

# The Mathematical Association of America: Its First 100 Years

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This article presents an overview of the history of the Mathematical Association of America as part of the celebration of its centennial in 2015. It describes events this author regards as the most important over the century but the account is certainly not exhaustive; for example, it makes little mention of competitions conducted under the aegis of the Association or of the expanded book publication program. Our account begins with the founding of the MAA and then describes its sections, governance, and meetings. Overarching activities are outlined in two distinct periods, 1916-1955 and 1955-2014, with an explanation for the separation into disjoint stages. The article discusses prizes and awards before ending with a brief mention of MAA headquarters.

## Founding

One of the most historic moments for mathematics in America occurred with the establishment of a national organization on the last two days of 1915. It is rather miraculous that the Mathematical Association of America (MAA) was founded amidst World War I, a year after Canada entered the fray as a Dominion of the British Empire and 16 months before the U.S. Congress declared war. It is important to note that the use of “America” in the title of the Association includes both Canada and the U.S. As Albert Bennett wrote upon the 50<sup>th</sup> anniversary of the MAA in 1965, “The phrase ‘of America’ was interpreted from the start to include Canada and indeed the North American continent” [3, p. 1]. Since that time, members living in the Caribbean areas belong to the Florida Section of the MAA.

The founding of the MAA took the reverse of the usual route whereby an organization is established first and creates its official journal later. For instance, the American Statistical Association was formed in 1839 but did not establish a publication for another 49 years. The American Mathematical Society (AMS) was quicker, being founded in 1888 but creating the *Bulletin* as its first periodical three years later. Yet the MAA’s official journal, the *American*

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*Mathematical Monthly*, was initiated more than twenty years before the Association was founded. So in this case a journal (the *Monthly*) spawned an association (the MAA).

After the MAA assumed the reins of the *Monthly*, its masthead read, “Founded in 1894 by Benjamin F. Finkel, published by him until 1913. From 1913 to 1916 it was owned and published by representatives of fourteen Universities and Colleges in the Middle West.” Benjamin Franklin Finkel was a graduate of Ohio Northern University who had taught in secondary schools before being appointed professor of mathematics and physics at Drury College in Missouri. Finkel pursued graduate studies during summers at the University of Chicago before earning his Ph.D. at the University of Pennsylvania.

Finkel’s earlier classroom experience had made him keenly aware of poor instruction in elementary mathematics, and that inspired him to establish a journal “devoted solely to mathematics and suitable to the needs of teachers of mathematics in these schools” [8, p. 309]. He consulted with numerous high-school teachers and college professors but few teachers responded favorably, whereas he received enthusiastic support from several notable professors. The first issue of the *Monthly* had appeared in January 1894 with the title *The American Mathematical Monthly: A Journal for Teachers of Mathematics in the Collegiate and Advanced Secondary Fields*. The task of physically producing a journal was not easy, especially mathematical typesetting, and it became a family affair, with Finkel carving most of the woodcuts himself while his wife Hannah Cokeley Finkel served as proofreader.

Finkel met Leonard Dickson while studying at the University of Chicago in the summer of 1895. Seven years later Finkel invited Dickson to become an editor of the *Monthly*, and called his acceptance “a red-letter day in the history of the *Monthly*” [8, p. 314]. The cover of the January 1903 issue reads, “Edited by B.F. Finkel and Leonard E. Dickson.” By then it was apparent that college and university instructors evinced a much greater interest in the *Monthly* than its intended audience, especially the problems department, which was central at the outset and has been a mainstay to this day.

A “second red-letter day in the history of the *Monthly*” [8, p. 314] occurred in 1907 when Herbert Ellsworth Slaughter replaced Leonard Dickson as editor along with Finkel. Slaughter was a graduate of Colgate College who taught at the Peddie School near Princeton before matriculating at the University of Chicago, where he obtained his Ph.D. in 1898 under E.H. Moore, four years after joining the mathematics faculty. Slaughter was in



charge of submissions during 1907 and 1908, an experience that heightened his awareness of the need for financial support for the *Monthly* beyond subsidies provided by Drury College and the University of Chicago. He soon obtained a matching subsidy from the University of Illinois with the help of a third editor, G.A. Miller. But in 1912 Benjamin Finkel confided to Slaught that the printer could no longer afford the low-cost services he had been providing. Undaunted, by the end of the year Slaught, along with Earle Hedrick (MAA president 1916) and Florian Cajori (MAA president 1917), arranged for eleven Midwestern universities and colleges to help defray the costs and to pass the *Monthly* legally from the private possession of Benjamin Finkel to the Board of Editors.

Moreover, during 1913-1915 Slaught gained the conviction that more had to be done for the average mathematics teacher within the field of collegiate mathematics. Accordingly, he conducted an informal discussion at the dinner of the April 1914 meeting of the Chicago Section of the AMS about the role of collegiate mathematics in America. It was felt that, on one end of the spectrum, secondary mathematics was being handled well by existing secondary associations throughout the country, while at the other end, research interests were being fortified by the AMS. Yet, as Slaught wrote, “the great intermediate field of collegiate mathematics ... so far has had no organized attention” [20, p. 251]. Karen Parshall describes this division of labor as “the stratification of the American mathematical community” [17].

In late 1914 the resolute Slaught appealed to the Council of the AMS to appoint a committee to “consider the general relation of the Society to the promotion of teaching, especially in the collegiate field” [12, p. 20]. Over the next year two critical elements nudged closer together: the *Monthly* and a movement to emphasize collegiate mathematics. The impetus was the search for a source of dedicated support for the *Monthly*, but Slaught had conceived a grander idea of founding a national body as well. Thereupon the AMS Council appointed the requested committee, which voted three-to-two that the AMS should take neither control nor responsibility for publishing the *Monthly* but resolved [2, p. 79; 12, p. 20]:

It is deemed unwise for the American Mathematical Society to enter into the activities of the special field now covered by the *American Mathematical Monthly*; but the Council desires to express its realization of the importance of the work in this field and its value to mathematical science, and to say that should an organization be formed to deal specifically with this work, **the Society would entertain toward such an organization only feelings of hearty good will and encouragement.** [Emphasis added.]

This resolution was endorsed by an overwhelming majority of the Council, which then adopted it.

