## National Association of Mathematicians



## Newsletter

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## Living Our Math Like It's Golden



At the Joint Mathematics Meetings held in Atlanta, Georgia in January of 2017, the National Association of Mathematicians Launched their Golden Anniversary Campaign. The Hidden Figures book by Margot Lee Shetterly hit the big screens to tell the story of Katherine Johnson, Dorothy Vaughn and Mary Jackson who worked at NASA.
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# The National Association of Mathematicians (NAM) 

publishes the NAM Newsletter four times per year.

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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

With life comes death. With joy comes struggle. With pleasure comes pain. With happiness comes sadness. With peace comes turmoil. The many forces in life come to greet us through yin and yang to encourage us to do and be better than before. We also gain a deeper appreciation for the purely sweet moments in life where we can be in mathematical harmony.

It is with great appreciation and sadness that we honor former NAM President Rodgers Joseph Newman (page 3). With his arduous efforts along with those in the mathematical community, we cherish our golden years through NAM's Golden Anniversary Campaign (page 4). We are reminded through William Claytor and Katherine Johnson's story that by motivating students, we motivate our nation (page 5). We celebrate the honor of Dembele being appointed to the Claytor Endowed Professorship (page 5). We appreciate the strength of Tanya Moore to bring the entire mathematics community to become enlightened with the achievements and struggles of the hidden figures (page 6). For it is at the Joint Mathematics Meetings, we remind each other of how interdependent we are and through our interdependency, we all become strong (page 7) . Through the myriad of feats by our humble mathematical ancestors, we will indeed 'be counted' (page 8). By coming to know Katherine Johnson, we can become reassured as scholars and better equipped to share the love of mathematics with others (page 8). It is through our bonding love, the NAM Board encourages President Trump to
reconsider the Immigration and Nationality Act (page 9). We also feel the pain and confusion of children who have been caught in the middle of turbulent immigration policies (page 10). In the midst of the political landscape, we must make time to strengthen our faculty through NAM's Conference on Research and Teaching Excellence (page 10). We appreciate the pivotal appointment of Don Outing who will lead the effort on diversity through an inaugural appointment at Lehigh University (page 11). Through Mathematical Research Communities, we find enlightenment and magical synergies


Talitha Washington that jump-start careers (page 11). We take great pride and joy in the awarding of Chelsea Walton and Jelani Nelson as 2017 Sloan Research Fellows (page 12). Throughout the year and online, we echo that 'Black Mathematicians Matter' (page 14).

In the lyrics of Jill Scott who soulfully shares,
Living my life like it's golden
I'm taking my own freedom
Puttin' it in my song
Singing loud and strong
Proving all day long
May we too go forth and do the same even in the midst of our yin and our yang.

Enjoy!

## Rogers Joseph Newman, 1926-2016

Johnny Houston


Johnny Houston

Rogers Joseph Newman was born in Ramar, Alabama near Montgomery, Alabama on December 22, 1926 as the only child of Jonathan Newman, a farmer and insurance agent and Vera Primos Newman, a school principal. Later in life when Rogers married his significant other, Dorothy Alice Willis Newman, their union also produced no daughters. However, it did produce three sons; the late Rogers Joseph Newman, Jr.; Roy Oliver Newman and Robert Marion Newman. Rogers received his high school diploma from Alabama State College Laboratory School. He enrolled in Morehouse College in Atlanta, Georgia in 1944 and earned and AB Degree in Mathematics from that institution in 1948. One of his graduating classmates was Dr. Martin Luther King, Jr. Immediately following graduation, he matriculated at Atlanta University (now Clark Atlanta University) where he earned the MA degree in mathematics in 1949.

Rogers began his illustrious teacher career at Bishop college in Marshall, Texas (1949-50). He taught at Grambling College, in Grambling, Louisiana (1950-51); at Jackson State College, in Jackson, Mississippi (1951-53); and at Southern University in Baton Rouge, Louisiana (1953-55).

After the 1954-55 academic year, Newman actively pursued a PhD in mathematics at the University of Michigan in Ann Arbor, with duties as a teaching fellow during the 1957-58 academic year and as a junior instructor in (1958-60), while also doing limited teaching at Eastern Michigan University (1958-59). In the fall of 1960, Rogers returned to Southern University as a full time faculty member. In January 1961, he received his PhD in Mathematics from the University of Michigan in Complex Variables. His dissertation topic was capacity and Tchebycheff polynomials. In the Fall of 1961, he was appointed chair of the Department of Mathematics at

Southern University, a


Rogers Newman position held until Spring 1973. The Department flourished under his leadership. Newman was the first math graduate of Morehouse College to earn a PhD.

In addition to collegiate teaching, Rogers was Director of the Institute for Higher Education Opportunity Southern Regional

Education Board (SREB) in Atlanta, Georgia (1973-73) and Dean of the College of Science and Humanities at Alabama State University in Montgomery, Alabama (1974-76). Rogers also taught at Tulane University (Summer, 1965), Tuskegee Institute (Summer, 1969) and he was the Commonwealth Visiting Professor at Longwood College in Farmville, Virginia (198486). He returned to Southern University in Baton Rouge,


Rogers Newman Louisiana in the fall of 1986 and he remained there until retirement.

During his more that 40 years of tenure as a mathematician and educator, Rogers has taught and influenced scores of established mathematicians. His list of students who have earned doctorates include Stella Ashford, Juanita Bates, Roosevelt Calbert, Preston Dinkins and Delores Spikes. In addition to his contributions to teaching (selected Danforth Teacher in 1955 and University Teacher of the Year in 1981), he has been productive as a scholar with several written works and a number of scholarly presentations. His scholarly pursuits led him to further formal studies beyond the PhD degree. Rogers did further study at Imperial College, University of London, England (1970-71) and Louisiana State University (Summer 1970, 1971). Rogers Newman was a member of Omega Psi Phi Fraternity.

