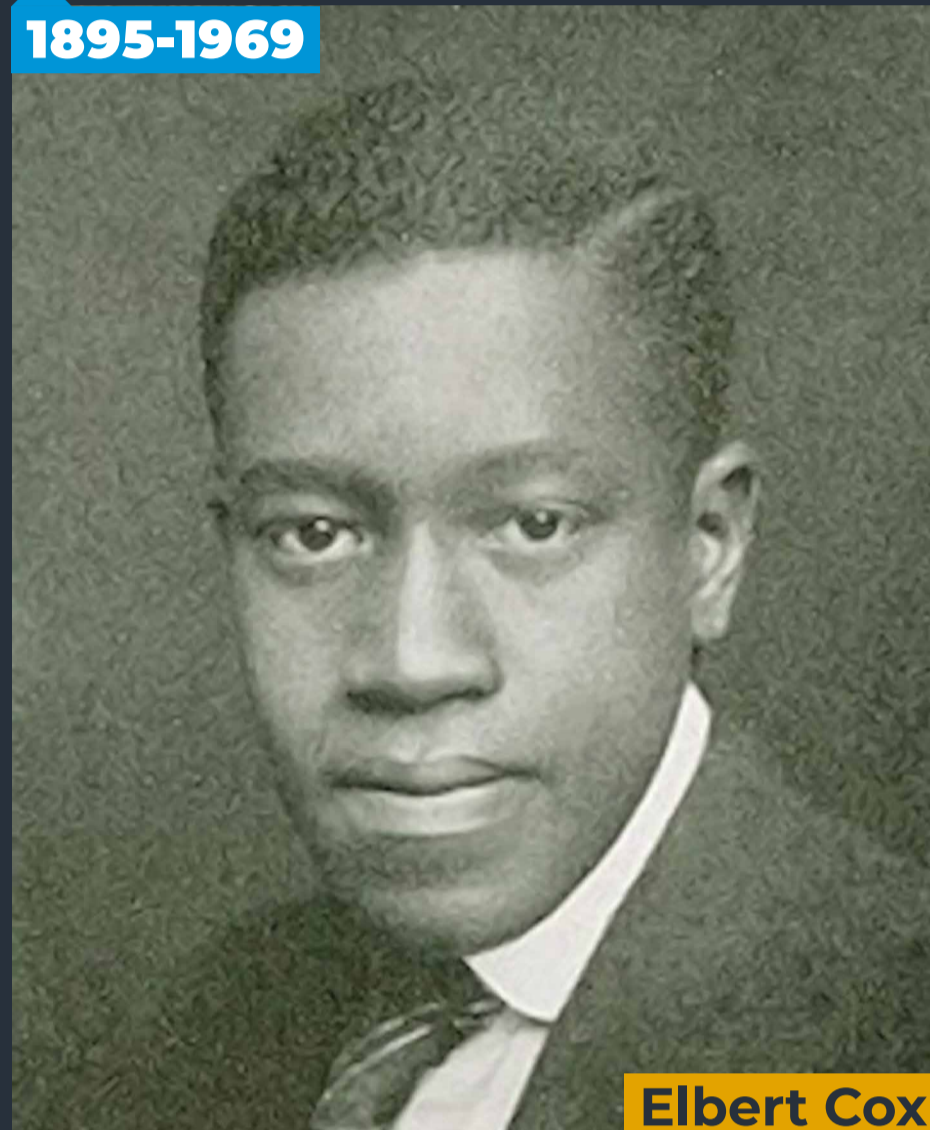


# Black HEROES of Maths

Elbert Cox was the first Black person in history to receive a PhD in mathematics, in 1925. He turned down a scholarship to study violin at the Prague Conservatory of Music to pursue mathematics, taking a break from his studies after his Bachelor's degree to fight in the first world war.

1895-1969



Elbert Cox

Mary Jackson is best remembered as NASA's first Black female engineer. She joined NASA as a computer under Dorothy Vaughan, then moving to work for an engineer within NASA, before completing training to become an engineer. Unable to get a promotion to manager as an engineer, she left engineering to take a job within NASA that would allow her to influence the hiring and promotion of all of NASA's female mathematicians, engineers and scientists.