Events moved quickly after that decision. Herbert Slaught and a loyal band of supporters gave wide publicity to the idea of forming the kind of body the AMS resolved to encourage with good will. In June 1915 he mailed letters to mathematicians throughout the U.S. and Canada soliciting feedback on this idea, enclosing a reply post card. It met with unbridled support, but also sprinkled opposition. Finally, Slaught circulated a form letter seeking to identify those who favored such an organization, resulting in a call to an organizational meeting signed by 450 mathematicians representing every state in the U.S. and province in Canada.

Where and when should the organizational meeting be held? The obvious choice, it would seem, would be at the annual AMS meeting that December 27-28. However, the AMS met at Columbia University in New York City, whereas the majority of support for the new body came from the Midwest. Instead, the organizational meeting was held at Ohio State University on December 30-31, 1915, in conjunction with the annual meetings of Section A of the American Association for the Advancement of Science (**AAAS**) and the Chicago Section of the AMS. Ironically, the AAAS meeting had been scheduled for Toronto by organizer J.C. Fields but the outbreak of WWI cancelled those plans and the AAAS moved to Columbus instead. Otherwise the MAA might have held its organizational meeting in Canada.

Two of David Hilbert's American students played decisive roles in the meeting—Earle Hedrick (who presided) and Will Cairns (who served as secretary *pro tem*). Overall 104 delegates attended, including ten women. Cairns reported, “After three hours of patient and painstaking deliberation, all mooted questions were settled except the name of the new organization” [4, p. 3]. A committee of three was appointed to select a name from amongst the 18 that were submitted. The next day they voted independently, only to discover a “remarkable unanimity of purpose” [1, p. 29], as all three favored the Mathematical Association of America. Therefore the centennial of the MAA will occur on December 31, 2015.



The response to the formation of the new organization was overwhelming. Charter membership was closed on April 1, 1916, at 1045. (While that number might seem small today, it represented 1/100,000 of the U.S. population at the time.) By contrast, AMS membership that year was 732. Because the first names of women were recorded, I counted 132 females (12.6%),

a total that is in line with a study that asserted, “About twelve percent of the over 1000 charter members were women” [19, p. 29]. Twenty-nine of the 132 held Ph.D. degrees at the time, accounting for 22.1% of 131 charter members who had obtained that degree. It is harder to distinguish African-Americans; the only charter member I know was Dudley Weldon Woodard. With its Midwestern origins one might assume that the majority of charter members would hail from there, yet the four leading states were New York (120), Ohio (72), Massachusetts (70), and Pennsylvania (67). A mere 15 came from Canada. It was telling that only 145 of the 1045 were high-school teachers, confirming once again the wisdom of Benjamin Finkel’s emphasis on collegiate-level mathematics.

Founding the Association obviated the need for university subsidies that had kept the *Monthly* afloat the previous three years. Thus Slaughter’s idea to form an organization, with members’ dues paying for the journal, was brilliant. *Herbert Slaughter was truly the father of the MAA*. To reinforce this designation, the title page for the January 1938 issue of the *Monthly* asserted:

In appreciation of his exceptional services to the Mathematical Association of America and to this *Monthly*, this volume is dedicated to the late Herbert Ellsworth Slaughter, who at the time of his death was Honorary President of the Association and had served continuously as an editor of the *Monthly* for thirty years.

The second day of the organizational meeting continued with passage of a constitution that had been tentatively prepared beforehand. In addition, a nominating committee presented a slate of officers: Earle Hedrick, president; E.V. Huntington and G.A. Miller, vice-presidents; and W.D. Cairns, secretary. Huntington, Miller, and Cairns were elected president for 1918, 1921, and 1943-1944, respectively. The MAA’s indebtedness to Germany was immediate—Hedrick and Cairns had obtained doctorates at Göttingen, Huntington at Strassburg, and Miller had studied with Sophus Lie at Leipzig after receiving a Ph.D. from Cumberland University (TN).

An appointed 12-person Executive Council selected Alexander Ziwet and Karl Swartzel to negotiate with the owners of the *Monthly* to secure it as the official journal of the Association. As a result the *Monthly* was formally transferred to the MAA in time for the appearance of the January 1916 issue. This action underlines the fact that it was the journal that had spawned the Association! The organizational meeting ended with an illustrated address titled “The story of algebra” by L. C. Karpinski.

In 1965 Brown University emeritus professor A.A. Bennett lyrically described the work of those mathematicians involved in establishing the MAA [3, p. 1]:

Our Association was founded under especially auspicious circumstances. The many favorable factors were not accidents, nor miracles, nor achieved through serendipity. Some were the end results of a chain of events, not always desired, not always with the eventual outcome in view. But in large part they were secured through wise planning, tactful compromise, cajoling of the apathetic, courageous facing of pessimists in high places, and unremitting work.

The MAA developed in several directions at once, perhaps the most influential being the establishment of MAA sections.

## MAA Sections

In his November 1915 *Monthly* article “The teaching of mathematics,” Herbert Slaught stated that the object of the journal was “to *stimulate activity* on the part of college teachers ... that may lead to *production*” [21, p. 291]. But he quickly added that “the formation of smaller groups ... will provide a far-reaching stimulus to individual activity” and he hoped “to see the college teachers of mathematics organized in every state, or even in some smaller groups.”

Those smaller groups had a model to follow: the AMS. Its first section (Chicago) was established in 1896, a dozen years after its founding. Two sections followed: San Francisco (1902) and Southwestern (1906). How long did it take the MAA to form sections? Minutes! No sooner had the constitution been approved than three states submitted formal applications to become sections—Kansas, Missouri and Ohio.

Which of the three state organizations became the first MAA section? Organizationally savvy, the Ohio group created a special committee at the conclusion of the first day of the two-day meeting to prepare its own constitution. Consequently Ohio beat Missouri by a few minutes in the heated race; Kansas placed third. Therefore the Council of the MAA (the Board of Governors since 1938) acted expediently and granted Ohio’s application as the first section on March 1, 1916. But the honor of holding the first official meeting reverted to Kansas, which met in March. The Ohio Section held its initial meeting a month later for two days, a tradition that has continued every spring since then (except the war year 1945). The Missouri Section waited until November to hold its initial gathering.

Four more MAA sections were formed during 1916, three from Midwestern states (Iowa, Indiana, and Minnesota) and the first one with a non-state geographical boundary (Maryland-Virginia-District of Columbia). Ten years later, Slaught singled out the seventeenth section—

Philadelphia—as the first to bear the name of a city instead of a state or union of regions, because he had feared “the seeming apathy or lethargy” in the Atlantic states [27, p. 7]. Unlike Midwestern mathematicians, those in New England felt adequately represented by the Association of Teachers of Mathematics in New England until 1955, when the Northeastern Section was formed to also include the Canadian provinces of New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island.

