

## Newsletter

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### *The Next Generation of Scholars*



#### **NAM's MATHFest 2010**

NAM MATHFest 2010 was hosted by Miami Dade College in Miami, Florida from November 18 to 20, 2010. This conference brought together undergraduates from across the nation who engaged in mathematics through sharing their research, participating in a problem-solving contest, and networking with established mathematicians.

Top Row: Aqeeb Sabree (Texas Southern University), Ruqiah Muhammad (Texas Southern University), Ashlee Edwards (Virginia Wesleyan College), and Cathalee Soergel (Miami University)

Bottom Row: Leland Kent (Morehouse College), Sovandara Chea (Texas Southern University), Marcia Higgins (Johnson C. Smith University), Davian Vernon (Morehouse College)

# The National Association of Mathematicians (NAM)

publishes the NAM Newsletter four times per year.

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## Newsletter Website

<http://faculty.evansville.edu/tw65/NAM.htm>

This website has a list of open job and summer positions. It also features past editions of the *Newsletter* and editions from 41.1 to present are in color.

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**Letters to the editor** should be addressed to Dr. Talitha M. Washington, University of Evansville, Department of Mathematics, 1800 Lincoln Avenue, Evansville, Indiana 47722 or by email to [nam\\_newsletter@yahoo.com](mailto:nam_newsletter@yahoo.com). Email is preferred.

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**NAM's Official Webpage** <http://www.nam-math.org>

**NAM's History and Goals:** The National Association of Mathematicians, Inc., known as NAM was founded in 1969. NAM, a nonprofit professional organization, has always had as its main objectives, the promotion of excellence in the mathematical sciences and the promotion and mathematical development of under-represented minority mathematicians and mathematics students. It also aims to address the issue of the serious shortage of minorities in the workforce of mathematical scientists.

## From the Editor

As I sit in church, I can hear the constant babbling of babies and the wild chatter of children. I admit that sometimes I am disquieted as I am trying to hear the stories being told. All of the sudden, my pastor, Rev. Adrian M. Brooks, Sr., interrupts his message to remind us that "you know when an organization is alive. You see and hear the youth. A dying organization is void of the young."

NAM's efforts to cultivate, nourish and grow the next crop of mathematical researchers are highly commendable. At NAM's Undergraduate MATHFest 2010, budding students, intrigued by the rigor and beauty of mathematics, gained invaluable connections (page 7). At the Joint Mathematics Meetings 2011, the new Ph.D. session showed diversity within areas of research, as well as diversity within the NAM community (page 8). All the while, Dr. Azarian reminds us that, as we move forward, it is vital to preserve our past, and remember the mathematicians who came before us (page 3). We are also encouraged to preserve our own works, and Carol Mead of the Archives of American Mathematics Archives shows us how (page 6). Fortunately, at times, a family member will document the joys and conflicts that exist in every family, as with Dr. J. Ernest Wilkins' family (page 4).

However, we do not have to proceed by ourselves. Over the years, we have received generous support for our efforts from the mathematics insti-



David Bressoud (MAA President 2009-2010) and Talitha Washington

tutes from across the country (page 7). Through connections with other professional organizations such as the Mathematical Association of America, our efforts are supported and amplified.

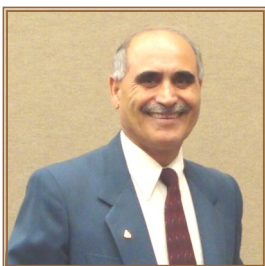
As NAM proceeds forward, we are reminded to include the young, to make connections with those around us, and to provide both the courage and support to move our community forward so that the next generation of scholars can travel a smoother road that leads to mathematical greatness.

