

The Maryland-District of Columbia-Virginia  
Section of the  
Mathematical Association of America:  
The First One Hundred Years

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v. 1.3



# The Beginnings

Jon Scott, Montgomery College

The Maryland-District of Columbia-Virginia Section of the Mathematical Association of America (MAA) was established, just one year after the MAA itself, on December 29, 1916 at the Second Annual Meeting of the Association held at Columbia University in New York City. In the minutes of the Council Meeting, we find the following:

A section of the Association was established for Maryland and the District of Columbia, with the possible inclusion of Virginia. Professor Abraham Cohen, of Johns Hopkins University, is the secretary.

We also find, in “Notes on the Annual Meeting of the Association” published in the February, 1917 *Monthly*,

The Maryland Section has just been organized and was admitted by the council at the New York meeting. Hearty cooperation and much enthusiasm were reported in connection with this section.

The phrase “with the possible inclusion of Virginia” is curious, as members from all three jurisdictions were present at the New York meeting: seven from Maryland, one from DC, and three from Virginia. However, the report, “Organization of the Maryland-Virginia-District of Columbia Section of the Association” (note the order!) begins

As a result of preliminary correspondence, a group of Maryland mathematicians held a meeting in New York at the time of the December meeting of the Association and presented a petition to the Council for authority to organize a section of the Association in Maryland, Virginia, and the District of Columbia.

On the surface at least, it seems those “Maryland mathematicians” did have our entire region in mind all along. At any rate, what we now officially know as the Maryland-District of Columbia-Virginia Section became the seventh section of the MAA, the first beyond the mid-west region of the country. [For the record the first six sections were: Kansas, Ohio, Missouri, Iowa, Indiana, and Minnesota (now part of the North Central Section). The claim of who was actually first is a constant source of discussion.]

The first Section Meeting was held at Johns Hopkins University on March 3, 1917, and was attended by 38 people, including 23 members of the MAA. Of those 23, 17 were from Maryland and 6 from DC. An Executive Committee of three was elected: Abraham Cohen of Johns Hopkins University, President (Chair); Ralph E. Root of the US Naval Academy, Secretary-Treasurer; and Walter D. Lambert of the US Coast and Geodetic Survey, member of the Executive Committee. The program consisted of two papers, with moderated discussion: “The Aims and Possibilities of this Local Section” by R. E. Root (USNA), and “A College and University Course for Teachers of Secondary Mathematics” by L. S. Hulburt (JHU). Wouldn't it be wonderful if we knew more of the content of these papers and the discussions that followed? Alas, we do not.

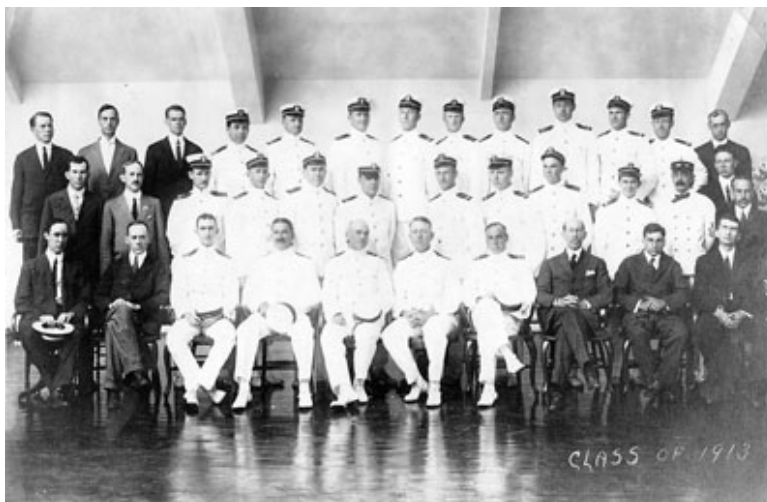
## Before the Section

Let's return to the beginning of the MAA itself at the end of December, 1915 to note participation by members in what will become our Section. Of the 104 persons in attendance at that first meeting in Columbus, just three were from what would be our section, two from Maryland and one from the District: Professor Ralph E. Root of the US Naval Academy, C. F. Van Orstrand of the US Geological Survey, and J. R. Musselman, a graduate student at Johns Hopkins University.

Professor Root was appointed to a committee to nominate the first slate of officers and executive council members. He was also appointed to the Committee on Libraries. Abraham Cohen, of JHU and our first Section Chair, and who was not at this meeting, was appointed as an Associative Editor of the *Monthly*.

Professor Root on January 4, 1916, wrote to the Board of Editors of the *Monthly* (published in the February, 1916 issue) on the topic of what he referred to as "economic considerations ... of very vital import to the average teacher of mathematics." Stating that salary, rank, and professional standing mostly have depended on research, and that this has "...resulted in great emphasis on activities in research and small emphasis on effective teaching, when appointments and promotions are considered," he goes on to recommend "...The new association should become an avenue through which an effective teacher may gain the good opinion of the profession at large because of the quality of his work and through contributions to the solution of the problems of the teacher."

Individuals who joined the Association prior to April 1, 1916 were deemed Charter Members. A total of 58 individuals from the future MD-DC-VA Section became Charter Members of the MAA: 26 from Maryland, 15 from DC, and 17 from Virginia.



*U.S. Naval Academy Postgraduate Department class of 1913. Professor Ralph Root, the Department's first civilian faculty member after whom Root Hall is named, is in the second row, far left.*

# The First Ten Years of the Maryland-DC-Virginia Section of the Mathematical Association of America, 1917-1926: Reflections

Ezra Brown  
Virginia Tech

The early years of the Maryland-District of Columbia-Virginia Section of the Mathematical Association of America are fascinating. Let's begin with a sample of current levels of meeting activity. At the 2016 MD-DC-VA Spring Section meeting, there was a Section Officers Meeting, a workshop, a reception, a banquet with welcoming address by the president of the institution, a banquet address, a host of activities for our Section NExT, forty-three contributed papers spread over seven sessions involving forty-nine authors or coauthors and including twenty-seven students, three panels (on inquiry based learning, the mathematical preparation of future high school math teachers, and calculus and the HS/College interface), two invited hour addresses, lunch, a meeting of the general membership, a Radical Dash competition, a student poster session with seven posters involving nine students, a Student Jeopardy competition, and an undergraduate prize session. Including the invited speakers, there were forty-six talks given at the meeting, and there were more than 150 attendees.

In contrast, during the first ten years there were twenty section meetings with a total of 150 talks presented in all, and only one of them was a joint paper. Of these talks, the speakers for 99 of them came from three institutions. Two of them were Johns Hopkins University and the United States Naval Academy. The third was – and this is not a misprint – the United States Coast and Geodetic Survey.

The first contributed talk by a woman in our section was at the third section meeting, and women were regular attendees and presenters almost from the very beginning. One of the early talks was by a woman at Hood College. One of the early meetings was at the Drafting Room at the US Capitol.

## Talks I wish I had heard

- “The aims and possibilities of this local section,” by Professor R. E. Root of the US Naval Academy (USNA), was the very first talk ever given at a MD-DC-VA Section meeting, held at Johns Hopkins University (JHU) on March 3, 1917. Just to be at the first meeting and hear the first talk ... just to be in on the beginning of it all.
- Most of Frank Morley's talks, especially one at the tenth section meeting about Ptolemy's Theorem.
- A talk from the Ninth Section meeting on May 7, 1921 by Mr. W. E. Heal on Fermat's Last Theorem. Always an interesting topic, but in addition, it was given by a researcher at the US Coast and Geodetic Survey (!) at a meeting held (for the first and only time) in the Drafting Hall of the United States Capitol!
- A talk from the Third Section meeting on May 4, 1918 at Catholic University of America “On the Missouri system of grading students” by Professor Florence P. Lewis of Goucher College. Women were giving talks at our section meetings almost from the very beginning. A good sign of our Section's health.
- From the Sixth Section Meeting (GWU, December 1919), a talk by Mr. A. S. Hawkesworth of Naval Ordnance: “Proof that in a plane world infinite in extent, but finite in thickness, gravity would be a constant at any altitude.” I would certainly have been at that talk.

- A talk from the Tenth Section meeting (JHU, December 10, 1921) entitled “The fluctuating attitude toward mathematics” by Mr. Harry English of the Washington DC High Schools. Nearly a century later and not much has changed!
- A talk on binary octic forms.

#### Famous or especially interesting speakers

- At Section Meeting 2, a talk on differential equations by Professor Arthur Byron Coble of JHU. Professor Coble did research in finite geometries, their associated symmetry groups, and general geometric transformations. At the time of this meeting, he was vice-president of the AMS and eventually served as AMS President in 1933-34. To hear one of the pre-eminent American mathematicians of the day give a talk at the second of our section meetings: that would have been a treat.
- At Section Meeting 3, a talk by Frank Morley of JHU, who was A. B. Coble’s doctoral advisor, famous in his own right about his remarkable Trisector Theorem. Morley spoke at eleven of our Section’s first 20 meetings.
- The eminent mathematical physicist George Y. Rainich of JHU gave talks at four of our early section meetings, including one “by invitation” about number theory.

#### Hot topics or common themes

- Military themes and topics, as might be expected from the Section that includes quite a large number of government installations where mathematical research was being done with specific military applications in mind. The Section began its existence during World War I, and defense of the Atlantic Coast was certainly an application that generated research in quite a number of different areas of mathematics.
- Even so, there were plenty of research talks on such topics as Grassmann’s *Ausdehnungslehre*, curves of pursuit, the mathematics of Einstein’s theory of relativity, geometry, transfinite ordinals, Laplace’s equation, algebraic curves, distinguishing between primes and composite numbers of large size, invariant theory, growth functions, number theory, and probability. Finally, there were plenty of talks aimed at the teaching of mathematics going all the way back to L. S. Hulburt (JHU) who gave “the other talk” at our very first Section meeting, on “A college or university course for teachers of secondary mathematics.” [Our very first section meeting and we are hearing about courses specifically aimed at teachers of mathematics. How about that.] Subsequent meetings brought talks on a college training course in secondary mathematics, the teaching of limits, a symposium on mathematics for engineering students, changes in the mathematical courses in high school, and special methods used in a course in analytic geometry.

#### How the talks at the meetings reflected what was going on in the world

- In those days, there were talks about applications of mathematics to problems of interest to the Department of War – and nowadays there are talks about applications of mathematics to problems of interest to the Department of Defense.

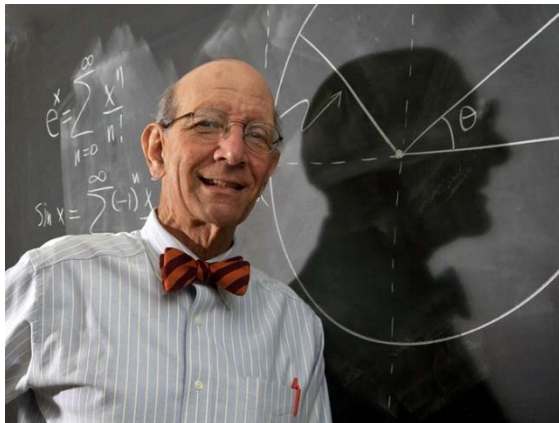
- In those days, there were talks about the teaching of high-school mathematics and about revising mathematical curricula for undergraduates. Nowadays, well, the tone of the talks is different, but a century later we're still struggling with the same issues.
- In those days, there were talks about interesting research topics. Nowadays, it's the same.

Final thoughts...

Just this: nowadays, the attendees at our section meetings are math nerds interested in talking about, learning about, and teaching math. A hundred years ago, it seems that their meetings had the same feel. The principal difference is that we now encourage our students to engage in mathematical research and to embrace their inner geek.

In short, we would have felt right at home going to MD-DC-VA meetings in those days. "The more things change ..."

We've had a great section for a hundred years, and the MAA is still a place where you meet the nicest people.



# The First Decade

## Section Meetings 1917-1926: A Snapshot

Number of Meetings: 20

Number of Papers: 145

Number of Papers per Meeting:

Minimum: 2

Median: 7.5

Maximum: 12

Number of Presenters: 70 (6 Women, 64 Men)

## Women Presenters

Katherine S. Arnold, Hood College

A course in analytic geometry, special methods used (May, 1926)

Clara L. Bacon, Goucher College, Discussion Leader

A college or university course for teachers of secondary mathematics ( March, 1917)

Content of a course in analytic geometry (January, 1919)

Sarah Beall, U. S. Coast and Geodetic Survey

Determination of longitude by the U. S. Coast and Geodetic Survey (Illustrated) (May, 1920)

The identification of stars (May, 1925)

Florence P. Lewis, Goucher College

On the Missouri system of grading students (May, 1918)

Report of the Summer Meeting of the Association at Ann Arbor, Michigan (with G.H. Cresse, December, 1919)

Miss A. Marie Whelan, Johns Hopkins University

Invariants of the binary octavic (May, 1923)

Elizabeth W. Wilson, Central High School, Washington, DC

The summation method for the determination of the Pearsonian coefficient of correlation (December, 1924)

Statistics as an aid in secondary school administration (May, 1926)

## Most Frequent Speakers

<b>Speaker</b>	<b>Institution</b>	<b>Number of talks</b>
Frank Morley	Johns Hopkins University	13
F. D. Murnaghan	Johns Hopkins University	11
W. D. Lambert	U. S. Coast and Geodetic Survey	10
O.S.Adams	U. S. Coast and Geodetic Survey	7
R. E. Root	U. S. Naval Academy	5

## Types of Institutions Represented

<b>Affiliation of Speakers</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
College or University	46	98
Government (non-military)	15	37
Military	4	6
High School	3	5
Unknown	2	2

## Institutions Providing the Most Presenters

<b>Affiliation</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
Johns Hopkins University	13	44
U. S. Naval Academy	20	39
U. S. Coast and Geodetic Survey	6	24

## Meeting Hosts

<b>Institution</b>	<b>Number of meetings</b>
Johns Hopkins University	6
U. S. Naval Academy	4
St. John's College	3
George Washington University	2
Catholic University of America	1
Drafting Hall, U. S. Capitol	1
Goucher College	1
National Bureau of Standards	1
Thompson School	1

## Invited Addresses and/or Special Sessions

March, 1917

**The aims and possibilities of this local section**

Professor R. E. Root, U. S. Naval Academy

**Discussion**

A. E. Landry, Catholic University

W. D. Lambert, U.S. Coast and Geodetic Survey

Frank Morley, Johns Hopkins University



May, 1919

**Symposium on Mathematics for Engineering Students**

- a) Paper, Prof. Abraham Cohen, Johns Hopkins University (Mathematics)
- b) Discussion, Prof. Alexander Dillingham, U. S. Naval Academy (Mathematics)
- c) Paper, Prof. T. J. MacKavanagh, Catholic University (Engineering), by invitation
- d) Discussion, Prof. L. A. Doggett, U. S. Naval Academy (Engineering), by invitation
- e) General Discussion

May, 1922

**On Graeffe's method for the numerical solution of algebraic equations (illustrated)**

Professor L. B. Tuckerman, U. S. Bureau of Standards, by invitation

December, 1923

1. **The use of mathematics in naval construction**

Commander A. J. Chantry, Jr., U.S.N.

Head of the Department of Mathematics, U. S. Naval Academy, by invitation

2. **A question in the theory of numbers**

Dr. G. Y. Rainich, Johns Hopkins University, by invitation

May, 1924

**Vectors in the foundations of geometry**

Dr. G. Y. Rainich, Johns Hopkins University, by invitation

December, 1924

**Special Session on Relativity**

**Physical aspects**, Dr. Paul R. Heyl, Bureau of Standards

**Mathematical aspects**, Professor F. D. Murnaghan, Johns Hopkins University

**General discussion**, Dr. G. Y. Rainich, Johns Hopkins University

December, 1926

1. **The theorems of Menelaus and Ceva and their extension**

Dr. P. Wernicke, U. S. Patent Office, by invitation

2. **Modern navigation**

Commander A. M. R. Allen, United States Naval Academy, by invitation

3. **A monogram designed to simplify certain geodetic calculations**

H. S. Rappleye, United States Coast and Geodetic Survey, by invitation

Papers Regarding the Curriculum or Teaching

March, 1917

**A college or university course for teachers of secondary mathematics**

Professor L. S. Hulburt, Johns Hopkins University

**Discussion**

Clara L. Bacon, Goucher College

E. R. Smith, The Park School

May, 1918

1. **On the Missouri system of grading students**  
Professor Florence P. Lewis, Goucher College
2. **A college training course in secondary mathematics**  
Dr. H. C. Gossard, U. S. Naval Academy

January, 1919

1. **Content of a course in analytic geometry**  
Dr. G. R. Clements, U. S. Naval Academy  
**Discussion**  
Professor Clara L. Bacon, Goucher College
2. **The teaching of the subject of limits**  
Professor Clara E. Smith, Wellesley College

December, 1919

**Desirable changes in the mathematical courses in the high school**  
Mr. Harry English, Washington High Schools

May, 1921

**Suggestions as to improvements in text-books on mathematics**  
Professor Angelo Hall, U. S. Naval Academy

December, 1921

**The fluctuating attitude toward mathematics**  
Mr. Harry English, Washington High Schools

December, 1922

**Remarks on the proposed plan of reorganization of secondary school Mathematics**  
Professor A. E. Landry, Catholic University

December, 1924

**A laboratory course in mathematics**  
Professor R. E. Root, U. S. Naval Academy

December, 1925

**Freshman mathematics for non-technical students**  
Professor F. Borden, George Washington University

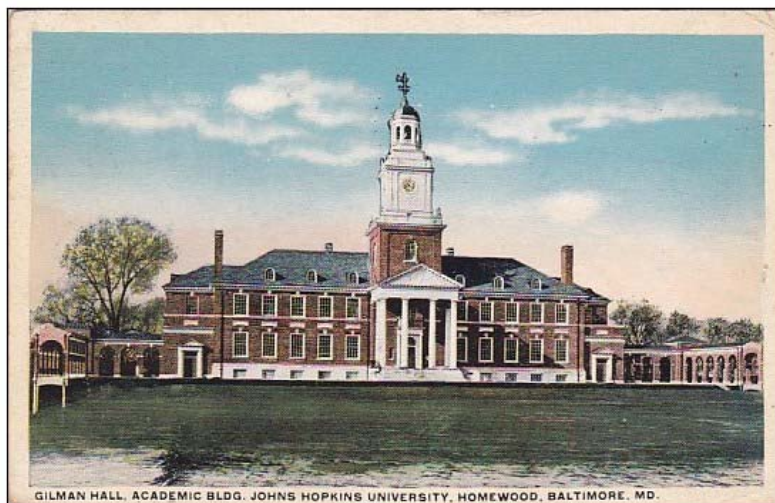
May, 1926

**A course in analytic geometry, special methods used**  
Professor Katherine S. Arnold, Hood College

In general, the meetings featured lots of interesting papers on mathematics and its applications, most notably naval and various geological applications.

## Trivia

- Original Executive Committee consisted of three members: President (chair). Secretary-Treasurer, and Member of the Executive Committee. At the Fall 1921 meeting, an additional member was added so that Washington, Baltimore, Annapolis, and the state of Virginia might each have a representative on this committee. It should be noted that this distribution of members was not always followed.
- At the Spring 1920 meeting, a committee of three was appointed to cooperate with the National Committee on Mathematical Requirements.
- The Section adopted a resolution at the Fall 1921 meeting that all members desiring to present papers at meetings should feel free to submit abstracts. (The exact wording can be found in the official report of the meeting.) This seems to imply that prior to this time, speakers at meeting were “invited” to present by the Executive Committee.
- First member from Virginia to attend a meeting: J. J. Luck, University of Virginia, Spring, 1919.
- Papers presented by members from Virginia institutions:
  - J. J. Luck, University of Virginia  
**Plane curves developed upon cylinders and cones** (Spring, 1920)
  - W. H. Echols, University of Virginia  
**A note on the roots of the derivative of a polynomial** (Spring, 1920)
  - T. McN. Simpson, Jr., Randolph-Macon College  
**Relations between the metric and projective theories of curves** (Spring, 1921)  
**The significance of assumptions** (Spring, 1922)
- It was the general practice at meetings for members from the host institution to provide lunch.
- Meetings were always open to both members and non-members. The median attendance per meeting of members only was 30.5, ranging from a low of 16 at the January, 1919 meeting to a high of 51 in both Fall, 1925 and Spring, 1926. For the seventeen meeting for which we have information, total attendance ranges from 32 to 94, with median 45.



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## Section Meetings: Reflections on the First Decade

Ethan Duckworth, Loyola University Maryland

The very first meeting was March 3, 1917, held at Johns Hopkins. I'll note that the very first meeting only had two talks, a far cry from today when we have 40--50! In fact, one of these talks wasn't about math: it was titled "The aims and possibilities of this local section," indicating they were still trying to figure out what to do with this section! At least we don't have talks like that anymore. The other talk was called "A college or university course for teachers of secondary mathematics" which sounds like it *could* be given today.

There was less **diversity of location** then as compared to now: out of the twenty meetings, six were at Johns Hopkins, four at the Naval Academy. All were in Baltimore, Washington D.C. or Annapolis.

There was more **diversity of speaker backgrounds**. Out of the 147 separate talks, 43 were from some part of the federal government (US Coast and Geodetic Survey, US Geological Survey, Bureau of Standards, Army/Navy Ordnance, Patent Office, Bureau of Plant Industry, Naval Observatory, Aberdeen Proving Grounds, Bureau of Weather) and 7 were from high schools or with no affiliation listed. So basically one-third were not from so-called higher education (colleges and universities).

There were a few **regular speakers**, as noted in the decade snapshot:

- Adams 7
- Lambert 9
- Murnaghan 11
- And a drum roll for the biggest speaker: Frank Morley 13 times over 10 years.

(Morley did six more in the next decade; so did Murnaghan. Both were at Hopkins.)

**Morley** deserves a little bio: He started at Haverford College, helped reinvigorate the Johns Hopkins math department after the departure of Sylvester (Morley become only the third head of the department, Sylvester was the first), discovered the Morley trisector theorem in plane geometry, led 50 Ph.D. students, and published a book on inversive geometry.

**Florence Lewis and Clara Bacon** might also deserve a little bio (both gave talks, Bacon also helped run a discussion); here's some info from *Pioneering Women in American Mathematics: The Pre-1940 PhD's* by Judy Green (of our Section!) and Jeanne LaDuke<sup>1</sup>:

Two women with Johns Hopkins PhD's were particularly influential at Goucher: Clara L. Bacon was on the faculty from 1897 until 1934; Florence P. Lewis from 1908 until 1947. Bacon, originally from Illinois, had graduate from Wellesley in 1890 and taught at four schools in the Midwest before moving to Woman's College of Baltimore. She had studied at the University of Chicago for six summers and acquired a master's degree in 1904. Lewis had received her bachelor's and master's degrees from the University of Texas, where she had studied philosophy and mathematics. After receiving the master's degree in philosophy, Lewis studied philosophy and mathematics at a number of schools in the United States and Europe. She earned a second master's degree, this one in mathematics, from Radcliffe in 1906.

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<sup>1</sup> Volume 34 of History of mathematics, American Mathematics Society, 2009.

In 1907 the trustees of the Johns Hopkins University voted to open graduate courses to women. In September of that year, Bacon, who had been teaching in Baltimore for ten years, and Lewis, who was at the time a tutor at the University of Texas, applied for admission to the graduate program in mathematics at Johns Hopkins. After Lewis had completed one year of full-time study at Johns Hopkins, Bacon hired her as an instructor at the Woman's College [Goucher]. In 1911 Bacon became the first woman to be granted a PhD in mathematics from Johns Hopkins. Lewis received her Ph.D., the second granted to a woman in mathematics by Johns Hopkins. Both were students of the English algebraic geometer Frank Morley.



*Clara Bacon of Goucher  
College*



*Frank Morley*

Another interesting talk: "On Fermat's Last Theorem" by **W.E. Heal**. I found a reference to him in Google Scholar<sup>2</sup> and a website<sup>3</sup> which claims that Heal was the first mathematician born in Indiana. This article mentions the talk he gave on Fermat's Last Theorem, but indicates that nothing was ever published on it. It also says "Some years after Mr. Heal's death his mathematical library of some 155 volumes was given, in 1931, to the Tulsa, Oklahoma, Public Library, where it was arranged in the Technical Department and is known as 'The Heal Mathematical Collection.' It is a representative collection of volumes of Heal's time in the fields of advanced geometry, number theory, and the Philosophy of Mathematics."