During his professional career, Newman was active with several professional organizations: The National Association of Mathematicians (NAM) - President, 19841994; The Mathematical Association of America (MAA) Board of Governors (1986-89); and the Task Force on Minorities (1986-1996). He was active with the American Mathematical Society (AMS) and Pi Mu Epsilon honorary mathematical society. Moreover, he was a reader for National Science Foundation (NSF) and a reviewer for Mathematical Reviews. He was invited as a lecturer/ consultant by several institutions, including Wabash College, Virginia State University and Winston-Salem State University. He gave the first Scholarly presentation at a NAM meeting in 1972.

Newman received several recognition's including the NAM Distinguished Service Award (1994). He was one of the few selected to make a special presentation (which was published, at AMS 100th Annual Meeting in 1994). He was also included in the exhibit of outstanding African American Mathematicians in the Museum of Science in Chicago, Illinois (1996). Newman continued to impact the Mathematical Sciences Community with his continuous professional involvement prior to retirement. He died at his residence on January 9, 2016.

He received several recognition's including the

We will certainly miss him. We are grateful for his many services and outstanding contributions which have strengthened our mathematical community.

## Johnny Houston is Professor Emeritus at Elizabeth City

 State University and was NAM's Executive Secretary during Newman's Presidency of NAM. He can be reached at: jlhouston602@gmail.com

Past chairs of the Department of Mathematics at Southern University (left to right): Mr. Jeffrey Thomas, Dr. Katrina Cunningham, Dr. Rogers Newman, Dr. Stella Ashford, and Dr. Joseph Meyinsse

## NAM's Golden Anniversary Campaign

Golden Anniversary 2019


During NAM's first three decades (1969-1999), NAM had a very large membership annually. In 1969 when NAM was founded, Elbert Frank Cox (PhD from Cornell University, 1925) died. He was the first Black in the world to receive a PhD degree in mathematics. During the year of the founding of NAM and of Cox's death, the total number of Black persons who had earned a PhD degree in mathematics was not much beyond 100. These early scholars reflected on some of the challenges and obstacles that they faced along the way as they considered what should be the primary mission of NAM. Specifically, many remembered the scarcity of nurturing, motivating and encouraging environments as well as the lack of extensive opportunities and connections to enhance their growth in mathematics. Thus they established the major mission or purpose of NAM to be that of promoting excellence in the mathematical sciences and promoting the mathematical development of underrepresented American minorities.

In 2019 the National Association of Mathematicians (NAM) will celebrate its 50th Anniversary Year! From January 1, 2017 until September 30, 2019, NAM will conduct a GOLDEN ANNIVERSARY CAMPAIGN with the goal of establishing a NAM Endowment Fund of at least $\$ 2$ million to serve as the base support, ensuring vibrant annual programs and activities for many years in the future. During the Golden Anniversary Campaign, NAM hopes to achieve a significant increase in membership; especially in the category of Life Members as well as increasing abundantly its student membership!

NAM's Golden Anniversary Campaign began its kickoff with an Initial Membership Phase on January 1, 2017. In this phase, NAM is seeking to solicit at least $\$ 50,000$ from the membership. In addition, during the nationwide campaign, beginning April 1, 2017, members, friends, philanthropists, foundations, companies, and other supportive enterprises will have the opportunities to partially or fully endow any of the programs and activities that NAM seeks to sponsor annually. We welcome all to become a NAM supporters. Membership and participation in NAM are open to all.

The purpose of NAM has always been to promote excellence in the mathematical sciences and to promote the mathematical development of underrepresented American minorities. NAM is still needed today to help increase the number of underrepresented American minorities in the mathematical sciences.

NAM carries out its purpose by providing and promoting year-round programs and activities of excellence in the mathematical sciences for underrepresented minorities in mathematics. The annual national meeting of NAM, held each January during the Joint Mathematics Meetings, is electrifying in its breadth of variation and diverse in its participation. Each year it includes a NAM panel on current mathematical issues; the Haynes-Granville-Brown Colloquium of presentations by recent underrepresented minority PhD recipients in mathematics; the Cox-Talbot Address and NAM Lifetime Achievement Award at the NAM Banquet, and the Claytor-Woodard Research Lecture.

In the spring, NAM holds a Regional Faculty Conference on Research and Teaching Excellence. During the summer, NAM promotes and supports an Undergraduate Summer Computational Science Institute in one venue and sponsors the David Blackwell Lecture at the MAA summer Mathfest. In the fall, NAM conducts its own unique undergraduate MATHfest at a historically black college.

Over the past four and a half decades, these programs and activities have proven to be very effective bridges for helping scores of minority students to embark on successful careers in the mathematical sciences. They provided critical avenues for connecting underrepresented American minorities to the mathematical sciences community, just as the NAM Newsletter contributes to that connectivity. NAM's greatest challenge annually has been that of having sufficient resources to support all of its programs and activities at the level of quality and in quantities needed by the target audiences. NAM can have the resources needed if it has a significant increase in annual membership dues and the proceeds from an Endowment Fund to ensure certain base support for advanced planning of these year round programs and activities.

NAM is an internationally recognized mathematical sciences professional 501(c)3 organization with distinction. We urge you to join us in supporting the NAM Golden Anniversary Campaign to help advance the mathematical sciences in America.

You can help NAM to succeed in accomplishing these annual goals by joining NAM in 2017 and paying your annual membership dues each year, or by choosing a life membership in NAM. Your dues will assist in the annual quest to help develop future generations of underrepresented minorities launch successful careers in the mathematical sciences. FOR THIS WE THANK YOU!

The Committee Members of NAM's Golden Anniversary Campaign include Johnny L. Houston, Co-Chair (Elizabeth City State University), Sylvia T. Bozeman, CoChair (Spelman College), Robert Bozeman (Morehouse College), William 'Bill' Hawkins (University of the District of Columbia), Tanya Moore (Building Diversity in Science) and Sastry Pantula (Oregon State University). Inquiries can be sent to: NAM.campaign@gmail.com

## Hidden Figures Connects with NAM History <br> Sylvia Bozeman



Through her research for the book Hidden Figures, author Margot Lee Shetterly brought to light several little known connections in African American history. A particular connection may be of special interest to NAM members and all who delight in mathematical history. It begins with William Waldron Schieffelin Claytor.