*Enjoy!*



# The Second Ptolemy: Persia's Fifteenth Century Mathematical Genius

Mohammad K. Azarian



Mohammad Azarian

Ghiyāth al-Dīn Jamshīd Masūd al-Kāshī was one of the most renowned mathematicians and astronomers in Persian history, as well as one of the most fascinating medieval mathematicians in the world. In Iran and other Persian speaking societies, he is called by his Persian name, Kāshānī. Kāshānī's exact date of birth is not known, but it was sometime during the second half of the fourteenth century. Most likely, he was born in the Tamerlane empire in the city of Kāshān in central Iran about 160 miles south of the capital Tehran, and about 300 miles from the Caspian Sea. Kāshānī died on the morning of Wednesday, June 22, 1429 (Ramadān 19, 832 AHL) outside of Samarqand, at the observatory he had helped to build in Uzbekistān, in northeast Iran.

Kāshānī was known for his extraordinary ability to perform very difficult mental computations. The many nicknames given to Kāshānī include “the second Ptolemy”, “the pearl of the glory of his age”, “the king of engineers”, “the reckoner”, and “our master of the world”. Although Kāshānī's interests were in mathematics and astronomy, he was actually a physician. Like many other scientists of the Middle Ages, he dedicated most of his known scientific treatises to monarchs or other influential rulers of his time in order to receive compensation.

Kāshānī was Persian, but, in order to increase his readership, he wrote most of his mathematical work in Arabic. Most of his work was written in sexagesimal system, a system where the digits are separated by commas, and the integral and fractional parts by semicolons. (For example, “1, 23; 45, 57” in base 60 is

$1 \times 60 + 23 \times 60^0 + 45 \times 60^{-1} + 35 \times 60^{-2}$  in base 10.) Today, his best-known work has been translated into English, French, German, and Russian. For a more detailed discussion of Kāshānī's life and his mathematical achievements, we refer the reader to the references provided for this article, especially [5].



## Mathematical Achievements

“The Treatise on the Circumference” was completed in Arabic as *Al-Risāla al-muhītīyya* in July of 1424 (Sha'bān 827 AHL). In this masterpiece of computational techniques, Kāshānī used his fundamental theorem from this *risāla* to calculate the value of  $\pi$ , correct to 16 decimal places. He used inscribed and circumscribed polygons, each with 805,306,368 sides. This approximation of  $\pi$  was a remarkable achievement for that time. It far surpassed all approximations of  $\pi$  by all previous mathematicians throughout the world, including Archimedes, Ptolemy, and Muhammad *al-Khwārizmī*. Archimedes' approximation was 3.14 (250 BC); Ptolemy's result was 3.14166 (150 AD); and *al-Khwārizmī*'s approximation was 3.1416 (800 AD). It took European scientists 186 years to improve on Kāshānī's approximation of  $\pi$ .

“The Treatise on the Chord and Sine” was completed in Arabic as *Risāla al-watar wa'l-jaib* around 1427. The main part of this work involves the creation of and solutions to the cubic equation  $ax = b + x^3$  where  $a$  and  $b$  are constants. He then found an approximation of  $\sin 1^\circ$  via trigonometric identity  $\sin 3x = 3\sin x - 4\sin^3 x$ . By using an iterative method, today known as the fixed-point method, he found that

$$\sin 1^\circ = .0174524064372835103712$$

which is correct to 22 decimal places (and is equivalent to  $\sin 1^\circ = 1;2,49,43,11,14,44,16,26,17$ , correct to ten sexagesimal places). This was the first approximation method in the history of mathematics and the most significant achievement in medieval algebra. Before this work, the best known approximation was found in the tenth century AD by Abu'l-Wafā and Ibn Yūnus but they were correct to only four sexagesimal places.

“The Key of Arithmetic” or “The Calculators' Key” was completed in Arabic as *Miftāh al-hisāb* on March 2, 1427 (Jamādi al-awwal 3, 830 AHL). It took Kāshānī more than 7 years to complete this work. It was written primarily as a textbook and was used for more than five centuries as a textbook as well as an encyclopedia. It served many generations of students, accountants, astronomers, architects, engineers, land surveyors, and merchants.

## Side Note

The start of the Islamic calendar is the year 622 AD in the Western calendar, the year the prophet Muhammad made the *hijra*, his migration Mecca to Medina. There are two Islamic calendars in use: the lunar, which is 354 days and the solar, which is 365 days. In this article, “AHL” and “AHS” are used for these two calendars, respectively.



