

National Association of Mathematicians, Inc.



**Annual NAM Banquet  
and  
Cox-Talbot Address**

**Friday, January 6, 2023  
6:00 PM - 8:40 PM  
Constitution B, 2nd Floor,  
Sheraton Boston Hotel**



# BANQUET PROGRAM



Welcome and Occasion

Dr. Omayra Ortega, NAM President  
Dr. Torina Lewis, NAM Vice-President

Invitation

Dr. Aris Winger, NAM Executive Director

----- DINNER -----

In Memoriam: Dr. Abdul-Aziz Yakubu (1960 – 2022)

Dr. Dennis Davenport, Howard University

NSF Mathematics Institutes Award for Best Presentation  
(Haynes-Granville-Brown Session)

Dr. Aris Winger, NAM Executive Director

Lifetime Achievement Award: Dr. Scott Williams

Remarks by Dr. Edray Goins, Pomona College

Introduction of Speaker

Dr. Omayra Ortega, NAM President

----- Cox-Talbot Address -----

*Histories of African American Connecting Mathematics and Society*

Dr. Nathan Alexander, Morehouse College

Closing Remarks

Dr. Omayra Ortega, NAM President

# IN MEMORIAM

NAM cannot exist or grow without a history of support and dedication from our members. When one of our member passes we like to honor their legacy and life whenever possible. Below we celebrate a snippet of lives of some of our members that passed recently.

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## JANIS M. OLDHAM

March 31, 1956 - July 14, 2021



Dr. Janis M. Oldham was born March 31, 1956 in Indianapolis, Indiana. She passed July 14, 2021. Dr. Oldham graduated from North Central High School in 1974 and earned degrees in mathematics from the University of Chicago (BS), Purdue University (MS), and University of California at Berkeley (PhD). Her area of specialization was Differential Geometry. She completed a thesis on Connections in Super Principal Fiber Bundles. Dr. Oldham spent more than 25 years of her professional life as a highly respected faculty member in the Department of Mathematics at North Carolina A&T State University teaching both undergraduate and graduate courses.

Although her participation in professional organizations was comprehensive, she was particularly interested in events and activities that promoted mathematical excellence for underrepresented minorities. For example, in the fall of 1994, she was one of two Coordinators who hosted the very large and successful NAM Undergraduate MATHFest IV on the campus of NC A&T State University. From 1997-2000 she served as NAM's Newsletter Editor. In 2002, Dr. Oldham served as a member of a committee that organized the NSF funded conference on Mathematical Studies in Nonlinear Wave Propagation in which 10 principal lectures on fiber optics were given by professionals in mathematics, engineering, and physics. Dr. Oldham hosted the EDGE Summer Session for beginning graduate students at NC A&T in 2005, following an earlier summer as an EDGE instructor. For several years thereafter she was a leader of the NC EDGE Mentoring Cluster (with Ellen Kirkman and Kim Weems) in which she was determined to keep each student in the Cluster on target to earn the PhD degree.

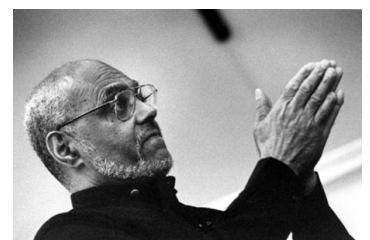
For decades, Dr. Oldham was a Life Member of NAM. In 1994, she was a recipient of a NAM Distinguished Service Award. At NAM's 50th Anniversary Banquet in 2019, Dr. Oldham was the recipient of NAM's Stephens-Shabazz Teaching Award. She received the 2005 Etta Z. Falconer Award for Mentoring and Commitment to Diversity at the Infinite Possibilities Conference, as well as the Bridge Builders Award from the Greensboro Club of the National Association of Negro Business and Professional Women's Clubs, Inc. Her Legacy was well-defined by her activities.