In 1933, Claytor became the third African American to earn a PhD degree in mathematics. In 1980, NAM established the Claytor Lecture as a scholarly presentation to honor Claytor, a topologist. ${ }^{1}$ The Claytor Lecture was later expanded to the Claytor-Woodard Lecture to also honor Dudley Weldon Woodard, the second African American to earn the doctorate in mathematics. This lecture is an annual NAM signature event during the Joint Mathematics Meetings.

Woodard, a professor at Howard University, supervised Claytors's thesis when Claytor earned the Master's degree from Howard University, in its inaugural graduate mathematics class. Then Claytor proceeded to the University of Pennsylvania's doctoral program where Woodard had also earned the PhD.

In 1933, Claytor joined the faculty at West Virginia State College. In that same year, Katherine Johnson (then Katherine Goble) entered as an undergraduate at West Virginia State College. Shetterly writes ${ }^{2}$ :


Katherine Johnson ${ }^{4}$
"She [Katherine] made such quick work of the course catalog that Claytor had to create advanced classes just for her. 'You would make a good research mathematician, Claytor said to his star seventeen-year-old undergraduate after her sophomore year, 'And,' he continued, 'I am going to prepare you for this career.'"

According to an interview with Katherine Johnson, one of the courses Claytor created for her was Analytic

Geometry'. The 'rest of the story' is a part of the history of the space program at the National Aeronautics and Space Administration (NASA).

Although Katherine Johnson began work as a human computer, she is best known for her work as a mathematician in the Spacecraft Controls Branch of NASA where "she calculated the flight trajectory for Alan Shepard, the first American to go into space in 1959. Johnson also verified the mathematics behind John Glenn's orbit around the Earth in 1962 and calculated the flight trajectory for Apollo 11's flight to the moon in 1969.,"

In 2015, almost 30 years after retirement from NASA, Katherine Johnson was awarded the Presidential Medal of Freedom by President Barack Obama for her contributions as a "pioneer in American space history." Claytor and Johnson's story reminds us all to encourage and prepare


Sylvia Bozeman


Johnson being awarded the Presidential Medal of Freedom students for a mathematical future yet unchartered.
References
${ }^{1}$ Johnny L. Houston, The History of the National Association of Mathematicians, The First Thirty Years: 19691999, The National Association of Mathematicians, Inc., 2000, p. 59.
${ }^{2}$ Margot Lee Shetterly, Hidden Figures, William Morrow, an Imprint of Harper Collins Publishers, 2016, p. 73.
${ }^{3}$ Katherine Johnson, Biography, The HistoryMaker, Interiew on 2/6/2012, http://www.thehistorymakers.com/ biography/katherine-g-johnson-42
${ }^{4}$ https://en.wikipedia.org/wiki/Katherine_Johnson
Sylvia Bozeman Professor Emerita at Spelman College. She can be reached at: sbozeman2@bellsouth.net

## Dembele Appointed as Claytor Endowed Professor

Bassidy Dembele has been appointed as the William W.S. Claytor Endowed Professor in Mathematics at Grambling State University. This appointment is for a three-year period, effective February 1, 2017.

After earning a PhD degree in mathematics from

Howard University in 2008, he joined the faculty at Grambling. Dembele's research focuses on the mathematical epidemiology of infectious diseases including malaria and drug administration protocol for optimal treatments.

## Panel Brings 'Hidden Figures’ to Light

Tanya Moore



Tanya Moore

I still remember the first Joint Math Meetings (JMM) I attended. At the time, I was a sophomore at Spelman College, attending the conference with one of my professors and a few classmates. Not only was it my first time in San Antonio, but it was my first introduction to the larger community of professional mathematicians outside the walls of Spelman. It was overwhelming. The sheer magnitude of the number of attendees and the number of overlapping sessions was enough to make anyone feel small. But, with a feeling of outsider-ness, a looming question mark over the rightness of being there was exacerbated. Our group from Spelman stayed close to one another, affirming our place in this community by one another's presence.

Now, more than twenty years after that first conference experience it was the first night of the JMM 2017 in Atlanta and a standing-room-only audience was on hand to meet Margot Lee Shetterly, author of the New York Times bestseller Hidden Figures, a story centered around the lives of black female mathematicians. This time I experienced a difference sense of being overwhelmed. Shetterly would be given a rock star greeting by a packed room of diverse mathematicians for her work that uniquely captures the intersection between race, gender, mathematics and the Civil Right Movement. This was a true full-circle moment for me.

Hidden Figures: The American Dream and the Untold Story of the Black Women Mathematicians Who Helped Win the Space Race tells the remarkable story of black female mathematicians, scientists and engineers at the National Aeronautics and Space Administration (NASA) and its predecessor from the 1930s through the 1980s as well as their significant contributions to the American space race. The audience was given several special treats, including presentations by both Shetterly and Dr. Christine Darden, engineer, sonic boom expert and one of the many women whose professional lives were brought to light by Shetterly's research and book.

Shetterly was introduced with a quote from the book's prologue that assigned this story its place in American history. It was noted that she is also the founder of The Human Computer Project (www.thehumancomputerproject.com), a project that focuses on identifying the names and accomplishments of all of the women who worked as computers, mathematicians, scientists and engineers at NASA during this unique period in history. Before Shetterly addressed the audience, and at several key points during the panelists' presentations, the audience was surprised with movie clips from the not-yet-released Hidden Figures movie which is based on the book.

