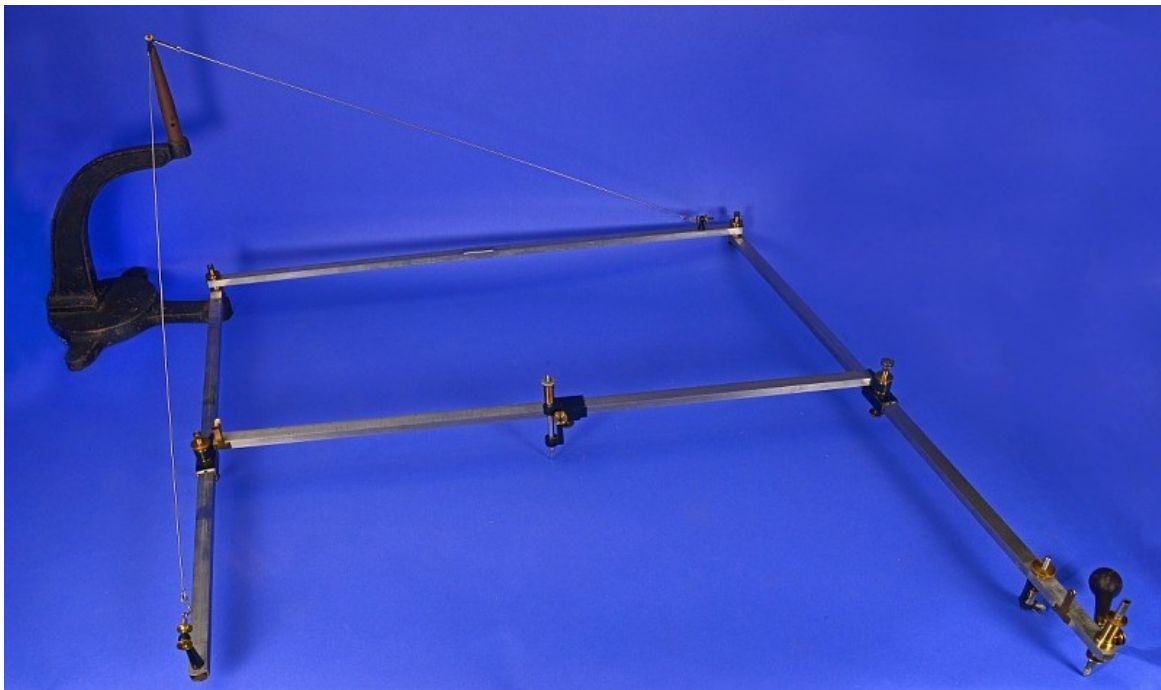
Suspension Pantograph Used by Mary Spear, manufactured before 1928, Smithsonian Negative Number NMAH-AHB2016q012400.

All of these articles may be accessed via the *Convergence* homepage through at least July 2025. Currently, *Convergence*'s page on MAA's new website also leads to the back catalog. As a general rule, any *Convergence* URL you may have in your records, discover on an internet search, find within MAA Connect, and the like, will become active by replacing "www" in the web address with "old". Thus, our popular Classroom Resources Index may be accessed at https://old.maa.org/press/periodicals/convergence/classroom-resources-index. We will continue to update *Convergence*'s Calendar of upcoming events on the history of mathematics and its use in teaching as long as the website remains live.

Meanwhile, we are building *MAA Convergence*'s new presence within the Taylor & Francis suite of MAA journals, which you can access by logging into the MAA Member Portal or going directly to https://maa.tandfonline.com/journals/ucnv20. We hope soon to have posted an updated Aims and Scope statement, an opening editorial, and a customized version of the submissions portal. Additionally, we have three submissions undergoing final editorial review that will appear in *Convergence*'s new location. We expect that all of *Convergence*'s legacy articles will be loaded into this space by the end of 2025. We are still searching for a permanent home for our web-based features such as On This Day, Quotations, Problems from Another Time, and the Calendar. Please stay tuned to MAA Connect for additional updates! If you have questions, or have a submission of your own to share with our readers, please contact the editors at convergence@maa.org.

Congratulations and Thanks for Service!