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## ROBERT PARRIS MOSES

January 23, 1935 – July 25, 2021

Bob Moses was born and raised in Harlem, NY, where he attended public schools. He received a B.A. in Philosophy from Hamilton College in 1956, and received an M.A. in Philosophy from Harvard University in 1957. Moses directed the Student Non-Violent Coordinating Committee's Mississippi Voter Registration Project from 1961-1964; was co-Director of the Council of Federated Organizations 1962-1964, and was a lead organizer for the 1964 Mississippi "Freedom" Summer Project, parachuting Mississippi Freedom Democratic Party to 1964 National Democratic



Convention in Atlantic City.

Moses taught mathematics at the Samé School in Tanzania, East Africa from 1969 – 1976, when he returned to the United States and re-entered the doctoral program in Philosophy at Harvard. A MacArthur Foundation Fellow 1982-1987, he used his fellowship to begin the Algebra Project, which uses mathematics as organizing tool for quality education for all children in America. With support from the National Science Foundation, the Algebra Project works with middle and high school students who previously in the lowest quartile on standardized exams, proposing that they attain a high school math benchmark: graduate on time in four years, ready to do college math for college credit.

Moses was the Distinguished Visitor for the Center for African American Studies at Princeton University 2011-2012, and has been an adjunct lecturer at NYU School of Law from 2012 – 2016. He has served on the Education Advisory Committee of the Mathematical Sciences Research Institute from 2004 to the present. In May 2016, the University of North Carolina press published Dr. Laura Visser-Maessen's book, Robert Parris Moses – a life in civil rights and leadership at the grassroots. He has received numerous honorary doctorate degrees, has delivered keynote speeches and workshops nationwide, and has served as principal investigator on eight National Science Foundation mathematics education research awards to date.

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### **GENEVIEVE M. KNIGHT**

June 18, 1935, – August 19, 2021



Dr. Genevieve Madeline Knight, a nationally known mathematics educator, was the youngest of three sisters, all of whom became mathematics and science educators. As a freshman at Fort Valley State College (now University) in 1957, Knight was studying home economics when the Sputnik launch created a big push for more American students to become educated in mathematics and the sciences. Knight transferred to mathematics and graduated in 1961.

The Knight sisters were in Alpha Kappa Mu Honor Society, Beta Kappa Chi scientific honorary society and Delta Sigma Theta sorority. Knight completed a master's degree in 1963 at Atlanta University, under the supervision of Dr. Abdulalim A. Shabazz, and took a teaching position at the Hampton Institute (now University). She became an NSF fellow, a position that allowed her to travel and meet with other college mathematics teachers. She returned to graduate school and completed a doctorate in mathematics education in 1970 at the

University of Maryland, College Park under the supervision of Prof. Henry H. Walbesser.

Returning with her doctorate, Knight remained at Hampton University for 15 more years, becoming chair of mathematics and computer science. In 1985 she moved to Coppin State University as a full professor. She was contacted for the position by Dr. Freeman Hrabowski, III, (her former student at Hampton) who was then Prof. of Mathematics and Dean of Science at Coppin St University and later became President of the University of Maryland, Baltimore County. "Genevieve is a great American and human story who took great pride in teaching students and teachers and did it with love and care" said Dr. Hrabowski, Throughout her lengthy career, Dr. Knight was a strong advocate for equity for women and minorities, especially in the mathematics and mathematics education communities: AMS, MAA, AWM, NAM, NCTM and Benjamin Banneker ASSN (of which she was one of the founders). She was outspoken and could speak truth to power. Dr. Knight earned distinguished teaching awards from both Hampton and Coppin State Universities. As a mentor, she was presented the Outstanding Faculty Award for Mathematics and Mentoring of Minority Youth from the White House Initiative on HBCUs. In 1996, she was named the Wilson H. Elkins distinguished professor for the University of Maryland System, and three years later received a Lifetime Achievement Award from the National Council of Teachers of Mathematics (NCTM).