Other thoughts: 43 of the 147 talks were given by someone from Hopkins. What a loss for us that they no longer contribute at that level!

In terms of the **topics**, some sound like something I'd like to read today: "On Fermat's Last Theorem", "Modular Geometry", "Imaginary points in geometry", "Invariants under rotation", "A modern presentation of determinants," etc. Some have the same poor vague, uninformative titles that we still see today: "On a certain statistical problem", "Variation on an old theme" (this by Morley!). There are two about **pyramids** (ooh, the mystery of the pyramid! In fact, pyramids continue to fascinate: there's another pyramid paper, "On Some Mathematical Properties of the Pyramid of Cheops" by Ilhan Izmirli,

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<sup>2</sup> William Edington, *William Ephraim Heal, Indiana Pioneer Mathematician*, Proceedings of the Indiana Academy of Science, vol. 62, 1952.

<sup>3</sup> <http://journals.iupui.edu/index.php/ias/article/viewFile/5903/5912>

then a Strayer College Student, at Section meeting 160 in 1998, and another one in section meeting 128, 1982, The "Secret of the Pyramid!" by Benjamin L. Schwartz, Georgetown University).

I found myself wondering if it is possible to look up any **papers based on the talks given** then? I've tried, but it's quite hard. Frank Morley has only 5 papers listed in MathSciNet, and they end at 1907, but that's pretty inaccurate. For example, there are another 4 listed for Frank V. Morley, and these are all in Annals of Math! Clark Kiberling has a sort of article about Morley<sup>4</sup>, and he lists 30 or so papers.

For a flavor of what the talks might have been like, let me look at something Frank Morley wrote in 1919, on a topic similar to what some of his talks appear to cover: "The Lüroth quartic curve", *American J. of Math.* 41 (1919) 279-282. I'll quote from the first two sentences here, to see if the flavor of the math has changed: "It has been known since 1870 that the problem of inscribing a five-line in a planar quartic is poristic; of the ten conditions nine fall on the lines and one on the curve. Thus, the quartic is one for which an invariant vanishes, and the degree of this invariant is sought." Well, there's not a lot of explanation, the first sentence contains words I don't understand; things then were about the same as now!

We can also gain some insight into another talk from then, Section Meeting 20, December 1927, "The Byrd polar flight" by H. G. Avers, United States Coast and Geodetic Survey. This was presumably about the recent exploration attempted by Richard Evelyn Byrd, later Admiral Byrd, to fly to the North Pole. The attempt was made in May 1926, and Byrd was given credit for making it to the pole, with Congress awarding a medal of honor. But some people had their doubts about whether he made it all the way, and perhaps that's what this talk explored.

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<sup>4</sup> <http://faculty.evansville.edu/ck6/bstud/morley.html>

## Section Meetings 1927-1936: A Snapshot

Number of Meetings: 20

Number of Papers: 135

Number of Papers per Meeting:

Minimum: 4

Median: 7

Maximum: 9

Number of Presenters: 74 (5 Women, 69 Men)

### Women Presenters

Beatrice Aitchison, Johns Hopkins University (graduate student)

*Regular accessibility* (May, 1932)

*On mappings with functions of finite sections* (December, 1932)

Almeda J. Garland, Randolph-Macon Woman's College

*The extremals for a class of problems in the calculus of variations* (May, 1935)

Gillie A. Larew, Randolph-Macon Woman's College

*Some applications of Carathéodory's method of geodesic equidistance* (May, 1931)

Florence P. Lewis, Goucher College

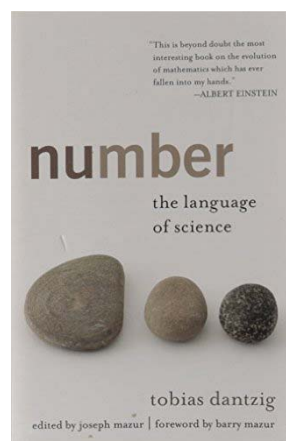
*Mathematical aspects of a theory of the frequency distribution of species* (May, 1930)

Bessie I. Miller, Rockford College, IL (on leave)

*A cubic curve and a reflector* (May, 1928)

### Most Frequent Speakers

Speaker	Institution	Number of talks
Tobias Dantzig	University of Maryland	10
Frank Morley	Johns Hopkins University	6
John Tyler	U. S. Naval Academy	6
F. D. Murnaghan	Johns Hopkins University	5
Oscar Zariski	Johns Hopkins University	5



### Types of Institutions

Affiliation of Speakers	Number of Presenters	Number of Papers
College or University	60	109
Government (non-military)	11	19
Military	4	6
Business (non-government)	1	1

## Institutions Providing the Most Presenters

Affiliation	Number of Presenters	Number of Papers
Johns Hopkins University	16	34
U. S. Naval Academy	9	19
University of Maryland	7	17
University of Virginia	7	13
U. S. Coast and Geodetic Survey	5	9

## Meeting Hosts

George Washington University	3
Johns Hopkins University	3
U. S. Naval Academy	3
University of Maryland	3
American University	1
College of William and Mary	1
Georgetown University	1
Goucher College	1
National Bureau of Standards	1
St. John's College	1
University of Richmond	1
University of Virginia	1

## Invited Addresses (and selected others)

May, 1927

**The drag of wings with end plates**

Dr. P. E. Remke, Postgraduate School, U. S. Naval Academy

December, 1927

**Observers' patterns**

Howard S. Rappleye, U. S. Coast and Geodetic Survey, invited address

May, 1928

**The first English Euclid**

Professor Walter F. Shenton, American University

December, 1928

**On Euclidean geometry**

Professor Frank Morley, Johns Hopkins University

May, 1929

**On Einstein's new theory**

Professor F. D. Murnaghan, Johns Hopkins University



December, 1929

**Packing of spheres and hyperspheres**

Michael Goldberg, Bureau of Ordnance, Navy Department

May, 1930

**The potential of a spherical zone**

W. D. Lambert, U. S. Coast and Geodetic Survey December, 1930

December, 1930

**Small vibrations of particles in systems analogous to certain organic compounds**

R. C. Yates, The Johns Hopkins University

May, 1931

**A direct analytical proof of Pascal's theorem and related theorems**

T. L. Wade, University of Virginia, invited address

December, 1931

1. **The theory of six numbers**

Professor Frank Morley, Johns Hopkins University, invited address

2. **Magic squares**

H. M. Robert, U. S. Naval Academy, invited address

May, 1932

1. **A second note on the celestial sphere**

Professor Frank Morley, Johns Hopkins University, invited address

2. **Difference equations and differential equations**

Professor Richard Courant, University of Göttingen

3. **Congruences of lines in space**

Dr. Jacob Yerushalmy, Princeton University (post-doc), invited address

December, 1932

**Recent contributions to the problem of existence of curves with pre-assigned singularities**

Professor Oscar Zariski, Johns Hopkins University, invited address

May, 1933

**The characterization of some remarkable systems of points of interpolation by means of conjugate points, of the Cotes's numbers, and of certain external properties**

Professor Lipót Fejér, University of Budapest, invited address

December, 1933

**On general aspects of the calculus of variations**

Professor Arnold Dresden, Swarthmore College, President of the MAA, invited address

May, 1934

**Some remarks concerning Finsler geometry**

J. H. Taylor, George Washington University, invited address

December, 1934

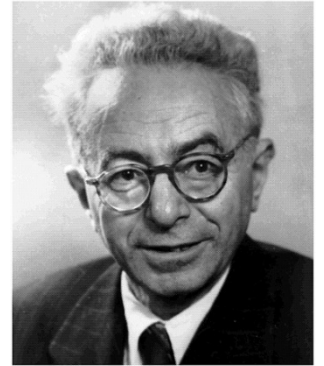
**Analytic topology**

Professor G. T. Whyburn, University of Virginia, invited address

May, 1935

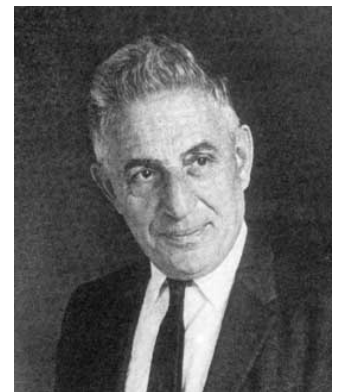
**Existence theorems for differential equations**

Professor J. M. Thomas, Duke University, invited address



*R. Courant*

*Courant*



*Oscar Zariski*



*E.J. McShane*

December, 1935

**Recent developments in the problem of Plateau**

Professor E. J. McShane, University of Virginia, invited address

May, 1936

**Some curious aspects of mathematical history**

Professor Tobias Dantzig, University of Maryland, invited address

December, 1936

1. **An episode in the life of Sylvester**

Professor R. C. Yates, University of Maryland

2. **Cremona transformations and their applications to algebraic function theory**

Professor A. E. Landry, Catholic University of America, invited address

## Papers Regarding the Curriculum or Teaching

December, 1927

**Some remarks on a recent textbook of College Geometry**

Dr. J. N. Rice, Catholic University of America

December, 1928

**Teaching limits to freshmen**

Professor R. E. Root, Postgraduate School, U. S. Naval Academy

May, 1936

**An examination for instructors in mathematics**

Professor G. R. Clements, U. S. Naval Academy

## Trivia

- At the December, 1927 meeting, members were reminded that the AMS and MAA were “making an experiment in holding their annual meeting so far south as Nashville.” Attendance was encouraged.
- Clara L. Bacon of Goucher College was elected chair (“chairman”) of the Section for the academic year 1930-31. She became the first woman to hold this position.
- At the Spring, 1930 meeting:  
“... encouragement was given to the preparation of papers appropriate to the general membership of the Association-papers more in line with the teaching membership than the graduate membership. The executive committee was asked to make an early effort to arrange programs for the meetings, and to provide for the entertainment of the group when no formal invitation was received from some institution.”
- At the Fall, 1930 meeting:  
“It was decided that the custom of having a luncheon provided for those attending the meetings of the Section should be abandoned, and that in the future each individual should personally bear the expense of his own luncheon, but that arrangements should be made for the group to have luncheon together.”
- The 29<sup>th</sup> meeting of the Section, in Spring, 1931, was held at the University of Richmond, the first meeting to be held in Virginia.

- Special tours or exhibits in conjunction with meetings:
  - Colonial museum of the Hammand-Harwood house, Annapolis, MD (December, 1929)
  - Artemas Martin collection of rare mathematical books at American University (December, 1930)
  - Rare books collection at St. John's College (December, 1931)
 

“The most noteworthy exhibits were: Pacioli, Luca de Borgo: Divina Proportione; Venice 1509. (Plates attributed to Leonardo da Vinci.) A second edition (1500) of Martiani Capella's famous encyclopaedia. Numerous English works of the 18th century on building and architecture, one of them Wm. Pain's Practical House Carpenter, used by George Washington. Maclaurin, Colin-Newton's Phil. Discourses 5th Ed. 1794. Vol. 1 of Ozanam's Mathematical Course (5 vols.) London, 1712. Tracts by Robert Boyle on Flame, Air and Explosives, London, 1672. Freheri, D. Pauli-Theatri Vivorum Eruditione Clarorum, 2 vols. Nuremberg, 1688. Two volumes of U. Aldrovanus, Bonn, 1667. Andrew Wakely's Mariner's Compass and Tables, London, 1758.”
  - Laboratories of the National Bureau of Standards (December, 1936)
- Total attendance ranged from a low of 34 at the Spring, 1935 meeting at George Washington University to a high of 104 at the Spring, 1931 meeting at the University of Richmond. Median total attendance was 61. Counting members only, attendance ranges from 27 to 47, with median 39.5.



The Artemus Martin Collection at AU

Artemas Martin (1835-1918) worked as a farmer, district school-teacher, and market gardener. In 1877, he began editing and publishing the Mathematical Visitor. He followed this in 1882 with the Mathematical Magazine. He served as editor, publisher and typesetter for both magazines. Martin also served as librarian of the U.S. Coast and Geodetic Survey and as "computer" (mathematician) in the tidal division. The Martin Collection features mathematical texts from the 15th through the 20th centuries. The bulk of the collection relates to algebra, arithmetic, and number theory, though there are texts relating to surveying and other sciences.

<http://www.american.edu/library/archives/martin.cfm>

## Section Meetings 1937-1946: A Snapshot

Number of Meetings: 17

Number of Papers: 99

Number of Papers per Meeting:

Minimum: 3

Median: 6

Maximum: 9

Number of Presenters: 80 (3 Women, 77 Men)

### Women Presenters

Nancy Cole, Sweet Briar College

*On a problem in the calculus of variations* (May, 1940)

Carol V. Coleman, Washington Veterans High School Center

*Mathematics in the Washington Veterans High School Center* (December, 1945)

S. Helen Taylor, Frostburg State Teachers College

*Needed changes in curriculum materials and in methods as suggested by wartime experience* (December, 1946)

### Speakers from HBCU's

Herman Branson, Howard University

*An integral equation of a general metabolizing system* (May, 1946)



Herman Branson

### Most Frequent Speakers

Speaker	Institution	Number of talks
E. J. Finan	Catholic University of America	3
L. S. Dederick	Aberdeen Proving Ground	3
Michael Goldberg	Navy Department	3
O. J. Ramler	Catholic University of America	3
R. E. Root	U. S. Naval Academy	3

Nine speakers gave 2 talks each, with the remaining 67 giving a single paper during this ten year period.

### Types of Institutions

Affiliation of Speakers	Number of Presenters	Number of Papers
College or University	58	72
Government (non-military)	11	12
Military	10	14
High School	1	1

## Institutions Providing the Most Presenters

Affiliation	Number of Presenters	Number of Papers
U. S. Naval Academy	16	21
University of Virginia	10	11
University of Maryland	7	8
Johns Hopkins University	7	8
Aberdeen Proving Grounds	5	7

## Meeting Hosts

George Washington University	3
Johns Hopkins University	3
U. S. Naval Academy	3
Aberdeen Proving Grounds	1
Catholic University of America	1
Georgetown University	1
Randolph-Macon College	1
Randolph Macon Women's College	1
Trinity College	1
University of Maryland	1
University of Richmond	1



*Hans Rademacher*

## Invited Addresses and/or Special Sessions



*John von Neumann*

May, 1937

### **Axiomatic treatment of projective geometry**

Professor John von Neumann, Institute for Advanced Study, invited speaker

December, 1937

### **Fields of parallel vectors**

Professor T. Y. Thomas, Princeton University, invited speaker

May, 1938

### **Partitio numerorum**

Professor Hans Rademacher, University of Pennsylvania, by invitation

December, 1938

### **The problem of three bodies**

Professor Monroe Martin, University of Maryland, invited speaker

May, 1939

### **Use of conics to smooth distributions**

G. B. Dantzig, Bureau of Labor Statistics



*George Dantzig*

December, 1939

**On triangles having a common mean**

Professor O. J. Ramler, Catholic University of America

May, 1940

1. **Certain changes in student preparation during the last fifty years**

Professor R. E. Gaines, University of Richmond (invited speaker)

2. **Mathematics from the point of view of the 'New Plan'**

Dean Scott Buchanan, St. John 's College (invited speaker)

December, 1940

**Navigation**

Lieutenant-Commander P. V. H. Weems, U. S. N. (retired), invited speaker

May, 1941

1. **Rocketry**

Professor W. A. Conrad, United States Naval Academy

2. **Computation of flat trajectories**

Professor E. J. McShane, University of Virginia, invited speaker

December, 1941

**Recent investigations concerning the nature of thunderstorms and their electrical manifestations**

Dr. L. P. Harrison, Associate Meteorologist, U. S. Weather Bureau, invited speaker

May, 1942

**Symbolic dynamics and topological transformations**

Professor G. A. Hedlund, University of Virginia, invited speaker

April, 1944

**Vertices of plane curves**

Dr. S. R Jackson, University of Maryland

December, 1944

**The Riemann Manifolds of an Algebraic Function Field**

Professor Oscar Zariski, Johns Hopkins University, invited speaker

May, 1945

**The Bequest of the Greeks**

Professor Tobias Dantzig, University of Maryland, invited speaker

December, 1945

**Some applications of probability theory to the inspection of materials**

Lieut. Comdr. J. F. Daly, U.S.N.R., invited speaker

May, 1946

1. **Early history of the Maryland-District of Columbia-Virginia Section of the Mathematical Association of America**  
Professor R. E. Root, Post Graduate School, U. S. Naval Academy
2. **On the sampling problem in the observation of the election in Greece**  
Dr. W. Edwards Deming, Bureau of the Budget, invited speaker

## Papers Regarding the Curriculum or Teaching

December, 1937

- Some points in the teaching of the calculus**  
Dr. S. B. Littauer, U. S. Naval Academy

May, 1940

1. **Certain changes in student preparation during the last fifty years**  
Professor R. E. Gaines, University of Richmond (invited speaker)
2. **Mathematics from the point of view of the 'New Plan'**  
Dean Scott Buchanan, St. John 's College (invited speaker)

May, 1942

- Open discussion: The teaching of college mathematics**

April, 1944

- Mathematics as she are taught**  
Dr. L. B. Tuckerman, Bureau of Standards

December, 1945

- Mathematics in the Washington Veterans High School Center**  
Carol V. Coleman, Washington Veterans High School Center

December, 1946

- The teaching of mathematics below the college level**  
Professor E. D. Murnaghan, Johns Hopkins University, invited speaker

## Trivia

- The Fall, 1939 meeting was held as part of the fiftieth year jubilee of the host institution, Catholic University of America.
- The Spring, 1940 meeting at University of Richmond was held during the hundredth year anniversary of the granting of the Charter to the University.
- In his talk, *Rocketry*, at the Spring, 1941 meeting Professor W. A. Conrad, U. S. Naval Academy, discussed the problem of placing "...a man on the planet Mars. He pointed out the many difficulties of travelling from the Earth to Mars by rocket, but stated how all of these, with the exception of the fuel problem, could be satisfactorily overcome. Professor Conrad suggested the expensive step rocket or the equally costly artificial satellite as a solution for the fuel problem."
- It appears that the three meetings, Fall, 1942, and Spring and Fall, 1943, did not occur, likely due to travel restrictions imposed during World War II.

- At the Spring, 1946 meeting, Dr. Herman Branson, a graduate of Virginia State College, a PhD physicist and Professor of Physics at Howard University, was the first African-American to address the Section. One of his research interest was in mathematical biology. (See *Physicists of the African Diaspora*)
- The report on the Spring, 1946 meeting included this brief summary of the talk by Professor R. P. Root on the early history of the Section.
  - “Professor Root gave a brief account of the founding of the Mathematical Association in 1915 and of the Maryland-Virginia-District of Columbia Section in 1917. The matter was presented by quotations from letters found in an old file. Letters quoted were mostly from E. R. Hedrick and A. Cohen.”

We do not have a copy of the paper, nor of the letters cited.

- Total attendance ranged from a low of 28 at the Spring, 1942 meeting at Randolph-Macon College, to a high of 101 at the December, 1947 meeting at Johns Hopkins University. Median total attendance was 56. Member attendance ranged from 16 to 53, with median 34.



## The Decade 1937-48: Reflections

Dave Carothers, James Madison University

When the MD-DC-VA section met in the spring of 1937, it had been only a few months since Hitler had occupied the Rhineland, Mussolini had taken control of Ethiopia, and civil war had broken out in Spain. Kristallnacht and Japan's invasion of China would occur soon. Over the next few years, the section meetings would gradually see greater influence of world events. When John von Neumann spoke at the Spring 1937 section meeting about projective geometry, he was already developing an interest in **military applications** and in a few years would go on to play a key role in the Manhattan project.

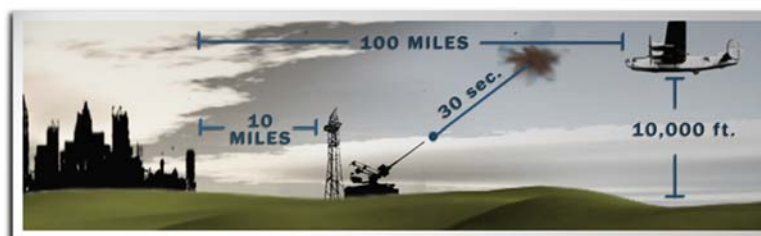
Von Neumann was not the only **emigrant European mathematician** to highlight a section meeting program. Hans Rademacher would speak on partitions a year later. Oscar Zariski would speak on Riemann manifolds in 1944. Russian-born Tobias Dantzig who gave a historical talk in 1945 had come to the US much earlier than von Neumann, Rademacher, and Zariski. His son George had given two talks late in the previous decade, many years before the breakthrough work in linear programming.

**Pure mathematics** was hardly ignored in the pre- and post-war list of speakers, both the famous and less so. Gustav Hedlund spoke about his work in the founding of topological dynamics and Victor Klee gave a talk while still a graduate student at the University of Virginia. But the focus on modeling and government or military applications became stronger over the years. Twenty of the one hundred and two talks between spring 1937 and fall 1946 were given by speakers representing the Naval Academy. The section met at the Naval Academy three times and once at the Army's Aberdeen Proving Ground, a facility that also supplied many interesting titles over these years.

As with professional baseball and other pastimes, section meetings had a **wartime hiatus** with no meetings between the spring of 1942 and the spring of 1944. Modeling topics continued to dominate at the end of the war, moving into areas of interest in the post-war world with a talk on elections in Greece by Edwards Deming.

The **teaching of mathematics** was less prominent as a section meeting topic than it is today, but it was not entirely ignored. The influence of the war was seen even here, with a post-war presentation on mathematics at the Veteran's High School Center in Washington.

As we look back on a century of MD-DC-VA history, among the more enlightening talks if we could hear it again would be R. E. Root's "Early history of the Maryland-District of Columbia-Virginia Section" in 1946.



## Section Meetings from 1937 – 1946: Reflections

Dipa Sarkar-Dey, Loyola University Maryland

The world was involved with wars from 1937 - 1946. It had begun in 1937 by Japan invading China and in 1938 Germany invading Austria. Those were the seeds for World War II which lasted from 1939 to 1945. Because of the war the scheduled Section meetings in Fall 1942 (Loyola College), Spring 1943 (The Johns Hopkins University) and Fall 1943 (Trinity College) were cancelled. Surprisingly, none of the talks during that time period were war related as reflected by the titles of the talks and the abstracts not available. No common theme of the talks were revealed by the titles.

During that time period the section met twice a year in Fall and Spring and the tradition continues. However, the meeting was only for a day instead of one and a half days. The number of talks, including an invited talk in each meeting during that time, were much less than those of recent years. The maximum number of talks was nine at the 1939 Spring meeting in Aberdeen Proving Ground and the minimum was three at the 1945 Spring meeting at George Washington University. The rest of the meetings had five to six talks. Whereas, in Spring 2016 there were forty two talks by students and faculty members and three invited talks and in Fall 2015 there were thirty seven talks by students and faculty members and three invited talks. The number of talks increased significantly in the last seventy years.

In ten years between 1937 and 1946 there were seventeen meetings. The Johns Hopkins University, George Washington University and the United State Naval Academy each hosted three meetings, Randolph-Macon College hosted two meetings, and Georgetown University, Aberdeen Proving Ground, University of Maryland, Catholic University of America, University of Richmond and Trinity College, each hosted one meeting. In recent years the section did not meet at Georgetown University, George Washington University and Aberdeen Proving Ground. The research universities were very much involved with the section during that time period.

The talks were not only presented by faculty members but also by professional mathematicians from various government agencies - U.S. Coast and Geodetic Survey, Social Security Board, Bureau of Labor Statistics, National Bureau of Standards, U.S. Geological Survey, U.S. Weather Bureau, U.S. Navy and Army and from the Institute for Advanced Study. In earlier days of the Section meetings no talk was presented by a student. Majority of the talks were research related, only a handful of teaching related talks. In most of the meetings there were none or one teaching related talk but in Spring meeting of 1940 at University of Richmond there were four teaching related talks out of six talks.

