

BLACK HEROES OF MATHEMATICS

Black Heroes of Mathematics Conference 2026

Speakers' Bio

Imole Ajayi

Dr Imole Ajayi, is a mathematician, statistician, and AI fairness researcher whose work focuses on applying mathematical and statistical methods to complex real-world problems. She completed her PhD in Mathematics at Loughborough University, where her research developed statistical models for low-energy electron emission in scanning electron microscopy, contributing quantitative approaches to the characterisation of nano- and micro-scale particles.

Her research interests span statistical modelling, artificial intelligence, algorithmic fairness, and responsible data science. She is developing the Chamberlain Fairness Audit Framework, a probabilistic approach to identifying structural and intersectional disparities in algorithmic decision-making, including the proposed Inequality Attribution Score (IAS).

Alongside her research, Imole has extensive experience in data and analytics and currently leads Data & Analytics at AB Microfinance Bank Nigeria. She is a Fellow of the Royal Statistical Society, an Associate Fellow of Advance HE, and an Associate Member of the Institute of Mathematics and its Applications. She is passionate about making mathematics visible as a powerful tool for scientific discovery, responsible AI, and meaningful social impact.

Jason Anquandah

Dr Jason S. Anquandah is a Lecturer in Data Science and Statistics at UWE Bristol. She holds a PhD in Statistics from the University of Leeds, and her academic background spans statistics, mathematical modelling, actuarial science and data science. Her research interests include applied statistics, mathematical finance, machine learning and the use of quantitative methods to address real-world problems.

Alongside her academic work, Dr Anquandah is passionate about mathematics education and widening participation in mathematics, data science and artificial intelligence. She has taught students from a wide range of backgrounds and is particularly interested in making mathematics accessible, relevant and connected to everyday life. Through her teaching, research and outreach work, she hopes to encourage more young people to see mathematics not simply as numbers and equations, but as a tool that can open doors and create opportunities.

Nira Chamberlain

Nira Chamberlain OBE is a British mathematician, mathematical modeller, and science communicator from Birmingham, England. He is widely recognised for applying mathematics to major engineering, defence, aerospace, and industrial projects, and for promoting diversity within the mathematical sciences.

BLACK HEROES OF MATHEMATICS

He studied Mathematics at Coventry Polytechnic, graduating in 1991. He then completed an MSc in Industrial Mathematical Modelling at Loughborough University in 1993 and later earned a PhD in Mathematics from the University of Portsmouth in 2014.

Professionally, he has spent more than three decades developing mathematical models and simulation algorithms to solve complex industrial and engineering problems. He has worked for major engineering organisations and is a Mathematical Modelling Technical Fellow at AtkinsRéalis. His work has included modelling costs and operational capabilities for the Royal Navy's HMS Queen Elizabeth aircraft carrier programme.

Chamberlain has held several prominent leadership positions in mathematics. He served as President of the Institute of Mathematics and its Applications (IMA) and later became President of The Mathematical Association. He is also a Visiting Professor at Loughborough University and founder of the Black Heroes of Mathematics Conference.

He is a passionate public speaker and advocate for mathematics education. His lectures include *The Black Heroes of Mathematics*, *The Mathematics That Can Stop an AI Apocalypse*, and *Saving Aston Villa!*, all aimed at demonstrating the power and relevance of mathematics in society

Among his many honours:

- Named one of the UK's top scientists by the Science Council in 2014.
- Became the first Black mathematician to be included in the UK's Who's Who directory of notable figures.
- Won the Big Internet Maths Off in 2018, earning the title "World's Most Interesting Mathematician".
- Awarded an OBE (Officer of the Order of the British Empire) for services to mathematical sciences in 2022.

Today, Chamberlain is regarded as one of Britain's leading ambassadors for applied mathematics, inspiring young people through his research, public engagement, and advocacy for greater representation in STEM

Herbert Daly

Dr Herbert Daly began his career in the technology industry, working in software engineering, telecommunications, systems modelling, and consulting. He initially joined the graduate programme at **Nortel Networks** and later worked with wireless software technologies before moving into academic research.

He earned degrees in **Computer Science**, **Software Engineering**, and a **doctorate in Simulation Modelling**. His research interests include performance and capacity issues in enterprise systems, software engineering, fault-tolerant systems, modelling and simulation, and systems development

BLACK HEROES OF MATHEMATICS

Dr Daly taught at the **University of Bedfordshire** and later became a Senior Lecturer at the **University of Wolverhampton**. He has been active in promoting mainframe computing education, worked with the IBM Academic Initiative, and served as Chairman of the **UK Computer Measurement Group (UKCMG)**

He is also recognised as a speaker and advocate for technology education, enterprise computing, and the recruitment and development of future technology professionals

Kofi Jackson

Kofi is a software engineer specializing in artificial intelligence, with research interests spanning within mathematics and computing. He holds an MSci in Mathematics from Imperial College London and has since built a career across a range of software engineering roles. His work sits at the intersection of computational systems and mathematical theory, with particular interest in the development of novel mathematical solutions and more efficient computational methods. Beyond his professional work, Kofi maintains a broad intellectual curiosity, reading widely and following developments in mathematics and computing outside his immediate research focus. This combination of formal mathematical training and applied engineering experience informs his approach to problems that bridge abstract theory and practical computation.

Justine Nasejje

Dr Justine B. Nasejje is a Senior Lecturer in the School of Statistics and Actuarial Science at the University of the Witwatersrand (Wits), Johannesburg. Her research interests are at the intersection of survival analysis and machine learning, with a particular emphasis on developing interpretable and robust models for time-to-event data. She has published extensively on the application of classical machine learning techniques such as Random Survival Forests to survival data and is currently advancing neural network-based survival models to enhance both their predictive accuracy and explainability.