To give a flavor of the mathematical contributions of the black women at the National Advisory Committee for Aeronautics (NACA) and NASA, Dr. Ulrica Wilson of

Morehouse College presented an inside look at the mathematical publications of Dorothy


Left to right: Tanya Moore, Margot Lee Shetterly, Ulrica Wilson, and Chrinstine Darden Hoover, a 'hidden figure' included in the book. As early as 1951, Dorothy Hoover published theoretical research on triangleshaped delta wings. Dr. Rudy Horne, of Morehouse College, who served as Hidden Figures film's mathematical consultant, shared his experience of bringing the mathematics created by these women to the big screen.

At the conclusion of the program both Shetterly and Darden were given certificates of honorary NAM Lifetime Membership by President Edray Goins in recognition of their efforts which have raised the visibility and preserved the legacy of black female mathematicians at NASA. Following the panel discussion, two long lines snaked around the edges of the room with members of the audience seeking autographs of their personal copies of Hidden Figures and often finding a moment to express words of appreciation.

The panel was conceived as an opportunity to share this history at our largest gathering of math professionals, to both inspire us and to challenge us to have a commitment towards creating a math community that is accessible and welcomes the participation of the mathematical genius and acumen among women and men from all different racial and ethnic backgrounds. NAM was one of five cosponsoring organizations, which also included the Association for Women in Mathematics, the EDGE Program, Building Diversity in Science, and the American Mathematical Society. Hats off to my co-organizers Lily Khadjavi, Kimberly Weems, Ulrica Wilson, Ami Radunskaya, Sylvia Bozeman, Edray Goins and Helen Grundman.

Throughout the entire event, it was apparent that Shetterly's work resonated broadly with many segments of the population, including a group of Spelman College math and science majors in the audience who had formed a book club to read and discuss the book. Perhaps this story will also inspire a rising generation of children who now see diverse mathematics highlighted on the 'big screen' as well as in the Young Readers version of Hidden Figures. Hopefully they too come to know these important women and that their mathematics is without limits.

Tanya Moore is at Building Diversity in Science. She can be reached at: tanya.a.moore@gmail.com

## NAM @ JMM 2017



## $\mathcal{N}$ AM Granville-Brown-Haynes Session of Presentations by Recent Doctoral Recipients in the

Mathematical Sciences featured Deidra Andrea Coleman (Philander Smith College), Piper Harron (University of Hawaii at Manoa), Cris Negron (Massachusetts Institute of Technology), Valerie Nelson (Howard University/Department of Defense), Nourridine Siewe (National Institute of Mathematical and Biological Synthesis, NIMBioS) and Ashley Wheeler (University of Arkansas). Deidra Coleman won the Mathematical Biosciences Institute (MBI) Presentation Award.


Lecture was given by Wilfrid Gangbo (center, UCLA) who was honored by Johnny Houston and Edray Goins.

$\mathcal{N A M}$ Panel Discussion on "Transforming Post-Secondary Education (TPSE) Mathematics: Implications for the Preparation of African American Undergraduates and Institutions" featured panelists (left-right Sylvester James Gates, Jr. (University of Maryland at College Park), Frank Ingram (Winston-Salem State University), Asamoah Nkwanta, (Morgan State University), and Suzanne L. Weekes (Worcester Polytechnic Institute) with moderator Duane Cooper (Morehouse College).

$\mathcal{A M} S-\mathcal{N A M}$ Special Session on "The Mathematics of the Atlanta University Center presenters included (left to right) Sylvia Bozeman (Spelman College), Yewande Olubummo (Spelman College), Duane Cooper (Morehouse College), Sandra Rucker (Clark Atlanta University), Johnny Houston (Elizabeth City State University), Sam Ivy (United States Military Academy), Talitha Washington (Howard University), Joycelyn Wilson (Spelman College), Monica Jackson (American University), and Colm Mulcahy (Spelman College). Not pictured are Charles Earl (Automattic), Tepper Gill (Howard University), Michael Johnson (University of Massachusetts Boston), Karen King (National Science Foundation), Ronald Mickens (Clark Atlanta University), and Shelby Wilson (Morehouse College).

## Being Counted: Monica Jackson Talks ‘Hidden Figures’

Monica Jackson, an associate professor in American University's Mathematics and Statistics Department, recently talked with University Communications about creating more STEM opportunities for women of color. In this lightly edited interview, Jackson discussed Hidden Figures, refuting stereotypes, and the importance of making math fun.

UC: What were your impressions of Hidden Figures?
MJ: "I loved it! I thought it was a great movie. A good friend of mine, Rudy Horne, was a math consultant for the movie. He's actually coming here to give a talk in April."

UC: Were you familiar with Katherine Johnson, Dorothy Vaughan, or Mary Jackson before you saw the movie?
MJ: "No, I didn't know anything about them. So that was what was fascinating."

UC: This seems like the question many people have been asking: How did we not know this story?
MJ: "That's what we've been saying, too, in the math community."

UC: Did you find these women personally inspiring?
MJ: "Yes, definitely. I guess what was more shocking was how much hasn't changed through the years. So watching the movie, some of the same things they went through are still some of the things minorities go through in mathematics. Being mistaken for the help. That happens a lot."

UC: What kinds of obstacles have you faced throughout your life and career?
MJ: "Being a woman and being a minority in this field is different. There's not many of us. I think the good thing was my family was very supportive. I've always loved math. I knew since I was six years old I was going to do something with math. But it's definitely one of the hardest things that I've done, having to go through this process. But I love it, so I'm going to do it no matter what."

UC: Did you have role models in the math world? Did other women of color help you along the way?
MJ: "Yes. I ended up going to a historically black college [Clark Atlanta University], which was where I found a lot of my role models in my field. Without them, I definitely would not have made it this far."

UC: Have you mentored any young women of color at AU ?
MJ: "Oh, quite a bit. That's definitely my passion, my way of giving back. I run REU's, Research Experiences for Undergraduates. That's how I got started in doing math research when I was at Clark Atlanta. I was a sophomore, I got put in an REU, and that's how I learned that I loved math research."