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## SHIRLEY MCBAY

May 4, 1935 – November 27, 2021

Shirley Ann Mathis (McBay) was born in 1935 in Bainbridge, GA, the daughter of Annie Bell Washington (Stevens Williams Pringley). She attended Hutto Elementary and excelled in Mathematics early on (including defeating older students in Math competitions). She graduated from Hutto High School at the age of 15 years. From there, she attended Paine College in Augusta, GA, and graduated with a degree in Chemistry at the age of 19. She immediately joined Atlanta University where she earned Masters degrees in both Chemistry and Mathematics. After marrying Henry McBay (Professor of Chemistry) and starting a family, she began pursuing a Ph.D. at the University of Chicago but transferred to the University of Georgia (UGa) to be closer to home. At UGa, she was the first woman to earn a Ph.D. in Mathematics and the first African-American to earn a Ph.D. of any kind at the school. She was Professor of Mathematics at Spelman College for many years and also served in the Administration, ultimately rising to be Chair of the Division of Natural Sciences. In 1975, she began working for the National Science Foundation in Washington, DC reviewing grant proposals. In 1980, she became Dean of Students at Massachusetts Institute of Technology (M.I.T.) in Cambridge, MA where she spearheaded an institution-wide self-study of the obstacles that were hindering Minority students' success. The recommendations from that report led to the creation of the Quality Education for Minorities (QEM) project at M.I.T. In 1990, she left M.I.T. to establish QEM Network in Washington, DC for which she served as President. QEM Network is a non-profit dedicated to improving education for women and underrepresented minority students, faculty, and institutions nationwide.



She retired in 2016 and moved to Las Vegas, NV as the housemate of her lifelong best friend, Audrey Forbes (Manley). In 2018, due to deteriorating health, she moved to Los Angeles, CA and lived with her first son, Michael McBay. She died peacefully on November 27, 2021, at the age of 86 years. She is survived by her eldest son Michael McBay of Los Angeles, CA and her youngest son Ronald McBay of Atlanta, GA and 'the daughter she never had' Laura-Lee Davidson of Washington, DC.

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## NATHANIEL DEAN

January 9, 1956 – February 18, 2021



Nathaniel Dean, an African American mathematician and educator who made significant contributions to abstract and algorithmic graph theory, as well as data visualization and parallel computing, was born in Mississippi on January 9, 1956 and passed in Texas on February 18, 2021. He received a BS in mathematics and physics from Mississippi State University in 1978, a MS in applied mathematics from Northeastern University in 1983 and a PhD in mathematics from Vanderbilt U (1987). He had a stellar career in both industry and higher education. After receiving his PhD degree in graph theory in 1987, Dr. Dean worked for the next 11 years in the Software Production Research Department of Bell Labs where he produced over thirty scientific publications. In 1997, he received the President's Silver Award from Bell Labs. In 1998, Dr. Dean became an Associate Professor of Computational and Applied Mathematics at Rice University. While at Rice, he supervised four PhD students with thesis topics ranging from algorithmic graph theory to biological computing. In 2003 he moved from Rice University to Texas Southern University (TSU). He became a full professor and served as chair of the Mathematics Department at TSU. He was funded by a grant from the National Institutes of Health as Director of the Computational Research Laboratory at TSU. Dean's departure from



TSU to Texas State Univ (TX-St) occurred in 2006. At Texas State he supervised his fifth PhD student and served as chair of the mathematics department. Dr. Dean received other recognition while at Texas State before he retired. Dr. Dean's research focused on constructing mathematical models of complex systems and developing computer tools to visualize, design and analyze such systems. His research areas included discrete mathematics, optimization, data mining, and network visualization.

Before retirement, Dr. Dean produced over 60 publications in these fields, and some of his work in data mining was highlighted in the PBS television series *Life by the Numbers*. Some of the data mining in this series also reflected software that he had developed to teach discrete mathematics at the K-12 levels. In addition to his scientific research, Dean focused on mathematics education and outreach throughout his career. In 2001, Dr. Dean was elected Vice President of the National Association of Mathematicians (NAM). Subsequently he served as President (2005-2015) where he led NAM with excellence and was a Life Member. Dr. Dean served as an Associate Editor of the *Notices of the American Mathematical Society* (AMS) and served on the Board of Governors for the Mathematical Association of America (MAA). Additionally, Dean served as Managing Editor of the *Journal of Graph Theory*, co-organizer of several mathematics conferences, and served as Editor of four volumes for the AMS: *Computational Support for Discrete Mathematics*, *African Americans in Mathematics*, *African Americans in Mathematics II*, and *Robust Communication Networks*. He was active with the Society for Industrial and Applied Mathematics (SIAM) and with the annual Conference for African American Researchers in the Mathematical Sciences (CAARMS).