Her recent work focuses on explainable deep learning methods for maternal and child health research in Sub-Saharan Africa, contributing to the realization of Sustainable Development Goal 3: Good Health and Well-being. Dr Nasejje's research is deeply collaborative, involving partnerships with institutions such as the Leibniz Institute for Prevention Research and Epidemiology, BIPS (Germany), the University of Leeds (UK), the London School of Hygiene and Tropical Medicine (LSHTM), and several African universities. Through the Decolonial Approaches to Technological Agency (DATA) project, she contributes to interdisciplinary research, institutional capacity building and the development of locally relevant technological solutions in partnership with universities across Africa and the United Kingdom.

She earned her PhD in Statistics from the University of KwaZulu-Natal in April 2018, where her doctoral thesis was recognized with the prestigious Kambule Doctoral

BLACK HEROES OF MATHEMATICS

Award. Dr Nasejje is a Humboldt Research Fellow and has been an active member of the International Biometric Society since 2015.

At Wits, she leads the Survival Analysis Research Group, mentoring postgraduate students and early-career researchers while fostering regional and international collaboration. Her work bridges statistical theory, computational modeling, and public health applications, with ongoing projects addressing maternal and under-five mortality, competing risks, and interpretable neural network models for survival prediction.

Oluwaseun Olushola

Oluwaseun Olushola is a 125th Anniversary Scholar and PhD researcher in Applied Mathematics at the University of Birmingham. His research uses delay differential equations and dynamical systems to study *Daphnia*-based biofiltration, exploring how mathematical modelling can improve the reliability and effectiveness of this technology for wastewater treatment.

His academic journey has included receiving an Undergraduate Research Bursary from the London Mathematical Society and being selected to present his research at the University of Birmingham's Doctoral School Showcase and Beyond Boundaries: PhD Research for Climate and Sustainability Solutions.

Originally from Nigeria, Oluwaseun's journey in mathematics has been shaped by a deep passion for the subject and its potential to address real-world problems. Through his research, teaching and public engagement, he is committed to communicating the value of mathematics and inspiring others to explore the opportunities that mathematics and research can offer.

Nneka Umeorah

Nneka Umeorah is a Lecturer in Financial Mathematics at Cardiff University, United Kingdom. She earned an MSc in Risk Analysis (Financial Mathematics) and a PhD from North-West University, South Africa. Before joining Cardiff, she was a Postdoctoral Research Fellow at the University of Johannesburg, where she received the UJ Global Excellence and Stature (GES) 4.0 Award for research on the Fourth Industrial Revolution (4IR). Her interdisciplinary research spans mathematical finance, financial modelling, credit risk, derivatives pricing, and machine learning applications in finance. Her work combines classical numerical and computational methods with modern machine learning and network-based approaches to financial modelling, risk analysis, and forecasting. She has presented her research at numerous international and local conferences and published in peer-reviewed journals. She has supervised more than ten postgraduate students and currently supervises a PhD student. She is also a Fellow of the Higher Education Academy.

BLACK HEROES OF MATHEMATICS

Alain Zemkoho

Alain B. Zemkoho is a Professor of Mathematical Optimization at the University of Southampton's School of Mathematical Sciences, where he is affiliated with the Operations Research Group and CORMSIS (Centre for Operational Research, Management Sciences and Information Systems). His research focuses on mathematical optimisation, particularly bilevel and hierarchical optimisation, nonsmooth and nonconvex optimisation, and numerical methods for continuous optimisation.

He earned a PhD in Mathematics and Computer Science from the Technical University of Freiberg (Technische Universität Bergakademie Freiberg) in Germany in 2012. Following his doctorate, he worked as a Research Associate at Freiberg and later as a Research Fellow at the University of Birmingham before joining the University of Southampton in 2014.

Among his professional distinctions, Alain Zemkoho has been:

- An Alexander von Humboldt Experienced Fellow (2024-2026).
- A Fellow of the Alan Turing Institute for Data Science and Artificial Intelligence (2019-2023).
- A Fellow of the Institute of Mathematics and Its Applications.
- A Fellow of the Higher Education AcademyHis scholarly work has made substantial contributions to the theory of bilevel optimisation and operations research. He has authored numerous highly cited publications on optimisation theory, constraint qualifications, optimality conditions, and applications of mathematical optimisation to areas such as transportation, machine learning, forecasting, and data analysis.

In addition to research and teaching, he has held leadership roles including Director of MSc Programmes and Director of Student Employability within Mathematical Sciences at Southampton, and he serves as Chair of the Bilevel Optimization Society.

Alain Zemkoho is widely recognised as an international expert in bilevel optimisation, a branch of mathematical programming concerned with hierarchical decision-making problems that arise in economics, engineering, transportation, machine learning, and public policy

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African Gifted Foundation (AGF)

The African Gifted Foundation (AGF) was founded in 2010 by Tom Ilube CBE to provide opportunities to gifted young women from across Africa, focusing specifically on STEM subjects.

For the first four years, AGF ran Summer Academies in Kampala, Uganda and Accra, Ghana for talented science and maths students across the continent. Over 200 students attended from 50 different schools across 12 African countries, including Nigeria, Cameroon, South Africa, and Sudan. The Summer Academies explored subjects ranging from space science to computer cryptography, with leading lecturers from the UK, USA and across Africa.

Building on the success of these summer schools, in 2014 AGF made the bold decision to establish a permanent school for outstanding young women with a passion for science and maths. Two years later, the African Science Academy (ASA) opened its doors as Africa's first STEM academy for academically gifted girls.

Since then ASA has gone from strength to strength.