UC: How can parents and teachers encourage more minority women to pursue STEM fields?
MJ: "I would just say support them. I think that's probably the biggest thing that helped me. And encourage them. Show them that math is fun. They are going to be alone.
 They're going to be isolated. There

Monica Jackson are definitely going to be a lot of naysayers who think they can't do it. But if they have the strong support system, and family and friends, and someone who truly thinks they can do it, I don't think those obstacles are going to be a problem."

UC: As shown in the film, Katherine Johnson had an aptitude for math at a very young age in West Virginia. Is this something you need to have a knack for early in life? Or can you master it by working at it?
MJ: "I think, definitely, you can master it by working at it. The key is just having the interest in it, and the love of it, and seeing the beauty in it. If you don't see that, I don't think any talent or any mentor will help you get through it."

UC: You mentioned wanting to pursue math since you were six. Did you also have that flair for this?
MJ: "I knew I had a love for it at that age. These were my favorite classes all the way through school. In college, I knew I'd major in math. All my degrees are in math. And if there were a degree higher than a Ph.D. in math, I'd be doing that now."

UC: Were there instances where people doubted you in high school, or even when you were younger?
MJ: "The first one I remember was in elementary school. I was always the only minority in my classes. We were learning times tables, and we were racing in the class. And I was doing so well, the teacher accused me of cheating. So she had me do a special timed test just with her-to redo all of them to make sure that I was doing it right."

UC: It seems like there are fewer culturally-embedded biases in math than you might find in other subjects. As a discipline, is math a universal language?
MJ: "It definitely is. That's not where the bias comes from. The bias comes from perceptions. So from teachers and other people believing that you cannot do the work. But the work, I think, cuts across all boundaries. Math itself is not color, it's just math. But the bias comes from when I'm turning in work and someone else is turning in work, and how we're viewed differently."

UC: From your online bio, you're described as a "spatial statistician." Can you elaborate a bit on what that entails?

MJ: "I study data that are correlated. I look for geographic trends in data sets in order to predict, say, disease outbreaks. For example, I do a lot of tracking different cancers, such as breast cancer or lung cancer rates. And I'm trying to see where the next outbreaks are going to be. Or if there are any clusters in certain areas, to find out if there are some environmental causes for certain cancers. And I also work a lot with developing what we call spatial statistics, or these mathematical models, that can actually find big global trends or these outliers."

UC: Are you happy to see movies like Hidden Figures get made?
MJ: "Oh yeah! I was totally shocked when I heard that it was number one at the box office. I definitely didn't expect that to happen for this type of movie. I'm hoping that means more movies are coming."

UC: Do you think, generally speaking, mathematicians are accurately depicted in movies?
MJ: "I think some of those movies are fun to watch. But I don't think they get it right all the time. I guess one reason why Hidden Figures was so great was because Rudy Horne [a Morehouse College professor] was a math consultant, and we know him so well. He worked with them throughout the whole movie to make sure that it was right. So they made this into more than just a Hollywood movie."

UC: This film explored a theme of "human computers"
versus technology. As the new IBM was being developed, mathematicians were deemed less necessary. Is there still tension in your field between trusting the computer versus trusting the person?
MJ: "My degrees are in math, but now I do stats more. And with what I do now, computers are an absolute must.
There's no way I could do what I do by hand. I do a lot of graphical displays of data. You can't do that by hand. The data sets that I work with now are huge. There was a time that you could do stats on a calculator, or even just on paper. Now, you can't."

UC: In society, we're now utilizing statistics in so many different areas. Stats have become quite prevalent in daily journalism. Are you excited that we're becoming more statistics savvy, or are you worried that stats could get misused?
MJ: "I'm definitely happy that people are trying to learn stats, but I've seen so many poor uses of stats in the news. You know, that kind of hurts the field a little more than helps it. We've always had a joke that you should have a license to do statistics. I mean, I actually had someone tell me, 'Your job is going to be obsolete. There's so many [software] packages that do what you do.' And I'm saying, 'Because of the fact that you think that, I'll always have a job.""

This article originally appeared at www.american.edu/ ucm/news/20170223-Jackson-math.cfm.

## NAM Board Opposes Trump’s Executive Order

On January 27, 2017, President Donald Trump invoked his powers through the Immigration and Nationality Act (INA) and signed Executive Order 13769 which says in part: "I hereby proclaim that the immigrant and nonimmigrant entry into the United States of aliens from [Iraq, Syria, Sudan, Iran, Somalia, Libya, and Yemen] would be detrimental to the interests of the United States [...]." We, the Board of Directors of the National Association of Mathematicians, Inc., oppose this executive order. NAM is an organization whose mission is to promote the excellence of those mathematicians from the African diaspora. Of these seven countries, most have populations in which Islam is the dominant religion, while three (Libya, Somalia, and Sudan) are in Africa. We as the Board of Directors find this executive order to be rooted in fear, couched in words which tyrannize as an antithesis to all we hold dear.

As Black History Month begins, we are reminded by the Africans and Muslims who have made an impact on those of us in the mathematical sciences. Indeed, the Libyan mathematician Eratosthenes ( $276 \mathrm{BC}-194 \mathrm{BC}$ ) quite literally changed the way we think about the world. Besides being the chief librarian at the famed Library of Alexandria and the father of geometry (he was one of the first to estimate the circumference of the Earth), he invented the eponymous sieve method which students use even to this day to determine which numbers are prime.

Perhaps more relevant here is the African-American
mathematician Abdulalim Shabazz (1927 -
2014), who showed us how the love which stems
 from being a Muslim encourages us all. Born Lonnie Cross, Dr. Shabazz received degrees from institutions as prestigious as MIT and Cornell, helped establish the reputations of several HBCUs as department chair, and mentored countless students across the country. Dr. Shabazz received a mentoring award from AAAS in 1992 as well as a Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM) award from President Bill Clinton in 2000. It is no coincidence that most of these awards and honors came after Dr. Shabazz converted to Islam in 1961. It seems very unlikely that our current president would have the foresight to fete a Muslim in today's political climate.