There were 28 sections when the MAA celebrated its semicentennial in 1965. Only one has been added since that time, the Intermountain Section, founded in 1975 when the Rocky Mountain Section was partitioned.

## Officers and Governance

Since its founding the MAA has had a core of four officers: president, vice president, secretary, and treasurer. Its online site lists all presidents with photographs and short biographies:

<http://www.maa.org/about-maa/governance/maa-presidents>

During the first ten years the presidency was an honorary office held for one year. However, the term limit was increased to the present two years starting in 1927. Dorothy Bernstein was the first woman president, elected for 1979-1980. Due to increasing membership, today’s officers include, in addition to the core: president-elect, first vice president, second vice president, associate secretary, and associate treasurer.



By 1938 many MAA leaders had become concerned about the tenuous relationship between the Association and its sections, so the Trustees appointed the Committee to Review the Activities of the Association. This committee reported its findings in the *Monthly* two years later, whereupon the Trustees accepted the report and discharged the committee with appreciation. Its five recommendations provided the most extensive analysis of the structure and operations of the MAA since its founding in 1915. One of those recommendations replaced the Trustees with the now familiar Board of Governors to administer and control all MAA scholarly and scientific activities. To exercise its fiduciary responsibility, the Board of Governors votes on dues and on reports from the treasurer, Budget Committee, and Audit Committee. The Board also approves the editor and editorial board of this *Monthly*, and some other journals.

The Board was initially composed of six national officers, six governors elected at large, and 14 governors elected by region. The term for governors at large was three years, so two

were elected annually. However, the designation of regional governors soon proved to be unnecessarily cumbersome and so in 1945 the Board began phasing them out in favor of sectional governors serving three-year terms. Since that time the Executive Committee was formed to act on behalf of the governors on matters that arise between Board meetings. This Committee has also made recommendations on the management, policies, and activities of the MAA.

## **National and Sectional Meetings**

There are three kinds of mathematicians—those who can count and those who can't. The assignment of numbers to initial MAA annual meetings seems to bear out this joke.

The December 1915 organizational meeting was regarded as the first annual meeting because the next one was called second in the *Monthly* report. The 1917 annual meeting was called the third. Yet the 1918 annual meeting was also referred to as the third. Subsequent meetings were numbered after this one. The 1942 meeting was cancelled at the request of the Office of Defense Transport, the only time in MAA history that this annual affair did not take place, so the 40<sup>th</sup> occurred in December 1956. However, after that meeting the Board voted “to hold the Annual Meeting normally scheduled for December 1958 during the latter part of January 1959” [9, p. 213]. Up to that point, most annual meetings had been scheduled between Christmas and New Year's Day (except three held in November during WWII) but they have all been held in January since the 41<sup>st</sup> in 1958. This explains why the 98<sup>th</sup> annual meeting will take place in January 2015.

Back in 1916, the second annual meeting was held December 28-30 at Columbia University with 184 attending, including 141 MAA members. It was run in affiliation with the AAAS but with neither the AMS nor the American Astronomical Society, both of which met December 27-28 at the same place. The program consisted of a joint dinner on Thursday evening, four lectures on Friday, and one on Saturday morning. The first “third annual meeting” met in Chicago in conjunction with the Chicago Section of the AMS but it was not until the second such meeting in 1918 that the two professional organizations of mathematics met jointly.

The philosophy of including Canada in the title of the MAA was reinforced at the sixth annual meeting held in Toronto in 1921 in conjunction with the AMS, AAAS, and the APS

(American Physical Society). This suggests that the titles of all four organizations implicitly included Canada.

The MAA met jointly with the AMS and AAAS in 1922. Although Harvard was the official host, lectures were given at MIT as well, especially those held in conjunction with Section A of the AAAS. At a joint dinner Herbert Slaught spoke about the founding of the MAA and its prospects for future activities. Only three papers were delivered at the joint session but the MAA sponsored an additional six and the AMS 53. A symposium on mathematical statistics was also conducted at the meeting.

The MAA held its first summer meeting September 1-2, 1916, at MIT, sandwiched between the organizational and second annual meetings. (“Annual meeting” refers to the December/January gathering, as opposed to “summer meeting,” though summer meetings are held annually as well.) Attendees wore badges with identifying names and institutions for the first time, a custom followed to this day. The nine invited lectures were delivered in MIT’s spanking new buildings while Harvard Yard dormitories provided accommodations. At the welcoming dinner on Friday night (9/1), a cablegram with fraternal greetings was received from Mittag-Leffler in Sweden. Except for three years during WWII, summer meetings were held after the U.S. Labor Day until 1952, when they were switched to the week before the national holiday. Twenty-five years later these gatherings were scheduled for earlier in August because many universities and colleges began their fall semesters the week before the three-day holiday. Moreover, a mandatory group photograph was shot through 1948. The largest meeting of the MAA (through 2014) was held in January 2012 in Boston with 7199 registrants.

The attendance of 750 persons in 1958 encouraged both the MAA and AMS to meet later in January from that time forward. Moreover the MAA began to enlarge its program dramatically. Longtime MAA secretary H.M. Gehman reported, “The reasons for the expanded programs of meetings is due to the increase in the membership of the Association, the broadening of interests of the membership, and the increase in the activities in which the M.A.A. is engaged” [10, p. 579].

A historic change for MAA national meetings took place in 1996 when the AMS voted to disband its summer gatherings. The MAA decided to continue alone, adopting the name “MathFest” starting in 1997, and has sponsored this meeting every summer since then.

The MAA has sponsored two meetings a year up to the present time with only a few cancellations. We mentioned the only annual meeting cancelled (in 1942) but seven summer meetings were not held. Four of these were cancelled whenever an International Congress of Mathematicians was held in North America (1924 in Toronto, 1950 in Cambridge, 1974 in Vancouver, and 1986 in Berkeley) while the other three were in 1938 for the AMS semicentennial celebration, 1945 for WWII, and 1992 for the Canadian Mathematical Society.

Today most sessions and lodgings of annual meetings are held in hotels, often in conjunction with a convention center, and not on a college campus. The first time the MAA did not hold a winter meeting on a college campus was 1929, when the site was the Hotel Fort Des Moines, but that did not happen again until Chicago in 1960. Only a few annual winter meetings have met at universities since then.