## References

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- [2] Mohammad K. Azarian, *The Introduction of Al-Risāla al-Muhītīyya: An English Translation*, International Journal of Pure and Applied Mathematics, Vol. 57, No. 6, pp. 903-914, 2009.
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*Editor's Note:* As he himself is Persian, Dr. Azarian has made Kāshānī's work available to mathematicians and historians by translating and providing documentation.

## Review "Damn Near White: An African American Family's Rise from Slavery to Bittersweet Success"

Ronald E. Mickens

*Damn Near White: An African American Family's Rise from Slavery to Bittersweet Success* by Carolyn Marie Wilkins (University of Missouri Press, Columbia and London, 2010, pps. 192; ISBN 978-0-8262-1899-5).

The rather short yet factually concentrated book under review provides a history of the Wilkins family. More specifically, it is centered on the life and career of patriarch J. Ernest Wilkins (February 1, 1894—January 19, 1959), as well as focuses on the underlying reasons for why Wilkins "may have been forced to resign from his Labor Department post by members of the Eisenhower administration."

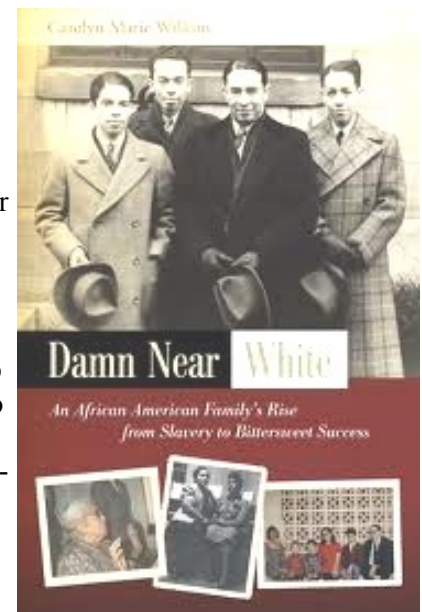
The author, one of Wilkins' granddaughters, is a professor at the Berklee College of Music in Boston, Massachusetts. An accomplished musician, Carolyn Marie Wilkins has toured in South America for the U.S. State Department as a Jazz Ambassador, performed as a percussionist for both the Pittsburgh and Singapore symphonies, and appeared on both radio and television with her ensemble "Spirit Jazz." She is the author of the book *Tips for Singers: Performing, Auditioning, and Rehearsing*.

In addition to J. Ernest Wilkins, the essential character in the book is Aunt Marjory. Her roles in the extended Wilkins family were many and included the transmission of family oral history; providing fun loving, mischievous actions which sometimes upset other family members; and, most importantly, after her death, leaving to Carolyn the contents of "ten bulging scrapbooks filled with family history and memories." It is from this wealth of initial material, multi-family interviews, and travel to and searches at a broad range of locations containing archival documents, that made the current book an actuality.

For the author, Carolyn, one of the major tasks in putting this book together was to provide insights into her own understandings of what it really means to be a light-skinned African American, and also be a member of a group of such individuals who have made outstanding achievements intellectually, socially, and culturally. In the end, the initial question of what were the causes of her grandfather's actual "resignation" merely provides the backdrop for these more direct, personal issues.

*Damn Near White* covers a lot of historical territory, taking us deep into significant racial and social events in the 19<sup>th</sup> century. The Wilkins' family history involves every known human emotion and interaction: love, hate, scheming, skin color dynamics, bigamy, the abandonment of wives and children, educational attainment, and the maintenance of financial status. The seventeen photographs included in the book provide a very vivid physical portrayal of the Wilkins family. Some show great love, affection, and caring among the individuals, while others hint at a tension that is all so common within the dynamics of family life.

After learning of the existence of this book, I immediately purchased a copy, read it within a day of its receipt,



and emailed the author with some general comments. I am very pleased to recommend this book. My copy has markings, comments, and underlined passages on almost every page. This short history of the Wilkins family is an im-



Dr. Mickens discussing the book at the JMM 2011 NAM Business Meeting in New Orleans

portant work within the context of African American history and culture. In spite of being brief, the book provides a sensitive and deep commentary on what it means to hold distinguished membership in the black elite, in which, simultaneously the individuals are also “damn near white.”