There was a talk in Spring 1940 at University of Richmond on *Certain Change in Student Preparation during the last fifty years*, by R. E. Gains of University of Richmond, I wish I was there to hear that talk. It would certainly have helped me to compare the students of our time. There was a talk at the same meeting on *Mathematics from the point of view of the 'New Plan'* by Dean Scott Buchanan of St. John's College, which reminded me of the numerous talks I heard during our section meetings on the MAA's proposal on the curriculum of mathematics majors. Of course there were talks on calculus teaching.

I wish I was there to hear the research talks "*Axiomatic Treatment of Projective Geometry*", by **John Von Neumann** in Spring 1937 meeting at Randolph-Macon Woman's College (It is worth mentioning that there was a Spring meeting in 1942 at Randolph-Macon College, a different institution); "*On a class of Distributions Approaching Normality*", by **G. B. Dantzig** in Fall 1938 at University of Maryland; "*The Bequest of the Greeks*", by **Tobias Dantzig** in Spring 1945 at George Washington University (the same

titled book was published in 1955); and “*On the Sampling Problem in the Observation of the Election in Greece*” by **W. Edwards Deming** in Spring 1946 at George Washington University.

[**John Von Neumann** was a pioneer of the application of operator theory to quantum mechanics, in the development of functional analysis, and a key figure in the development of game theory and the concepts of cellular automata, the universal constructor and the digital computer. During World War II he worked on the Manhattan Project, developing the mathematical models behind the explosive lenses used in the implosion-type nuclear weapon.

**G. B. Dantzig** is known for his development of the simplex algorithm, an algorithm for solving linear programming problems, and his work with linear programming. In statistics, Dantzig solved two open problems in statistical theory, which he had mistaken for homework after arriving late to a lecture of Jerzy Neyman.

**Tobias Dantzig** was the father of **George Dantzig**, and the author of *Number: The Language of Science (A critical survey written for the cultured non-mathematician)* (1930) and *Aspects of Science* (New York, Macmillan, 1937).

**W. Edwards Deming** developed the sampling techniques that were used for the first time during the 1940 U.S. Census, formulating the Deming-Stephan algorithm for iterative proportional fitting in the process. During World War II, Deming was a member of the five-man Emergency Technical Committee. He worked with H.F. Dodge, A.G. Ashcroft, Leslie E. Simon, R.E. Wareham, and John Gaillard in the compilation of the American War Standards published in 1942 and taught statistical process control (SPC) techniques to workers engaged in wartime production. Statistical methods were widely applied during World War II, but faded into disuse a few years later in the face of huge overseas demand for American mass-produced products.

(Source: WIKIPEDIA)].



*W. Edwards Deming*

## Section Meetings 1947-1956: A Snapshot

Number of Meetings: 20

Number of Papers: 118

Number of Papers per Meeting:

Minimum: 4

Median: 6

Maximum: 8

Number of Presenters: 98 (10 Women, 88 Men)

### Women Presenters

Miss Barbara McGehee, University of Richmond

*A summation process* (December, 1950)

Miss Stirling Clark, University of Richmond

*Napier and his logarithms* (May, 1951)

Mrs. Ida Rhodes, National Bureau of Standards Computation Laboratory

*Round table discussion on modern numerical analysis and college mathematics*

(Panel member: December, 1951)

Professor Ella C. Marth, Wilson Teachers College

*Proposals for future activities of the section* (Panel member: April, 1952)

Professor Florence M. Mears, George Washington University

*Proposals for future activities of the section* (Panel member: April, 1952)

Miss Veryl G. Schult, District of Columbia Public School

*Proposals for future activities of the section* (Panel member: April, 1952)

Miss Gloria C. Ford, Morgan State College

*On the uniform convergence of a certain eigenfunction series* (with L. Mishoe, December, 1954)

Professor Anne E. Scheerer, Georgetown University

*Evaluation of the definite integral  $\int_0^\infty (u^{-1} \exp(-\varphi^2 u/4 - u^{-1})) du$*  (December, 1955)

Dr. Olga Taussky-Todd, National Bureau of Standards

*Commutativity of finite matrices* (May, 1956)

Professor Herta T. Freitag, Hollins College

*The place of mathematics in Austrian education* (December, 1956)



*John and Olga Taussky Todd  
worked at NBS from 1945-1957*

## Speakers from HBCU's

Professor David Blackwell, Howard University

*Controlled random walks* (May, 1954)

Professor Luna Mishoe, Morgan State College

*On the limit of the coefficients of a certain eigenfunction series* (May, 1954)

*On the uniform convergence of a certain eigenfunction series* (December, 1954)

*On the Gibb's phenomenon in the eigenfunction series associated with a non-self-adjoint differential equation* (December, 1956)

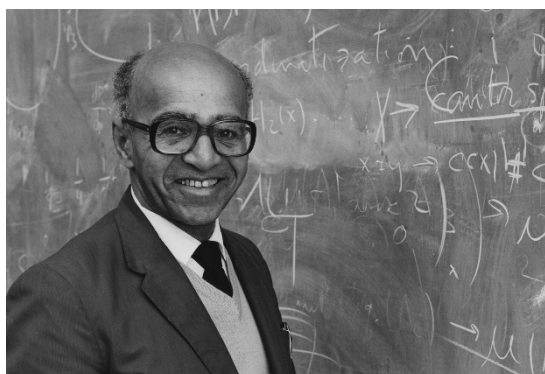
Miss Gloria C. Ford, Morgan State College

*On the uniform convergence of a certain eigenfunction series* (December, 1954)

Note: Gloria Ford Gilmer was the first African American women to publish a non-PhD thesis research paper in mathematics.



*Gloria Ford Gilmer*



*David Blackwell*

## Most Frequent Speakers

Speaker	Institution	Number of talks
John Tyler	U. S. Naval Academy	5
Michael Goldberg	Department of the Navy	4
J. P. Hoyt	U. S. Naval Academy	4
M. H. Martin	University of Maryland	4
J. A. Tierney	U. S. Naval Academy	4

## Types of Institutions

Affiliation of Speakers	Number of Presenters	Number of Papers
College or University	60	78
Government (non-military)	14	11
Military	22	28
High School	2	3

## Institutions Providing the Most Presenters

<b>Affiliation</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
U. S. Naval Academy	11	20
National Bureau of Standards	8	5
University of Virginia	7	10
University of Maryland	7	11
Aberdeen Proving Grounds	6	9

## Meeting Hosts

<b>Institution</b>	<b>Number of meetings</b>
U. S. Naval Academy	3
Catholic University of America	2
George Washington University	2
University of Maryland	2
Johns Hopkins University	1
American University	1
College of William and Mary	1
Georgetown University	1
Howard University	1
Morgan State College	1
National Bureau of Standards	1
Naval Proving Grounds	1
University of Richmond	1
University of Virginia	1
Virginia Military Institute	1

## Invited Addresses (and selected others)

May, 1947

**The use of transformations in college geometry**

Professor A. W. Tucker, Princeton University, invited speaker

December, 1947

**The first year course in college mathematics**

Professor E. J. McShane, University of Virginia, invited speaker

May, 1948

**American mathematics turns useful**

M. H. Slud, Catholic University

December, 1948



*Albert W. Tucker*

**Modifications of authalic projections**

Mr. P. D. Thomas, U. S. Coast and Geodetic Survey

May, 1949

**A theorem on local convexity**

Mr. V. L. Klee, Jr., University of Virginia

December, 1949

**Roulettes in gas dynamics**

Prof. M. H. Martin, University of Maryland, Invited Address

May, 1950

**Some applications of partitionings**

Professor R. H. Bing, University of Wisconsin and University of Virginia, Invited Address

December, 1950

**Effective processes and Turing machines**

Mr. W. W. Boone, Catholic University of America, Invited Address

May, 1951

**On truncation error and stability**

Professor W. W. Leutert, University of Maryland, Invited Address

December, 1951

**Use of an electronic analogue machine as a curve fitting device**

Mr. C. H. Murphy, Jr., Ballistic Research Laboratories, Aberdeen Proving Ground

April, 1952

**Some remarkable theorems about areas**

Dr. L. R. Ford, Emeritus Professor of Mathematics, Illinois Institute of Technology, Invited Address

December, 1952

**The Stieltjes integral**

Professor E. J. McShane, University of Virginia, Invited Address

May, 1953

**Certain problems of approximation using Bernoulli and Euler polynomials**

Professor D. C. Lewis, Jr., The Johns Hopkins University, Invited Address

December, 1953

**Analysis and the undergraduate**

Professors D. W. Hall and G. L. Spencer, II, University of Maryland, invited address

May, 1954

**Controlled random walks**

Professor David Blackwell, Howard University

December, 1954



*Victor Klee*



*R.H. Bing*



*Lester R. Ford*

**Report on the High School Mathematics Contest**

Mr. W. H. Norris, Maury High School, Norfolk, VA

May, 1955

**Rotors, plane and fancy**

Mr. Michael Goldberg, Department of the Navy, Invited Address

December, 1955

**The evolution of extended decimal approximations to  $\pi$  and  $e$**

Dr. J. W. Wrench, Jr., David Taylor Model Basin, invited address

May, 1956

**Commutativity of finite matrices**

Dr. Olga Taussky-Todd, National Bureau of Standards

December, 1956

**A Plea for changed attitudes toward science**

Dr. B. C. Dees, National Science Foundation, Invited Address

Papers Regarding the Curriculum, Teaching, or Outreach

May, 1947

**The use of transformations in college geometry**

Professor A. W. Tucker, Princeton University, invited speaker

December, 1947

**The first year course in college mathematics**

Professor E. J. McShane, University of Virginia, invited speaker

May, 1948

**The veteran and the accelerated course in mathematics**

W. H. Norris, Veteran's Center, Norfolk, VA

May, 1949

1. **Visual education-the slide rule**

Professor W. F. Shenton, American University

2. **Non-digital computing devices in the teaching of mathematics**

Professor Randolph Church, U. S. Naval Postgraduate School

December, 1949

**Mathematical requirements for the personnel of a computing laboratory**

Dr. R.F. Clippinger, Aberdeen Proving Ground



May, 1950

**Undergraduate research**

Professor E. R. Sleight, University of Richmond

December, 1951

1. **John Warner's mathematical exercises**  
Professor W. F. Shenton, The American University
2. **Round table discussion on modern numerical analysis and college mathematics**  
Dr. J. H. Curtiss, National Bureau of Standards Applied Mathematics  
Mr. John Todd, Mr. H. E. Salzer, and Mrs. Ida Rhodes, National Bureau of Standards Computation Laboratory

April, 1952

1. **A proposed course for college freshmen**  
Professor W. E. Byrne, Virginia Military Institute
2. **Proposals for future activities of the section**  
Professor S. B. Jackson, University of Maryland  
Professor Ella C. Marth, Wilson Teachers College  
Professor Florence M. Mears, George Washington University  
Miss Veryl G. Schult, District of Columbia Public Schools; presented by Miss Schult

December, 1952

**The review course in calculus at the United States Department of Agriculture Graduate School**  
Mr. Sidney Kaplan, Comptroller of the Army and United States Department of Agriculture Graduate School

December, 1953

1. **A natural approach to the fundamental theorem of the integral calculus**  
Professor J. P. Hoyt, U. S. Naval Academy
2. **Analysis and the undergraduate**  
Professors D. W. Hall and G. L. Spencer, II, University of Maryland, invited address

December, 1954

**Report on the High School Mathematics Contest**  
Mr. W. H. Norris, Maury High School, Norfolk, VA

May, 1956

1. **A Carnegie Foundation project in modern mathematics for college sophomores (preliminary report)**  
Professor R. V. Andree, University of Oklahoma and Haverford College
2. **The national status of mathematics contests in secondary schools**  
Professor D. B. Lloyd, District of Columbia Teachers College

December, 1956

1. **The place of mathematics in Austrian education**  
Professor Herta T. Freitag, Hollins College
2. **Panel Discussion: The National High School Mathematics Contest**  
Professor R. P. Bailey, U. S. Naval Academy (Former Chairman, National Contest Committee)

Mr. W. H. Norris, Norfolk Public Schools (Chairman, MD-DC-VA Contest Committee)  
Professor D. B. Lloyd, D. C. Teachers College (Former Chairman, NCTM Contest Committee)

3. **A Plea for changed attitudes toward science**

Dr. B. C. Dees, Assistant Director of Scientific Personnel and Education, National Science Foundation, Invited Address

Trivia

- December, 1950: In his report from the Board of Governors, G. R. Clements “commented on the medals available as awards for high school mathematics competition, the desire of the Association to reach a larger proportion of the Junior College teachers, and the attempts made to improve the teaching of mathematics in the schools.”
- The December, 1951 meeting was held at the National Bureau of Standards in connection with its fiftieth anniversary.
- Also at the December, 1951 meeting, the Section voted a change in by-laws to make its official name “...The Maryland-District of Columbia-Virginia Section of the Mathematical Association of America.”
- At the April, 1952 meeting, the By-Laws were amended so that the two “additional members of the Executive Committee” be designated as “Vice-Chairmen.” The composition of the Committee remains at four members: Chairman, Secretary-Treasurer, and two Vice-Chairmen. Later, in 1955, the Section Governor and a Treasurer were added, bringing the Executive Committee to six members.
- In December, 1952, the Section met at Howard University, the Section’s first meeting at an HBCU. This meeting had the highest meeting to date, with total attendance at 115, 82 of whom were members of the Association.
- It was announced at the December, 1952 meeting that “... the Section will sponsor contests for high school students in order to stimulate further interest in mathematics.” A year later, at the December, 1953 meeting,

“Professor W. H. Norris, Chairman of the High School Contest Committee, reported that the number of schools replying to the initial letter sent out by his committee indicated the possibility of having a contest in May, 1954. At the request of the committee the Section voted: (1) That the Chairman of the Section appoint a board of members at the collegiate level which shall make the final selection of the winning papers; and (2) That the members of the Section approach their respective schools and companies in regard to contributions for prizes.”

In Spring, 1954, Norris reported

“... that approximately 1700 students from 46 high schools were scheduled to take part in the section's first high school contest ...”.

The Section continued to sponsor these contests in 1955 and 1956, at which time there began a movement for the Association to sponsor a national competition. The Section voted to support this, but also committed to continuing its own local contest until the national competition was in place.

- Sometime prior to the December, 1953 meeting, the Section established a visiting lecture program for undergraduate students. By the time of the May, 1954 meeting, at least six lectures had been given.
- At the May, 1954 meeting, the Section "...voted that a registration fee of twenty-five cents be charged at future meetings to cover costs of future activities of the section."
- The Spring, 1955 meeting was held at Morgan State College in conjunction with several other scientific societies in a Dedication Program for Calloway Hall and the new Science Quadrangle at Morgan State. This was the second section meeting held at an HBCU.
- Total attendance ranged from a low of 48 at the Spring, 1955 meeting at Morgan State College, to a high of 130 at the December, 1954 meeting at Georgetown University. Median total attendance was 96.5. Member attendance ranged from 34 to 96, with median 64.

## Reflections on the Section Meetings 1947-1956

Bonita V. Saunders

National Institute of Standards and Technology

### Talks I wish I had heard

I wish I had heard all of them, well, except for those dealing with war games, speeding projectiles, and other topics that appear to be strongly war-related. However, my “must hear” list would have reflected my interests in applied mathematics and mathematics education. I would have included the following talks in pure and applied mathematics:

“Recent advances in the Brun approach to the Goldbach problem”, R.C. Rand, U.S. Naval Academy (1948),

“A theorem on local convexity”, V.L. Klee, Jr., University of Virginia (1949),

“An approximate solution of a system of non-linear equations”, C.H. Murphy, Jr., Aberdeen Proving Ground (1955),

“A set of predictor and corrector formulas for the numerical solution of ordinary differential equations”, C.H. Frick, J.E. Mulligan, U.S. Naval Proving Ground (1956)

“Commutativity of finite matrices”, Olga Taussky-Todd, National Bureau of Standards (1956).

### *And under mathematics education:*

“The first year course in college mathematics”, E.J. McShane, University of Virginia (1947),

“American mathematics turns useful”, M.H. Slud, Catholic University (1948),

“Mathematical requirements for the personnel of a computing laboratory”, R.F. Clippinger, Aberdeen Proving Ground (1949),

“Round table discussion on modern numerical analysis and college mathematics”, J.H. Curtiss, John Todd, J.E. Salzer, Ida Rhodes, National Bureau of Standards Computation Laboratory (1951), and

“A Plea for changed attitudes toward science”, B.C. Dees, Assistant Director of Scientific Personnel and Education, National Science Foundation (1956).

### Famous or especially interesting speakers

During this period, we see a treasure trove of eminent speakers. Most of these speakers are best known for contributions completed years after these talks. It would be interesting to know how they were actually viewed by the research community at his point. Here is a partial list:

At the spring 1947 Section Meeting, the invited speaker was Princeton University Professor **Albert William Tucker**. Tucker was the Ph.D. advisor of John Nash, winner of the 1994 Nobel Prize in economics for the game theory work in his 1950 dissertation. Tucker served as MAA President from 1961-1962.

Reference:

<http://www.maa.org/about-maa/governance/maa-presidents/albert-william-tucker-1961-1962-maa-president>

University of Virginia (UVA) Professor **Edward James McShane**, a frequent speaker at MD-DC-VA Section meetings, presented the invited address at the fall 1947 meeting. His research interests included calculus of variations, integration theory, stochastic calculus, and ballistics, spanning both pure and applied mathematics, but he was also interested in mathematics education. Although his career as a UVA mathematics professor began in 1935, from 1942-1945 he served as head of the Ballistics Research Laboratory at Aberdeen Proving Ground. In 1948 he was elected to the National Academy of Sciences and later served as president of both the MAA (1953-1954) and the American Mathematical Society (1959-60).

References:

<http://www.maa.org/about-maa/governance/maa-presidents/edward-james-mcshane-1953-1954-maa-president> , <http://www.nasonline.org/member-directory/deceased-members/52676.html>

At the spring 1954 Section meeting the final speaker listed is eminent mathematician and statistician Professor **David Blackwell**, Howard University. In fall 1954 Blackwell joined the new statistics department at the University of California, Berkeley, and soon became their first tenured African American professor. He became chair of the statistics department in 1956 and remained at UC Berkeley until his retirement in 1988. In 1965 Blackwell became the first African American to be elected to the National Academy of Sciences.

References :

<http://www.amstat.org/about/statisticianhistory/index.cfm?fuseaction=biobio&BioID=20> ,  
<http://www.nasonline.org/member-directory/deceased-members/57657.html>

Both **John Todd** and his wife **Olga-Taussky-Todd** presented talks at MD-DC-VA Section meetings during this period. The couple joined the National Bureau of Standards (NBS, which is now NIST) when they emigrated to the U.S. from England in 1947. John helped establish the National Applied Mathematics Laboratory (NAML) at NBS and eventually became Chief of NAML's Computation Laboratory. They both enjoyed distinguished careers at NBS, but a love of teaching, a desire to train new researchers in emerging areas such as scientific computing, numerical analysis and matrix theory, combined with joint offers from the California Institute of Technology (Caltech) led them to accept positions there in 1957. John was immediately offered a full professorship at Caltech, but since no woman had ever taught there, Olga was offered a research associate appointment that allowed, but did not require teaching. In 1963 she was granted tenure, and in 1971 her appointment was changed from research associate to full professor. A prolific researcher, she reportedly published about 300 papers, and was the first woman at Caltech to attain the rank of full professor.

References:

<http://www.maa.org/news/mathematician-john-todd-savior-oberwolfach-dies-96>

<http://www.ams.org/notices/199608/taussky.pdf>

<http://math.nist.gov/mcsd/highlights/alumni02.html>

## Hot topics or common themes

What stands out during this period is the variety of subject areas covered by the speakers, but by the 1950s there are several talks that have numerical themes or that mention computing devices. These were mostly by speakers from the Ballistics Research Laboratories which had funded several early electronic computers such as ENIAC in the 1940s and 1950s, or speakers from the National Bureau of Standards (NBS) where the first fully operational stored-program electronic digital computer in the United States (SEAC) was built. In 1951 J.H. Curtiss (NBS Applied Mathematics), John Todd (NBS Computation Laboratory), et. al presented "Round table discussion on modern numerical analysis and college mathematics." "Random numbers for high speed computers" was presented by J.M. Cameron and M. Newman, NBS (1954) and "The propagation of error in numerical integrations" by M.M. Lotkin, Ballistic Research Laboratories (1954). There was also a talk about an analogue machine, "Use of an electronic analogue machine as a curve fitting device", C.H. Murphy, Jr. Ballistic Research Laboratories (1951).

### References:

<https://en.wikipedia.org/wiki/ENIAC>

<http://math.nist.gov/mcsd/highlights/alumni02.html>

## How the talks at the meeting reflected what was going on in the world

Although this period begins a couple of years after the end of World War II, it straddles the Korean War (1950-1953). Therefore, the influence of war is quite evident in the job locations of many of the speakers. For example, many were associated with the Navy, including the Naval Research Laboratory, David Taylor Model Basin, Bureau of Ordnance (Navy Department), U.S. Naval Proving Ground, and the U.S. Naval Academy. Other military associations included the Ballistic Research Laboratories at Aberdeen Proving Ground, U.S. Army at Fort Meade, a Veteran's Center in Norfolk, and the Virginia Military Institute. If we combine these with speakers from other government facilities such as the National Bureau of Standards and National Science Foundation, more than fifty percent of the speakers during this period were affiliated with the U.S. government.

While the talks included many topics from pure and applied mathematics, some of the research was definitely influenced by military concerns. For example, there was "The sound of a projectile moving at supersonic speed" by S.B. Jackson and M.H. Martin, University of MD (1947), "The veteran and the accelerated course in mathematics" by W.H. Norris, Veteran's Center, Norfolk, VA (1948), "Digitalization of war games" by W.W. Leutert, Computing Laboratory, Aberdeen Proving Ground (1955), and "Contribution to the theory of the blunderbuss", P. Treuenfels, Ballistics Research Laboratory, Aberdeen Proving Ground (1956).

The early 1950s also marked the start of litigation that led to the landmark Supreme Court decision on *Brown vs. Board of Education of Topeka Kansas* (May 17, 1954) which declared that state laws requiring separate public schools for black and white students were unconstitutional. While this case did not address colleges and universities, the outcome created the first large crack in a system of segregation that affected all aspects of life for African Americans. During this period, we see the first MD-DC-VA Section meeting held at a historically black college or university (HBCU) on December 6, 1952 at Howard

University. This is followed three years later in April 1955 by a meeting at another HBCU, Morgan State College, where the MD-DC-VA Section joined with several other scientific societies for the dedication of Calloway Hall and the Science Quadrangle at Morgan State.

Final thoughts...

It is clear from comparing the talks at current MAA meetings with those from 1947-56 and earlier years that the focus and speakers at the meetings have changed dramatically over the years. Talks at the early meetings covered a breadth of mathematical topics in both pure and applied mathematics with speakers from colleges, universities, and government laboratories alike. At today's meetings one sees far fewer applied mathematics talks and a sparsity of speakers from government labs or private industry.

While this change may have been, at least partially, intentional, it was also clearly driven by what has been happening in the applied research world. For example, in 1952 the Society for Industrial and Applied Mathematics (SIAM) was incorporated. SIAM is a nonprofit organization dedicated to supporting the exchange of mathematical theories and techniques among mathematicians, engineers, and other scientists. It directly supports activity groups dedicated to researchers specializing in various areas of applied mathematics and helps fund conferences organized by these groups. The rise of SIAM and other organizations and conferences dedicated to specialized fields of applied research in statistics, physics, engineering, biology, chemistry, computer science, information science, and other areas makes it difficult for the MAA to lure speakers in such fields to meetings. Also, in the past, many of these researchers would have been called mathematicians; but today, in spite of the fact that many are doing theoretical or numerical work and solving various types of mathematical equations, they are more likely to identify themselves by the type of application – physicist, chemist, or engineer, for example.

Many of the talks presented at current MD-DC-VA Section meetings are quite good, but overall, today's meetings tend to present a somewhat narrow view of mathematics. Most mathematicians appreciate the beauty and structure of mathematics, but there are others who are also fascinated by the idea that mathematics can be used to model a physical process observed in nature, to create realistic animations in a feature film, or to predict the rise and fall of the stock market on Wall Street. Earlier meetings were more successful at exposing attendees to diverse research areas involving mathematics. Though this is more challenging to do today, we owe it to our students to try.