There have been at least two controversial locations of annual meetings. Negotiations for sites take place years beforehand, and those for the January 1970 meeting began five years earlier. Yet in late October 1969, just ten weeks before the affair was scheduled to begin, officials in Miami (FL) informed meeting organizers that they could not supply the number of rooms agreed upon earlier. Fortunately Henry L. Alder (MAA president 1977-1978) informed organizers about the sparkling new Convention Center in San Antonio, whereupon the location was hastily changed to that Texas city (and its renowned River Walk), which has now hosted more annual meetings than any other site.

Another controversial annual meeting was held in Las Vegas in 1972. The combination of smoke-filled rooms and an “ambiance of gambling [that some found] intrusive and oppressive (and a handful found too tempting)” caused MAA and AMS leaders to resolve that “the Society not meet again in Las Vegas in this century” [18, p. 36]. Nonetheless, the AMS Western Section has held meetings there, and one is scheduled for 2015.

The locations of some section meetings were controversial because of **discrimination** against African-Americans, particularly in the Southeastern Section of the MAA. As far as is known, no African-American attended a meeting in this five-state section up to 1951, when Fisk University chair Lee Lorch and three African-American colleagues attended the gathering in Nashville. However, they were prohibited from registering for the banquet to hear a talk by Saunders Mac Lane (MAA president 1951-1952). Shortly thereafter the Board of Governors responded to a letter from Fisk University faculty, not by changing its bylaws, as the group had

requested, but by affirming its intention to conduct the affairs of the MAA without discrimination. Nonetheless, no African-American mathematicians attended Southeastern meetings again until 1960. However, when a group from Atlanta University was refused rooms at the meeting site, the Wade Hampton Hotel in Columbia (SC), they left in protest. It was not until the late 1960s and early 1970s that African-Americans felt comfortable enough to attend Southeastern meetings on a regular basis. Since that time minority mathematicians have participated in sectional governance and have presented invited addresses. In 1995 the report, “A history of minority participation in the Southeastern Section,” concluded [7, p. 10]:

The Southeastern Section has been the birthplace of protest against discrimination on the basis of race. Confrontations here have helped to move the MAA forward in the elimination of barriers in the mathematics community, not only for African-Americans, but for women, gays and lesbians, and other minorities. Today the Southeastern Section stands as a leader and a model in its determination to encourage and promote the full participation of all of its members.

## **MAA Activities I: 1916-1955**

Once the MAA had been established in 1915 its charter member launched several projects, forming six committees in 1916 alone. The Committee on Relations with the *Annals of Mathematics*, chaired by E.H. Moore, entered into an agreement with Princeton, the journal’s publisher, whereby the MAA provided an annual subvention in exchange for the publication of expository articles and subscription rates at half price for MAA members. The MAA entered into a similar agreement with the *Duke Journal* when it was established in 1935, but both subventions were discontinued at the end of 1942 due to lack of resources.

The most significant initial project was carried out by the National Committee on Mathematics Requirements (NCRM), formed in March 1916 “to investigate the whole field of mathematical education from the secondary school through the college and to make recommendations looking toward a desirable reorganization of courses and the improvement of teaching” [25, p. 5]. NCRM issued a preliminary report at the MAA’s first summer meeting that September and a final report seven years later—a detailed, 650-page document titled *The Reorganization of Mathematics in Secondary Education*. Part I consisted of separate sets of recommendations for mathematics to be taught in grades 7-9 and 10-12. Part II was made up chiefly of reports by specialists, like Earle Hedrick’s chapter stressing functions as a unifying theme across the entire curriculum. The last chapter contained a bibliography of 569 items on the teaching of mathematics that had been published from 1911 through 1921.

The NCMR report was influential in establishing the basic contour of the high-school curriculum for several decades but jousting over the aims in teaching mathematics continues to this day. However, no major change in practice occurred through the 1930s due mainly to the Great Depression and the inertia of maintaining traditional educational practices. One important byproduct of this work was the founding of another professional organization of mathematicians in 1920, the National Council of Teachers of Mathematics (NCTM). Like the MAA, the NCTM adopted an existing publication as its official journal, *The Mathematics Teacher*.

The impact of the NCMR was generally positive but not the work of the Committee on Standard Departments, charged with formulating standards for undergraduate departments. As we know from NCTM documents formulated in the 1990s, the term “standards” can be controversial, and it was no different back then, as the committee made little progress and was allowed to lapse within two years.

Another ill-fated action from the early years of the MAA was the approval of a resolution by L.C. Karpinski in favor of the metric system of measure. Two other MAA committees from the early years met some success but ultimate disappointment. The Committee on Libraries languished in 1939 because few members availed themselves of its loan services and its holdings were shelved in the much larger AMS library at Columbia University. However, even the AMS library was discontinued in 1950.

Another initiative whose perceived needs never came to fruition was the Dictionary Committee, which proposed in 1917 that the MAA publish a two-volume dictionary covering all terms that would be used chiefly by college students. This project initially met a favorable response but funds were never allocated and although the committee met as late as 1937, it had been mostly inactive during those twenty years. The MAA never published such a dictionary but in 1942 Glenn James published *Mathematics Dictionary* commercially and it ran through five editions.

These few disappointments paled in comparison with MAA successes, like the establishment of mathematics clubs at the undergraduate level. Reflecting this development, the *Monthly* initiated a column “Undergraduate Mathematics Clubs” in 1918 that continued under different names until 1954.

The printing costs problem raised its ugly head again in 1920, when the MAA was forced to increase dues by a dollar from the initial \$3 per year. However, the resulting \$4 dues remained

in place until 1958, causing Lester R. Ford (MAA president 1947-1948) to joke that the three most important constants in mathematics were  $\pi$ ,  $e$ , and 4 [11, p. 105].

To address rising costs, the MAA was incorporated in 1920 under the statutes of the state of Illinois, an important move that allowed the Association to receive donations and bequests; the AMS followed suit three years later. The MAA took advantage of this status right away when Herbert Slaught announced a sizable gift from Mary Carus, the editor of Open Court Publishing Co. The purpose of her gift was to fund a series of books to publish mathematical exposition at nominal cost. The first Carus Mathematical Monograph was *Calculus of Variations* by G.A. Bliss (1925) and the second *Functions of a Complex Variable* by D.R. Curtiss (1926); Curtiss was MAA president 1935-1936. By 2014, 31 books had appeared in this popular series.