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## **ABDUL-AZIZ YAKUBU**

1960 – August 14, 2022

Abdul-Aziz Yakubu, an Internationally recognized mathematician, scholar, and educator who made significant contributions to the continued development and growth of Howard University PhD Program in Mathematics which was the first (1976) PhD Program in Mathematics established and accredited at a Historically Black College/University (HBCU). He was born in Ghana. He passed in Washington, DC on August 14, 2022 where he was employed as Professor of mathematics at Howard. He joined Howard's faculty in 1990 (1990-95, Assistant Professor; 1995-99, Associate Professor; 1999, Professor). He served as Chair of the Department from 2004-2014. In 1982, he received a BS degree (Honors) in Mathematics and Computer Science from the University of Ghana, Legon; in 1985, he received a MS degree in Mathematics from the University of Toledo; and in 1990, he received a PhD in Mathematics from NC State University (thesis: *Global Stability, Bifurcations, and Chaos in Discrete Competitive Systems*; advisor, John E. Franke).



Dr. Yakubu was a leading researcher and expert in mathematical biology. His specific research interests were in mathematical applications to the biological sciences with global applications that include the prevention and control of the spread of infectious diseases, and the sustainability of exploited fisheries. His numerous research publications (over 85) include papers on analysis and applied dynamical systems. He lectured widely on his research in North America, Africa, Asia, and Europe. Dr. Yakubu has held over ten visiting positions, including at Cornell U, NC State U, the Ohio St. U, and Botswana International U of Science and Technology. He has served several professional mathematics organizations (over 10) at various levels, including, the Chair of the World Outreach Committee of the Society for Mathematical Biology from 2007-2016. Dr. Yakubu has directed 7 PhD dissertations to successful completion (all his students belong to underrepresented minority groups). He was a strong proponent of diversity, equity, and inclusion in the mathematical sciences in all activities and the inclusion of institutional engagement of Historically Black Colleges and Universities (HBCUs) in such initiatives at the regional, national and international levels.

# HAYNES-GRANVILLE-BROWN

Named in Honor of their early Legacies to teach and mentor many young African Americans to do graduate study and earn PhD degrees in mathematics; they are the first three African American women known to have earned PhDs, in mathematics.



Euphemia L. Haynes  
1943



Evelyn B. Granville  
1949



Marjorie L. Browne  
1950

## ----- 2023 Speakers -----

1:30 PM - 1:55 PM



Kevin Steine Harris Jr.

*Mathematics Professor*

Tacoma Community College

<https://www.kshmath.com>

*Decomposition of Modules  
and Tensor Products over  
Subalgebras of Truncated  
Polynomial Rings*

2:00 PM - 2:25 PM



Saber Ahmed

*Visiting Assistant Professor  
of Mathematics and Statistics*

Hamilton College

[https://www.hamilton.edu/  
academics/our-faculty/  
directory/faculty-detail/  
Saber-Ahmed](https://www.hamilton.edu/academics/our-faculty/directory/faculty-detail/Saber-Ahmed)

*Perplectic-Brauer Algebra*

2:30 PM - 2:55 PM



Noel Bourne

*Postdoctoral Fellow*

Carnegie Mellon University

[https://www.linkedin.com/  
in/noel-bourne-a18bbb214](https://www.linkedin.com/in/noel-bourne-a18bbb214)

*Classification of Pointed Hopf  
Algebras in Characteristic 2*



# LIFETIME ACHIEVEMENT

## Scott Williams



Born in Staten Island, New York, Scott Williams is an only grandchild. His grandparents strongly valued Education. Thus, all of his aunts and uncles on both sides had Master's degrees at least. His mother Beryl E. Williams was the first Black to graduate from the University of Maine (1936), later earning the M.S. in mathematics (1940). His father, Roger K. Williams, was one of the first Blacks to earn a Ph.D. in Psychology (Penn State U - 1946). When he was 12, Scott Williams' mother took him to see the M.I.T. campus during a family trip to Boston. After her description of the Institute as a great place of mathematical learning, he said, 'Mom, I will get a Ph.D. here in Mathematics.'