We could start by looking for invited or contributed speakers who use mathematics in their work, but may not hold a job title that identifies them as a mathematician. In fact, in many cases they may have a strong background in mathematics but not hold a degree in the field. Of course, even in recent years we have had some speakers who fall under this category, but the effort to attract such speakers needs to be increased.

Unfortunately, it is likely that the proposed speaker is already attending conferences that are more closely related to their areas of interest. This means that giving a talk at our section meeting must look like a “big deal” not only to the potential speaker, but also to the individual’s supervisor and other co-workers. The MAA Business, Industry and Government (BIG) Committee has been looking at the possibility of creating a list of potential speakers for each MAA Section, but progress has been slow. What will probably be needed is a program that is supported at the section and national level like Section NExT or Project NExT with the goal of appointing speaker fellows committed to presenting at least one invited talk at a Section meeting in their area during the year. How about MAA BIG Fellows or MAA Applied Fellows?

Reference:

<http://www.siam.org/about/more/overview.php>



## The High School Math Contest

The Mathematical Association of America, well aware of the importance of mathematics in modern life, wishes to sustain interest and encourage ability in mathematics among capable students. To this end, the Maryland-District of Columbia-Virginia Division of the Association, in keeping with the practice of other sections, plans to sponsor a mathematics contest among the secondary schools within its area.

So begins the December, 1953 letter from W. H. Norris, Chairman of the Section's High School Contest Committee, to high schools within the Section to determine if there was sufficient interest. The response was good, and the first Section High School Mathematics Contest was held on May 6, 1954 with approximately 1700 students from 46 high schools participating. Prizes, donated by various businesses and colleges within the Section, included savings bonds and tuition scholarships. The final report of this contest listed the best overall paper, as well as the best student from each of Maryland, the District of Columbia, and Virginia, as well as the highest scoring girl. It also listed: "...boys from white high schools..., ...girls from white high schools..., and ...students from Negro high schools..." ranking high. No doubt a sign of the times in the 1950's.

The Section first started thinking about a contest for high school students in the early 1950s. The Metropolitan New York Section established its first contest in May of 1950, and in the next few years other Sections also began contests. Many used, with permission, the Metropolitan New York contest; others, like our Section, built their own.

With the success of our first contest, a second was scheduled for April 6, 1955. Over 2000 students from 84 high schools competed on this 40-question, 80-minute test. On three of these questions, students were required to explain how they arrived at their solutions. Their responses would be considered in the awarding of prizes. The Section was fairly active in soliciting donations; the prize list was expanded to include a \$50 bond, three \$25 bonds, three sets of K&E drawing sets, 3 model Martin B-57 airplanes, three Westinghouse clock radios, a copy of Newton's "Principia", and a \$5 cash award. In addition, two collegiate scholarships were offered.

It is clear that this outreach activity enjoyed great support both from the membership and the wider community. Section members worked hard to create and organize what had turned into an annual event. Here is an interesting example of attempts to gain support from our academic institutions.

Early, 1955, in response to a memo from the Superintendent of the Naval Academy to Academy faculty, encouraging "...personal liaison with our best secondary schools...", Academy professor Richard P. Bailey, then secretary of the Section, wrote to the Superintendent suggesting that the Naval Academy actively support the Contest. He even proposed that the Academy might offer "...an appointment as Midshipman to a qualified prize winner," something he admitted might be difficult.

As successful and popular as the contest became, unexpected controversy arose. Section Chair F. E. Johnston received a letter, dated July 29, 1955, from Harry M. Gehman, Secretary-Treasurer of the MAA, requesting the section "...refrain from soliciting for the contest outside the boundaries of your Section." He further writes:

By all means, avoid any solicitation of funds in the State of New York or from companies having headquarters in New York State. The Thompson Act of New York State forbids such solicitation. Also the Board of Governors has voted that all such requests for funds should be made through the office of the Secretary-Treasurer upon authorization of the Board of Governors or of the Executive and Finance Committee.

This caused some confusion since the Section had, in fact, confined such requests to local companies and institutions. But it turned out that some of these were local divisions of companies with corporate headquarters elsewhere, and one of the local requests had been forwarded to its main office in New York City. The national MAA had two concerns—first, that we may have been in violation of a New York law, and second, that such a company might receive similar requests from many sections and decide to refuse to fund any.

There was not initial agreement among members of the Section Executive Committee as to how to respond. While they generally wished to adhere to the wishes of the MAA, they also did not want to give up the right to seek contributions from companies with major presence in our region. After the exchange of many letters, the Section, in late December, 1955, came to consensus, and sent a petition reading in part:

...It is understood that the Prize committee .... shall solicit funds, scholarships and prizes from organizations located entirely within the area or from such branch offices of organizations within the area as shall be in a position to grant such requests without having to refer said requests to any higher authority outside this geographical area.

The petition was approved by the Executive and Finance Committee.

1955 saw the first mention of the possibility of a national contest for high school students of mathematics. At the Summer 1955 Section Officers Meeting, Professor W. H. Fagerstrom, chair of the Metropolitan New York Section suggested "...that a national committee of the Association be appointed to administer these secondary-school contests." A motion was made and carried recommending "that the President appoint a committee to study the question of having a national committee to administer contests." At this time, the Metropolitan New York contest had reached far beyond that section's boundary. Fagerstrom reported that some 23,000 students from 854 high schools across the country had registered for their 1955 contest.

In October, 1955, MAA President William Duren, who had recently moved to the University of Virginia, appointed a five member Committee on High School Contests, the members coming from different Sections conducting contests. Professor R. P. Bailey represented the MD-DC-VA Section. After the resignation of the original chair, Bailey became chair early in 1956. By the Summer 1956 Meeting of the Association, the Committee presented their recommendation to "...sponsor an annual contest in mathematics for secondary school students in the United States and Canada and that the first contest of this nature be held in 1958." It was agreed that Sections would assume local responsibility for conducting the contest within their area. Furthermore, a Section could choose not to participate, or to run their own contest instead. This, of course, was the beginning of what we now know as the American Mathematical Competitions (AMC).

The MD-DC-VA Section continued with its own contest during 1956 and 1957, and then took responsibility for running the national competition, within the Section, beginning in 1958. This commitment continued up through at least the late 1990s as the National MAA offices took more and more responsibility for administrating the contests and dealing directly with middle and high schools.



*William Larkin Duren, Jr.*

## Section Meetings 1957-1966: A Snapshot

Number of Meetings: 20

Number of Papers: 152

Number of Papers per Meeting:

Minimum: 2

Median: 8

Maximum: 11

Number of Presenters: 117 (6 Women, 111 Men)

### Women Presenters

Sister Mary Seraphine Bennett, Mt. Saint Agnes College

*An extension of Rainville's classification of simple polynomial sets* (December, 1966)

Mrs. F. Marion Clarke, Bendix Radio Division & Westinghouse Electric Corporation

*Interpolation with divided differences adapted to a high speed digital computer* (December, 1962)

*A note on the use of the Laplace transform and initial conditions in the solution of a system of linear differential equations* (May, 1964)

*Sifting properties of singularity functions in the solution of linear differential equations* (November, 1964)

Eleanor Green Dawley, Hampton Institute

*A note on abelian  $p$ -groups and their endomorphism rings* (December, 1966)

Professor M. Gweneth Humphreys, Randolph-Macon Woman's College

*A General Curriculum in Mathematics for Colleges* (Panel member, December, 1966)

Miss Carol V. McCamman, Calvin Coolidge High School

*Developing city-wide mathematics examinations* (December, 1961)

Professor Herta T. Freitag, Hollins College (both with A. H. Freitag)

*A study of variations in the viewing of a picture* (April, 1958)

*An algorithm for the determination of divisibility of one natural number by another* (December, 1959)

### Speakers from HBCU's

Professor Volodymyr Bohun-Chudyniv, Morgan State College

*Some examples of completely semiassociative and noncommutative loops and algebras* (December, 1959)

*On generalized  $K$ -nions loops and algebras* (May, 1960)

*On the number of non-equivalent types of triple-systems of order  $N \geq 15$*  (November, 1964)

Eleanor Green Dawley, Hampton Institute

*A note on abelian  $p$ -groups and their endomorphism rings* (December, 1966)

Professor W. L. Fields, Hampton Institute

*The solution of ordinary differential equations with constant coefficients by analog computer methods* (April, 1958)

Professor Luna Mishoe, Morgan State College

*On the summability of a certain eigenfunction series* (December, 1958)

*Fourier series and eigenfunction expansions associated with a non-self-adjoint differential equation* (May, 1960)

## Most Frequent Speakers

<b>Speaker</b>	<b>Institution</b>	<b>Number of talks</b>
A. J. Goldman	National Bureau of Standards	7
Michael Goldberg	Department of the Navy	4
Walker H. Land, Jr	IBM	4

Of the remaining speakers, 8 presented three times, 19 twice, and 87 once.

## Types of Institutions

<b>Affiliation of Speakers</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
College or University	62	70
Government (non-military)	17	27
Military	21	35
High School	2	2
Business	14	19
Unknown	1	1

## Institutions Providing the Most Presenters

<b>Affiliation</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
University of Maryland	11	12
U. S. Naval Academy	9	10
National Bureau of Standards	7	16

## Meeting Hosts

American University	2
Georgetown University	2
Goucher College	2
Howard University	2
University of Maryland	2
Aberdeen Proving Grounds	1
Catholic University of America	1
College of William and Mary	1
George Washington University	1
Johns Hopkins University	1
Randolph Macon Woman's College	1
U. S. Naval Academy	1
U. S. Naval Weapons Laboratory	1
University of Virginia	1
Westinghouse Defense Center	1

## Invited Addresses

May, 1957

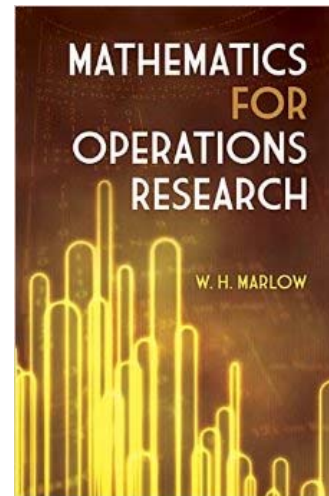
1. **Geometry in the mathematics curriculum**  
Professor W. L. Chow, The Johns Hopkins University, Invited Address, MAA
2. **Quaternions and Clifford numbers**  
Professor Marcel Riesz, Institute of Fluid Dynamics, University of Maryland, Invited Address, SIAM



*Wei-Liang Chow*



*Marcel Riesz*



December, 1957

### **Report of the Commission on Mathematics**

Executive Director A. E. Meder, Commission on Mathematics, New York, NY, Invited Address

April, 1958

### **Cardioids and rolling polygons**

Professor R. C. Yates, College of William and Mary, Invited Address

December, 1958

### **Some published USSR research in mathematical economics**

Dr. W. H. Marlow, George Washington University, Invited Address

May, 1960

### **Nets and calculus**

Professor B. J. Pettis, University of North Carolina, Invited Address

December, 1960

### **Evolving patterns in mathematical research**

Dr. F. J. Weyl, Office of Naval Research, Invited Address

December, 1962

### **A research program for undergraduates**

Professor J. C. Abbott, U. S. Naval Academy, Invited Address

April, 1963

### **Men and Mathematics: a Plea for the Historical Sense in Mathematics**

Dr. Philip J. Davis, National Bureau of Standards, Invited Address

December, 1963

### **Elementary Analysis in Modern Language**

Dr. F. Joachim Weyl, Office of Naval Research, Invited Address

May, 1964

**Information Theory**

Brockway McMillan, Under Secretary of the Air Force for Research and Development,  
Invited Address

November, 1964

**The application of functional analysis to the solution of differential and integral equations**

Seymour Goldberg, University of Maryland, Invited Address

May, 1965

**The aims and purposes of the Committee on the Undergraduate Program in Mathematics of the Mathematical Association of America**

Samuel Eilenberg, Columbia University, Invited Address

December, 1965

1. **Dynamical Theory of Transformation Groups**  
Walter Gottschalk, Wesleyan University
2. **Classification and Representation of Dynamical Systems**  
Shizuo Kakutani, Yale University
3. **Problems in Dynamical Systems Arising in Probabilistic Analysis**  
Gian-Carlo Rota, Massachusetts Institute of Technology

April, 1966

**An example of optimal control**

G. S. Jones, Institute for Fluid Dynamics and Applied Mathematics, University of Maryland,  
Invited Address

Papers Regarding the Curriculum, Teaching, or Outreach

May, 1957

**Geometry in the mathematics curriculum**

Professor W. L. Chow, The Johns Hopkins University, Invited Address, MAA

December, 1957

**The Maryland-District of Columbia- Virginia Mathematics Contest**

Professor D. B. Lloyd, District of Columbia Teachers College

May, 1959

**The position of mathematics in South American higher education**

Mr. Carlos Fallon, Nems-Clarke Company, Silver Spring, MD

December, 1960

1. **The training of inservice teachers of mathematics**  
Dr. C. R. Phelps, Program Director, Academic Year Institutes Program, National Science Foundation
2. **The algebra program in the Soviet Union**  
Professor G. H. Miller, State Teachers College at Towson

December, 1961

1. **Algebra for freshmen**  
Professor Jean-Pierre Meyer, Johns Hopkins University
2. **Developing city-wide mathematics examinations**  
Miss Carol V. McCamman, Calvin Coolidge High School, Washington, D. C.
3. **Report on the Meeting of the Mathematical Association of America at Stillwater, Oklahoma, August 1961**  
Dr. C. H. Frick, U. S. Naval Weapons Laboratory, Dahlgren, VA

December, 1962

**A research program for undergraduates**

Professor J. C. Abbott, U. S. Naval Academy, Invited Address

May, 1964

**Computer assisted instruction in mathematics**

Joseph Hilsenrath, National Bureau of Standards

May, 1965

1. **The aims and purposes of the Committee on the Undergraduate Program in Mathematics of the Mathematical Association of America**  
Samuel Eilenberg, Columbia University, Invited Address
2. **What Graduate Schools in the Area Expect of New Students**, Panel discussion  
Gustav B. Hensel, Catholic University of America; John D. Miller, University of Virginia;  
Bruce Reinhart, University of Maryland

December, 1966

1. **Let's modernize the teaching of modern mathematics**  
G. L. Engel, U. S. Naval Weapons Laboratory, Dahlgren, VA
2. **A General Curriculum in Mathematics for Colleges**  
Professor M. Gweneth Humphreys, Randolph-Macon Woman's College  
Professors W. L. Duren, University of Virginia  
J. A. Hummel, University of Maryland  
G. S. Quinn, The American University

## Trivia

- Spring, 1957: joint meeting with local sections of SIAM.
- The Fall, 1965 meeting at Howard University was shared with the *Lecture Series in Differential Equations*, sponsored by the Air Force Office of Scientific research and the Joint Graduate Consortium of American, Catholic, George Washington, Georgetown, and Howard Universities and the University of Maryland
- During this decade, the Section continued to organize the High School Mathematics Competition—its own competition, and later the National MAA competition.
- In Spring, 1959, the section voted a letter of rebuke to be sent to the School Science and Mathematics magazine for carrying false advertising about the classical insoluble problems of Greek geometry.
- At the Fall, 1959 meeting, the registration fee for meetings was increased from twenty-five cents to fifty cents to cover rising costs of postage and occasional expense for outside invited speakers.
- The Fall, 1966 meeting was the first to hold concurrent sessions of contributed papers.
- We have total attendance for only 14 of the 20 meetings (median: 107; range: 65 to 151). We also have member attendance for 16 meetings (median: 90; range: 52 to 109).



## Section Meetings 1967-1976: A Snapshot

Number of Meetings: 20

Number of Papers: 182

(No information available for the Spring 1971 meeting at Loyola College of Maryland.)

Number of Papers per Meeting:

Minimum: 2

Median: 8

Maximum: 19

Number of Presenters: 160 (20 Women, 140 Men)

(Eight meetings had no female presenters.)

### Women Presenters

Sister John Frances Gilman, Saint Joseph College, Emmittsburg, MD

*Representations of Quadratic Forms* (December, 1967)

Eleanor G. Dawley Jones, Virginia State College

*A Characterization of the additive group of real numbers* (April 1968)

Ruth Goodman, Westinghouse Electric Corp., Baltimore, MD

*Sets of polynomials orthogonal simultaneously on four ellipses* (April 1968)

Geraldine Coon, Goucher College

*The Relevance of the MAA to our Section Colleges and Junior Colleges* (Panel member, November, 1968)

Marguerite Lehr, formerly of Bryn Mawr College, now of Salisbury, MD

*Parades and geometry* (November, 1968)

Dr. Ruth Bari, George Washington University (Invited Address)

*A New Look at the Four-Color Conjecture*, (November 1970)

Eleanor Green Jones, Norfolk State College

*Notes on endomorphism rings of torsion-free abelian groups* (April 1972)

Cheryl G. Tropf., University of Virginia

*On the bar structure in barred spiral galaxies* (April 1972)

Dr. Lida K. Barrett, University of Tennessee (Invited Address)

*A Metallurgical Application of Topology—An Elementary Introduction to Algebraic Topology* (November, 1973)

Hanna Nekvasil, Washington, DC

*Applications of non-Euclidean geometry to physics* (April, 1974)

Judith F. Gilsinn, National Bureau of Standards

*Working with large scale transportation and communications networks in the computer* (April, 1974)

Vivian E. Spencer, University of Connecticut

*The holor representation of raw materials measures* (April, 1974)

Linda R. May, Salisbury State College

*Use of the computer in a traditional calculus course* (November, 1974)

Marjorie L. Stein, National Bureau of Standards

*Planes, cubes, and center representable polyhedral* (November, 1974)

Hilda R. Findley-Knier, Washington, DC

*Content and Presentation of Lower Division Mathematics* (Panel member; April, 1975)

*Casting out cultural artifacts in the pre-calculus curriculum* (April, 1975)

Lynn H. Fox, Johns Hopkins University  
*Mathematical education for gifted female adolescents* (April, 1975)

Sister Marie Augustine Dowling, College of Notre Dame of Maryland  
*Mathematics in Colonial America* (November, 1975)

Judith F. Gilsinn, National Bureau of Standards  
*Algorithms for transit information* (November, 1975)

Carolyn A Maher, Rutgers University (Invited Address)  
*The Unification of Mathematics, Fiction or Reality?* (November, 1976)

Carla B. Oviatt, Montgomery College  
*A solution to a placement problem* (November, 1976)

Bonnie Page Danner, Virginia Commonwealth University  
*Maximal separable subfields* (November, 1976)

### Speakers from HBCU's

Eleanor G. Dawley Jones, Virginia State College  
*A characterization of the additive group of real numbers* (April 1968)

Earl Embree, Morgan State College  
*The Relevance of the MAA to our Section Colleges and Junior Colleges*  
 (Panel Member, November 1968)

Joseph Gurfein, Federal City College (Invited Address)  
*Origins of Mathematics* (April 1970)

Eleanor Green Jones, Norfolk State College  
*Notes on endomorphism rings of torsion-free abelian groups* (April, 1972)

L. W. Shapiro, Howard University  
*The  $p$ -group of a graph* (April, 1972)

R. M. Chapman, Hampton Institute  
*On the structure of ultraproducts of abelian groups* (April, 1973)

S. R. Srivastava, Bowie State College  
*Radiation conditions and a uniqueness theorem for the  $n$ -dimensional wave equation in an infinite domain* (April, 1973)

L. W. Shapiro, Howard University  
*Rings and Catalan numbers* (April, 1974)

Lew Kowarski, Morgan State College  
*The "Canonization" of conicoids on Univac 1106* (November, 1974)

Ann Miller, University of Maryland, Eastern Shore  
*2-metric properties of 2-normed lattices* (April, 1975)

V. J. Katz, Federal City College  
*On the history of the generalized Stokes theorem* (November, 1976)

## Most Frequent Speakers

<b>Speaker</b>	<b>Institution</b>	<b>Number of talks</b>
Michael Goldberg	Department of the Navy (formerly)	7
B. L. Schwartz	Mitre Corporation, Navy, Analytical Services	6
Robert Anglin	Dan River Mills	4
John M. Smith	George Mason	4
R. A. Herrman	U S Naval Academy	3

## Types of Institutions

<b>Affiliation of Speakers</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
College or University	107	111
Business	13	21
Government (non-military)	17	17
Military	8	13
High School	1	1
Organizations	3	4
Unknown	11	15

## Institutions Providing the Most Presenters

<b>Affiliation</b>	<b>Number of Presenters</b>	<b>Number of Papers</b>
University of Maryland	15	14
National Bureau of Standards	10	11
University of Virginia	8	7

## Meeting Hosts

During this decade eighteen different institutions hosted section meeting.

This list includes four HBCUs (Morgan State, Old Dominion, Hampton Institute and Bowie State) and one two-year college (Montgomery College, Rockville).

<b>Institution</b>	<b>Number of meetings</b>
U. S. Naval Academy	2
University of Virginia	2
Bowie State College*	1
George Mason College*	1
George Washington University	1
Georgetown University	1
Goucher College	1
Hampton Institute*	1
Loyola College of Maryland*	1
Madison College*	1
Montgomery College, Rockville*	1
Morgan State College	1
Northern Virginia Community College*	1
Old Dominion College*	1
Towson State College*	1
University of Maryland	1
University of Richmond	1
Virginia Commonwealth University*	1

\*Institutions hosting a meeting for the first time.

## Invited Addresses (and selected others)

April, 1967

**Some Comments on Existence and Uniqueness Theorems in Applied Mathematics with an Application to Thin Airfoil Theory**

Professor A. G. Mackie, Institute for Fluid Dynamics and Applied Mathematics, University of Maryland, Invited Address

December, 1967

**The Reverse Cauchy-Schwarz Inequality**

Professor Monroe Martin, University of Maryland

April, 1968

1. **The Practice of Applied Mathematics**

Dr. Walter P. Reid, Naval Ordnance Laboratory, Silver Spring, MD

2. **Mathematical Legends: Separating Wheat from Chaff**

Dr. W. J. Schneider, Syracuse University

November, 1968

**Mathematics in Topography**

G. F. Temple, Sedleian Professor of Natural Philosophy, Oxford University and Visiting Research Professor, Institute for Fluid Dynamics and Applied Mathematics, University of Maryland

April, 1969

1. **Some Remarks on the Calculus of Variations**  
C. B. Morrey, Jr., University of California, Berkeley
2. **Dissection Problems in Two and Three Dimensions**  
Michael Goldberg, formerly with the Navy Department

October, 1969

1. **Dynamic topology**  
Professor G. T. Whyburn, Johns Hopkins University, Chauvenet 1936  
(read by Professor E. E. Floyd, University of Virginia as a memorial tribute to Professor Whyburn)
2. **Hamiltonian mechanics**  
Saunders MacLane, University of Chicago, Chauvenet, 1941
3. **Complex methods in harmonic analysis**  
Guido Weiss, University of Washington, Chauvenet, 1967
4. **Finite dimensional Hilbert spaces**  
Paul R. Halmos, Indiana University, Chauvenet, 1947
5. **A look at probability and analysis**  
Mark Kac, Rockefeller University, Chauvenet, 1950, 1968

April, 1970

1. **Incorporating Applications on Mathematics into Undergraduate Courses**  
Peter Lax, Courant Institute of Mathematical Sciences, New York University
2. **Origins of Mathematics**  
Joseph Gurfein, Federal City College

November, 1970

**A New Look at the Four-Color Conjecture**  
Dr. Ruth Bari, George Washington University

November, 1971

1. **Pitfalls in automatic computations or how to keep out of trouble with computers**  
Dr. H. J. Oser, National Bureau of Standards
2. **Number theory and computers**  
Dr. Morris Newman, National Bureau of Standards

April, 1972

1. **A numerical analysis course developed by Ben Noble**  
David Schneider, University of Maryland
2. **On the minimum motion of a moved line segment**  
Michael Goldberg, Washington, DC

November, 1972

**England was Lost on the Playing Fields of Eton: A Parable for Mathematics**  
Dr. A. B. Willcox, Executive Director, MAA

April, 1973

**Finite Groups and Error-Correcting Codes**  
Dr. A. I. Thaler, National Science Foundation

November, 1973

**A Metallurgical Application of Topology—An Elementary Introduction to Algebraic Topology**  
Dr. Lida K. Barrett, University of Tennessee

April, 1974

**Solving Equations Exactly**

Dr. C. R. Johnson, National Bureau of Standards

November, 1974

**Period Three Implies Chaos**

Dr. James Yorke, University of Maryland

November, 1975

**Groups and Riemann Surfaces**

Dr. Leon Greenberg, University of Maryland

April, 1976

1. **Matrices, eigenvalues, and complex projective space**

Jay Alexander, University of Maryland

2. **Trends in school mathematics**

Henry Walbesser, University of Maryland, Baltimore Campus

November, 1976

**The Unification of Mathematics, Fiction or Reality?**

Carolyn A Maher, Rutgers University

Papers Regarding the Curriculum, Teaching, or Outreach

November, 1968

**The Relevance of the MAA to our Section Colleges and Junior Colleges**

Geraldine Coon, Goucher College

Earl Embree, Morgan State College

Jorg Mayer, George Mason College

William Swyter, Montgomery Junior College

Alfred Willcox, Executive Director, MAA

April, 1969

**The enrichment of calculus courses through concurrent use of a computer**

F. W. Terry, Hood College

April, 1970

**Incorporating Applications on Mathematics into Undergraduate Courses**

Peter Lax, Courant Institute of Mathematical Sciences, New York University

November, 1970

1. **Behavioral objectives and the teaching of mathematics**

J. M. Smith, George Mason College

2. **Self-paced learning of calculus**

Arnold Stokes, Georgetown University

April, 1972

1. **A numerical analysis course developed by Ben Noble**

David Schneider, University of Maryland

2. **A mathematics preparatory program for underprivileged students**

S. E. Goodman, University of Virginia

November, 1973

**Secondary Mathematics in Maryland and Virginia—The Present and the Future**

James Henkelman, University of Maryland

Edgar Edwards, Virginia State Department of Education

Vincent Brandt, Baltimore County Public Schools

James Fey, University of Maryland

April, 1974

**The implications of short-term memory research for the learning of mathematics**

H. B. Tunis, University of Maryland

November, 1974

1. **Mini-courses in mathematics**

David Russell, Prince George's Community College

2. **Pre-service mathematics for teachers**

J. M. Smith, George Mason University

3. **Small-group instruction in mathematics courses**

R. E. Hildebrand, University of Maryland

4. **Use of the computer in a traditional calculus course**

Linda R. May, Salisbury State College

5. **Individualization of mathematics for college certificate programs**

H. V. Ellis, Jr., Paul D. Camp Community College

April, 1975

1. **Content and Presentation of Lower Division Mathematics**

Hilda R. Findley-Knier, Washington, DC

R. M. Davis, Northern Virginia Community College

Jack Nachman, University of Maryland

C. W. S. Ziegenfus, Madison College

2. **Accelerating mathematics instruction for the mathematically talented**

W. C. George, Johns Hopkins University.

3. **Mathematical education for gifted female adolescents**

Lynn H. Fox, Johns Hopkins University.