*Buy a copy, now!*

In our mathematics community, when the name Dr. J. Ernest Wilkins is called forth, we are generally referring to J. Ernest Wilkins, Jr., a son of the J. Ernest Wilkins, who is the subject of *Damn Near White*. J. Ernest Jr. is a distinguished mathematician, engineer, science administrator, and mentor to many professors and students. It is of significance to note that his mother, Lucile Robinson, and father received undergraduate degrees in mathematics; the father from the University of Illinois (BS, 1918) and his mother at the University of Chicago (BS, 19??).

In addition to J. Ernest Jr., the Wilkins had two other children, Julian and John. Both graduated from the Law School of Harvard University. The author’s father, Julian, had a very successful career as an attorney, while John worked for the U.S. Justice Department in Washington, DC. For our purposes, it is of interest to know that Carolyn Wilkins’ mother told her (pp. 33) that “Lucile and J. Ernest were hard on their children ... Your father never felt he was bright enough or good enough to suit either one of them.” Further, “Both Aunt Constance and my mother described J. Ernest’s criticism of his boys as ‘unrelenting,’ ‘harsh,’ and ‘extreme’ (pp. 32). Even when they had grown to adulthood, J. Ernest rode his boys hard.”

My own deep personal and professional relations with J. Ernest, Jr. began about 1988 when I initiated discussions with him on accepting a professorship at the then new Clark Atlanta University, which was a consolidation of Atlanta University and Clark College. In 1990, he was appointed Distinguished Professor of Applied Mathematics and Mathematical Physics and retired from that position in 2003.

J. Ernest, Jr. was a very sociable person and on many occasions my wife and I enjoyed the warm and cozy at-

mosphere of his home, along with Sylvia (Spelman College) and Robert (Morehouse College) Bozeman. At other times, especially for lunch, Sandra Rucker (Clark Atlanta University) and Earl Barnes (Morgan State University) would be present.

I had the opportunity on several occasions to formally interview J. Ernest, Jr. These sessions generally lasted for about three hours and he provided me with a wide range of his views on subjects involving personal, private, and public aspects of his careers, life, and wishes. A small part of my short bio-essay on him is based on my notes from these discussions. However, reading the book *Damn Near White* allows me to place many of his replies to my questions in a broader perspective. In particular, I think I now understand his general kindness and patience with both students and colleagues, and why he was such a successful mentor to both sets of individuals.

Before I end, two “stories” may be of interest to the reader. First, J. Ernest, Jr. once told me that during the review of one of his mathematics research manuscripts, the editor wanted him to change only one word to have the paper accepted for publication. He wrote back that his word selection was the proper one to use and that if the suggested change was required, he would withdraw the manuscript. Upon receipt of the editor’s reply, he withdrew his work from further consideration in that journal.

The second “story” involves me. For almost thirty years, I have taught a graduate course in mathematical physics. When J. Ernest, Jr. arrived at Clark Atlanta University, he would often stand outside my classroom and listen to my lectures. On four or five occasions, several days later, he would produce a massive (~ 20 pages) document giving the full mathematical proof details on some topic that I had presented to my graduate students. Of course, I always welcomed these results and for all of them we jointly reworked them into papers emphasizing both the mathematical and physical aspects of the topics. He enjoyed my deep physical reasoning associated with these problems and I came to appreciate greatly the precision of his quick and sharp mind as it related to many areas of applied mathematics. While these joint efforts generally were on problems not before discussed in the research literature, we never published any of them. Maybe, this will be done in the near future.

In summary, we should all thank Carolyn Wilkins for bringing to us the details of the Wilkins family history. Hopefully, someday soon, someone will write a fuller volume on this remarkable family and give in detail their contributions to help create a more humane and understanding American society.