Despite a nearly perfect College Board Exam (now SAT) math score, Williams failed to get a scholarship to MIT. He attended Morgan State College (now University), along with Earl Barnes and Arthur Grainger and became involved in Dr. Clarence Stephen's mathematics learning program, now known as the Morgan-Potsdam Model. By the time Scott Williams received a B.S. in Mathematics from Morgan State College (1964), he had solved 4 advanced problems in The Mathematical Monthly and co-authored two papers on Non-Associative Algebra with his undergraduate advisor, Dr. Bohun Volodymir-Chudyniv. That work and a 96% on the Advanced Mathematics Graduate Record Exam assured him he would be accepted into the Yale University Ph.D. program. However, for unknown reasons he was not accepted into Yale. After working in the Product Testing Division of International Business Machines on the IBM 360, he entered Lehigh University's graduate program and distinguished himself in his first year by producing many new examples in Dr. Albert Wilansky's Ph.D. student topology seminar. He earned an M.S. in Mathematics from Lehigh University (1967) and a Ph.D. in Mathematics from Lehigh University (1969). After a postdoctoral position at Pennsylvania State University (1969-71), Williams joined the State University of New York at Buffalo in a two-year Affirmative Action position. Because of his research, an appointment to a normal position followed, and after a nasty and divisive battle, he was appointed Associate Professor with tenure in 1977. He became Full Professor in 1985.

Dr. Williams has published 50 papers in Topology and Set Theory. His work in his fourth paper, 'The  $G$ -delta -topology on compact spaces,' *Fundamental Mathematicae* 83 (1974), pp. 143-149, established him as one of the rising stars in General Topology. In 1975 he became the first to apply the notion of scales from Logic to solve problems in Topology. His 1978 work on Boolean Algebras began the now popular technique of using trees to study Stone-Cech Remainders. His 1987 work with Jan Pelant of the Czech Academy of Sciences solved two 30-year-old problems in the field of Topological Dynamics.

Dr. Williams has given nearly 150 invited conference lectures, colloquia, and seminar lectures on his mathematics research at 56 institutions in seven countries and is a columnist with the journal *Topology Atlas*. Scott Williams has also a great interest in teaching. He has lectured to high ability high school students many times over the past 20 years. In 1983 he was awarded the State University of New York's Chancellor Award for Excellence in Teaching. His interest in the history of blacks in mathematics led to his world wide web book, '[Mathematicians of the African Diaspora](#),' which has received numerous awards. He has also served as an advisor to programs for the National Research Council and the National Science Foundation. He is co-founder of the Council for African American Researchers in the Mathematical Sciences (CAARMS). In 1969 he was a co-founder of NAM, along with Walter Talbot, Johnny Houston, James Donaldson and 13 others. Williams gave NAM's Claytor-Woodard Lecture in 1990 in Louisville, KY. His topic was, "The Box Product Problem." For ten years, Williams served as NAM's Newsletter Editor. In 2019, when NAM observed its 50<sup>th</sup> Anniversary, Scott Williams, Johnny Houston, and James Donaldson were among the five present who received a NAM's Founder Award.

# COX-TALBOT LECTURE

The *Cox-Talbot Lecture* addresses current issues in mathematics education and public policy. The National Association of Mathematicians inaugurated the lecture series in 1980; it takes place at the end of the annual NAM banquet at the Joint Mathematics Meetings.



ELBERT FRANK COX  
December 5, 1895 - November 28, 1969

Elbert F. Cox was born and raised in Evansville, Indiana. After demonstrating unusual ability in high school mathematics and physics, he was directed toward Indiana University where he earned a baccalaureate degree in 1917 with a major in mathematics. After serving in the US Army in France during World War I, he returned to pursue a career in teaching as a mathematics instructor at a high school in Henderson, Kentucky and later at Shaw University in Raleigh, North Carolina. In December of 1921, he applied for admission to Cornell University, was awarded an Erastus Brooks Fellowship in September 1922, and was awarded the doctor of philosophy degree in mathematics from Cornell University in 1925, becoming the first African American to earn a Ph.D. degree in mathematics in the United States.