We, the Board of Directors of NAM, will not sit by as ignorance of cultures and countries not mainstream to provincial American tastes continue to cloak the achievements of mathematicians from the African diaspora. As Maya Angelou said, "I refuse to allow any man-made differences to separate me from any other human beings." We will continue to celebrate the lives of these individuals in the mathematical sciences. We hope President Trump and his administration will reconsider this executive action and do the same.

See: http://nam-math.org/trump_letter.html

## Herbert Medina Organized Open Letter to Trump

Herbert Medina, Professor of Mathematics and Associate Dean for Faculty/Student Development and Student Success, organized an open letter to President Donald Trump for the continuation of the Deferred Action for Childhood Arrivals (DACA) program. Trump sought to end this program where more than 700,000 young people were brought to the United States illegally as children. The letter has obtained more than 1350 signatures. Here is the letter in its entirety.

Mr. Donald J. Trump
President-elect of the United States of America
Trump Tower
725 Fifth Avenue
New York, NY 10022
Dear Mr. President-elect Trump:
We the undersigned higher education professionalsfaculty, staff and administrators-respectfully write to you regarding the Deferred Action for Childhood Arrivals (DACA) program.

As you know, DACA was an executive order issued by President Obama in summer 2012. The DACA program has allowed about 750,000 young men and women who

- came to the U.S. before their 16th birthday;
- have lived continuously in the U.S. since 15 July 2007 and were under the age of 31 on 15 June 2012;
- have completed high school or a GED;
- have been honorably discharged from the armed forces, or are enrolled in school; and
- have not been convicted of a felony or serious misdemeanors to be protected from deportation and obtain a work permit.
We have witnessed the many positive results of DACA. We have seen college graduates become employed as engineers, accountants, writers, artists, lawyers, bankers. We have witnessed the many positive results of DACA.

We have seen college graduates become employed as engineers, accountants, writers, artists, lawyers, bankers. We also have seen "DACAmented" individuals who now, because they are allowed to be employed, are able to attend
and complete medical school, graduate school, and other post-baccalaureate training programs. These individuals are presently and will be in the future of great benefit to our nation.

A suspension of DACA will have dire consequences for these talented, lawabiding, hard working, educated (we hope Herbert Medina one day) future U.S. citizens. Since all of these individuals have known no other country but ours (tens of thousands having arrived at such a young age that they have no memory of their home country and often do not even speak its language), they will in all likelihood not leave the U.S. Rescinding DACA, therefore, would have the effect of adding these fine young men and women to the rolls of the unemployed, forcing them from a productive existence with prospects of upward mobility back to life in the shadows. We also worry about the negative effects to our economy if we remove the contributions of some three-quarters of a million collegeeducated, often highly-skilled workers.

As higher-education professionals, it is our livelihood to educate and cultivate the talent of students so that they can make significant contributions to our economy and society. It pains us to think of denying the possibility of employment and exposing to deportation some of the students who sit in our classrooms, who play on our sports teams, who lead our student governments, and who are siblings, classmates, friends, co-workers, boyfriends/ girlfriends to millions of U.S. citizens.

We ask you to please allow DACA to continue. It is the right thing to do for the hundreds of thousands who have qualified for the program, and it is the right thing for our country.
Sincerely,
[Given some of the other DACA support letters that have been made public the last couple of days, we felt it was timely to close the signature period today 30 Nov 2016. A heartfelt Thank you very much to all signatories for your support. The letter will be delivered in the coming days.]
[Click here to view list of 1350+ signatories]

## NAM's Faculty Conference

The National Association of Mathematicians' Faculty Conference on Research and Teaching Excellence (FCRTE) is a two-day meeting, typically Friday and Saturday in the Spring, which rotates around the country based on NAM's regional structure. The conference consists of five components:

- A Short Course in Computational Science
- The Albert Turner Bharucha-Reid Lecture
- Recognition Banquet
- Contributed Talks
- Regional Panel Discussion

This year, the 2017 FCRTE will be held March 24-25 at Morehouse College. Shelby Nicole Wilson (Morehouse College) will give the Bharucha-Reid Lecture, and the Regional Panel Discussion will focus on "Best Practices for Maintaining a Research Program at an HBCU".

More information can be found at the website:

## Lehigh's First Chief Diversity Officer Donald Outing

Donald Outing, current chief diversity officer and director the Office of Diversity, Inclusion and Equal Opportunity for the US Military Academy (USMA) at West Point, has been named Lehigh University's first Vice President for Equity and Community. Outing is an associate professor of mathematics at USMA.

Outing earned a BS in mathematics from the University of the State of New York, and an MS degree and PhD from Rensselear Polytechnic Institute. In 2015, he was certified as a diversity and equal opportunity practitioner in the US Department of Defense, after
completing the Defense Equal Opportunity Management Institute (DEOMI), and received the Commandant's Award for highest overall achievement. Outing is the founding director for the Center for Leadership and Diversity in STEM for the US Military Academy at West Point.

For more information, see:
 www 1.lehigh.edu/news/lehigh-announces-west-points-donald-outing-universitys-first-chief-diversity-officer

# MRC: Math, Research, and Community <br> \author{ Tom Barr 

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Consider the letters M, R, and C. For the American Mathematical Society (AMS) staff, almost fifty conference organizers and over a thousand alumni, they stand for Mathematics Research Communities (MRC), a professional-development program supported by the National Science Foundation (NSF) at AMS that works toward fulfilling the mission expressed in these words. In 2017, for the tenth consecutive year, some 120 early-career mathematicians will begin an adventure of deepening their mathematical specialty knowledge, developing their collaborative research skills, and forming communities built on collaboration and mentorship.