1921-2005



Mary Jackson

Nira Chamberlain has been president of the Institute of Mathematics and its Applications in the UK since 2020. He has been quoted in the Encyclopedia of Mathematics and Society for his mathematical modelling work for industrial partners. He was awarded an OBE in 2022 for his services to mathematical sciences and has repeatedly been featured in the 100 most influential British people from African and African Caribbean heritage 'Powerlist'.

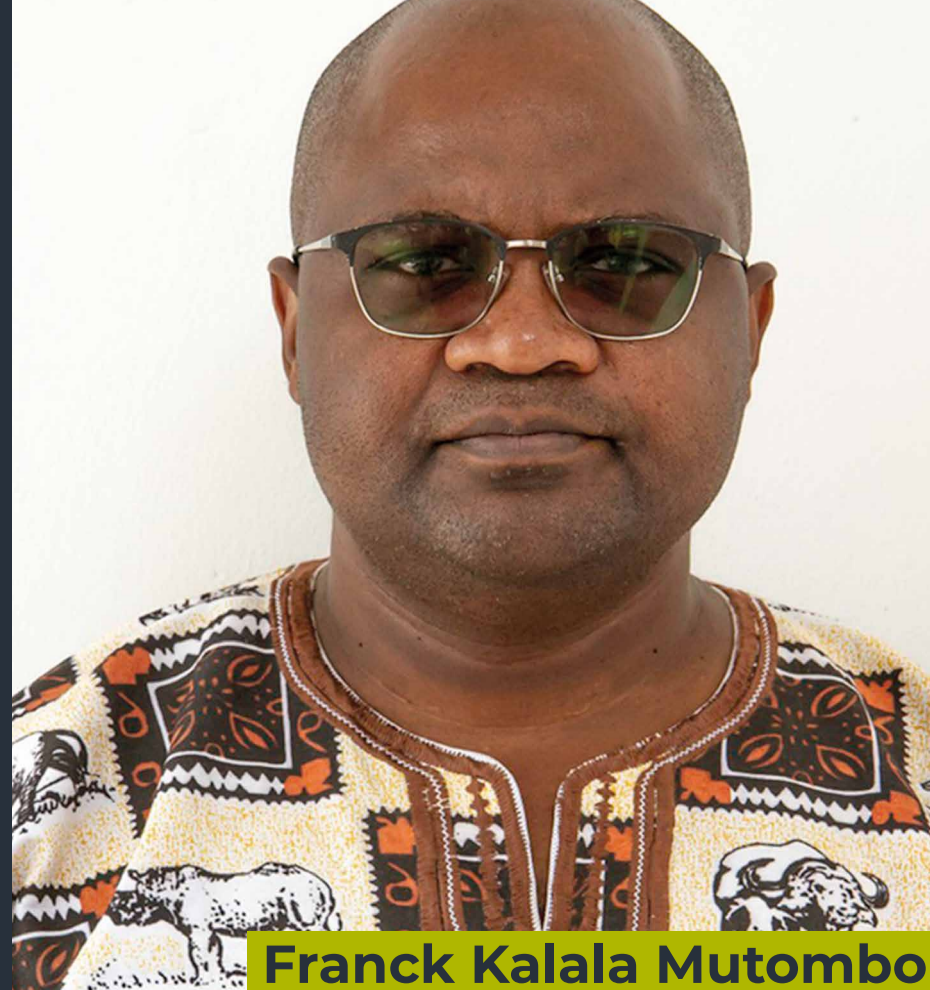
1969-Present



Nira Chamberlain

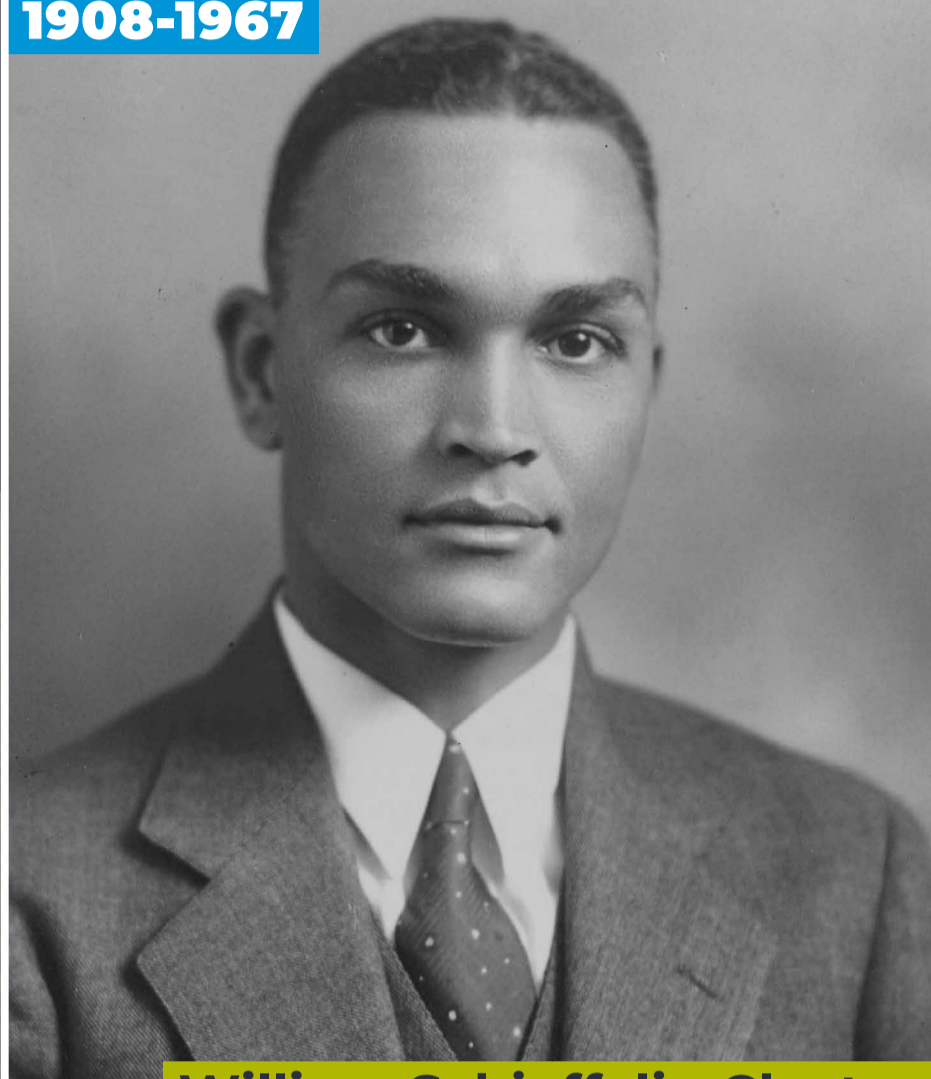
Franck Kalala Mutombo is a Professor of Mathematics at Lubumbashi University and former academic director of AIMS Senegal. AIMS South Africa Alumni he has studied in France, Scotland, and the Democratic Republic of the Congo. His work is in mathematical modelling, geometry, networks, and data science.

1975-Present



Franck Kalala Mutombo

1908-1967



William Schieffelin Claytor

William Schieffelin Claytor was the third African-American to get a PhD in mathematics and the first Black man to publish in a mathematical research journal. He was a student of Elbert Cox, a teacher of Katherine Johnson, and later worked with David Blackwell.

1923-2011



Jesse Ernest Wilkins Jr

Jesse Ernest Wilkins Jr. was a child prodigy; at the age of 13, he was the youngest ever student to enrol at the University of Chicago. He became a nuclear scientist, engineer, and mathematician. His work on how nuclear energy is distributed inside reactors is the basis of how all nuclear reactors are designed. Reactors use the approach named for him (Wigner-Wilkins approach) to create plutonium used in weapons. He worked on the Manhattan Project and was the president of the American Nuclear Society.

1971-Present



Nicole M. Joseph

Nicole M Joseph is an associate professor of mathematics and science education. She founded the Tennessee March for Black Women in STEM. Her research focuses on the experiences of Black women and girls with mathematics, and how white supremacy impacts this.