In September of 1925, Cox accepted a teaching position at West Virginia State College. He stayed there four years and moved to Howard University in 1929. Cox remained at Howard until his retirement in 1965, and served as Chair of the Mathematics Department from 1955–61. At the time of the inauguration of its Ph.D. program in 1975, the Howard University Mathematics Department established the Elbert F. Cox Scholarship Fund for undergraduate mathematics majors to encourage young black mathematicians to study mathematics at the graduate level.

WALTER RICHARD TALBOT  
December 9, 1909 - December 24, 1977



Walter Richard Talbot was born in Pittsburgh, Pennsylvania, December 9, 1909. He received the A.B., M.A., and Ph.D. degrees in mathematics from that institution in 1931, 1933, and 1934, respectively. In 1934, he accepted an assistant professorship in the Mathematics Department at Lincoln University in Missouri, and remained there moving through the ranks of professor until 1963. At Lincoln, he held several administrative positions including Chair of the Mathematics Department during 1940-63, Dean of Men during 1939–44, Registrar during 1946–48, and Acting Dean of Instruction during 1955–57. In 1963, Talbot moved to Morgan State University (formerly Morgan State College) as Chair and Professor of Mathematics. He retired from Morgan in 1977. Talbot's scientific interests were in mathematical and numerical analysis and computer science. During his career, Talbot was concerned about the teaching of mathematics and computer science. He served the Mathematical Association of America (MAA) in several capacities and participated in the founding of NAM. In 1978 NAM, honored him "in memoriam" at a luncheon, and Morgan State University has named a scholarship in his honor. His contributions to the teaching of our students and his service to the mathematical community will not be forgotten.

# NAM ACTIVITIES AT THE 2023 JOINT MATHEMATICS MEETINGS

For an online version of our sessions and activities please see

[https://www.jointmathematicsmeetings.org/meetings/national/jmm2022/2268\\_programindex](https://www.jointmathematicsmeetings.org/meetings/national/jmm2022/2268_programindex)

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## NAM Claytor-Woodard Lecture

**Thursday**, January 5 from 2:40 PM – 3:30 PM

Hynes Convention Center - Ballroom AB

**Ryan Hynd** (University of Pennsylvania)

*The Blaschke–Lebesgue theorem revisited*

## Joint Committee on Women Panel Metacognition in the Math Classroom

**Thursday**, January 5, 1:00 PM - 2:30 PM

Room 311, Hynes Convention Center

## NAM-SIAM Joint Session on Quantitative Justice

**Thursday**, January 5 from 8:00 AM - 11:00 AM

**Saturday**, January 7 from 8:00 AM - 11:00 AM

Room 310, Hynes Convention Center

## NAM Granville-Browne-Haynes Session of the Presentations by Recent Doctoral Recipients

**Friday**, January 6 from 1:00 PM - 3:00 PM

Room 311, Hynes Convention Center

1:30 PM - 1:55 PM **Kevin Steine Harris Jr.** (Tacoma Community College)

*Decomposition of Modules and Tensor Products over Subalgebras of Truncated  
Polynomial Rings*

2:00 PM - 2:25 PM **Saber Ahmed** (Hamilton College)

*Perplectic-Brauer Algebra*

2:30 PM - 2:55 PM **Noel Bourne** (Carnegie Mellon University)

*Classification of Pointed Hopf Algebras in Characteristic 2*

## NAM Cox-Talbot Address

**Friday**, January 6 from 7:45 PM - 8:35 PM

Constitution B, 2nd Floor, Sheraton Boston Hotel

**Dr. Nathan Alexander** (Morehouse College)

*Histories of African Americans Connecting Mathematics and Society*

## NAM Business Meeting

**Saturday**, January 7 from 11:15 AM - 12:15 PM

Room 311, Hynes Convention Center

National Association of Mathematicians, Inc.



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