4. **Casting out cultural artifacts in the pre-calculus curriculum**

Hilda R. Findley-Knier, Washington, DC

5. **Time-shared interactive computer-controlled information television (TICCIT)**

R. M. Davis, Northern Virginia Community College

November, 1975

1. **Placement and Prescription: Another approach to individualized instruction**

William Steger, Essex Community College

2. **A mathematics preparatory program for minority students: a post-mortem examination**

S.E. Goodman, University of Virginia

3. **A course in the application of mathematics: A model building approach**

D.C. Cathcart, Salisbury State College

April, 1976

**Trends in school mathematics**

Henry Walbesser, University of Maryland, Baltimore Campus

November, 1976

**A solution to a placement problem**

Carla B. Oviatt and K. S. Weiner, Montgomery College

## Trivia

- The October 1969 section meeting was also the dedication of Chauvenet Hall at the U S Naval Academy. The Invited speakers (Saunders MacLane, Guido Weiss, Paul R. Halmos and Mark Kac) were past Chauvenet prize winners.
- Our first invited woman speaker was Dr. Ruth Bari, at the November 1970 section meeting.
- March, 1967: Correspondence from Kenneth May asking for a history of the Section to be use in a volume on the first 50 years of the MAA. There is no evidence that the Section ever responded.
- After the Spring, 1972 meeting at the University of Virginia, local arrangements chair William Duren writes "... we need a check list of things to do and people to contact in preparation for a meeting." He goes on to suggest things that should be include in such a list.
- We have several letters from high school student who attended the Fall, 1973 meeting at Towson thanking the Section for the opportunity to do so, and remarking on their experiences. We also have a couple of Secretary John Smith's responses to the students.
- We have total attendance for 18 of the 20 meeting during this period. Attendance ranged between 48 at the Spring, 1973 meeting at Hampton Institute, and 127 at the Spring, 1967 meeting at the University of Virginia. Median attendance was 88.



*Lida K. Barrett*



*Earl Embree*



*Victor Katz*



## MD-DC-VA Summer Workshops from 1976 – 1995

Based on the vision and creativity of Ben Fusaro, professor at Salisbury University, the MD-DC-VA Section had a thriving summer workshop program that began in 1976 and continued through 1995. Salisbury University hosted two one-week long workshops every year from 1976 to 1990 and in 1991 the two summer workshops moved to Frostburg State in Maryland. There were no workshops in 1992. The workshop returned to Salisbury, Maryland in 1993, with funding from NSF. During the summers of 1994 and 1995, Frostburg held one workshop each summer. These Section summer workshops served as a model for other sections and demonstrated the need for and value of summer faculty development programs. From 2001 through 2015 the MAA PREP program offered this faculty development program for the MAA community.

The table on the following pages details the topics, leaders and number of participants for the Section's summer workshops.



*Ben Fusaro*

## MD-DC-VA Summer Workshops

Year	Topic	Leader	Venue	Number of attendees
1976	Models - Deterministic & Stochastic	D. C. Cathcart	Salisbury State College	21
1976	Calculus, Computing and Constructive Mathematics	Henry Cheng	New Mexico State	cancelled
1977	Models in Operations Research & the Social Sciences	W. F. Lucas	Cornell University	12
1977	A Survey of Computer Science	W. J. Collins	Salisbury State College	7
1978	Statistics: A Second Look	G. W. Rock	Salisbury State College	14
1978	Mathematical Models & Contemporary Problems	F. S. Roberts	Rutgers	26
1979	Catastrophe Theory & Its Applications	Alexander Woodcock	Williams College	25
1979	Mathematics and the Microcomputer	A. F. Falcoff	Dupont	21
		H. H. Suber	Salisbury State College	
1980	Linear Algebra & Its Applications	M. Z. Nashed	University of Delaware	25
1980	Structured Programming in Pascal	W. J. Collins	Salisbury State College	34
1981	Energy Systems Modeling	H. T. Odum	University of Florida	13
		E. C. Odum	Santa Fe CC	
1981	Combinatorial Problem-Solving	Alan C. Tucker	SUNY Stony Brook	26
1982	Algebraic & Symbolic Computing	B. F. Caviness	University of Delaware	19
		David Stoutemyer	University of Hawaii	
1982	Teaching Problem Solving	Alan Schoenfeld	University of Rochester	14
1983	Microcomputer Graphics	G. J. Porter	University of Pennsylvania	29
1983	Linear Algebra & the Microcomputer	Gareth Williams	Stetson University	29
1984	Teaching Mathematics via APL	K. E. Iverson	Sharp Associates, Toronto	28
		D. L. Orth	IBM, Yorktown Heights, NY	
1984	Exploratory Data analysis	Peter Bloomfield	NC State	21
1985	Program Design and Pascal	William J. Collins	Salisbury State College	30
1985	Lecture by Benoit Mandelbrot on Fractals			
1985	Computer Solutions to Differential Equations	Herbert S. Wilf	University of Pennsylvania	28
1986	Mathematical Modeling	F. R. Giordano	U.S. Military Academy	
		M. D. Weir	Naval Postgraduate School	30
1986	Discrete Mathematics with Difference Equations	J. T. Sandefur	Georgetown University	29

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1987	AI, Mathematics and the Microcomputer	Stefan Shrier	Georgia Institute of Technology	27
1987	OR: Mathematics and the Microcomputer	J. J. Bartholdi	Georgia Institute of Technology	14
1988	Fractals and the Microcomputer	W. D. Withers	U. S. Naval Academy	30
1988	Program Design and Data Abstraction	W. J. Collins	Radford University	13
1989	Chaos and the Microcomputer	C. Grebogi	University of Maryland	38
1989	Decision Making and the Microcomputer	T. L. Saaty	University of Pittsburgh	16
1990	The Mathematics of Neural Networks	R. J. Scott	University of Maryland Baltimore County	27
1990	The Mathematics of Computer Graphics	J. W. Weiss	Fairfield University, CT	15
1991	Chaos and the Microcomputer	C. Grebogi	University of Maryland	19
1991	Discrete Modeling and the Microcomputer	W. J. Meyer	Adelphi University and Grumman Data Systems	
1993	Energy Systems Modeling	H. T. Odum	University of Florida	21
1994	Surfaces, Soap Bubbles and General Relativity	Frank Morgan	Williams College	19
1995	Mathematics Workshop with Derive	Marv Brubaker	Messiah College	?
		Carl Leinbach	Gettysburg College	

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## Section Meetings 1977-1986: A Snapshot

Number of Meetings: 20 (18 described here)

Number of papers: 311

Number of papers per Meeting:

Minimum: 8

Median: 16

Maximum: 26

Talks, especially by women

Year	Meeting	Talks
1977	Spring	1 invited 13 papers No women
	Fall	1 invited 1 panel (1 woman) 8 papers (1 woman)
		<p><b>A simplified sieve method to determine the set of primes less than the product of the first <math>n</math> primes</b> Inda Lepson, University of Maryland (retired)</p> <p>Panel Discussion <b>Applicable mathematics for employability</b> Dr. Elizabeth Cuthill, David Taylor Naval Ship Research and Development Center Dr. Carl Hammar, Sperry-Rand UNIVAC Dr. W. J. Shaffer, E. I. DuPont de Nemours John M. Smith, George Mason University, moderator</p>
1978	Spring	1 invited 12 papers No women
	Fall	2 invited 13 papers No women
1979	Spring	1 panel (1 woman) 16 papers (1 woman) <b>Re-Teaching Mathematics</b> Vera R. Granlund, University of Virginia
1979	Fall	Met at Prince George's Community College; no other information
1980	Spring	1 invited No additional Records

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	Fall	1 invited 2 "Birds-of-a-Feather" 1 woman 26 papers (4 women, including first talk and Section meeting for Caren Diefenderfer)
1981	Spring	1 invited address (1 woman) 20 papers (6 women) 7 papers from community colleges
	Fall	2 invited (1 woman) 13 papers (3 women) MAA Television Tapes
1982	Spring	2 invited addresses 20 papers (2 women)
	Fall	2 invited addresses 15 papers (2 women)
1983	Spring	1 invited address 11 papers (1 woman: Karen Parshall, Sweet Briar College)
	Fall	2 invited addresses 22 papers (6 women) <b>Evaluation of a Single Mathematics Placement Test Used to Assist Students in Selecting Entry Level Courses</b> Margaret Aldrich (Peggy Kidwell's mother), and Elizabeth Teles, both of Montgomery College <b>Discrete Mathematics in the First Two Years: An Update of the MAA Panel Activities</b> Martha Siegel, Towson State University
1984	Spring	Joint Meeting with AMS 10 invited addresses (1 woman, Carolyn Maher, Rutgers University) 13 papers (1 woman) <b>E.H. Moore and the Founding of a Mathematical Community in America 1892-1902</b> Karen Parshall, Sweet Briar College
	Fall	2 invited addresses (1 woman) <b>Mathematics and the Art of Escher</b> Doris Schattschneider, Moravian College; Editor Mathematics Magazine 1 workshop <b>An Introduction to the Mathematical Foundations of Computer Graphics</b> Gerald Porter, University of Pennsylvania 25 papers (4 women, including 3 students)

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**Mathematics Liberally Applied for/by the Non-Mathematics Major**

Sister Helen Christensen, Loyola College

TEAM Learning Modules: Video Presentation and Problem Solving

1. **Highway Slope Design**
2. **Hours of Daylight**
3. **Aircraft Sidestep Maneuver**

1985    Spring    1 invited address  
1 workshop  
16 Papers (3 women)

**A Property of the Unit Digits of the Fibonacci Sequence**

Herta Freitag, Hollins College

**Estimating Tornado Windspeed Probabilities: Empirical, Theoretical, and Subjective Perspectives**

Bob Abbey, Office of Naval Research and Mary Kay Abbey, Montgomery College

**A Non-Elegant Way of Expressing the  $n$ th Power of the Golden Ratio**

Herta T.Freitag, Hollins College

Fall    2 invited addresses  
25 papers (4 women)

1986    Spring    2 invited addresses (1 woman)

**The Use of a Symbol Manipulation Program (muMath) to Refocus Calculus on Concepts**

Kathleen Heid, Pennsylvania State University

19 Papers (2 women)

**Right Brain, Left Brain, and No Brain: Matching Styles of Learning with Styles of Teaching**

Robert F. Abbey, Office of Naval Research and Mary Kay Abbey, Montgomery College

**Using the IBM-PC in the College Math Classroom: Developmental Math through Differential Equations**

Mary Kay Abbey and Elizabeth Teles, Montgomery College

Fall    2 invited addresses  
24 papers (4 women)

**The Mathematician's Attic: Treasures of the National Collections**

Peggy Kidwell, Division of Mathematics, National Museum of American History

**Diagonalization of Complex Symmetric Matrices**

Dipa Choudhury, Loyola College

**Graph-Theoretic Models for the Liberal Arts Mathematics Course**

Sister Helen Christensen, Loyola College

**Methods of Apportionment**

Suzanne Sands, Goucher College

Talks by students

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<b>Year</b>	<b>Meeting</b>	<b>Student Presentations</b>
1982	Fall	<b>Jeeps Are Not Scalars</b> Carmen Castells, Johns Hopkins University (female!)
1984	Spring	<b>The Design and Implementation of an Interpreter for the Functional Language LISP</b> Anthony C. Barrett, James Madison University
	Fall	3 Student Papers <b>Pursuit Games</b> Young Lee, Student, Goucher College <b>Optimum Strategy for a Two Person Poker Game</b> Laura Lamb, Student, Goucher College <b>Guessing a Number with Lying</b> Susan Emily Imber, Student, Goucher College
1985	Spring	5 Student Papers <b>Probabilistic Analysis of a Numerical Method for Finding Zeros of a Function</b> Arthur Benjamin, Johns Hopkins University (his first professional talk!) <b>The Experience and the Product of a COMAP Winner-- Modeling in Animal Populations</b> John Kent, Dan McCaffey, and Mike Caulfield, advised by John August, Mount Saint Mary 's College <b>Some Results on the Period and the Restricted Period of the Fibonacci Series Mod-P</b> Anna Werner, American University <b>The Independence of Certain Ascoli Theorems</b> David A. Lamb, George Mason University <b>Some New Results Regarding Primitive Roots Modulo a Prime</b> Steve Bonner, American University
	Fall	1 student paper <b>The Experience and the Product of a COMAP Winner - Modeling in Animal Populations</b> Mike Caulfield, John Kent, Dan McCaffrey, Students; John August, Advisor, Mount Saint Mary's College
1986	Spring	2 student papers <b>PROLOG and Proof by Analytic Tableaux</b> Daniel B. Widdis, Student, U.S. Naval Academy <b>Help! To the Rescue in Rio Rancho!</b> COMAP Mathematics Competition in Modeling, 1986 Outstanding Paper Maureen Hardy, Mike Irizarry, Stephen Penrice, Students; Andrew Vogt, Faculty Advisor, Georgetown University

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Fall      1 student paper  
**Analysis of Jumping Games**  
**Arthur Benjamin, Graduate Student**, Johns Hopkins University

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HBCU and Minority Participation

<b>When</b>	<b>Who</b>	<b>What</b>
Fall 1978	Shantilal N. Shah, Hampton Institute	<i>Functions of Exponential Type are Differences of Functions of Bounded Index</i>
Spring 1981	Eleanor Green Jones, Norfolk State University	<i>Findings of the MAA Committee on Improving Remediation Efforts in the Colleges</i>
Fall 1982	Queen E. Wiggs, University of the District of Columbia	<i>Math Anxiety in Minorities</i>
1983	Fall (UDC)	<b>The 203 groups of Order 504</b> James Alonso, University of the District of Columbia <b>A More Successful Precalculus Sequence at an Open Admissions University</b> Eleanor Green Jones, Norfolk State University
Spring 1985	James Alonso, University of the District of Columbia	<i>Groups of order <math>q^3, p</math></i>
Fall 1985	William J. Berger, University of the District of Columbia	<i>Positive Integer Solutions of the Descartes Circle Equations</i>

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Common or new themes/Notable talks and events

<b>When</b>	<b>Who/What</b>
Spring 1977	<i>Invited Address</i> <b>Aberrancy: A Geometric Interpretation of the Third Derivative</b> Steven H. Schot, American University
Fall 1977	<i>Invited Address</i> <b>On the relationship between the application of mathematics and the teaching of mathematics</b> Dr. Henry O. Pollak, Bell Laboratories, Past President, MAA

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- Spring 1978      Invited Address  
**Those neglected cubics**  
Professor William M. Sanders, James Madison University
- Fall 1978      Invited Address  
**Mathematics: Where are We Going and What Educators Can Do About It**  
Alfred B. Willcox, Executive Director, MAA
- Spring 1979      Invited Address  
**Some Mathematical Models for One-Variable Calculus Students**  
Professor Brindel Horelick, University of Maryland, Baltimore County
- Spring 1979      Panel Discussion  
**Prospects in Mathematical Education in the 1980's**  
Dorothy L. Bernstein, President of the MAA, Goucher College  
Ron Davis, Northern Virginia Community College  
Robert L. Wilson, Jr., Washington and Lee University  
Joseph F. Kent, University of Richmond, (moderator)
- MAA Film: Cycloidal Curves or Tales from the Wanklenberg Woods**
- How Students Can Do "Research"**  
Allen Barwick, Woodrow Wilson High School (DC)
- Math and Careers**  
Richard Bolstein, George Mason University
- Spring 1980      Invited Address  
**Optimal Strategies for Sports**  
Professor Leonard Gillman, Treasurer of the MAA
- Fall 1980      Invited Address  
**The Applied Mathematics Program at Carnegie-Mellon University: A Blend of Traditional and Professional Training**  
Dr. Richard MacCamy, Carnegie-Mellon University
- "Birds-of-a-Feather" sessions  
**What's Happening at the Two Year Colleges?**  
William Sweeter, Montgomery College  
**Preparing Students for a Career as a Nonacademic Mathematical**  
Marjorie Stein, U.S. Postal Service
- Spring 1981      Invited Address  
**Death on the Highways: Can Mathematics Help?**  
Marcia Sward, Associate Executive Director of the MAA  
**Recommendations of the CUPM Subpanel on Computing**  
George Engel, Christopher Newport College  
**Recommendation of the CUPM Subpanel on Modeling**  
Ralph Disney, Virginia Polytechnic Institute and State University
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- Fall 1981      **The Teaching of Mathematical Problem Solving**  
 Carolyn Maher, Rutgers University  
**Implications of Prime 80 on Applied Mathematics**  
 Alan Tucker, SUNY at Stony Brook
- MAA Series of Television Tapes: Mathematics at Work in Society
1. **An Actuary—What's That?**
  2. **Mathematics in Space**
  3. **Mathematics: Where Will I Ever Use It?**
  4. **Mathematics - The Language of Science**
- Spring 1982      Invited Address  
**The Role of Computer Graphics in the Teaching of Mathematics**  
 David A. Smith, Duke University  
 Film Presentation  
**The Hypercube**  
 Thomas Banchoff, Brown University
- Fall 1982      Invited Addresses  
**The Mathematical Sciences Curriculum K-12: What is Still Fundamental and What is Not?**  
 Marcia Sward, Associate Director of the Mathematical Association of America  
**Applications of Statistics in the Telecommunications Industry**  
 James Maher, Bell Telephone Labs
- Spring 1983      Invited Address  
**Hardware, Software, and Mathematics**  
 Jack Befdler, University of Scranton
- Fall 1983      Invited Address  
**Intuitive and Counterintuitive Mathematics**  
 Warren Page, Editor-Elect, *Two-Year College Mathematics Journal*  
**Undergraduate Mathematics in China**  
 Florence Ashby, Montgomery College  
 Ron Davis, Northern Virginia Community College  
 Gloria Gilmer, National Institute of Education
- Spring 1984      Joint meeting with AMS
- Fall 1984      First Friday workshop?  
 (Jerry Porter, Computer Graphics)  
 Invited Addresses  
**Shakespeare or Bacon? Submarine or Whale?**  
 Herbert Wilf, University of Pennsylvania  
**Mathematics and the Art of Escher**  
 Doris Schattschneider, Moravian College; Editor Mathematics Magazine
- Spring 1985      Invited Address  
**How to Factor a Number**  
 Carl Pomerance, 1984 Chauvenet Prize Winner, University of Georgia
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	<p>Workshop  <b>Writing Mathematics Programs for the IBM PC</b>  David Schneider, University of Maryland</p>
Fall 1985	<p><b>Applied Mathematics in Design: the Role of Graphics</b>  Harry W. McLaughlin, Rensselaer Polytechnic Institute  <b>What is Discrete Algorithmic Mathematics?</b>  Stephen Maurer, Swarthmore College</p> <p>Workshop  Some Reasonable Objectives of a Discrete Mathematics Course  Walter Meyer, Adelphi University</p> <p><b>Open Forum: Should Our Section Become Involved in Issues Relating to Elementary and High School Math Education?</b>  Robert Lewand, Moderator, Goucher College</p>
Spring 1986	<p>Invited Addresses  <b>The Use of a Symbol Manipulation Program (muMath) to Refocus Calculus on Concepts</b>  Kathleen Heid, Pennsylvania State University  <b>Machine Intelligence in a Problem-Solving Context</b>  Stefan Shrier, Grumann-CTEC, Inc.</p>

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Our speakers came from colleges and universities and ...

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1977	<p>National Bureau of Standards  Department of Health Education Welfare  Naval Research Laboratory  Computer Sciences Corporation</p>
1978	<p>Naval Research Lab (2)  NBS  US Bureau of the Census  Computer Sciences Corporation (2)  Booz, Allen and Hamilton, Inc., Bethesda, MD (2)</p>
1980	<p>US Postal Service  AAAS  Department of Energy (2)  Naval Research Lab  World Bank  NIH  Chi Associates Inc.  Federal Emergency Management (2)</p>

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NBS  
Federal Highway Administration (2)  
The Mitre Corporation (2)  
Department of Labor  
Naval Sealift Command  
Booz, Allen and Hamilton, Inc.  
US Nuclear Regulatory Commission

1981 TRW  
FAA  
Naval Sealift Command  
National Institute of Education  
NSF  
Daniel S. Wagner Associates  
NASA/Godard

1982 Westinghouse Electric Corporation  
DOE  
Dept of Agriculture  
System Planning coporation  
Bell Telephone Labs  
Daniel H. Wagner Associates  
Systems Planning corporation  
Naval Research Lab

1983 General Physics Corporation  
J. S. Lee Associates  
AT&T Bell Telephone Labs  
Lockheed Engineering  
Chancy Station, Inc  
Naval Research Lab  
Office of Naval Research

1984 AT&T Bell Labs (2)  
General Physics Corporation  
IBM  
Sperry Corporation

1985 NIH (2)  
Computer Sciences Corporation  
EPL Analysis  
Center for Naval Analyses  
Bureau of Census

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1986 Grumann CTEC, INC  
Office of Naval Research  
Collins Communications Systems Division  
U.S. Army Signals Warfare Center  
National Institute on Aging  
US Naval Surface Center  
Bureau of the Census

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Overall Observations:

More students and more women.

Fewer speakers from HBCUs and business, government, industry.

Started workshops in this decade.