The MAA engaged in one unusual enterprise when it published the two-volume *Rhind Mathematical Papyrus* in 1929. The translation of the oldest mathematics book in existence was carried out by 84-year-old Arnold B. Chase, who added elaborate mathematical commentary. He was aided by his wife (an artist who copied the hieratic script and produced the corresponding hieroglyphic transcription), L.S. Bull (an Egyptologist with the Metropolitan Museum of Art), and Brown mathematician H.P. Manning (who had become an expert in hieratic script in his 60s and had taught Chase mathematics back in the 1890s).

In his retiring presidential address published in 1932, John Wesley Young (MAA president 1929-1930) called for the MAA to (1) provide funds to send national leaders to speak at sectional meetings in remote locales, (2) launch a second periodical with particular appeal to undergraduate students, (3) initiate a Committee on Publicity, and (4) form a competitive national examination like the one given in Hungary [26]. All four proposed initiatives have now become part and parcel of MAA activities, but none was instituted at once.

The MAA's second journal grew out of the effort of S.T. Sanders of Louisiana State University (LSU) to encourage high school teachers to join the Association. In 1926 he began publishing a monthly pamphlet and the next year expanded it into a magazine. However, financial support from LSU was terminated 1942 due to university budget constraints. Deficits mounted alarmingly! The MAA provided subsidies but even that dried up in 1945, whereupon the journal abruptly ceased publication. Fortunately, in 1947 Glenn James assumed sponsorship, resumed publication, and shortened the title to *Mathematics Magazine* from the name *National Mathematics Magazine* that had been used since 1934. But by 1959 deteriorating eyesight

caused him to negotiate and the December 1960 issue revealed the complete transfer to the MAA. In 1974 the MAA initiated its third periodical, the *College Mathematics Journal*, which had been published by Prentice-Hall as the *Two-Year College Mathematics Journal* the previous four years.

During the interwar years the MAA sponsored several studies of undergraduate mathematics courses, especially at the freshman and sophomore levels. At the 1922 summer meeting, J.W. Young proposed a general one-year course for freshmen that would meet the needs of those pursuing upper-level mathematics as well as those not continuing. Like today, there was little agreement on the contents of such an integrated course. Five years later an MAA committee headed by A.A. Bennett supported traditional instruction during the first two years but suggested that a certain amount of historical and philosophical background could provide additional mathematical concepts. The committee also drew up a suggested list of readings, a precursor to today's "Basic Library List."

The Great Depression exacted a distressing toll on the profession but the MAA addressed the employment problem directly. In 1932 the Board discussed the training of Ph.D. students for teaching at junior colleges or high schools due to the scarcity of available professorships. The next year those Trustees asked Arnold Dresden (MAA president, 1933-1934) to appoint a Commission on the Training and Utilization of Advanced Students in Mathematics. Under the leadership of Northwestern University chair E.J. Moulton, the Commission cautioned graduate students considering teaching in secondary schools to satisfy legal requirements of any state where they might teach. In 1934 the Commission issued a report describing the unemployment situation facing the 180 mathematics Ph.D.s seeking positions for 1934-1935. Only 14 were unemployed but many others held "makeshift" positions [16, p. 143]. Yet the Commission forecasted correctly that demand would soon exceed the supply of Ph.D.s so no further action was taken and the situation improved markedly in later years.

The other big activity taken in response to external demands of the profession took place when the MAA acted swiftly after war broke out in Europe in September 1939. Within a month the Board of Trustees authorized W.B. Carver (MAA president 1939-1940; chair at Cornell) to consult with AMS president G.C. Evans (the chair at UC Berkeley) about appropriate measures regarding national defense. The result was the joint War Preparedness Committee that presented its report at the summer 1940 meeting held at Dartmouth College [15]. The report listed three

recommendations: 1) competent secondary students should take the maximum amount of mathematics courses available, and colleges should offer courses in 2) mechanics, probability, surveying, navigation, and other essentials of military science, and 3) applied mathematics at the graduate level. This Committee also compiled and maintained a register of vacancies and availability of mathematicians for service throughout the war.

## **MAA Activities II: 1955-2014**

What is the distinctive role of the MAA? The founders viewed the pedagogy of collegiate mathematics as its distinguishing characteristic yet over its first 40 years the Association mainly held meetings, elected officers, selected hour speakers, and published a journal, all of which duplicated AMS actions. The critical event that separated these two national organizations occurred during the presidencies of Edward J. McShane and William L. Duren Jr. 1953-1956. These two leaders had been friends from their undergraduate years at Tulane and graduate studies at Chicago, where both earned Ph.D.s in 1930. Duren returned to Tulane upon graduation and taught there until 1955. He then joined McShane at Virginia, where he had been since 1935.

Both McShane and Duren had established solid reputations in research by 1955, which was typical of most MAA leaders. But their experiences in teaching propelled them into roles that altered the character of the MAA. Before assuming the MAA presidency in January 1953 McShane had settled upon the idea that the cornerstone of his term would be to dramatically improve undergraduate instruction in mathematics. His first action was to establish the Committee on the Undergraduate Mathematical Program (**CUP**), where by “program” he meant not only the curriculum but faculty and students as well. He appointed Duren to chair CUP.



The idea of organizing a national committee to deal with the undergraduate program seems commonplace today but in retrospect this was an unusual move for the MAA and would be the first in a series of broad strokes that would distinguish it from the AMS. This was not the first MAA committee to deal with curricular issues, as noted above. However, even the massive NCMR report from 1923 dealt only with secondary education.

Duren was the perfect choice to head CUP. As chair at Tulane he had established a graduate program in 1947 with grants from the Office of Naval Research administered by Mina

Rees. But the program had a low success rate, which Duren attributed to poor undergraduate training. His idea was to replace the traditional freshman college algebra course by calculus or by a general analysis course including calculus.



CUP acted with dispatch and filed a report to the Board at the 1953 summer meeting. The major recommendations that the Governors adopted at once were to 1) concentrate on first-year courses for able students, 2) articulate with physicists and engineers, and cultivate contacts in the social sciences, 3) avoid overemphasizing abstract topics, and 4) enlist college instructors in the process.

Two future MAA presidents were instrumental in these activities: Albert Tucker (1961-1962) and G. Baley Price (1957-1958). Duren had met Tucker during a sabbatical year at the Institute for Advanced Study in the mid-1930s, and credited him with getting the idea of replacing the college algebra course with calculus accepted: “Tucker gave it the prestige of Princeton, which was essential to its general acceptance” [6, p. 3]. Baley Price, as chair at Kansas, obtained a small grant and devoted space from his University to support CUP members to meet during the next summer to begin to carry out details. Up to this time it had been difficult for a national group to operate in this manner.