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*Ronald Mickens is a Professor of Physics at Clark Atlanta University and a life member of NAM. His email is [rmickens@cau.edu](mailto:rmickens@cau.edu).*



# The Archives of American Mathematics Preserves Mathematics History

Carol Mead

During the January 2011 Joint Mathematics Meeting in New Orleans, I had the good fortune to meet Dr. Talitha Washington, this newsletter's editor. When I told Talitha what I do—preserve the papers of mathematicians and records of mathematics organizations at the University of Texas at Austin (UT)—we discovered a mutual interest: seeing more underrepresented mathematicians preserve their papers for future generations to research. She encouraged me to write an article about the collections I curate, with the aim of appealing to the NAM membership to preserve their papers for the historical record.

## *What Is the Archives of American Mathematics?*

The mission of the Archives of American Mathematics (AAM), a research component of the Dolph Briscoe Center for American History (the Center) at UT, is to collect, preserve, and provide access to the records of American mathematicians and mathematical organizations for use by historians, mathematicians, educators, and others interested in the history and development of mathematics. Since its inception 35 years ago, the AAM has grown from two to over 100 collections, housing the papers and records of prominent American mathematicians and organizations, including those of the MAA, for which we are the official repository for its historical records. In 2003, with the support of the MAA and the Educational Advancement Foundation, an Austin-based philanthropic organization, the Center created a position unique in the United States: an archivist dedicated to curating mathematics collections.

Now, with a solid foundation of mathematical archival collections, the AAM's goal is to become the preeminent resource for the history of American mathematics. To accomplish this goal, we must include mathematicians and organizations from a wide range of the American mathematics community, including underrepresented minorities.

## *Why Preserve Papers?*

I have found, in talking with mathematicians, that many of you do not consider your papers to have archival merit. I would like to counter that belief by saying that your papers do have historical value. Whatever the subject area, including mathematics, archives can reveal, among other things, the genesis and development of ideas and, ultimately, document the progress of a nation's intellectual growth. The papers of African American and other minority mathematicians are of particular importance both for the ideas found within them and for the evidence they provide of minorities' growing participation in and contributions to the American intellectual record.

I realize that generally mathematicians do not use ar-



Carol Mead

chives in their research, unless it tends to the historical. However, ideas, in this case mathematical ones, are not created in a vacuum. They have a historical trail, which often is found in mathematicians' papers – in notes or correspondence, for instance. One example of this trail comes from a small collection here of notebooks created by G. A. Hedlund, of Yale, during World War II, and two letters between Hedlund and Marston Morse in 1941. According to the donor, one of Hedlund's Ph.D. students, the notebooks and one of the letters is likely the beginning of the symbolic logic and discrete dynamical systems as we know them today.

## *How Do You Donate Papers or Records?*

To initiate a donation, please contact me at [carolmead@austin.utexas.edu](mailto:carolmead@austin.utexas.edu). Information I will ask for includes the background of the creator of the collection, the general contents (professional correspondence, lectures, etc.), volume, and formats of materials (paper, digital, photographs, etc.). I also request a general inventory of the collection, which I use to determine what should be accepted for donation.

Once we agree on the donation, the donor sends it to me and I then send the donor a Deed of Gift to sign and a letter of acknowledgment. Once the agreement is in place, we will "process" the collection: establish an arrangement for it, transfer the materials into archival quality folders and boxes, create an online "finding aid" (which contains background about the creator and the papers, and box contents), and store the boxes in our facilities. At this point, the collection is open to researchers.

I encourage you to contact me if you have any questions about possible donations of collections, as well as inquiries about our research materials. For further information about the AAM, please visit our website: <http://www.cah.utexas.edu/collections/math.php> A listing of our collections and links to their inventories may also be found on the site: [http://www.cah.utexas.edu/collections/math\\_findingaids.php](http://www.cah.utexas.edu/collections/math_findingaids.php)

## *What is the Briscoe Center?*

The Dolph Briscoe Center for American History is a special collections library, archive, and museum that facilitates research and sponsors programs on the history of the United States. The Briscoe Center supports research and education by acquiring, preserving, and making available research collections and by sponsoring exhibitions, conferences, symposia, oral history projects, publications, and grant-funded initiatives.