Brice Nguelifack program. Now an passistant professor in the Department of Mathematics at the United States Naval Academy in Annapolis, Maryland, he is finding the experience to be beneficial in his new career as a faculty member.
"The MRC summer conference at the Snowbird Resort in Utah was probably my favorite summer conference. Being in my early career as a faculty member, MRC gave me the opportunity to build a solid and lasting network with great people across different disciplines with the same research interest. The MRC conference was just that one bridge I needed to cross to use my rich background in mathematics and statistics and to take my research to a new level. Even though the MRC was a bit of a learning experience for me, it was definitely an enjoyable experience, especially the wonderful aspect of working with a group of participants from different backgrounds who shared ideas. As one of the participant once told me, 'Get a group of really good people in a really good place and magic happens!' For me, magic happened at MRC last summer!"

Here's how it works. Each year, the MRC Advisory

Board selects three or four proposals from conference organizer teams to be the topics. For instance, the full complement of topics alongside Nguelifack's 2016 Algebraic Statistics includes Lie Groups, Character Varieties, and Mathematics in Physiology and Medicine. AMS administers the program and application portals to the respective conferences, each limited either to 20 or 40 participants, are open throughout the winter. In March, applicants are notified of their acceptance, and those enrolling receive full travel and subsistence support for a week-long, intensive research conference-traditionally in June at Snowbird, Utah, near Salt Lake City-with a group of leading researchers in the topical area. The magic to which Nguelifack refers begins to happen there: in small groups and guided by the organizers, participants work on problems and make progress toward real results. Evenings provide time for professional development activities and socializing. Throughout the following months, the magic continues.

Participants have support to attend the Joint Mathematics Meetings in January and be part of in Special Sessions devoted to their respective topics. Small groups of participants from the 2016 MRC cohort are eligible to apply for partial program support to travel for additional collaborations. These grants are approved and awarded on a first-come, first-served basis.

Since 2008 the MRC program has received generous support from NSF, and in the summer of 2016, AMS was awarded funding of $\$ 1.2$ million to continue the MRC program through 2019. Information about the 2017 MRCs is at www.ams.org/programs/research-communities $/ \mathrm{mrc}$ 17, and applications are accepted until March 1, 2017. Topics for this year are Homotopy Type Theory (June 4 10), Beyond Planarity: Crossing Numbers in Graphs (June 11-17), and Dynamical Systems-Smooth, Symbolic, and Measurable (June 18-24). "Watch www.ams.org/mrc for the 2018 MRC topics.

From Brice's experience, perhaps those letters also stand for Magical Resource for Collaboration!

Tom Barr is the Special Projects Officer of the American Mathematical Society and can be reached at thb@ams.org.

## Sloan Fellows Jelani Nelson and Chelsea Walton



Jelani Nelson

Chelsea Walton and Jelani Nelson have been named 2017 Alfred P. Sloan Research Fellows.

Nelson is an Assistant Professor of Computer Science at Harvard University. His research focuses on developing efficient algorithms for massive datasets.

Chelsea Walton is an Assistant Professor of Mathematics at Temple University. Her research area lies in noncommutative algebra, noncommutative algebraic geometry, quantum algebra, and representation theory

The Sloan Research Fellows (https://en.wikipedia.org/ wiki/Sloan_Fellowship) were awarded $\$ 60,000$ by the Alfred P. Sloan Foundation to "provide support and recognition to early-career scientists and scholars".

## NAM Calendar

The Mathematical Sciences Research Institute (MSRI) will host a workshop on "Critical Issues in Mathematics Education 2017" on March 15-17, 2017 at MSRI in Berkeley, California. See: www.msri.org/workshops/836
NAM's Teaching and Faculty Research
Conference will be held on March 24-25, 2017 at Morehouse College, Atlanta, Georgia (age 10). See: http://nam-math.org/fcrte.html


The Underrepresented Students in Topology and Algebra Research Symposium (USTARS) will be held on March 31-April 2, 2017 at Amherst College in Amherst, Massachusetts. See: www.ustars.org
The Association for Women in Mathematics (AWM) Research Symposium will be held at the Univer sity of California Los Angeles (UCLA) April 8 -9, 2017. Mariel Vazquez (University of California, Davis) is a keynote speaker. See: https://sites.google.com/site/awmmath/home/ RS17
The National Mathematics Festival is a free and public celebration that will be held on April 22 at various Smithsonian Museums in Washington, DC. See: www.mathfest.org
The Howard University Modeling Biology \& Medicine Workshop on Modeling of Neuropathies and Neuropsychiatric Illnesses will take place on April 29, 2017 at Howard University in Washington, DC. See: humathbio.weebly.com/future-workshops.html
The Annual Meeting of the Command, Control and Interoperability Center for Advanced Data Analysis (CCICADA) on "Data Science for Homeland Security" will be held May 18-19, 2017 at Howard University in Washington, DC. See: http://ccicada.org/
Math SPIRAL 2015, an under graduate research program, will be held June 1-August 11 at Morgan State University in Baltimore, Maryland. Participation is limited to students at the affiliates. See: www.spiralreu.org

Fellowships were initially awarded in physics, chemistry, and mathematics, but awards were later added in neuroscience, economics, computer science, and computational and evolutionary molecular biology. These two-year fellowships are awarded to 126 researchers yearly.

Since the beginning of the program in 1955, 43 fellows have
 won a Nobel Prize, and 16 have won the Fields Medal in mathematics. There have only been four AfricanAmericans who were awarded Sloan Fellowships in Mathematics: Kathleen Adebola Okikiolu (1997), Arlie Petters (1998), Trachette Jackson (2003), and now Chelsea Walton (2017).