Frequent contributors

W. P. Wardlaw, USNA

David A. Schedler, VCU

J. F. Kent, University of Richmond

Howard Penn, USNA

Carol Crawford, USNA

Brian Shelburne, Sweet Briar

Karen Parshall, Sweet Briar

Caren Diefenderfer, Hollins College

Bob Hanson, JMU



*Herta Taussig Freitag*



*Jon Scott and Mary Kay Abbey*

## Two Remarkable Women



Eleanor Green Jones

Mathematician and professor of mathematics Eleanor Jones was born on August 10, 1929 in Norfolk, Virginia. Her mother, Lillian Vaughn Green, was a domestic worker, and her father, George Herbert Green, was a letter carrier. She attended Booker T. Washington High School where her favorite subject was mathematics. Jones graduated as valedictorian of her class at the age of fifteen and received a scholarship to attend Howard University. Jones received her B.S. degree in mathematics in 1949. She studied under Elbert Cox, the first African American to receive his Ph.D. degree in mathematics. Jones remained at Howard

University where she received her M.S. degree in mathematics in 1950. Then, she returned to Booker T. Washington High School as a mathematics and science teacher for two years.

Jones was hired in 1955 as an associate professor of mathematics at Hampton University. When schools in Norfolk, Virginia were closed in 1958 due to forced integration, Jones helped tutor students in a local church. That same year, she also became vice chair of the Congress of Racial Equality (CORE) in Virginia. By 1962, Jones left Hampton to study mathematics at Syracuse University under the tutelage of Dr. James Reid. In 1965, she was elected to the Sigma Xi science honor society and went on to graduate from Syracuse University in 1966 as the eleventh African American woman to earn her Ph.D. degree in mathematics. Her thesis, entitled, "Abelian Groups and Their Endomorphism Rings and the Quasi-Endomorphism of Torsion Free Abelian Groups," examined advanced abstract algebraic concepts. In 1967, Jones rejoined the faculty at Hampton University. One year later, she became professor of mathematics and chair of the department at Norfolk State University.

Jones retired as professor emeritus from Norfolk University in 2003. She served on the Committee for Opportunities for Underrepresented Minorities of the American Mathematical Society, the Executive board of the Association for Women in Mathematics and the Board of Governors for the Mathematical Association of America. Jones also held the position of vice president of the National Association of Mathematicians. She raised three sons, Everett B. Jones, Edward A. Dawley and the late Herbert G. Dawley.

From *The History Makers*, <http://www.thehistorymakers.com/biography/eleanor-jones-42>

## Vera Raymond Granlund

Vera Raymond was born in Bronxville, New York and attended Bronxville public schools and Rye Country Day School. She played the piano, violin and trombone, was a baton twirler for the drum majorette corps, and was the first girl to be on the high school chess team. In 1943 she entered Connecticut College for Women, leaving after three semesters to marry John Granlund, who was in the Navy's V12 program at the Massachusetts Institute of Technology and subsequently at the Boston Naval Yard. They were married on March 10, 1945. John completed his graduate work at MIT, where Vera worked doing scientific calculations in the statistics department and for the Confidential Instrumentation Department until the birth of her son. Later the family spent a year in England while John pursued research in transatlantic radio transmission. He returned to MIT's Lincoln Laboratory and Vera was a stay-at-home mother who worked with Boy Scouts, Girl Scouts, the PTA and the League of Women Voters. In 1959, the family moved to Short Hills, NJ and Vera continued her volunteer activities while John worked at ITT Federal Laboratories in Nutley.

When her youngest daughter began kindergarten, Vera went back to college and worked summers as a



*Vera Raymond Granlund on the day of her retirement from UVA (center, front row)*

teaching assistant at Drew University. She was awarded a BA degree, summa cum laude, in mathematics in 1967 and was awarded a National Science Foundation grant by Stevens Institute of Technology in Hoboken, NJ -- the first woman so honored. In the fall of 1967 Vera entered Stevens Institute as a teaching assistant handling recitations. She continued her studies during the normal school year, spent several summers at Drew University, then

spent two summers working with "exceptional" high school seniors at Stevens. After completing the credits needed for an MS and a PhD, Vera returned to Drew University to teach a statistics course; she later completed her research and obtained her PhD in May 1975. During this time she also taught piano and tutored high school math students.

Vera and John moved to Charlottesville in November 1975, when John accepted a position at the National Radio Astronomy Observatory. Vera was hired by the University of Virginia mathematics department in the School of Engineering and Applied Science. She developed a new course for students who were not fully prepared for engineering math as taught by the Department of Applied Mathematics and Computer Science, and also taught four basic courses all engineering students took. She enjoyed nineteen years at UVA, was elected to the Raven Society and retired as an emeritus professor in 1997. Even after retirement she continued to tutor students at the university.

From

[http://www.hillandwood.com/home/index.cfm?action=public%3Aobituaries.view&o\\_id=110264&fh\\_id=10702](http://www.hillandwood.com/home/index.cfm?action=public%3Aobituaries.view&o_id=110264&fh_id=10702)

## Section Meetings 1987-1996: A Snapshot

Number of Meetings: 20

Number of papers: 358

Number of papers per Meeting: 18

The total number of talks at each meeting varied from a low of 8 (Fall '90) to a high of 31 (Fall '96). In general the trend was an increase in the number of talks.

### Number of Women Speakers

Year	Number of Contributed talks by women
1987	5
1988	6
1989	7
1990	6
1991	9
1992	> 2
1993	9
1994	11
1995	4
1996	32 (!)

### Talks by and for Students

Over the decade, there was a sprinkling of student talks at Fall meetings. Most student talks were at Spring meetings. Started with 0 talks in '87, 1 in '88, increasing to 14 in '96 + 5 Meritorious MCM teams!

In the **Spring of '94** we held an **MAA Student Conference on Environmental Mathematics** at St. Mary's College of Maryland.

#### Invited Addresses:

- The Exxon Valdez Oil Spill, Peter Olsen, National Security Agency and U.S. Coast Guard Reserve
- Some History of Fermat's Last Theorem, V. Frederick Rickey

#### Workshop

- Modeling Viability of Endangered Species, Robert McKelvey, University of Montana

7 student papers by 13 students, including 3 MCM papers. Also a talk by 2 students in the regular conference.

At the **Fall '96 meeting at Hood College**, the Georgetown University math club put on a skit, *Dances with Calculators*. There were also two panels for students:

- Regional Representatives of Graduate Schools
- Looking for Employment



## HBCU/minority participation

During this decade, there were many talks by faculty from **Morgan State University**:

- Vojislav Stojkovic (7)
- Sam Tannouri (3)
- Carl Thomas Moore
- J. Bernard Nestor
- Xiao-Xjong Gan
- Ahlam E. Tannouri (including a workshop)
- Jon Smid
- Eun-Ho Lee
- Tafyu Kim
- Several student papers

Other speakers:

- Genevieve M. Knight, Coppin State College (3 talks)
- Bonita V. Saunders, National Institute of Standards and Technology (2)
- Chris Barat Virginia State University, (2)
- Lou Shapiro, Howard University
- Victor J. Katz, University of the District of Columbia
- Abol G. Miamee, Hampton University
- E. William Chapin, University of Maryland Eastern Shore
- George Pfeiffer, Norfolk State University
- Rebecca Lee, Bowie State University

Talks related to minority participation:

- "Recruiting Minorities into Mathematics," Tony Hawkins, MAA.
- "Benjamin Banneker," Florence Fasanelli, MAA.
- "The African Heritage of Benjamin Banneker," Kenneth Lee Jones, Student, American University
- "Initiating an Intervention Program for Minority Middle and High School Students," William Hawkins, SUMMA.
- "A Successful Intervention Program for High Ability Minority Students," Linda B. Hayden, American University
- "Summer Workshop for Minority Students," George Piegari, Virginia Military Institute

## Themes in meetings/talks

Talks by folks from Rand Corp, National Security Agency, US Dept of Education, U.S. Army Topographic Engineering Center, U.S. Army Ballistic Research Laboratory, Aberdeen Proving Ground, Naval Research Lab, National Institutes of Health, NSF, USDA Graduate School, National Museum of American History, NIST, AsTech Associates, Johns Hopkins University Applied Physics Lab + several consultants and private or retired researchers.

Lots of talks about the history of mathematics and its teaching.

And lots of talks about using the computer to teach mathematics.

Talks about fractals and chaos.

A couple of talks about wavelets.

Calculus reform.

Writing in math classes.

Spring '96: a workshop on The World-Wide Web

### **An Introduction to the Project Next Fellows Program, Spring 1996**

- Della Fenster, University of Richmond
- Jacqueline Hall, Hampden-Sydney College
- Christine McMillan, Virginia Polytechnic Institute & State University
- Maureen Yarnevich, Towson State University

## Notable invited lecturers/workshop leaders

- Bernard L. Madison and Paul Zorn Fall '87
- Leonard Gillman Spring '88
- Paul Halmos, Art Benjamin (grad student), Fred Rickey Fall '88
- Sol Garfunkel, COMAP Spring '89
- Bob Devaney, Marcia Sward Fall '89
- Joe Gallian Fall '90
- Helamon Ferguson, Lida K. Barrett Fall '91
- Deborah Hughes Hallett Spring '92
- Keith Devlin, Woody Dudley Fall '93
- Bill Dunham, Frank Morgan Fall '95
- James Yorke Fall '96 (2 talks)
- MAA Presidents: 5

**Spring '95:** Joint meeting with **VMATYC** at Thomas Nelson Community College. One joint talk, one joint panel. 35 MAA papers, including 10 student talks.

## Most frequent contributors

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Bill Wardlaw	USNA	14 talks
Howard Penn	USNA	9 talks, 2 workshops
Vojislav Stojkovic	Morgan State University	7 talks
Jack Clark	Frostburg State University	5 talks, 1 workshop
G. Edgar Parker	James Madison University	6 talks
Marcelle Bessman	Frostburg	6 talks
James Coughlin	Towson	5 talks

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## LOTS of talks by **USNA** faculty

- William P. Wardlaw (14)
- R. Bruce Richter (2)
- Paul B. Massell (1 @ USNA, 1 @ JHU)
- Howard Penn (9 talks, 2 workshops)
- Jim Buchanan (2 talks, 2 workshops)
- William Douglas Withers
- Craig Bailey (2)
- C. C. Hanna
- Peter Turner
- Michael W. Chamberlain
- Robert A. Hermann
- Peter Turner
- Peter McCoy (4)
- Carol G. Crawford



*Bill Wardlaw*



*Howard Lewis Penn*

## Trivia:

The first talk in our Section by **Dan Kalman**? “Linear Algebra and the Irrationality of the Square Root of Two,” Dan Kalman, American University, Spring 1995. Then 3 more talks by Kalman in subsequent meetings during this decade.



*Genevieve Knight*



*Chris Barat*



*Dan Kalman*

## MD-DC-VA MAA Memories

Roland Minton, Roanoke College

**My favorite meetings:** Four stand out, for family reasons.

Father: my Dad and I attended the April 1991 meeting at Virginia Commonwealth University. I gave a talk; this may have been the first time my Dad had seen me “in action” professionally. He was a long-time MAA member and highly valued his professional connections, most of which were in his specialty of statistics. At this meeting he was quite proud to introduce me to Sister Helen Christensen. The Maryland meeting and this meeting give a very nice family continuity to the Mintons in this section. One further favorite aspect of this meeting: I was getting heavily involved with graphing calculators and Jerry Johnson gave a wonderful keynote that helped me organize some of my thoughts on the benefits and harms of technology. His bottom line of “it’s coming, and our choice is whether to be a part of shaping changes in a positive way or allowing it to all go negative” was an attitude I repeated successfully with numerous local high school teachers.

Son: my son Greg attended the November 2002 meeting at the University of Maryland. He was a sophomore in high school, had become quite advanced mathematically, and was debating graduating a year early. Jon Scott was wonderful talking to us about the pros and cons of graduating early; Jon, of course, was great about asking me for updates on Greg as the years went by. (Greg, for the record, earned his Ph.D. in mathematics from MIT in 2013). Another significant event was John Osoinach’s talk on the Lying Oracle. I enjoyed it very much, and Greg was very excited by it. John sat down with us after the talk, and got Greg interested in doing John’s Problems of the Fortnight at Hampden-Sydney. Bud Brown gave an excellent talk on  $(7,3,1)$  that was an exemplar of mathematical curiosity and scholarship. After my talk, Ed Parker engaged me in a wonderful give and take. The meeting was special because of the way the MD-DC-VA family embraced my son and gave him the sense of an exciting mathematical community that I was a part of. He would probably have become a mathematician anyway, but this meeting surely helped.

Wife: Jan and I did much of the organization of the April 2007 meeting at Roanoke College. The extra involvement make the meeting a blur, but it is a happy blur due to having input into most of the details of the meeting. The two things that stand out are Eve Torrence grabbing me at the previous year’s meeting at the University of Virginia and talking me into hosting, and a coincidence that made Roanoke College look good. The campus is often deserted on Friday evening, but our banquet guests adjourned to a rally as part of a Walk for Cancer fundraiser. It is a nice, and rare, gift to receive a wave of pride in the student body at my school. The Jeopardy event was a disaster, but has now assumed a mythic status that is good.

Personal: “my” meeting was in April 2014 at James Madison. I gave the banquet address (a light mix of magic tricks and historical sidebars) and received the John M. Smith Teaching Award. Both were orchestrated by Dave Taylor, with letters of nomination written by many of the younger mathematics faculty at Roanoke College. That is special. There’s not much about getting old that I’m enjoying, but seeing the next generation of RC mathematicians participate in and value our excellent MAA section feels good.

## My favorite talk: three categories this time

The complete package: the section has several people who have taken interesting little problems and completely analyzed them. John Osoinach's and Robb Koether's Lying Oracle falls into this category. Bruce Torrence has given several of these talks, including an investigation of whether you get wetter running in the rain or walking. This is a category I try to contribute to; the most successful attempts were Elvis the Calculus Dog and G.H. Hardy's Golfing Adventure.

Making connections: Bud Brown has given numerous talks where he takes a theme, such as the number eleven, and weaves together an impressive set of apparently diverse mathematical facts. The category name could also be "tour de force" as it shows command of big pieces of mathematics. Dan Kalman has given talks of this type, and some of the keynote speakers (Michael Starbird comes to mind) have also given great talks.

Special topics: The wide range of outside speakers gives us all a chance to hit (and sometimes miss) some exciting work. Bob Borelli's differential equations talk was perfectly timed for me, as were James Yorke's, Bob Devaney's, and Celso Grebogi's chaos talks. For pure enjoyment, I might put Art Benjamin's performances at the top.

## The Things I Like Best

It all boils down to a positive energy about undergraduate mathematics. Student involvement, talks on pedagogy (official presentations, panel discussions, and casual conversations), and accessible "complete package" talks are always inspirational. The general supportive atmosphere and openness to newcomers joining "the club" are part of making the meetings enjoyable and worthwhile for a large number of people.

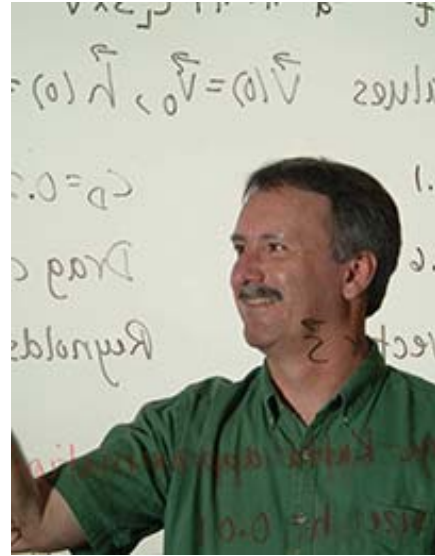
## Why I Bring Students

Because the section has a culture of supporting undergraduate work, students find an energetic and enjoyable community of mathematicians (sometimes this is a surprise to them). This has direct and indirect influences on their education at Roanoke College, as they now "belong" to mathematics and are motivated to do research and present their results. They learn that their work is competitive and respected, which reinforces the joys of doing independent work. They also have fun seeing other students' talks and competing in Jeopardy. The bottom line is that students who have gone to the meetings have become *more* interested in mathematics.



*Roland's father, Paul Minton, at SMU*

**Funny comments:** Bud Brown giving directions, leading us by saying, "Walk this way" and then going into his best Groucho Marx walk. Dan Kalman, constructing excruciating puns. The late Howard Penn, making a motion for the secretary to be instructed to send a letter of appreciation to the host school.



*Roland Minton*



*Greg Minton*



*Jan Minton*

## Section Meetings 1997-2006: A Snapshot

Number of meetings: 20

Number of papers: 343

Number of papers per meeting:

Minimum: 9

Median: 19

Maximum: 25

Number of contributed talks by women

Year	Number of talks
1997	13
1998	7
1999	>3
2000	6
2001	3
2002	9
2003	8
2004	8
2005	11
2006	8

Invited address, Spring 1999: **Women in Mathematics: Reality and Myths**  
Anita Solow, Randolph-Macon Woman's College

Talks by and for Students

Fall '98: Invited Lecture for Undergraduate Students

**Web, Sieves, and Money: Number Theory's Rubber Hits the I-way Road**

J. Kevin Colligan, National Security Agency

Special **undergraduate student conference**, Spring '99, JMU

- Keynote Speaker, Joseph Gallian
- Student Presentations
- Poster Session
- Panel Discussions:
  1. Careers in the Mathematical Sciences
  2. Graduate Programs in Mathematics



Workshop for students Spring '05

**Weird Multiplication and Weird Ways to Multiply**

James Tanton, St. Mark's School

Number of talks by undergraduate students

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<b>Meeting (Usually spring)</b>	<b>Number of student talks</b>
1997	11
1998	13 + 5 meritorious MCM teams
1999	We know there were 4 awards for research talks, 3 for expository talks, and 5 for posters. There were 6 Meritorious MCM teams from our Section, including 2 from the Governor's School in Richmond.
2000	9 (Spring 6, Fall 3)
2001	4 MCM teams (1 outstanding, 3 meritorious) + 12 talks
2002	7 talks + 4 MCM teams (2 outstanding, 2 meritorious)
2003	6 MCM teams, including 2 from Maggie Walker governor's school, VA. Student talks not separated in program.
2004	11 talks, including one by Gwyneth Whieldon of St. Mary's College
2005	6 + 5 MCM teams (1 outstanding, 4 meritorious; 2 from Maggie Walker)
2006	14 talks + 1 meritorious MCM team

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Graduate student events:

Talks by grad students:

Spring '98, Va. State: 2

Spring 2000, Randolph Macon College: 5

Fall '01, Virginia Tech: 7

Fall '02, College Park: 9. Also a panel for grad students about the job search.

Student competitions:

In 2008, we begin listing the winning Jeopardy team on the website.

In 2011, we add the winning Radical Dash team.

HBCU/minority participation

**Section meeting at Virginia State University** Spring 1998

**Section meeting at Bowie State University**, Spring 2000

At that meeting, invited speakers:

- John W. Alexander, Jr., Spelman College, on “The History of Mathematics in Color”
- Melvin R. Currie, National Security Agency
- Workshop: Victor Katz, University of the District of Columbia and Rebecca Berg, Bowie State University

**Section Meeting at Norfolk State University**, Spring 2003

**Section meeting at Morgan State University**, Fall 2004

**Invited speakers during this decade:**

- James White, Mathwright Library Fall ‘98
- Fern Y. Hunt, NIST (Spring 06)
- Bonita Saunders, NIST (Fall 2001)

**Contributed talks by faculty from HBCUs:**

Morgan State University:

- Asamoah Nkwanta (3)
- Vojislav Stojkovic (3)
- Roni Ellington
- Ahlam Tannouri (4)
- Jan Smid
- Bhamini M. P. Nayar (2)
- Grace Steele
- Arthur D. Grainger (2)
- Marshall M. Cohen (2)
- Karen S. Adams
- + several students

Coppin State College:

- Atma R. Sahu (2)

Virginia State University:

- Raymond Fletcher III (4)
- Fabio Guerinon
- Dawit Haile (3)
- Christopher E. Barat

Bowie State University:

- Rebecca Berg
- Roman Sznajder (3)
- Karen Z. Benbury
- Paul Chi

Hampton University:

- Frank Kozusko
- Abolghassem Miamee

Norfolk State University:

- Boyd Coan
- Guy T Hogan
- Shadana Yates
- Jiashi Hou
- Archie W. Earl, Sr.

U. MD, Eastern Shore:

- Daniel M. Seaton



*Bonita Saunders*



*Fern Hunt*



*James White*

Meeting themes

Panel Discussion Spring '04

**Mathematics Preparation for Incoming College Students**

Denny Gulick, U. MD, College Park,

David Carothers, JMU

Jerry Dancis, U. MD, College Park

Gail Kaplan, Key School and Towson University

Followed by Special Presentation Fall '04

**Mathematics Preparation for Incoming College Students**

Denny Gulick, University of Maryland College Park

*See statement on website*

Some interesting Friday afternoon workshops:

**Teaching Calculus with the TI-92**

Craig Bailey, U.S. Naval Academy

**Visualization and Modeling in the Differential Equations Course**

Robert Borrelli, Harvey Mudd College

**Portfolio and Rubric Assessment in Mathematics Classes**

Lyn Stallings, American University

**Mathwright Workshop**

Dan Kalman, American University. Also one by James White.

**Grant Writing Workshop**

**Panel on Quantitative Reasoning (QR)**

Organized by Caren Diefenderfer and Trish Hammer, with Christina Salowey (Classical Studies) and Andre Spies (History), all from Hollins.

**Getting Undergraduates Involved in Research**

Joseph Gallian, University of Minnesota Duluth

**Writing to Learn Mathematics — No Grading Required**

Mary Kay Abbey and Bette Daudu of Montgomery College

**Accessible — but surprisingly sophisticated — Math Activities for Students, Clubs, and Research**

James Tanton, St. Mark's School

**WeBWork Workshop**

Jeffrey Holt, University of Virginia

**Buckyballs and Mathematical Origami**

Eve Torrence, Randolph Macon College

What did contributed talks look like?

Still lots of talks about using technology (TI-92, MATLAB, Mathcad, algebra software, Fortran 90!) to teach mathematics.

History of math.

Talks about Project NExT, and what it might mean at the Section level.

Mathematical modeling.

**Using the Washington Post to Teach an Introductory Statistics Course**

Stephanie Cawthorne, Marymount University

**Online Teaching and Learning Resources; Online Math Tutoring; Interactive Web Based Labs**

### Reviews of Calculus Reform

Roland Minton, Roanoke College

Lots of talks about elliptic curves.

Math and sports.

Still some fractals.

### More on Elvis, the Calculus Dog

Roland Minton, Roanoke College

Lots and lots of beautiful mathematics!

Section NExT

We started our chapter of **Section NExT** in Fall 2001 at the Virginia Tech meeting.

Our first class of Fellows:

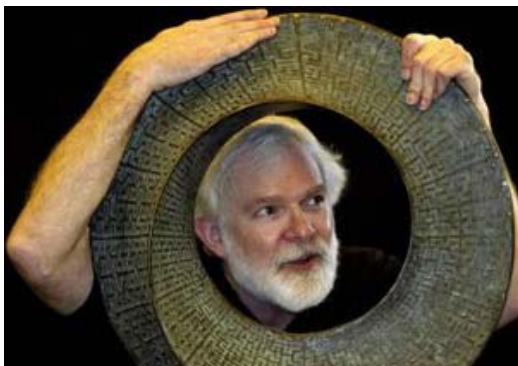
Hasan Hamdan	James Madison University
John Hamman	Anne Arundel Community College
Kira Hamman	Hood College
Kamal Hennayake	Chesapeake College
Suzanne Kelton	Emory & Henry College
David Kung	St. Mary's College
Conrad Lotze	Towson University
John Osoinach, Jr.	Hampden-Sydney College
Stephanie Pepin	Montgomery College - Takoma Park
Kimber Tysdal	Hood College
Christos Xenophontos	Loyola College

John Hamman is now our Section Chair, Dave Kung is the Director of Project NExT, Kira Hamman is the incoming Chair of the MAA Membership Committee, John Osoinach won an Allendoerfer Award... What a stellar group of young mathematicians!

Since then we have welcomed 132 Section NExT Fellows into our community – faculty members from universities, from 4-year colleges, and from 2-year colleges. Many of them have also become leaders in the Section and the Association in general.

At our Section meetings, the Section NExT Fellows participate in workshops and panels, have conversations at special lunch tables, enjoy social events, and get to know each other and the Section leadership. Section Visitors and other Invited Lecturers often meet with the group of Section NExT Fellows and offer workshops, lectures, and early-career advice.