Carol Mead is the Archivist for the Archives of American Mathematics, The Dolph Briscoe Center for American His-

tory at The University of Texas at Austin. Her email is carolmead@austin.utexas.edu.

# Mathematical Sciences Institutes Support NAM's Undergraduate MATHFest 2010

Nathaniel Dean



Dr. Nate Dean, NAM President

There are several institutes around the country that are at least partially funded by the National Science Foundation (NSF). Eight of these institutes contributed \$250 towards awards given to undergraduate presenters at NAM's Undergraduate MATHFest, held from November 18-20, 2010 at Miami Dade College in Miami, Florida. These institutes are:

- American Institute of Mathematics (AIM)
- Institute for Computational and Experimental Research in Mathematics (ICERM)
- Institute for Mathematics and its Applications (IMA)
- Institute for Pure and Applied Mathematics (IPAM)
- Mathematical Biosciences Institute (MBI)
- Mathematical Sciences Research Institute (MSRI)
- National Institute for Mathematical and Biological Synthesis (NIMBioS)
- Statistical and Applied Mathematical Sciences Institute (SAMSI)

Students competed for cash prizes two separate competitions: oral presentations and problem solving. All students were allowed to compete in both competitions. The judges used a rubric with a detailed list of criteria to ensure consistency. The actual scorecard was adapted by the author from one used by the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) for a poster presentation competition at one of their conferences. Specifically, the judges evaluated each presentation's content, organization, delivery, awareness of audience, quality of visual aids, and length of talk.

## Presentation Winners

### 1<sup>st</sup> Place

**Raymond Perkins**, *Pursuit Evasion Games on Graphs*, SURIEEM, Michigan State University

**Davian Vernon**, *Classifying Bol-Moufang Quasigroups under a Single Operation*, SUMSRI, Miami University

### 2<sup>nd</sup> Place

**Ashlee Edwards** and **Cathalee Soergel**, *The Travelling Salesman at Home Near You*, SUMSRI, Miami University  
**Sam Somuah**, *Graph Mining*, DIMACS, Texas Southern University

### 3<sup>rd</sup> Place

**Karen Nielson**, **Malin Rapp-Olsson**, and **Mame Fatou Thiam**, *Using Variations of Beta-Binomial Distributions to Investigate Robust Scoring Methods*, SUMSRI, Miami University

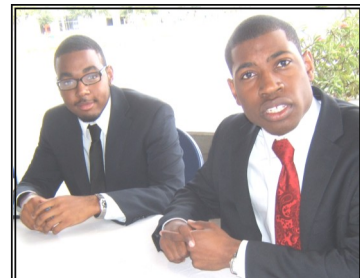
### 4<sup>th</sup> Place

**Sovandara Chea**, *Expert Finder*, Computer Science program, Texas Southern University  
**Marcia Higgins**, *Distribution of Emergency Supplies*, Johnson C. Smith University

### Honorable Mention

**Ruqiah Muhammad** and **Aqeeb Sabree**, *Generating Periodic Solutions of Higher Order Difference Equations via Solutions of a First Order Equation*, LL Clarkson Mathematical Research Experience, Texas Southern University

Another very lively activity for the students was the Challenge Problem competition organized by Dr. Duane Cooper of Morehouse College. He presented problems to the students which were solved during the conference. The problem solving exercise is an important kind of mathematical activity as it encourages the students to do complex mathematical problems. Faculty members were not allowed to compete for the prizes, but, many of them found the problems intriguing and even attempted to find their



Davian Vernon and Raymond Perkins



own solutions.