1987-Present



Tolulope Fadina

Tolulope Fadina is an assistant professor in mathematics. Her research work is in financial mathematics and actuarial science, and she has worked in several institutes across Africa, Europe, and North America. She is involved in the initiative to decolonize the mathematics curriculum.

Dorothy Vaughan was a mathematician and human computer for NASA. She was head of a segregated Computing Unit at NASA's predecessor, National Advisory Committee for Aeronautics (NACA) and NASA's first African American manager. When NASA introduced electronic computers she became an expert in the programming language used, Fortran.

1910-2008



Dorothy Vaughan

Grace Alele-Williams was the first Nigerian woman to be awarded a doctorate, and the first woman to become Vice-Chancellor of any university in Africa, at the University of Benin. She was a professor of mathematical education and received the Order of Niger in 1987.

1932-2022



Grace Alele-Williams

Tannie Liverpool is a professor at the University of Bristol. He studies hydrodynamics and how it might apply to new cancer treatments. He is involved in multiple initiatives to improve diversity in maths and physics.

1971-Present



Tanniemola B Liverpool

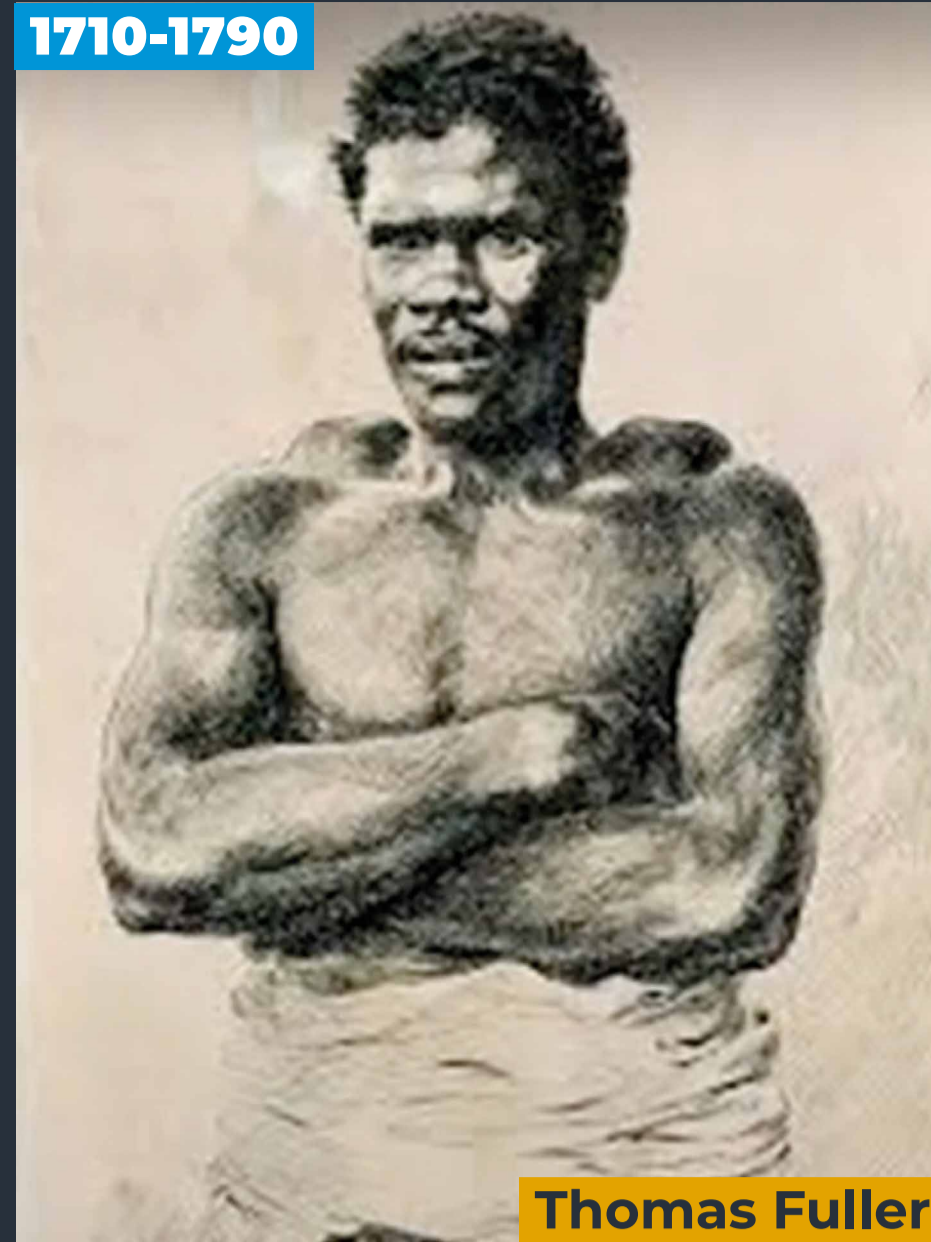
Anne-Marie Imafidon was the youngest girl ever to pass A-level computing. She co-founded the social enterprise Stemettes in 2013 and hosts the Women Tech Charge podcast. She has previously been co-presenter of the gameshow Countdown and in 2022 released her own book about women in tech called "She's in CTRL".