We rely on these Fellows to inject youth and enthusiasm into the Section and to be our leaders of tomorrow!



*Helaman Ferguson*

Notable invited speakers:

Brian Rosen, Pixar Corporation (Spring '97)

Ed Burger, Ron Graham (Spring '98)

Jim Tattersall (Spring '99)

Brian Hayes, Frank Morgan (Fall 2000, Spring 2002)

Roger Horn (Fall 2002)

Helaman and Claire Ferguson (Fall 2004)

Jim Tanton (Spring '05)

Frank Farris (Fall '05)

+ these MAA presidents:

Tom Banchoff (Spring '97)

Joe Gallian (Spring '99, student conference; Fall 2003 JHU)

Paul Zorn (Spring 2000)

**Display of Mathematical Artwork** by Artist Judith Townsend Spring '05

Note Ed Scheinermann of **Johns Hopkins** gave an invited address at the Fall 2002 meeting at College Park.

**Section Meeting 171: Johns Hopkins** University, Fall 2003

We met at the University of Maryland (Fall '02) and at the University of Virginia (Spring '05).

Still lots of talks (30) by USNA faculty:

- Craig Bailey
- William Wardlaw
- Geoffrey Price
- David Joyner
- Richard Maruszewski
- William Traves
- Howard L. Penn
- Carol G. Crawford
- Mark D. Meyerson
- Andrew Bashelor
- Irina Popovici
- Jody Lockhart
- Vincent van Joolen

Trivia:

First Section talk by Bud Brown Fall 1999 (Invited address, after he won the teaching award)

### Frequent contributors

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William Wardlaw	U.S. Naval Academy	12 contributed talks
Ilhan M. Izmirli	(first at Strayer, then a grad student at American)	11
Dan Kalman	American University	8 contributed talks + 1 invited address + 1 workshop
George DeRise	Thomas Nelson Community College	9
G. Edgar Parker	James Madison University	9
James Sochacki <sup>5</sup>	James Madison University	7
Ezra Brown	Virginia Tech	7 + 1 invited talk
Roland Minton	Roanoke College	5
Howard L. Penn	U.S. Naval Academy	5

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*G. Edgar Parker*

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<sup>5</sup> He gave talks about teaching math modeling and computational science, and then his MCM team won a Meritorious award.



## MAA: When the 'I' becomes 'We'

Randy Cone, Salisbury University

Well, I guess you could say, in more ways than one, I've "grown up" in the Maryland-Washington D.C.-Virginia (MDDCVA) Section of the MAA. In the brief space below, I couldn't possibly describe all of the wonderful experiences the Section has provided me - but I will recount a few. No matter where I found myself throughout my mathematical journey, the MAA was there to meet and support me, and to show me how the 'I' becomes 'We'.

In terms of my memories of the MDDCVA Section, they really come in two natural sets: my life as an undergraduate student, and my life as university faculty. One of the most remarkable aspects of my undergraduate education was the genuine dedication my professors had for working with their students. As a student at Salisbury University (SU), I was encouraged to attend MDDCVA MAA section meetings quite early in my academic career there. This encouragement came from several of my SU professors, including: Dr. Homer Austin, Dr. Steve Hetzler, Dr. Lee May, Dr. Mohammed Moazzam, and Dr. Kathleen Shannon. It must be said that SU faculty also encouraged many other students to attend Section meetings as well, looking to foster a broader culture of education and mathematics.

Some of the fondest memories of my undergraduate education were when large groups of SU students and faculty would fill up university vans and travel to a MAA Section meeting. The trips to and from the meetings were just as fun (and important) as the meetings themselves! We students would tell stories about ourselves, our academic struggles, and about what classes to take. Oftentimes the faculty would join in these conversations - how refreshing it was to get to know our professors this way, outside of the typical classroom and university settings! Of course, attending the section meetings themselves were fun and important too. Two stories come to mind about just how important the meetings could be to a student like myself.

Dr. Lee May was my academic advisor at SU, and early in the spring of 1997 he informed me that he and his wife were attending the spring section meeting for the MDDCVA MAA. He encouraged me to attend also, indicating there would be a large number of student-centered talks and activities at the meeting. So, myself and several friends piled in an SU van, along with SU faculty, and headed to the College of William and Mary for the weekend. Well, the meeting was great and there were many great talks - including one about 'The Mathematics of Juggling' which left me and my fellow students amazed and energized to learn more! Yet, this was not the best part of the meeting. Unbeknownst to any of us students, during one of the large plenary sessions, Dr. May was presented a teaching award by the Section. What a different view we had of Dr. May from that point forward! Here we were, far from SU and from home, and everyone else in the MDDCVA region knew how great a teacher Dr. May was, just like we did! It was incredibly important to see our professors held in esteem by their colleagues, and well, to see them as something more than professors too. How proud I was to be associated with such people, to be part of a community, a part of a 'We' instead of just another 'I'!

The Mathematics and Computer Science Department at Salisbury University has long been student-centered, encouraging students to engage in undergraduate research, attend professional society meetings, compete for summer internships, and participate in international mathematics contests. In my short time at SU, I had three research projects, two summer internships, went to several MAA section meetings, and competed in the COMAP MCM contest. In my senior year at SU, my MCM team was fortunate enough to receive a 'Meritorious' designation for our solution paper. The contest

weekend was important and life-changing in its own right, but just as important for us was the invitation we received from our MAA section to come and speak about our solution at the upcoming meeting at the Virginia State University! It is hard to overstate how elated our team members felt about being invited in such an official capacity. Fortunately, when our team needed to write an abstract for our invited student Section talk, Dr. Shannon was there to guide us in the process, and to replace any occurrences of the word 'I' with 'We'.

Although my graduate institutions did not encourage MAA involvement, I'm grateful to say that my first post-graduate faculty position did. Close upon arrival to the Virginia Military Institute, it became clear that they were deeply invested in the MDDCVA Section: one of their tenured faculty, Dr. Dan Joseph, was the president of the section. It was from that point forward that I realized that as faculty, I could do the same for my students as was done for me, by: encouraging students to engage in undergraduate research, attend professional society meetings, compete for summer internships, and participate in international mathematics contests. It's what I've done ever since.

But there's more!

Not only did I get the opportunity to pay forward to my students the many gracious experiences my SU professors and the MDDCVA Section had given me, I got to see them all again at those same meetings, but now as faculty myself! Most of those same professors were still going to the meetings! Drs. Austin, Hetzler, May, Moazzam, and Shannon were all there, as well as a host of new colleagues! Not only that, by becoming an MAA Section NExT and Project NExT fellow, the MAA expanded my Section's professional network to an international network of colleagues and friends. I've since returned to Salisbury University as faculty, and I couldn't be happier. My former professors are now my day-to-day colleagues and it is glorious. However, I have made a realization. ...No longer do 'I' need to pay forward all of the gifts my SU professors and the MAA community have given me. What I need to do is to remember, and to dedicate my actions to the notion, that in the 'We', we are infinitely richer - richer as a community of students, teachers, and as fellow human beings.

## Section Meetings 2007- 2016: A Snapshot

Number of Meetings: 20

Number of papers: 473 (147 by women)

Number of papers per meeting:

Minimum: 15

Median: 25

Maximum: 39

### Talks by women

An increasing number of contributed talks by women at each meeting. An *explosion* in the number of invited addresses and workshops.

Year	Number of contributed talks by women	Other
2007	13	
2008	11	Spring '08: <ul style="list-style-type: none"> <li>• Workshop by Carolyn Yackel on knitting</li> <li>• Art exhibit by Judy Townsend</li> <li>• Banquet slideshow by Elizabeth Theta Brown</li> <li>• Invited address by Susan Goldstine</li> </ul> Fall '08: <ul style="list-style-type: none"> <li>• Invited address by Raina Robeva</li> </ul>
2009	10	Spring '09: <ul style="list-style-type: none"> <li>• Invited Address by Katherine Socha</li> </ul> Fall '09: <ul style="list-style-type: none"> <li>• Invited Address by Annalisa Crannell</li> <li>• Workshop by Carla Martin</li> </ul>
2010	12	Spring '10: <ul style="list-style-type: none"> <li>• Invited Address by Rebecca Goldin</li> </ul> Fall '10: <ul style="list-style-type: none"> <li>• Invited Address by Betty Mayfield</li> <li>• Martha Siegel led a discussion about CUPM</li> </ul>
2011	11	Spring '11: <ul style="list-style-type: none"> <li>• Invited Addresses by Sommer Gentry, Sarah Greenwald</li> </ul>

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		<p>Fall '11:</p> <ul style="list-style-type: none"> <li>• Invited Address by Marjorie Senechal</li> <li>• Workshop by Robin Blankenship</li> </ul>
2012	18	<p>Spring '12:</p> <ul style="list-style-type: none"> <li>• Invited Addresses by Peggy Kidwell, Alissa Crans</li> </ul> <p>Fall '12:</p> <ul style="list-style-type: none"> <li>• Caren Diefenderfer and Jan Minton led a workshop and gave an Invited Address about the Crochet Coral Reef Project</li> <li>• Heidi Hulsizer gave a contributed talk about Mathematics in Call of Duty: Black Ops. Leigh Lunsford heard it and encouraged her to submit it for publication. The paper was published in Math Horizons, and Heidi won an award for it!</li> </ul> <p>Note: Jennifer Galovich (and Tim Sibley) were on sabbatical at Va Tech this year and gave contributed talks at both the fall and spring meetings.</p>
2013	14	<p>Spring '13:</p> <ul style="list-style-type: none"> <li>• Jean McGivney-Burelle and Ann Stewart gave a workshop on Teaching with Classroom Voting and Clickers</li> </ul> <p>Fall '13:</p> <ul style="list-style-type: none"> <li>• Invited Address by Lorena Bociu</li> </ul>
2014	21	<p>Fall '14:</p> <ul style="list-style-type: none"> <li>• Invited Address by Valentina Harizanov</li> <li>• Workshop by Gwyneth Whieldon</li> </ul>
2015	18	<p>Spring '15:</p> <ul style="list-style-type: none"> <li>• Workshop by Caren Diefenderfer and Meagan Herald</li> </ul> <p>Fall '15:</p> <ul style="list-style-type: none"> <li>• Invited Addresses by Talitha Washington, Heidi Hulsizer</li> <li>• AWM Lunch discussion</li> </ul>
2016	19	<p>Spring '16:</p> <ul style="list-style-type: none"> <li>• Workshop by Laurie Lenz, Marymount University</li> </ul> <p>Fall '16:</p> <ul style="list-style-type: none"> <li>• 12 contributed talks, including 2 by students</li> <li>• Banquet address: Caren Diefenderfer, Betty Mayfield, Jon Scott</li> </ul>

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*Carla Martin*



*Martha Siegel*



*Talitha Washington*

## Talks by and for Students

We discover poster sessions. We try to include more graduate students.

<b>Meetings</b>	<b>Number of talks by students</b>
2007	14 talks, 3 posters
2008	15 talks
2009	13 talks (including 3 MCM talks) + 4 posters
2010	Spring: 7 talks (3 MCM teams) + 14 posters Fall: 3 talks by 4 students, 2 of whom were women
2011	Spring: 12 talks, 10 posters Fall: 5 talks
2012	Spring: 14 talks Fall: 5 talks, including one given jointly by a student from UVa and one from Va. State
2013	Spring: 15 talks Fall: 5 talks
2014	Spring: 24 talks, 6 posters Fall: <b>8 graduate student papers</b> , 2 undergraduate student papers Grad students from Johns Hopkins Va. Tech Va. State Old Dominion
2015	Spring: 16 talks, 10 papers Fall: 4 <b>grad student papers</b> [Old Dominion, UMBC, GW]; 4 undergrad papers
2016	Spring: 23 papers, 7 posters Fall: 2 undergrad, 1 grad

HBCU/minority participation

Spring 2007: **Garikai Campbell** of Swarthmore (now provost @ Morehouse) gave an **invited address and a workshop**

Spring 2010: **Meeting at Virginia State**

3 faculty members from Va. State gave talks

Spring 2013 **Contributed talk:**

**African-Americans in Mathematics: Geniuses Lost in the Shuffle**

Madelyn Windley, George Washington University

Fall 2014 **Meeting at Bowie State University**

Invited Address: **Colm Mulcahy, Spelman College** (on sabbatical @ AU)

**Throughout the decade...**

**Many talks by faculty and students from Va. State University**

- Raymond Fletcher (6)
- Andrea Sims (3)
- Mervin Woodlin (2)
- Maurice Brown
- Zhifu Xie
- Stephanie Nash
- + 8 other undergrads, 4 grad students

**Talks by faculty from Norfolk State University**

- Cherng-tiao Perng (6)
- Boyd Coan (6)
- Ming Fang (5)
- Abdinur Ali and Mushtaq Khan (7 together, plus 4 with Chung-Chu Hsieh, and one by Ali alone)

**Morgan State University:**

- Ahlam Tannouri (2)
- Marshall M. Cohen
- + 2 undergraduate students

Meeting Themes/Special events

**Fall 2007: Celebrated Euler's birthday.**

Invited talks about Euler and his work, by

- Ed Sandifer
- Bill Dunham
- Ron Calinger

Slide show by Victor and Phyllis Katz, about the Euler Study Tour

**Spring 2008: Emphasis on Mathematical Art** (see description in section about participation by women, above)

**Fall 2009: Session on College Preparedness in Mathematics**

Denny Gulick, University of Maryland

Lee May, Salisbury University

Robert Sachs, George Mason University

**Spring 2011:** There was a special **Section NExT Lecture** by Bud Brown: "How to Give a Talk"

**Fall 2012: A Forum on the Status of Mathematics Education: A Conversation in Solutions**

Randy Cone, Virginia Military Institute

**Spring 2013** Two special events:

**DLMF Live! Tables: NIST Digital Library of Mathematical Functions Tables Project**

Bonita Saunders, Bruce Miller, Marjorie McClain, Daniel Lozier, all from National Institute of Standards and Technology

**Building a Community: The American Mathematics Competitions (talk) and**

**Building a Community: A Panel Discussion**

Randy Cone, Virginia Military Institute

Jon Scott, Montgomery College

**Fall 2013: Mathematics, Magic, and Mystery**

Eve Torrence, Randolph-Macon College

Bruce Torrence, Randolph-Macon College

Colm Mulcahy, Spelman College and American University

[These 3 created a beautiful interactive poster/calendar for Math Awareness Month in Spring 2014]

**Fall 2013: Laura Taalman** gave a talk about **3D printing**; then she gave a workshop at the next meeting.

**Spring 2014:** A team from UMBC gave a series of contributed talks:

- **The Math Gym: To Be on Top of Your Game, You Have to Work Out!**
- **Course Redesign as a Strategic Tool to Consolidate Foundation Courses**
- **Implementation of Course Redesign to Improve Student Learning Outcomes**
- **iPads: In and Out of the Classroom**

Liz Stanwyck, Matthias K. Gobbert, Raji Baradwaj, Nagaraj K. Neerchal, Michelle Danaher



**Fall 2014 Workshop Integrating Tablets into the Mathematics Classroom**

Gwyneth Whieldon, Hood College

[note new interest in iPads, tablets]

**Spring 2015: Something new: Three invited panels.** Experimental, very successful:

- **Inquiry Based Learning in the MD-DC-VA Section**

*Organizers:*

Cassie Williams, James Madison University

Amy Ksir, United States Naval Academy

*Panelists:*

Mitch Keller, Washington and Lee University

Amy Ksir, United States Naval Academy

Pádraig McLoughlin, Kutztown University of Pennsylvania

Cassie Williams, James Madison University

*Update: This led to a Section IBL Consortium with its own website, and a paper session at the Fall '16 meeting.*

- **The Mathematical Preparation of Future High School Math Teachers**

*Organizer:* Bob Sachs, George Mason University

*Panelists:*

David Carothers, James Madison University

Mary Nelson, George Mason University

Katherine Socha, Park School, Baltimore MD

- **Calculus and the HS/College Interface**

*Organizer:* Bob Sachs, George Mason University

*Panelists:*

Caren Diefenderfer, Hollins University

Roland Minton, Roanoke College

Mary Nelson, George Mason University

## Notes

Spring '08: Meeting hosted jointly by James Madison University, Eastern Mennonite University

Fall '13: Meeting hosted jointly by Hampden-Sydney College and Longwood University

In Spring 2012 we started collecting slides from speakers and making them available on the website.

A few noted invited speakers

Art Benjamin (2 talks), Spring '08

Bob Devaney, Fall '08

Michael Starbird, Spring '10

Ravi Vakil, Spring '10

Nathan Carter, Spring '10

Chris Danforth, Fall '10

Jeff Suzuki gave a contributed talk in Spring '12 and then an invited mini-workshop in Fall '12

Brian Hopkins, Spring '15

Tim Chartier, Spring '15

Paul Zorn, Fall '16

Bill Dunham, Fall '16

## Section Memories

Jennifer Bergner, Salisbury University

- My favorite Section meeting

...is the Spring 2012 meeting when we kicked off the Radical Dash. The Dash was made into an Instagram Scavenger hunt at MathFest 2015 and JMM 2016 and will also be at JMM 2017. It was awesome to see so many undergraduate students (70+) dashing around doing mathematics!

- My favorite talk: I have two...

Betty Mayfield's Fall 2010 banquet address, *Women and Mathematics in the Time of Euler*. Her passion for original sources and sharing them with undergraduates was evident and the history was captivating!

Dan Kalman's Fall 2009 Invited talk, *Provincial Polynomia: Uncommon Excursions for the Seasoned Visitor*. Laugh out loud mathematics humor delivered in his signature style!

- The things I like best about Section meetings

The amazing people we have or have had in our section. So many talented, yet modest folk!

- Why I bring students to the meetings

The Jeopardy and Radical Dash competitions!

I remember when I first became the student activities coordinator in Fall 2009 and came up with the idea of having an Amazing Race style competition for the undergraduates. The executive council was so supportive and said, "Go for it!" There was not a single negative comment expressed- it was so encouraging to have the support to try something new. After the first Dash was ran there was also a lot of positive feedback and encouragement. Our section is a very supportive bunch!

Bryan Faulkner, Ferrum College

- My favorite talk

Chris Danforth's talk, *Chaos and the Mathematics of Prediction: from Hurricanes to Climate Change* at the fall 2010 meeting at George Mason University. From what I remember this talk included the use of tweets to measure happiness, predicting extreme weather events, and an interesting slide showing airplane arrivals at a US international airport.

You can view the "average happiness of Twitter" at <http://hedonometer.org/> where key words in tweets are used to measure happiness.

- The things I like best about Section meetings

Section meetings are the best venue for presenting my research.

- Why I bring students to the meetings

I teach at a small college with very few math majors. We do not have a math seminar with invited speakers. For the students that I have brought to the section meetings, it was their first time seeing a math talk. I bring students to the section meetings so that they can see a wide variety of math talks.

## Ann Stewart, Hood College

- My favorite talk

Section Meeting 185: George Mason University, November 5-6, 2010

Chaos and the Mathematics of Prediction: from Hurricanes to Climate Change

Chris Danforth, University of Vermont

This talk sticks with me because the subject was so interesting to me, and Chris was really able to engage the audience in a way that got across the big ideas and his excitement about the material without getting lost in the weeds.



- The things I like best about Section meetings

The thing that I like best about our Section meetings is the strong sense of community. I have really enjoyed getting to know colleagues at other institutions in the section. Our section meetings are so much more accessible than the national meetings, and you really get the chance to see what talented people we have in MD-DC-VA.

*Chris Danforth*

My participation in Section NExT, both as a fellow and later as the coordinator, also played an important role in helping me to feel that I was a part of things from the beginning. The opportunity to meet both young faculty and established faculty who share their experiences, and the chance to help with the undergraduate student activities really help to make attending the meetings feel very productive from the beginning. It is vital that we keep this program alive and well; many new faculty don't have the opportunity to participate in the national Project NExT program, and since the groups are smaller, the workshops and panels are much more personal.

## Katie Quertermous, James Madison University

My favorite thing about Section meetings is the opportunity to talk with colleagues about mathematics as a whole, both research and teaching. This dual focus seems to be unique to MAA meetings, and the community at the MD-DC-VA section meetings is especially supportive of a wide range of interests. At the meetings, I can reconnect with old friends, meet new ones, expand my understanding of new areas of mathematics, and learn ideas I can take back to my classroom all in one place.

## Meagan Herald, VMI

- My favorite Section meeting: Fall 2009 at Goucher College

This was my first section meeting and I was pleasantly surprised by how friendly, supportive and happy everyone was. Even though I was new to the section, I was greeted as one would greet an old friend. For me, this feeling still remains at our section meetings and in my view is one of the strengths of the MA-DC-VA section.

- My favorite talk: Fall 2010 by Betty Mayfield titled “Women and Mathematics in the Time of Euler”

This was a superb talk and I still use aspects from it to inspire research with my history of math students.

- My second favorite talk: Spring 2011 by Sommer Gentry titled “Faster, Safer, Healthier: Adventures in Operations Research”

I enjoyed this talk due to my research with Cystic Fibrosis and the work being done to improve organ transplantations policies/procedures.

- The thing I like best at Section Meetings

I enjoy getting to catch up with my colleagues who I do not see very often. Through these chats, we have collaborated on research, lined up presentations for various colloquia and discussed education pedagogy. As for the actual meeting activities, the invited addresses are very good and I enjoy the paper sessions.

- Why I bring students to the meetings

My decision to bring students to the meeting is solely based on the supportive environment of our section. I feel each member of our section want to see these young mathematicians succeed and are truly interested in what the students have to say. In return, my students grow in experience and confidence while coming away from the meeting with a renewed sense of excitement towards their field.

# My Favorite Section Meeting and Talks

James Parson, Hood College

My favorite and most memorable section meeting was the first section meeting that I attended, the fall 2008 meeting held at Hood College. I do not think that the meeting was objectively extraordinary (except, of course, for its having been held at Hood!), but it was a delightful surprise to me, since I had never attended an MAA meeting and had no idea in advance how valuable the talks at the meeting would be for me.

I still think about three invited talks from this meeting:

- Robert Lewand spoke at the banquet about encryption. I was particularly struck by his discussion of Vigenère's chiffre indéchiffrable, and when I had the opportunity to teach students in my liberal-arts mathematics class about encryption, I used some of his examples and stories in class—and I continued to use them when I discussed encryption in my number theory classes in subsequent years.
- The next morning Bob Devaney spoke about using Microsoft Excel to in his classrooms to illustrate aspects of dynamical systems. This talk was terribly exciting for me, since I had just learned to use Excel myself (while teaching the same liberal-art mathematics class in which I discussed cryptography), and I was eager to try it out in other classes. Inspired by Devaney's talk, I tried using Excel the next semester in my real analysis course (and continued to use it extensively in my liberal-arts mathematics courses).
- The final invited talk on Saturday was Raina Robeva's discussion of statistical arguments that had been used in the 1940s to distinguish between Lamarkian and Darwinian models of evolution. Robeva explained how fundamental features of basic probability distributions allow one to distinguish experimentally mathematical models based on these biological ideas, lending support to the Darwinian theory. I was fascinated to see how these mathematical ideas could be cleverly used to gain insight into biological questions, and I found the work with probability distributions particularly stimulating, since I had just been contemplating the basics of such distributions in the same liberal-arts mathematics course that had connections to Lewand's and Devaney's talks. Even nearly eight years later, when I finally taught statistics for the first time myself, I was still thinking about Robeva's talk and looked up the original 1943 paper that she focused on to read for inspiration before my course started.

In sum, this meeting and especially these talks were wonderful, not only since they were entertaining as I listened to them but because they stimulated me to pursue the ideas of the speakers even years after I heard them speak. Since that first meeting in 2008, I have attended many further section meetings and look forward to them as visits to a well of new ideas for my own teaching.