## Challenge Problem Winners



Dr. Duane Cooper (Morehouse College) assists problem solvers

**Problem 1**  
**Raymundo Navarrete**, MASS, The Pennsylvania State University

**Problem 2, Part 1**  
**Andre White**, L.L. Clarkson Research Experience, Texas Southern University

**Problem 2, Part 2**  
**Andre White** and **Aqeeb Sabree**, LL Clarkson Mathematical Research Experience,

Texas Southern University

Excitement about the prizes and the competitions loomed throughout the conference. As you can imagine this lead to significant involvement from all attendees, not just the competitors, and stimulated a lot of interaction. I announced the awards at the end of the meeting, and the students were ecstatic. It added a lot of excitement and anticipation at a point in the meeting when people would otherwise be leaving early or starting to feel a little worn out. *I can't wait until next year!*

*Nathaniel Dean is a Professor of Mathematics at Texas State university, San Marcos and the President of NAM. His email is nd17@txstate.edu.*

## Images of NAM at the 2011 Joint Mathematics Meetings

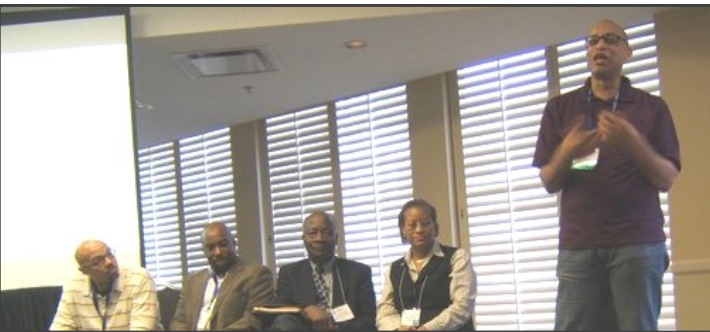


**Left:** Nathaniel Dean, President of NAM, honors Robert Bozeman (Morehouse College) with a plaque for giving the *Cox-Talbot Address*

**Right:** Mohammad K. Azarian (University of Evansville) with Edray Goins (Purdue University) who gave the *Claytor-Woodard Address*



**Right:** Past editors of NAM include Scott Williams (University at Buffalo, SUNY), Talitha Washington (University of Evansville), Janis Oldham (North Carolina A&T), Johnny Houston (Elizabeth City State University)



**Left:** A panel honoring the lives of Drs. David Blackwell, Anglea Grant, and Cora Sadosky included Robin Wilson (California State Polytechnic University), Edray Goins (Purdue University), Johnny Houston (Elizabeth City State University), Roselyn Williams (Florida A&M University) and Dennis Davenport (National Science Foundation)

**Below:** *Granville-Brown-Haynes Session* organized by Dawn Lott (Delaware State University) featured recent Ph.D.'s Katrina Cunningham (Southern University-Baton Rouge), Michael Young (Iowa State University), Patrice Benson (United States Military Academy), and Alejandra Alvarado (University of Arizona)

**Below:** Courtney Fulton (Howard University), Michelle Craddock (United States Military Academy), Lakeshia Legette (Johnson C. Smith University)





## Job Openings

### Search for the Executive Director of the Mathematical Association of America

#### Position

The Executive Committee of the Mathematical Association of America seeks candidates for the position of Executive Director to succeed Dr. Tina Straley, who will retire in December 2011 after twelve years of outstanding service. This position offers the appropriate candidate the opportunity to have a strong influence on all activities of the Association, as well as the responsibility of overseeing a large, complex, and diverse operation. The desired starting date is January 1, 2012.

#### Duties and terms of appointment

The Mathematical Association of America is the largest professional society that focuses on mathematics accessible at the undergraduate level. The approximately 20,000 members include university, college, and high school teachers; graduate and undergraduate students; pure and applied mathematicians; computer scientists; statisticians; and many others in academia, government, business, and industry. Through its active program of publications, meetings, and conferences, the Association provides expository mathematics, professional development programs for faculty, and resources for teaching and learning. Its programs include the American Mathematics Competitions (AMC), the Putnam Examination, and Project NExT. The Association has its headquarters in Washington, DC. The AMC office is located in Lincoln, Nebraska.

The economic condition of the Association is healthy with an annual operating budget of approximately \$8 million. There is a staff of just over 40 people in the two offices.