1990-Present



Anne-Marie Imafidon

1710-1790

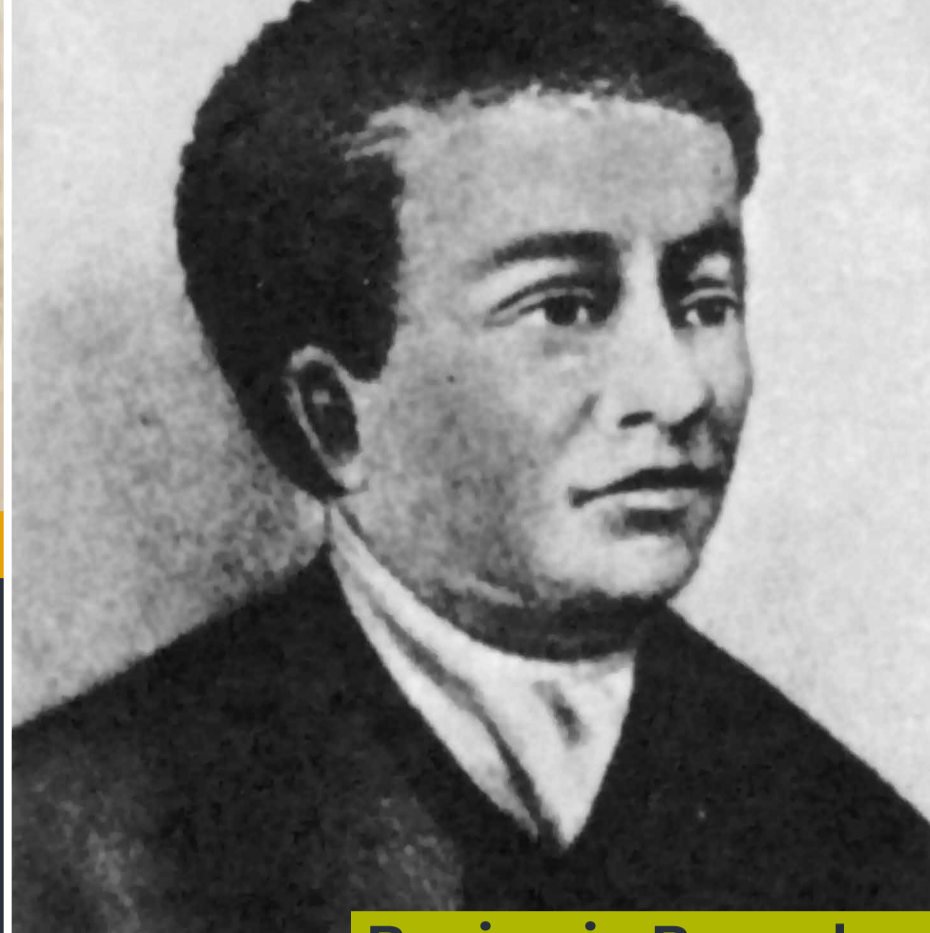


Thomas Fuller

Thomas Fuller, known as the Virginia Calculator, was an enslaved man in America. Born and likely educated in western Africa, he was a prodigious mental calculator, able to calculate large sums in a matter of minutes.