As a result, in August 1954 CUP issued a revolutionary report urging the adoption of one universal freshman course. What set CUP apart from its predecessors was that it not only issued a set of recommendations for the course, but it produced source material for what it called the Universal Course. This material was tested at Tulane and several other institutions the next year.

CUP reached a crossroads by 1958 when it realized that although its work had been restricted to mathematics in the freshman year, only the course designed for students in the social sciences (mostly under the direction of John Kemeny at Dartmouth) had found success. But the calculus part was generally unsuccessful and the overall program for mathematics majors remained unchanged from a half century earlier. CUP members felt strongly that the time was ripe for an expanded group to investigate the matter, resulting in a conference that November to examine its work over the prior five years and to assist in formulating plans and policies for its future work.

Two of the reports from that conference described progress that had been made at the pre-college level on what came to be called the New Math. One was by Max Beberman, the head of the University of Illinois Committee on School Mathematics, which had been formed in

1951 to develop a four-year program of high-school mathematics based on conceptual understanding as well as manipulative skills. With the help of Bruce Meserve at Vermont, the group produced mimeographed notes that were distributed to high-school teachers throughout Illinois. Those notes were then revised based on feedback and redistributed the following year. The initial aim was to be experimental but by the 1960s this aspect got lost because those mimeographed notes were converted into the *High School Mathematics* textbook series published by Heath starting in 1964.

The other report anticipating the New Math was given by Edward G. Begle, who had just been appointed as director of the School Mathematics Study Group (**SMSG**), an eight-person group created by the AMS. The launch of Sputnik in the fall of 1957 helped SMSG gain substantial support from NSF. However, the AMS distanced itself from the project's further activities and neither the *Bulletin* nor the official book on the history of the Society 1938-1988 (edited by Everett Pitcher) contains any mention whatsoever of SMSG. Nonetheless, efficient writing groups produced books that were adopted worldwide and developed ways of testing their success. Ultimately, however, parents and teachers joined in a massive public backlash against the New Math by the end of the 1960s and consequently SMSG fell out of favor.

Five other reports from the November 1958 CUP conference indicate other types of activities that were of prime interest at the time:

1. Films and television for mathematical instruction
2. The role of numerical analysis in the undergraduate program
3. Undergraduate statistics in a mathematics department
4. The mathematical training of social scientists
5. The relation of mathematics to physics instruction

For our purposes, however, the most important report was given by W.L. Duren, who reviewed CUP accomplishments over the preceding six years. He noted that although CUP had made no specific curricular suggestions, its members felt strongly that they had completed their mission, yet they recommended that a much broader study be carried out by an expanded group. The name of the new group changed slightly, the Committee on the Undergraduate Program in Mathematics (**CUPM**), but it included most of the original members. R. Creighton Buck was appointed chair. CUPM set about expanding its investigation into the entire undergraduate

program and five years later the Committee published its most important document. Over that period CUPM issued several vital reports that laid the foundations for the critical one in 1963.

One of CUPM's first official acts was to establish a Panel on Teacher Training under John Kemeny with a charge to prepare a set of recommendations of minimum standards for the training of teachers on all levels. Another initiative was to establish a Consultants Bureau to aid colleges and universities in upgrading and revising their present undergraduate mathematics offerings or with planning new curricula. CUPM also conducted a massive survey to learn about course offerings at smaller institutions; its findings were very revealing and paint a telling picture of the mathematics undergraduate program *circa* 1960. In addition CUPM formed the Panel on Physical Sciences and Engineering to investigate the mathematics curriculum as it related to those clients.

Arguably the most important group that CUPM assembled was the Panel on Pregraduate Training (**PPT**), initially chaired by Berkeley's John C. Moore. PPT began in 1960 by constructing an idealized program suitable for honors students in mathematics. Two years later the Panel issued a report in the *Monthly* listing its recommendations for an honors program in mathematics that had received the approval of the full CUPM beforehand [14]. PPT recommended a modicum of the algebra of vector spaces as well as the introduction of appropriate geometric and topological concepts into the 12-hour calculus sequence. Beyond that, the Panel endorsed a one-semester course on linear algebra at the sophomore level. Regarding upper-level courses, PPT listed five (or six) courses that every college should offer its majors: two in real analysis, one in each of abstract algebra, complex analysis, and geometry-topology, and either probability or mathematical physics.

Of the four panels that performed a major portion of the CUPM work, PPT became the most influential. The critical CUPM report presented the PPT's set of recommendations in 1963. The next year CUPM executive director A.B. Willcox wrote a rather extensive, though whimsical, summary for the *Monthly*. The crux of the recommendations was to bridge the gap between undergraduate instruction and contemporary mathematics by "an idealized program which, while keeping in touch with reality, would also help set the pace for curricular improvements for some years to come" [24, p. 1120].

Alan Tucker recently described how, in spite of all of CUPM's work and its vetting process, the curriculum proposed in the 1963 report was soon seen to be overly ambitious [23].

To compensate, two years later CUPM issued a revision recommending a watered-down version. The full set of recommendations in the 1965 report was sent to all mathematics departments, with complimentary copies available for MAA members. CUPM provided course outlines as samples for all lower-division and most upper-division courses. In an attempt to gain grassroots support, the Committee asked MAA sections to evaluate the proposed curriculum and publish their findings in the *Monthly*. Many did, and almost every issue contained sectional reports on the CUPM recommendations over the next few years.

Nonetheless, the actions taken by CUPM in its reports from 1963 and 1965 were monumental and allowed William Duren to answer the question, What was the *raison d'être* of the MAA? When the MAA celebrated its semicentennial he concluded (with brutal honesty), “I finally decided that [the] MAA existed to give comfort and status to college mathematicians ... This role of the MAA continues today [1967], but no longer as its only role” [5, p. 24].

The vetting process of the 1965 CUPM report by MAA sections and numerous colleges and universities over the next several years showed that it too was overly ambitious. Consequently the Committee proposed dramatic changes when it issued a new set of recommendations in 1972. This time the MAA issued a two-volume, 700-page publication that included a 64-page extensive revision of the earlier report called “Commentary on ‘A general curriculum in mathematics for colleges’.” It also contained a 32-page Basic Library List.