CAARMS 21 (Conference for African American Researchers in Mathematical Sciences) will be held June 21-24, 2017 at the University of Michigan in Ann Arbor, Michigan. See: www.caarms.net
MAA MathFest 2017, will be held July 26-29 in Chicago, Illinois. The NAM David Blackwell Lecture will be given by Rudy Horne (Morehouse College) and is entitled "Hidden Figures: My Role as a Math Consultant for this Film". The MAA Invited Address will be given by Ronald Mickens (Clark Atlanta University), the


Taraji Henson and Rudy Horne

AWM-MAA Etta Z. Falconer Lecture will be given by Talithia Williams (Harvey Mudd College). There will be a special session entitled "The Life and Legacy of J Emest Wilkins (1923-2011)"organized by Ronald Mickens (Clark Atlanta University) and Talitha Washington (Howard University). See: www.maa.org/mathfest


J Ernest Wilkins

The Society for the Advancement of Hispanics/Chicanos and Native Americans in Science will host the SACNAS National Conference on October 19-21, 2017 at the Salt Palace Convention Center in Salt Lake City, Utah. See: sacnas.org/events/national-conf
The Black Doctoral Network Conference will be held on October 26-28, 2017 in Atlanta, Geor gia. See: www.blackphdnetwork.com
Women in Numbers (WIN) will be held August 14-18, 2017 at Banff International Research Station. See: http://www.math.washington.edu/~bviray/WIN4.html
The Joint Mathematics Meetings will be held January 1013, 2018 in San Diego California.

## Job Openings



Additional job openings may be found on the NAM Newsletter webpage at:
http://nam-newsletter.org

## Grinnell College

The Department of Mathematics and Statistics invites applications for a two year appointment beginning Fall 2017. Assistant Professor (Ph.D.) preferred; Instructor (ABD) or Associate Professor possible.

Grinnell College is a highly selective undergraduate liberal arts college with a strong tradition of social responsibility. In letters of application, candidates should discuss their potential to contribute to a college community that maintains a diversity of people and perspectives as one of its core values. To be assured of full consideration, all application materials should be received by February 17. Please visit our application website at https:// jobs.grinnell.edu to find more details about the job and sub-

Advertisements should be submitted electronically to the editor at nam_newsletter@yahoo.com. Any format is accepted. Details on deadlines and the cost to advertise may be found on the website.

## The City College of New York

The Department of Mathematics at The City College of New York (CCNY) is seeking one or more Lecturers. The official annual teaching load is 27 contact hours per year (averaging 13.5 hours per week) across the mathematics department curriculum. Lecturers are expected to assist in curricular development and assessments for the department's courses, including the use of technology in supporting instruction, and to participate in appropriate departmental committees, student advisement and adjunct staff supervision. Preference will be given to candidates with the ability to teach undergraduate and graduate courses in statistics and probability courses. Reappointment in this position for five years confers a CUNY Certificate of Continuous Employment.

Please note: this is a full time teaching and curricular development position, not a research and teaching position, nor a postdoctoral position.

QUALIFICATIONS: Master's degree in Mathematics with at least 2 years of experience teaching mathematics at the college level as primary course instructor, with evidence of and commitment to excellence in teaching. Preferred Qualifications: PhD in Mathematics

COMPENSATION: CUNY offers faculty a competitive compensation and benefits package covering health insurance, pension and retirement benefits, paid parental leave, and savings programs. We also provide mentoring and support for research, scholarship, and publication as

Two Year Appointment
mit applications online. Candidates will need to upload a letter of application, curriculum vitae, transcripts (copies are acceptable), and provide email addresses for three references. Questions about this search should be directed to the search chair, Professor Christopher French, at MathSearch@grinnell.edu or 641-269-3172.

Grinnell College is committed to providing a safe and inclusive educational and work environment for all College community members, and does not discriminate on the basis of race, color, ethnicity, national origin, age, sex, gender, sexual orientation, gender identity or expression, marital status, veteran status, religion, disability, creed, or any other protected class.
part of our commitment to ongoing faculty professional development.

HOW TO APPLY: Access the employment page at www.cuny.edu and search for this vacancy using the Job ID 16141 or Title. Additionally, materials and reference letters are to be submitted online, to Lecturer Search, CCNY Math Department, via www.mathjobs.org

Among the required materials are a CV, a statement detailing teaching and related interests, a diversity statement describing the candidate's thoughts on diversity in the classroom and workplace, and three letters of reference (via Mathjobs.org), including at least two addressing teaching qualifications.
Any difficulties with the application process can be addressed to: Mr. Jason Redman, via email at jredman@ccny.cuny.edu, or by telephoning (212) 6505173.

CLOSING DATE: Open until filled with review of applications to begin on February 3rd, 2017. A start date of August 24, 2017 is anticipated.

EQUAL EMPLOYMENT OPPORTUNITY: CUNY encourages people with disabilities, minorities, veterans and women to apply. At CUNY, Italian Americans are also included among our protected groups. Applicants and employees will not be discriminated against on the basis of any legally protected category, including sexual orientation or gender identity. EEO/AA/Vet/Disability Employer.

## Kansas State University

Visiting Assistant Professor Positions

Subject to budgetary approval, the Math Department at Kansas State University anticipates hiring one or more Visiting Assistant Professors commencing August 13, 2017. This will be a term appointment with the possibility of re-appointment depending on performance, funding, and need of services. A Ph.D. in mathematics is required. The Department seeks candidates whose research interests align with those in the department. One position in particular will work with the Department's Mirror Symmetry and Tropical Geometry Research Center. The successful candidate should have strong research credentials as well as strong accomplishments or promise in teaching, and should value working with colleagues and students from
diverse backgrounds.
Applicants must submit the following: A letter of application, curriculum vita, outline of teaching philosophy, a statement of research objectives, and four letters of reference, at least one of which addresses the applicant's teaching ability or potential. All application materials must be submitted electronically via http://www.mathjobs.org.

Screening of applications begins January 19, 2017, and continues until position is closed. Kansas State University is an equal opportunity employer and actively seeks diversity among its employees and encourages applications from women and minorities. A background check is required.

## www.MathematicallyGiftedandBlack.com

Throughout the month of February, the website www.MathematicallyGiftedAndBlack.com featured a new black scientist every day. Erica Graham (Bryn Mawr College), Raegan Higgins (Texas Tech University), Candice

Price (University of San Diego) and Shelby Wilson (Morehouse College) said that this website is inspired by the website www.LatHisMS.org which highlighted Latinos and Hispanics in the mathematical sciences. Check it out!

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Web page: http://www.nam-math.org

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