Benjamin Banneker was an African American mathematician, astronomer, and naturalist. He is thought to have descended from the Vai people who live mostly in modern-day Liberia. He authored several astronomical almanacs, predicting eclipses and the movement of planets for the year ahead.

1731-1806



Benjamin Banneker

1890-1980



Euphemia Lofton Haynes

Euphemia Haynes was an American mathematician and educator. She was the first African American woman to earn a PhD in mathematics, in 1943.

1914-1979



Marjorie Lee Browne

Marjorie Lee Browne was one of the first African American women to receive a PhD in maths. She worked with maths teachers, encouraging minorities and women into the subject, and taught and researched at North Carolina College for thirty years.

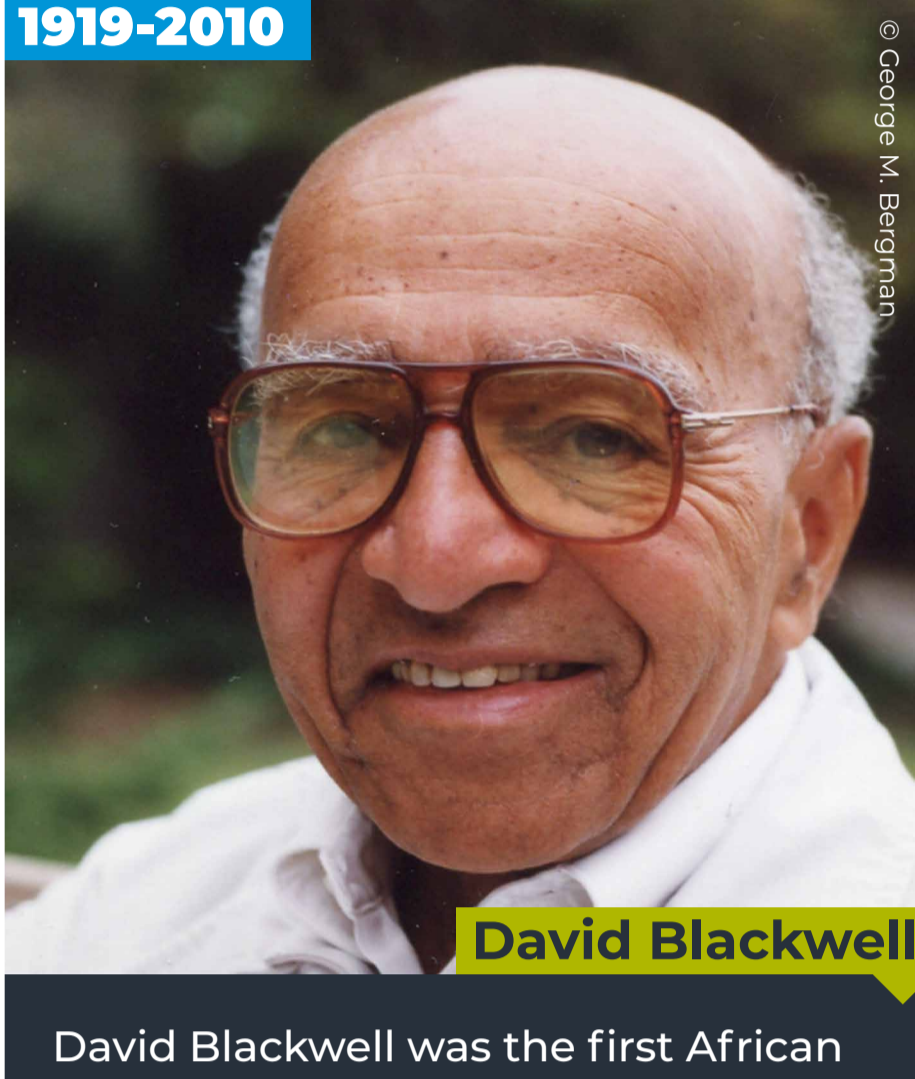
Katherine Johnson was a NASA scientist from the 1950-1980s. In 1962, preparing for astronaut John Glenn's orbital mission, computing machines were a new technology and not yet trusted by everyone. Johnson was called in to hand-check the computers' calculations. Glenn is remembered as saying about Johnson "If she says they're good, then I'm ready to go."