The gist of the “Commentary” was a curriculum of 12 courses aimed at what the CUPM regarded as the three major problem areas: 1) the evolving nature of mathematics, 2) the service functions of mathematics departments, and 3) prerequisites for entry into the program and requirements for graduation. Regarding 1) the Commentary suggested using the broader term “mathematical sciences” to account for the subject’s growing interconnections with other human endeavors. Was calculus still the bedrock for the mathematical sciences? CUPM nodded in the affirmative. The report also recommended multiple curricula to account for 2). For 3), although CUPM did not go beyond recommending that the mathematics curriculum provide suitable points of entry for all students, the MAA ultimately became involved in constructing its own placement tests for use by colleges.

The curriculum for mathematics majors that CUPM recommended in its 1972 report proved to be poised at the right level and was flexible enough to accommodate future changes. It has basically withstood the test of time over the past 42 years, with slight alterations since then to

address ongoing changes in the nature of mathematics. For instance, the report recommended two linear algebra courses, one essentially dealing with  $\mathbb{R}^n$  and the other proof theoretic (dealing with vector spaces over fields, triangular and Jordan forms of matrices, dual spaces and tensor products, bilinear forms, and inner product spaces). CUPM also advised that every college offer courses in abstract algebra and applied mathematics, though the latter proved to be problematic for many institutions. One other notable recommendation was that probability and statistics should be offered over two semesters and not combined into one.

The flexibility built into the 1972 report allowed the mathematics major to seamlessly adjust to two developments since then. One was the “Introduction to Proofs” course aimed at easing the transition from computational to conceptual mathematics. The other was the reduction to one sophomore-level course in linear algebra that continues to have wide variation. Alan Tucker has singled out the period 1955-1974 as the Golden Age of Mathematics Majors, and CUPM played an important role in shaping the curriculum during that period [23].

The 1972 report was not the last one issued by CUPM. A successor in 1981, for instance, recommended a multi-track structure to account for various alternatives within the mathematical sciences. Later activities brought CUPM into collaboration with NCTM in recommending sometimes controversial standards. Even now this influential Committee is preparing an updated report in 2015.

The emphasis here has been on CUPM’s recommendations on the undergraduate program for mathematics majors but from its founding in 1958 the Committee also formed subcommittees on teacher training, applied mathematics, and statistics whose findings were instrumental in the lists of recommendations. Later CUPM added panels on two-year colleges, computer science, and minority participation to address the evolving nature of college mathematics and those who teach and study it. Most of these committees are no longer linked to CUPM.

My history of the MAA EPADEL Section shows that up to the 1950s, its leaders were research mathematicians and its annual meetings generally featured lectures on cutting-edge advances. After that time the section began to expand horizons into various pursuits under the direction of a new generation of college professors. That account reads, “From 1956 to 1978 the character of the section changed from one devoted almost exclusively to the development of mathematics to one that sponsored a variety of activities on pedagogical and curricular themes” [27, p. 137]. These new activities included high-school contests, a newsletter, a panel on

industrial opportunities, sessions of undergraduate speakers, competitions, films, presentations and workshops on curriculum and pedagogy, and special interest groups.

The national MAA has been involved in all of these activities, and more, since that time and up to the present. One of the most successful was the result of an MAA Task Force formed in 1988 to address the issue of communities underrepresented in mathematics. Two years later the MAA established **SUMMA** (Strengthening Underrepresented Minority Mathematics Achievement) to increase the representation of minorities and improve the education of minorities in mathematics. The initial fulltime staff consisted of William Hawkins and Florence Fasanelli. During 1991-1997 SUMMA sponsored five conferences for project directors through its Consortium of Intervention Programs, two national conferences devoted to the issue of attracting minorities into teaching mathematics (with proceedings published by the MAA), and a survey of minority graduate students in the mathematical sciences. In 1994 the MAA began sponsoring the David Blackwell Lecture at its annual winter meeting, named in honor of the distinguished African-American mathematician; it has been sponsored solely by the National Association of Mathematicians at MathFests since 2006. In the second half of the 1990s SUMMA developed an archival record of minority Ph.D.s; implemented calculator-based, technical-assistance projects; conducted calculator workshops for tribal college faculty; and published a poster on African and African-American pioneers in mathematics. Since 2000 SUMMA inaugurated the National Research Experiences for Undergraduates Program and developed the Tensor program designed to encourage the pursuit and enjoyment of mathematics among middle school students, high school students, and beginning college students from groups traditionally underrepresented in mathematics.

Similarly, the Association of Women in Mathematics (**AWM**) was established to improve the status of women in mathematics, from changing attitudes about girls' ability to learn mathematics as early as elementary school to ending discrimination against professional women in mathematics. Although the MAA was not directly involved in the founding of AWM, in a speech at an MAA meeting in 1990 Judy Green noted:

The [AWM] was formed in January 1971 with a goal of encouraging the participation of women in mathematics and, at the summer meeting that year, the MAA sponsored a panel entitled "Women in Mathematics." In January 1974, the Board of Governors approved a recommendation "that the MAA participate in a joint committee with AMS in an investigation of the status of women in Mathematics." That Joint Committee still exists and has been expanded to include

representatives of the other mathematical organizations. ... The MAA Committee on the Participation of Women was ... formed [in] 1987.

The AWM inaugurated a series of lectures at the 1996 MathFest to enhance the attraction of women and minorities into scientific careers. These lectures became a joint effort of the AWM and the MAA eight years later, when the name was changed to Etta Z. Falconer Lectures.

The Blackwell and Falconer lectures are but two of several that the MAA sponsors each year to honor a mathematician. The earliest were Hedrick Lectures, named after the first president when established in 1952; these three-lecture series have been held at summer meetings and MathFests. Two lecture series have been created in the last sixteen years. The Leitzel Lectures were established in 1998 for the improvement of mathematical sciences education to honor James R.C. Leitzel for his efforts in improving that field. And the Porter Public Lectures, established in 2010 and sponsored jointly by the MAA, AMS, and SIAM, deal with a mathematical topic accessible to the broader community; they honor former MAA treasurer and now retired University of Pennsylvania mathematician Gerald Porter and his wife Judith, a retired professor of sociology at Bryn Mawr College.

Another successful MAA activity, launched in 1994, is **Project NExT** (New Experiences in Teaching), a professional development program for new and recent Ph.D.s in the mathematical sciences that introduces them to senior established mathematicians, which had been very hard until then. The program helps to ease the graduate-student-to-faculty-member transition by addressing all aspects of an academic career: teaching, scholarship, and professional activities. Workshops, national meetings, and an electronic discussion list help Fellows develop a network of peers and mentors as they assume their new responsibilities. Almost 1500 Project NExT Fellows have been chosen to date. At national meetings they wear different colored dots on their badges to help them identify each other by year; the first ones wear red dots and a recent *Monthly* author described himself as “a ‘brown-dot’ Project NExT fellow” [22, p. 915]. Many Fellows have become national leaders; for example, 1996 Fellow (blue dot) Francis Su is MAA President-Elect for 2014. The program was initially funded by the Exxon Education Foundation (now the ExxonMobil Foundation). The biggest current funder is the Mary P. Dolciani-Halloran Foundation.