Congratulations to newly elected HOM SIGMAA officers - Ximena Catepillán (reelected Chair) and Eugene (Bud) Boman (Electronic Resources Coordinator). Welcome to the HOM SIGMAA Executive Committee, Bud!!! HOM SIGMAA is so grateful to Antonia Cardwell for her years of service as Electronic Resources Coordinator. Thanks for your great work, Antonia!!!
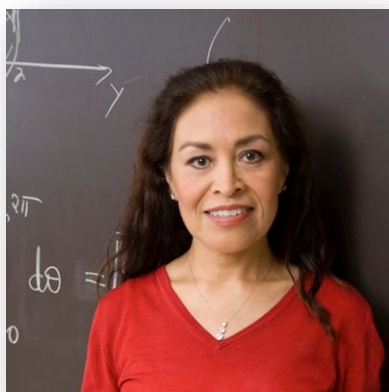
Ximena Catepillán   *Eugene (Bud) Boman*   *Antonia Cardwell*

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

HOM SIGMAA Student Travel Grants

Guidelines and Procedures

Purpose: The HOM SIGMAA wants to support students of the history of mathematics. We will offer travel grants (in the form of travel expense reimbursements) for students traveling to conferences to give a paper or poster on the history of mathematics. Grants are up to $250 for a local/regional/sectional meeting, and $350 for a national/international meeting. We encourage students to attend MAA meetings, but grants are not limited to MAA meetings. Submit application materials prior to the meeting; submit registration/travel/lodging receipts and verification of talk after the meeting.

Guidelines

1. Travel must be completed while a student or the summer immediately following graduation.
2. Approval of the grant is at the sole discretion of the HOM SIGMAA executive board.
3. Applications can be made at any time, but may take several weeks to be approved and are paid out by the MAA after travel is completed. So plan ahead.
4. Total annual grants dispersed will not exceed $1500 per year and are subject to HOM SIGMAA funding needs and will be considered on a rolling basis.
5. Preference will always be given to first-time grantees.

How to apply (prior to meeting):

1. Please send the application form (available on the HOM SIGMAA website) in Word or PDF to the Chair or Secretary of the HOM SIGMAA via email.
2. Have your research advisor email the Chair or Secretary of the HOM SIGMAA a letter verifying your status and stating the nature of your research.

Reimbursement (post meeting):

Email scans of the following to the HOM SIGMAA:
1. travel receipts totaling the grant amount or more
2. program page verifying your participation.

HOM SIGMAA Student Travel Grant Application

Full Name:

Status: (circle one)   Graduate student   Undergraduate student

Home Institution:

Email:

Address:

Conference title and session title:

Location and dates:

Title of talk/poster:

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

is pleased to announce its 22nd 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 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.[ℵ]
- 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: April 30, 2025

Results will be announced to winners via email, on MAA Connect,
and on the HOM SIGMAA website in May.
Winning papers will be published on *Convergence*.

Submissions and questions can be directed to
Dr. Amy Shell-Gellasch   ashellg@umich.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.
[ℵ] Web sources that give access to print material, such as JSTOR, are completely acceptable.

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

Al-Khwarizmi Student Paper Contest in the History of Mathematics during the Islamic Civilization, "8ᵗʰ-16ᵗʰ Century"

This contest is open to all undergraduate students in the USA

The purpose of this contest is to increase awareness and interest in the history of mathematics among undergraduates, and to encourage students to learn more about the contributions of the Islamic Civilization to mathematics.

First and second places winners will be chosen.

Winners will receive a one-year student membership in the MAA and HOM/SIGMAA, and a history of mathematics book.

Eligible Topics and Submission Guidelines

- Contributions of a scholar from the Islamic World to mathematics or geometry during such period.
- Any topic in geometry or mathematics from this period by scholars in the Islamic World.
- Contributions of multiple Islamic/Arabic scholars to a given subject/topic in mathematics in this period.
- Connections of Islamic/Arabic Mathematics and the Arts.
- Connections of Islamic/Arabic Mathematics and Architecture.
- Influence of Islamic/Arabic Mathematics on other civilizations.

- Submissions should be at a minimum 2500 words (approximately 10 double spaced 12 pt. pages) in length.
- Submissions should be in a single PDF file, including a cover page with title, name, school, and full contact information.
- Papers should include a full citation list.
- Papers should not draw too heavily from web sources $^{\pi}$
- Submissions should include a cover sheet with your name, the paper's title, your institution, supervising instructor if applicable, and email and permanent postal address.
- Please submit electronic copy to the email addresses below
- Students submitting a paper need not be currently taking a history of mathematics course.
- Only single-authored papers are eligible.

Deadline for submission is November 17, 2025

Papers will be judged by a panel of specialists for content, originality, and presentation.

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

Submissions and questions can be directed to

Dr. AbdelNaser Al-Hasan
via email at: naser.alhasan@newberry.edu
OR
Dr. Noah Aydin
via email at: aydinn@kenyon.edu

Information can also be found at the HOM-SIGMAA website at
www.homsigmaa.net

$^{\pi}$ Web sources that give access to print material, such as JSTOR, are completely acceptable.