1918-2020



Katherine Johnson

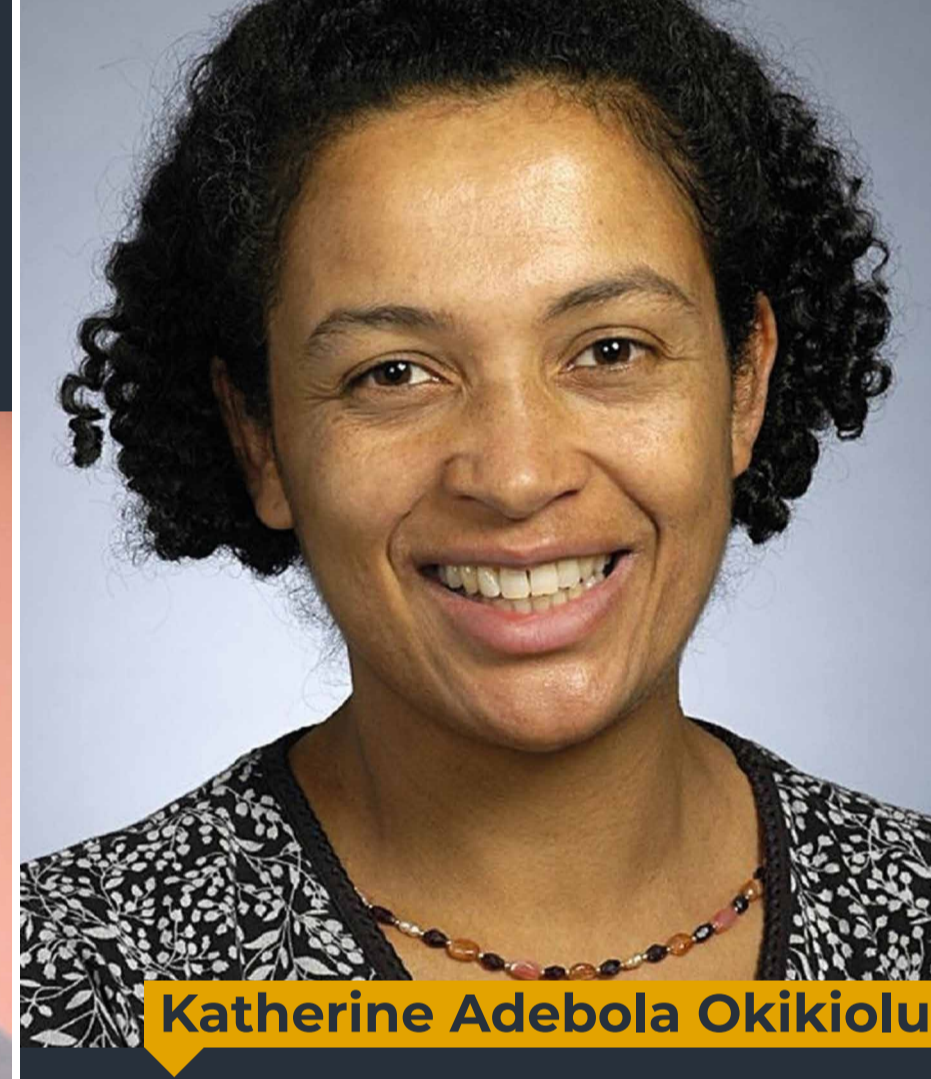
1919-2010



David Blackwell

David Blackwell was the first African American man to be inducted into the National Academy of the Sciences, and only the seventh African American to receive a PhD in mathematics. He was a statistician and mathematician whose work on game theory, probability theory, information theory, and statistics was significant. He wrote one of the first textbooks on Bayesian statistics.

1965-Present



Katherine Adebola Okikiolu

Kate Okikiolu is a Black British mathematician. She is the daughter of a renowned Nigerian mathematician and a maths teacher. Her research is primarily in elliptic differential operators. She has also worked to improve mathematics teaching for inner-city school children.