### What I like best about section meetings

I have especially enjoyed the open and welcoming atmosphere at all of the section meetings I have attended. Before I started attending our section's meetings, I had only attended disciplinary meetings related to my doctoral research. I found these meeting to be alienating since I never felt myself to be enough of an insider to participate fully. Our section's meetings, on the other hand, are visibly open to

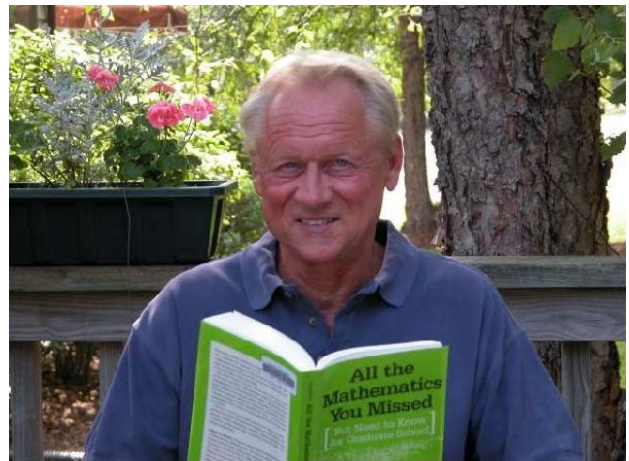
all: anyone—from insiders such as professors to comparative outsiders such as students and non-academic professionals—is welcome to speak in contributed paper sessions, and speakers are all listened to respectfully. This openness extends beyond the mathematical agenda of the meetings: I was startled, for example, at my first meeting to find the business of the section transacted at a “Meeting of the General Membership,” instead of in secret.

### Why I bring students to Section meetings

I bring students to the section meetings for many of the same reasons that I attend myself. I know that when students come to present their own research, for example, they will be treated respectfully and taken seriously. The talks at section meetings are also generally inspiring for students to hear: talks at discipline-specific meetings are often overly technical, assuming the audience knows immediately the important questions in the field. Most talks at our section meetings, on the other hand, aim to invite listeners, even novices, into the mathematical conversation.



*Bob Devaney*



*Bob Lewand*



*Raina Robeva*

## Appendix 1: Charter Members of the Section

Listed below are the charter members of the Section from its founding in December 1916.

Adams	Oscar S.	U.S. Coast and Geodetic Survey	Washington, DC
Bacon	Clara Latimer	Goucher College	Baltimore, MD
Bateman	Harry	Johns Hopkins University	Baltimore, MD
Bauer*	L. A.	Carnegie Institution of Washington	Washington, DC
Bixby	William Herbert	U.S. Army (retired)	Washington, DC
Brown	Lillian Olive	Hood College	Frederick, MD
Bullard	James Atkins	U.S. Naval Academy	Annapolis, MD
Capron	Paul	U.S. Naval Academy	Annapolis, MD
Carpenter	Delma Rae	Roanoke College	Salem, VA
Coble	Arthur Byron	Johns Hopkins University	Baltimore, MD
Cohen	Abraham	Johns Hopkins University	Baltimore, MD
Colaw	John Marvin	Monterey High School	Monterey, VA
Converse	Henry A.	Baltimore Polytechnic Institute	Baltimore, MD
Cromwell	John Wesley, Jr	M Street High School	Washington, DC
Davis	Elizabeth Brown	U.S. Naval Observatory	Washington, DC
Dickinson	C. N.	Hollins College	Hollins, VA
Director		Department of Terrestrial Magnetism	Washington, DC
Duke	Frank Williamson	Virginia Mechanics' Institute	Richmond, VA
Echols	William Holding	University of Virginia	Charlottesville, VA
English	Harry	Washington DC High Schools	Washington, DC
Eppes	James Bancroft	U.S. Naval Academy	Annapolis, MD
Gaines	Robert Edwin	Richmond College	Richmond, VA
Galloway	James Neville	Baltimore Polytechnic Institute	Baltimore, MD
Hall	Angelo	U.S. Naval Academy	Annapolis, MD
Hamilton	Walter Monroe	U.S. Nautical Almanac Office	Washington, DC
Harris	Rollins Arthur	U.S. Coast and Geodetic Survey	Washington, DC
Harry	Stephen Cloud	Friends School	Baltimore, MD
Hobbs	Allan Wilson		Baltimore, MD
Hodgkins	Howard Lincoln	George Washington University	Washington, DC
Hulburt	Lorrain Sherman	Johns Hopkins University	Baltimore, MD
Johnson	William Woolsey	U.S. Navy	Annapolis, MD
Lambert	Walter Davis	U.S. Coast and Geodetic Survey	Washington, DC
Landry	Aubrey Edward	Catholic University of America	Washington, DC
Langellotti*	Frank	Nautical Almanac Office	Washington, DC
Larew	Gillie A.	Randolph-Macon Woman's College	Lynchburg, VA
Lewis	Florence Parthenia	Goucher College	Baltimore, MD
Lord	William Leland	Woodberry Forest School	Woodberry Forest, VA
Luck	John J.	University of Virginia	University, VA
Mangold	Marie Cecilia	Trinity College	Washington, DC
Martin	Artemas	U.S. Coast and Geodetic Survey	Washington, DC
Miller	James Shannon	Emory and Henry College	Emory, VA
Morenus	Eugenie Maria	Sweet Briar College	Sweet Briar, VA
Morley	Frank	Johns Hopkins University	Baltimore, MD



Morrow	Emerson Boyd	Gilman Country School	Roland Park, MD
Norris	S. F.	Baltimore City College	Baltimore, MD
Norwood	Charles E.	U.S. Naval Academy	Annapolis, MD
Oglesby	Earnest Jackson	College of William and Mary	Williamsburg, VA
Robert	Henry Martyn, Jr.	U.S. Naval Academy	Annapolis, MD
Roeser*	Harry M.	Bureau of Standards	Washington, DC
Root	Ralph Eugene	U.S. Naval Academy	Annapolis, MD
Shenton	Walter Francis	Johns Hopkins University	Baltimore, MD
Smith	Eugene Randolph	The Park School	Baltimore, MD
Smith	James Brookes	Hampden-Sydney College	Hampden-Sydney, VA
Smith	Livingston Waddell	Washington and Lee University	Lexington, VA
Stone	Ormond	University of Virginia	Charlottesville, VA
Tanzola	Joseph J.	U.S. Naval Academy	Annapolis, MD
Tolley*	H. R.	U.S. Department of Agriculture	Washington, DC
Tyler	John	U.S. Naval Academy	Annapolis, MD
Van Orstrand	Charles Edwin	U.S. Geological Survey	Washington, DC
Watts	Charles Wilder	Virginia Military Institute	Lexington, VA
Williams	John Edward	Virginia Polytechnic Institute	Blacksburg, VA
Woodward	Robert Simpson	Carnegie Institution of Washington	Washington, DC

\* L. A. Bauer, Frank Langellotti, Harry Roeser, and H. R. Tolley were elected to the MAA after April 1, 1916, and therefore are not Charter Members of the national organization. Since they were members prior to the establishment of the Section, and attended its first meeting, they may be considered Charter Members of the Maryland-District of Columbia-Virginia Section. All other individuals listed above are Charter Members both of the MAA and the Section.

Of the 62 Charter Members, 26 were from Maryland, 19 from the District of Columbia, and 17 from Virginia.

## Appendix 2: Meeting sites

Institution	1917 to 1926	1927 to 1936	1937 to 1946	1947 to 1956	1957 to 1966	1967 to 1976	1977 to 1986	1987 to 1996	1997 to 2006	2007 to 2016	Totals
Aberdeen Proving Grounds			1		1						2
American University		1		1	2		1	1	1		7
Anne Arundel Community College										1	1
Bowie State University						1			1	1	3
Catholic University of America	1		1	2	1						5
Christopher Newport University								1		1	2
College of William and Mary		1		1	1		1		1		5
Coppin State College								1			1
Drafting Hall, U. S. Capitol	1										1
Eastern Mennonite University										1	1
Frostburg State University								1			1
Gallaudet College							1				1
George Mason University						1	1			1	3
George Washington University	2	3	3	2	1	1	1				13
Georgetown University		1	1	1	2	1		1			7
Goucher College	1	1			2	1	1			1	7
Hampden-Sydney College									1	1	2
Hampton Institute						1					1
Hollins University							1				1
Hood College								1		1	2
Howard University				1	2			1			4
James Madison University						1	1		1	2	5
Johns Hopkins University	6	3	3	1	1				1	1	16
Longwood University									1	1	2
Loyola College in Maryland						1	1		2		4
Marymount University								1			1
Montgomery College						1	1	1	1	1	5
Morgan State University				1		1			1		3
Mount St. Mary's College								1	1		2
National Bureau of Standards	1	1		1							3
Naval Proving Grounds				1							1
Norfolk State University									1		1

<b>Institution</b>	<b>1917 to 1926</b>	<b>1927 to 1936</b>	<b>1937 to 1946</b>	<b>1947 to 1956</b>	<b>1957 to 1966</b>	<b>1967 to 1976</b>	<b>1977 to 1986</b>	<b>1987 to 1996</b>	<b>1997 to 2006</b>	<b>2007 to 2016</b>	<b>Totals</b>
Northern Virginia Community College						1		1			2
Old Dominion College						1					1
Prince George's Community College							1				1
Randolph-Macon College			1					1		1	3
Randolph-Macon Woman's College			1		1						2
Roanoke College										2	2
Salisbury University								1	1	1	3
St. John's College	3	1									4
St. Mary's College of Maryland								1	1	1	3
Stevenson University										1	1
Thomas Nelson Community College							1	1			2
Thompson School	1										1
Tidewater Community College								1			1
Towson University						1		1	1		3
Trinity College			1								1
U. S. Naval Academy	4	3	3	3	1	2	2				18
U. S. Naval Weapons Laboratory					1						1
University of Mary Washington							1			1	2
University of Maryland		3	1	2	2	1	1		1		11
University of Richmond		1	1	1		1	1				5
University of the District of Columbia							1				1
University of Virginia		1		1	1	2		1	1		7
Virginia Commonwealth University						1	1	1			3
Virginia Military Institute				1					1	1	3
Virginia State University							1		1	1	3
Virginia Tech									1		1
Western Maryland College								1			1
Westinghouse Defense Center					1						1

## Most Frequent Meeting Hosts

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U. S. Naval Academy	18
Johns Hopkins University	16
George Washington University	13
University of Maryland	11
American University	7
Georgetown University	7
Goucher College	7
University of Virginia	7
Catholic University of America	5
College of William and Mary	5
James Madison University	5
Montgomery College	5
University of Richmond	5

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In addition, 3 institutions have hosted exactly four times; 11 exactly three times, 11 twice, and 22 once. A total of 60 different institutions (universities, colleges, community colleges, and government agencies) have hosted a section meeting.

For a complete list of meetings by date, see [http://sections.maa.org/mddcva/past\\_meeting\\_list.php](http://sections.maa.org/mddcva/past_meeting_list.php)

## Appendix 3: Section Governors

When first organized, the Association was unincorporated. The governing body was the Council, which consisted of officers and a few at-large members. A Council existed until September, 1920, when the organization was incorporated in the State of Illinois. At that time, a Board of Trustees was established. Members of both the Council and Board of Trustees were elected from the general membership at large.

There were no members of the Council or the Board of Trustees from the MD-DC-VA Section until 1935, when F. D. Murnaghan of The Johns Hopkins University was elected in 1935 to a term lasting through January, 1938.

At the end of 1939, the By-Laws were changed to replace the Board of Trustees with a Board of Governors. This time, members were to be elected, some at-large, and some regionally. G. T. Whyburn was elected as a Governor at Large, with term from 1940 to 1943.

Fourteen regions were established covering the US and Canada, including those areas not yet having MAA sections. Region 4 covered Maryland, Virginia, and the District; in other words, Region 4 was our Section. E. J. McShane of the University of Virginia was elected Regional Governor with term 1941-1943. D. W. Hall was elected Regional Governor from 1943-1945, and Gillie Larew served from 1945-1947. Terms for regional governors were two years, beginning in July.

However, in 1947, there was another change; phasing out regional governors and replacing with sectional governors. (In 1947, there were 7 regional governors and 9 sectional governors; by 1949, 26 sectional governors and no regional governors.) Sectional Governors were to have three year terms.

<b>Years</b>	<b>Governor</b>	<b>Institution</b>
1935-1938	F. D. Murnaghan <i>Trustee of the Association</i>	Johns Hopkins University
1940-1943	G. T. Whyburn <i>Governor at Large</i>	University of Virginia
1941-43	E. J. McShane <i>Regional Governor</i>	University of Virginia
1944-45	D. W. Hall <i>Regional Governor</i>	University of Maryland
1945-47	Gillie A. Larew <i>Regional Governor</i>	Randolph-Macon Woman's College
1947-50	D. W. Hall <i>Section Governor</i>	University of Maryland
1950-53	G. R. Clements	U.S. Naval Academy
1953-56	Stanley B. Jackson	University of Maryland
1956-59	Otto Ramler	Catholic University
1959-62	Robert C. Yates	College of William and Mary
1962-65	M. Gweneth Humphreys	Randolph-Macon Woman's College
1965-68	Dorothy L. Bernstein	Goucher College
1968-71	Edwin E. Floyd	University of Virginia
1971-74	Stanley B. Jackson	University of Maryland
1974-77	Robert H. Owens	University of Virginia

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1977-80	Theodore J. Benac	U.S. Naval Academy
1980-83	Ronald M. Davis	Northern Virginia Community College
1983-86	John Smith	George Mason University
1986-89	Ben A. Fusaro	Salisbury State College
1989-92	Howard L. Penn	U. S. Naval Academy
1992-95	Elizabeth Teles	National Science Foundation
1995-98	J. Kevin Colligan	National Security Agency
1998-2001	Jon Scott	Montgomery College, Takoma Park
2001-04	Betty Mayfield	Hood College
2004-07	David Carothers	James Madison University
2007-10	Ezra (Bud) Brown	Virginia Tech
2010-13	Dan Kalman	American University
2013-16	Caren Diefenderfer	Hollins University
2016-19	Jennifer Bergner	Salisbury University

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### Notes on some of our early Governors

**D.W. Hall**, who served as both Regional Governor and our first Section Governor, wrote a text for undergraduates with G.L. Spencer II, *Elementary Topology*, published by Wiley in 1955 and reviewed favorably in the *Bulletin* of the American Mathematical Society. He also published extensively in graph theory and was cited in W.T. Tutte's *Graph Theory as I Have Known It*.

**Gillie A. Larew** was a student at Randolph-Macon Woman's College in 1900 and returned to teach mathematics there for 46 years. She also served as Dean of the College for four years. Randolph College's Gillie A. Larew Distinguished Teaching Award is the oldest faculty award at the college, having been first presented in 1968.

The death of Professor **G.R. Clements**, retired, of the United States Naval Academy, was noted in the *Notices* of the AMS in March of 1956. Prof. Clements was 71 years old and had been a member of the AMS for 49 years. He was not listed as one of the charter members of the MAA, so we do not know how long he had been a member of the Association.

**Stanley B. Jackson** must have been a popular governor: he served one term in the 1950s and then was re-elected twenty years later for a second term. He was very much involved in the SMSG (School Mathematics Study Group) during those years.

**Otto Ramler** received his Ph.D. from Catholic University and also taught there for years.

**M. Gweneth Humphreys** (1911-2006) graduated with honors in mathematics from the University of British Columbia in 1932, earning the prestigious Governor General's Gold Medal at graduation. After receiving her master's degree from Smith College in 1933, Humphreys earned her Ph.D. at age 23 from the University of Chicago in 1935. She taught mathematics to women for her entire career, first at Mount St. Scholastica College, then for several years at Sophie Newcomb College, and finally for over thirty years at Randolph Macon Woman's College. The Gweneth Humphreys Award of the Association for Women in Mathematics, funded by contributions from her former students and colleagues at Randolph-Macon Woman's College, recognizes her commitment to and her profound influence on undergraduate students of mathematics. (*from the AWM website*)



*The University of Maryland Mathematics Department (date unknown). Stanley B. Jackson is at the far right on the front row.*



*Dorothy Bernstein taught at Goucher College, where she introduced the use of computers into the teaching of mathematics. She served as MAA President from 1979-1980.*

## Appendix 4: Chairs of the Section

<b>Years</b>	<b>Title</b>	<b>Officer</b>	<b>Institution</b>
1917-18	President	Abraham Cohen	Johns Hopkins University
1918-19	Chairman	A.E. Landry	Catholic University
1919-20	Chairman	Ralph E. Root	U.S. Naval Academy
1920-21	Chairman	L.S. Hulburt	U.S. Coast and Geodetic Survey
1921-22	Chairman	Oscar S. Adams	Johns Hopkins University
1922-23	Chairman	Frank Morley	Johns Hopkins University
1923-24	Chairman	G.R. Clements	U.S. Naval Academy
1924-25	Chairman	F.D. Murnaghan	Johns Hopkins University
1925-26	Chairman	Walter D. Lambert	U.S. Coast and Geodetic Survey
1926-27	Chairman	J. A. Bullard	U.S. Naval Academy
1927-28	Chairman	J. R. Musselman	Johns Hopkins University
1928-29	Chairman	C.C. Bramble	U.S. Naval Academy
1929-30	Chairman	W. F. Shenton	American University
1930-31	Chairman	Clara L. Bacon	Goucher College
1931-32	Chairman	Edgar W. Woolard	George Washington University
1932-33	Chairman	Paul Capron	U.S. Naval Academy
1933-34	Chairman	B. Z. Linfield	University of Virginia
1934-35	Chairman	F. M. Weida	George Washington University
1935-36	Chairman	G. T. Whyburn	University of Virginia
1936-37	Chairman	John Williamson	Johns Hopkins University
1937-38	Chairman	Gillie A. Larew	Randolph-Macon Woman's College
1938-39	Chairman	Michael Goldberg	Navy Department
1939-40	Chairman	L. S. Dederick	Aberdeen Proving Ground
1940-41	Chairman	T. McN. Simpson, Jr.	Randolph-Macon College
1941-42	Chairman	E. J. McShane	University of Virginia
1942-44	Chairman	J. H. Taylor	George Washington University
1944-45	Chairman	C. H. Wheeler, III	University of Richmond
1945-46	Chairman	J. B. Scarborough	U.S. Naval Academy
1946-47	Chairman	W. K. Morrill	Johns Hopkins University
1947-48	Chairman	E. J. Finan	Catholic University of America
1948-49	Chairman	Michael Goldberg	Navy Department
1949-50	Chairman	L. M. Kells	U.S. Naval Academy
1950-51	Chairman	O. J. Ramler	Catholic University
1951-52	Chairman	E. R. Sleight	University of Richmond
1952-53	Chairman	Marian M. Torrey	Goucher College
1953-54	Chairman	Daniel C. Lewis, Jr.	Johns Hopkins University
1954-55	Chairman	C. H. Frick	Mary Washington College
1955-56	Chairman	F. E. Johnston	George Washington University
1956-57	Chairman	R. C. Yates	College of William and Mary
1957-58	Chairman	R. P. Bailey	U.S. Naval Academy
1958-59	Chairman	M. W. Oliphant	Georgetown University
1959-60	Chairman	E. E. Floyd	University of Virginia
1960-61	Chairman	D. B. Lloyd	District of Columbia Teachers College
1961-62	Chairman	W. K. Morrill	Johns Hopkins University
1962-63	Chairman	Herta T. Freitag	Hollins College



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1963-64	Chairman	John W. Wrench, Jr.	David Taylor Model Basin
1964-65	Chairman	Daniel Shanks	David Taylor Model Basin
1965-66	Chairman	Samuel S. Saslaw	U.S. Naval Academy
1966-67	Chairman	Thomas L. Reynolds	College of William and Mary
1967-68	Chairman	Avron Douglis	University of Maryland
1968-69	Chairman	G.N. Trytten	University of Maryland
1969-70	Chairman	Stanley Jackson	University of Maryland
1970-71	Chairman	William Norris	Norfolk City Public Schools
1971-72	Chairman	Joseph Milkman	U.S. Naval Academy
1972-75	Chairman	Geraldine A. Coon	Goucher College
1975-77	Chairman	Ronald M. Davis	Northern Virginia Community College
1977-79	Chairman	Orville M. Thomas	U.S. Naval Academy
1979-81	Chairman	John M. Smith	George Mason University
1981-83	Chairman	John K. Schmeelk	Virginia Commonwealth University
1983-85	Chairman	Howard L. Penn	U.S. Naval Academy
1985-87	Chairman	Robert Lewand	Goucher College
1987-89	Chairman	Elizabeth Teles	Montgomery College, Takoma Park
1989-91	Chairman	John Milcetch	University of the District of Columbia
1991-93	Chairman	Sr. Helen Christensen	Loyola College in Maryland
1993-95	Chairman	Ben A. Fusaro	Salisbury State University
1995-97	Chair	Mary Kay Abbey	Montgomery College, Takoma Park
1997-99	Chair	Betty Mayfield	Hood College
1999-2001	Chair	Carol Crawford	U. S. Naval Academy
2001-03	Chair	David Carothers	James Madison University
2003-05	Chair	Lee May	Salisbury University
2005-07	Chair	Eve Torrence	Randolph-Macon College
2007-09	Chair	Jon Scott	Montgomery College, Germantown
2009-11	Chair	Dipa Choudhury	Loyola College in Maryland
2011-13	Chair	Daniel Joseph	Virginia Military Institute
2013-15	Chair	David Shoenthal	Longwood University
2015-17	Chair	John Hamman	Montgomery College, Germantown

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## Appendix 5: Section Award Winners

John M. Smith Award for Distinguished College or University Teaching  
 Named after the former Section Governor and first recipient of our Section's teaching award.

<b>Year</b>	<b>Recipient</b>	<b>Institution</b>
2016	Mary Nelson	George Mason University
2015	Caren Diefenderfer	Hollins University
2014	Roland Minton	Roanoke College
2013	Adrian Rice	Randolph-Macon College
2012	Mark McKibben	Goucher College
2011	Robert Sachs	George Mason University
2010	Don Spickler	Salisbury University
2009	Lawrence Washington	University of Maryland-College Park
2008	Bruce Torrence	Randolph-Macon College
2007	Mike Bardzell	Salisbury University
2006	David Kung	St. Mary's College of Maryland
2005	George Nakos	United States Naval Academy
2004	Homer Austin	Salisbury University
2003	Rebecca Berg	Bowie State University
2002	Robert Lewand	Goucher College
2001	Betty Mayfield	Hood College
2000	Paul Bourdon	Washington and Lee University
1999	Ezra (Bud) Brown	Virginia Tech
1998	Virginia Lyn Stallings	American University
1997	E. Lee May	Salisbury State University
1996	George Mackiw	Loyola College of Maryland
1995	I-Lok Chang	American University
1994	David Lay	University of Maryland-College Park
1993	Genevieve Knight	Coppin State College
1992	John Smith	George Mason University

### Meritorious Service Award

The Certificate of Meritorious Service is presented for service at the national level or for service to a Section of the Association. The first such awards were presented at the August 1984 meeting of the Association. Each Section is entitled to nominate one person for the award every five years.

<b>Year</b>	<b>Recipient</b>	<b>Institution</b>
2015	Sister Helen Christensen (posthumous award)	Loyola College
2010	Elizabeth Mayfield	Hood College
2005	Jon Scott	Montgomery College
2000	Elizabeth J. Teles	Montgomery College
1995	Howard L. Penn	United States Naval Academy
1990	John M. Smith	George Mason University
1985	Dorothy L. Bernstein	Goucher College

### Sister Helen Christensen Service Award

The Sister Helen Christensen Service Award is given each fall for outstanding service to the profession. The award is named after Sister Helen Christensen, in honor of her lifetime of service to mathematics education and the Section.

<b>Year</b>	<b>Recipient</b>	<b>Institution</b>
2016	David Carothers	James Madison University
2015	Jennifer Bergner	Salisbury University
2014	Ezra (Bud) Brown	Virginia Tech

## Section History Committee

- Jon Scott, Montgomery College, Chair
- Mary Kay Abbey, Montgomery College
- Chris Barat, Stevenson University
- Bud Brown, Virginia Tech
- Caren Diefenderfer, Hollins University
- Betty Mayfield, Hood College
- Howard Penn, U.S. Naval Academy
- Dan Symancyk, Anne Arundel Community College

Since our group began its work several years ago, two members of the committee have passed away: Chris Barat and Howard Penn. We are sorry that they cannot be here with us to celebrate the Centennial of our Section and the culmination of our work.

We are grateful to all the members of the Section who have helped us with this project, especially Section Webmasters Don Spickler and Brian Heinold.

This is just a taste of the vast amount of information we – and others – have collected. For more, please see the Section website: <http://sections.maa.org/mddcva/history.php>. We encourage you to add your own stories to the Section History Blog there, and to keep documenting the history of our Section.