The Executive Director is a full-time employee of the Association with administrative responsibility for the Association, is in charge of the facilities and staff of the Association, carries out such other duties as may be assigned by the Board, and is empowered to employ persons to discharge these duties. The directors of the various divisions report directly to the Executive Director. Besides these management duties, the Executive Director, together with the officers, provides leadership to the Association in furthering its mission to advance the mathematical sciences, especially at the collegiate level. The Executive Director, together with the President, represents the Association to outside groups and individuals.

The Executive Director serves at the pleasure of the Board. The terms of appointment, salary, and benefits will be consistent with the nature and responsibilities of the position and will be determined by mutual agreement between the Executive Committee and the prospective appointee.

#### Qualifications

A candidate for the office of Executive Director should be a mathematician with significant administrative experience. The position calls for interaction with the staff, membership, and patrons of the Association as well as leaders of other scientific societies. Leadership, communication skills, and diplomacy are prime requisites.

#### Applications

A search committee chaired by Ron Graham <graham@ucsd.edu> has been formed to seek and review applications. All communication with the committee will be held in confidence. Suggestions of suitable candidates are most welcome. Applicants should submit a CV, letter of interest, and an explanation of how their qualifications and experience will contribute to support the mission and build the future of the MAA. For full consideration, these should be sent by April 1, 2011, to:

Executive Director Search Committee  
c/o Julie Forster, Office of the MAA Secretary  
Box 15, Patterson 301  
Westminster College  
New Wilmington, PA 16172-0001  
forstejm@westminster.edu

The MAA is an Equal Employment Opportunity-Affirmative Action Employer



## NAM Calendar

## Conferences & Workshops

The **Underrepresented Students in Topology and Algebra Research Symposium (USTARS)** will be held **April 1-3, 2011** at the University of Iowa in Iowa City, Iowa. The keynote speaker is Dr. Emille Davie Lawrence of California State Polytechnic University, Pomona, California. See: <http://www.mathalliance.org/ustars.asp>

**Tapia Celebration of Diversity in Computing** will be held **April 3-5, 2011** in San Francisco, California. See: <http://tapiaconference.org/2011/>

**Project NExT** (New Experiences in Teaching) is a professional development program for new and recent Ph.D.'s in mathematics. Applications are due **April 15, 2011**. See: <http://archives.math.utk.edu/projnext/>.

**Math SPIRAL 2011**, an undergraduate research program, will be held **May 30-July 8** at the University of Maryland, College Park. Participation is limited to students at the affiliates. See: <http://www.spiral.math.umd.edu/>

**CAARMS 17** will be held in **June 1-4, 2011** at the Institute for Pure and Applied Mathematics (IPAM) at the Uni-

versity of California, Los Angeles. See: [www.caarms.net](http://www.caarms.net)

**SIAM Workshop Celebrating Diversity** will be held **July 19-21** at the International Council for Industrial and Applied Mathematics (ICIAM) 2011 in Vancouver, British Columbia, Canada. See: <http://www.iciam2011.com/>

The **SACNAS 2011 Summer Leader Institute** will be held **July 25-29** in Washington, DC. Applications are due **March 24**. The **SACNAS National Conference** will be held **October 27-30, 2011** in San Jose, California. See: <http://sacnas.org/events/national-conf>

**MAA MathFest 2011**, will be held **August 4-5** in Lexington, Kentucky. The NAM David Blackwell Lecture will be given by Dr. Farrah Jackson Chandler of Elizabeth City State University and the AWM-MAA Etta Z. Falconer Lecture will be given by Dr. Dawn Lott of Delaware State University. See: <http://www.maa.org/mathfest/>

The **Infinite Possibilities Conference 2012** will be held March 30-31 at the University of Maryland, Baltimore County. See: <http://www.ipcmath.org/>

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Please complete below if you did not send NAM this information within the past three years. List all degrees you currently hold. Circle the correct degree.

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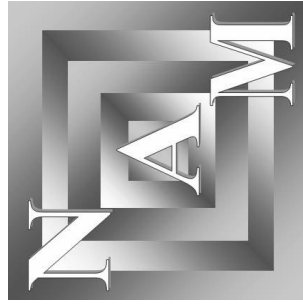
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**NAM Newsletter**  
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Spring 2011