Anotida Madzvamuse is a professor of mathematical and computational biology. His work is in applied mathematics, exploring how patterns form in nature, and his projects include modelling for COVID-19, which helped the NHS and regional health planners during the global pandemic. His current research looks at unravelling new mathematics for 3D cell migration.

1966-Present



Anotida Madzvamuse

1966-Present



Mamokgethi Phakeng

Mamokgethi Phakeng is a South African Professor of Mathematics Education and Vice-Chancellor of the University of Cape Town. She is the 2022 winner of the Africa Education medal. She founded the non-profit Adopt-A-Learner to help lower-income students engage with education. Since 2018, she donates 20% of her monthly salary to support financially needy women postgraduate students.

1971-Present

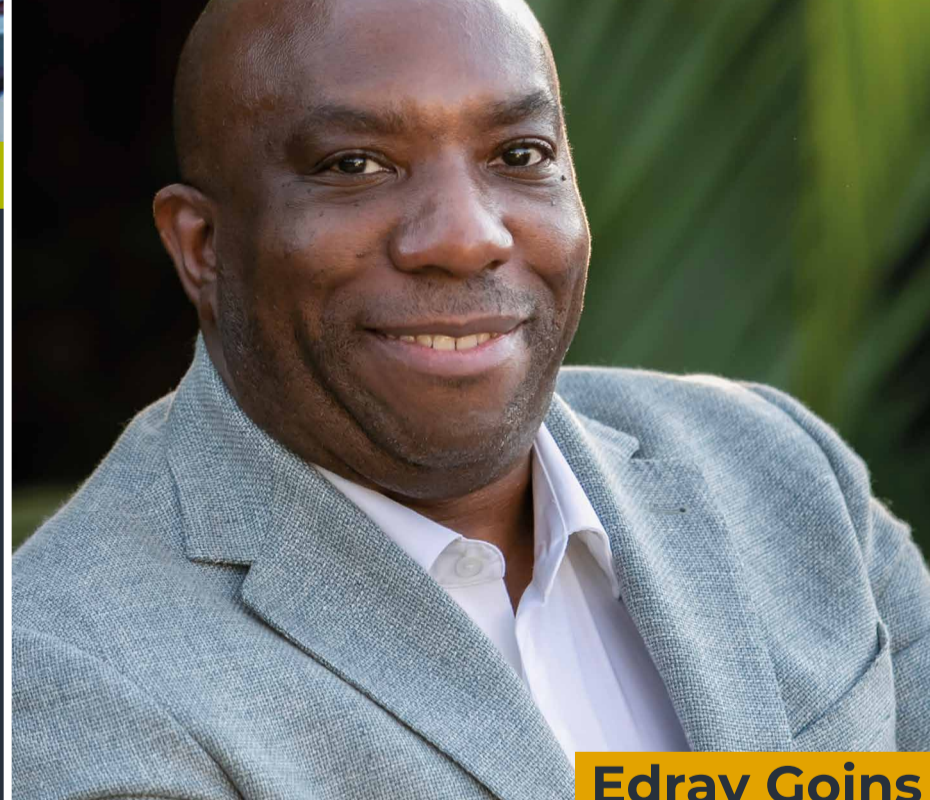


Erica Walker

Erica Walker is an American maths professor. She is chair of the Department of Mathematics, Science, and Technology at Columbia University and the Director of the Institute for Urban and Minority Education. Her research is about how culture and policy impact engagement with maths, particularly for underserved students.

Edray Goins specialises in number theory and algebraic geometry. At his college in California he has set up a summer school programme to engage under-represented students in mathematics. He was the president of the National Association of Mathematicians until 2020, where among many other things, he formed a committee to maintain the updating of the Mathematicians of the African Diaspora website.

1972-Present



Edray Goins

1974-Present



Talitha Washington

In February 2022 Dr Talitha Washington was elected as the president of the Association for Women in Mathematics in the United States. She is also the inaugural Director of the Atlanta University Center Data Science Initiative, which looks for data-based solutions to societal problems, and aims to increase the number of Black data science experts.

With thanks to Nira Chamberlain and the Black Heroes of Maths Conference 2022.