In 1999 an MAA Task Force headed by Ed Dubinsky and Ann Watkins reviewed the Association’s status heading into the 21<sup>st</sup> century. The most successful of the Task Force’s five priority action recommendations seems to have been the formation of Special Interest Groups—

**SIGMAAs.** Designed to take advantage of affordable online communication, the first specially focused group was formed in January 2000—SIGMAA RUME (Research in Undergraduate Mathematics Education). Two more SIGMAAs were formed over the next two years, whereupon the Task Force was disbanded and replaced by the standing Committee on SIGMAAs (now headed by Amy Shell-Gellasch). As of 2014 there were a dozen active SIGMAAs, with another in the works.

## **Prizes and Awards**

In 1925 MAA president Julian L. Coolidge donated money to establish the MAA's first award, the Chauvenet Prize for an outstanding expository article by an MAA member. The first recipient was G.A. Bliss. By the time the second Chauvenet Prize was given to T.H. Hildebrandt in 1929 the funding for the award had been supplemented by donations from the next two MAA presidents, Dunham Jackson (1926) and Walter B. Ford (1927). The Prize was awarded every three years from 1929 until 1963, when it began being awarded annually.

The MAA has created eight other writing awards since then. The first was the Lester R. Ford Award, established in 1965 for expository articles published in either the *Monthly* or *Mathematics Magazine*. Six awards were given that year. In 1976 the Allendoerfer Award was created for articles in *Mathematics Magazine*. From that time onward Ford Awards were restricted to the *Monthly*, with up to five given each year. In 2012 the Board of Governors designated this the Halmos-Ford Award.

The other writing prizes are (1) the Pólya Award, established in 1976 for expository articles published in *The College Mathematics Journal*, (2) the Beckenbach Book Prize, funded in 1986 as the successor to the MAA Book Prize, which had been created four years earlier, (3) the Hasse Prize, funded in 1986 by an anonymous donor for expository papers appearing in an Association publication, (4) the Evans Award, established by the Board of Governors in 1992 and first awarded in 1996, for articles in *Math Horizons* accessible to undergraduates, (5) the Robbins Prize, established in 2005 for outstanding papers in algebra, combinatorics, or discrete mathematics, and (6) the Euler Book Prize, established in 2005 with a gift from Virginia and Paul Halmos.

The MAA did not create any awards after the Chauvenet Prize until 1961, when the Board of Governors established the Award for Distinguished Service to the Association. It was

intended to be the MAA's most prestigious honor for service; the first recipient (in 1962) was Mina Rees. The endowed successor to this award is the Gung and Hu Award for Distinguished Service to Mathematics, which was first presented in 1990 (to Leon Henkin).

The MAA has created four other awards for service since the late 1970s. The first was the Certificate of Merit, given at irregular intervals for special work or service associated with the mathematical community. The first recipient was Henry M. Cox in 1977. Six years later the Board of Governors established a Certificate for Meritorious Service for service generally to an MAA section. The first certificates were presented in 1984. Four years later the Joint Policy Board for Mathematics created a Communications Award to reward and encourage communicators for informing the public about mathematical ideas. (The JPBM is a collaborative effort of the MAA with the AMS, SIAM, and the ASA.) Finally the Dolciani Award was established in 2012 for mathematicians who make distinguished contributions to the mathematical education of K-16 students in the United States or Canada.

In addition to awards for writing and service, the MAA began to create prizes for teaching about 25 years ago. The first was the Award for Distinguished College or University Teaching of Mathematics established in 1991 to honor annually at most three extraordinarily successful teachers whose influence extended beyond their own institutions. Two years later it was renamed in honor of Deborah and Franklin Tepper Haimo; D.T. Haimo was MAA president 1991-1992. In 2003 the Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member was created for undergraduate mathematics teachers. A recent award combines teaching and research—the Selden Prize for Research in Undergraduate Mathematics Education, was established in 2004 for teachers with significant records of published research in undergraduate mathematics education.

In 1926 Elizabeth Putnam created a trust fund to encourage team competition in college studies. Upon her death eight years later, the Putnam Competition assumed its present form and was administered by the MAA, which established an award for undergraduate students when the examination was first held in 1938. While that award is named for her husband, William Lowell Putnam, the Elizabeth Lowell Putnam Prize was established in 1992 for women with the highest scores. Since 1995 the Frank and Brennie Morgan Prize has been awarded jointly by the MAA, AMS, and SIAM to undergraduates for outstanding original work.

## **MAA Headquarters**

The MAA lived a vagabond existence over its first 60 years, with headquarters located at the home institution of its secretaries. Those officers passed along the massive records from one to another up to 1978, when a central organizational location was established. That year the MAA purchased a three-building complex at 1529 18<sup>th</sup> St. NW in Washington DC that has served as the Association's headquarters since then. The acquisition of the properties was aided by two anonymous members who pledged substantial amounts of money toward the project.

In 2002 a \$3 million donation from Paul and Virginia Halmos restored one of the three buildings, the Carriage House, which is located behind the two buildings housing MAA headquarters and the Washington DC offices of the AMS. The Carriage House serves as a mathematical sciences conference center. The MAA used the gift to renovate the interior completely. The Carriage House was built in 1892, eleven years before the building housing MAA headquarters.

## **Conclusion**

The MAA was founded in late 1915 by an exuberant group dedicated to the interests of collegiate mathematics. H.E. Slaughter (the father of the Association) and E.R. Hedrick (the first president) were at the forefront of this movement. With a large membership from the beginning, the Association engaged in many activities from the founding up to the mid-1950s. Most of these activities were similar to AMS actions, especially meetings at the national and sectional level. The second half of the decade saw the MAA distinguish itself from the AMS under the leadership of E.J. McShane and W.L. Duren Jr. The formation of CUPM was, and remains, critical for defining the undergraduate mathematics major.

This article also discussed MAA sections, prizes, awards, and headquarters. Many other aspects of the Association will be described in a forthcoming volume produced by the MAA Centennial Committee.

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