

Citation for the Award of an Honorary Doctor of Philosophy to Dr. Joseph Albert Mashite Mokoena

The University of the Witwatersrand is requested to consider conferring, posthumously, an honorary degree of Doctor of Science, honoris causa, upon Dr. Joseph Albert Mashite Mokoena. In the annals of the history of mathematics in South Africa the name of Joseph Mokoena is hardly known, if at all. Yet he is a true trailblazer in being the first Black South African to complete a PhD in mathematics awarded by the University of the Witwatersrand. This was less than ten years after the award of the first ever PhD in mathematics by a South African university and less than five years after the promulgation of the Bantu Education Act whose architect, the infamous Dr. Hendrik Verwoerd publicly pronounced that “*teaching the Bantu child mathematics when he cannot use it in practice*” was absurd.

Born on November 25, 1919, in Evaton, near Vereeniging, Dr. Mokoena overcame the formidable barriers of apartheid to become the first Black South African to earn a doctorate in Mathematics from a South African university, awarded by the University of the Witwatersrand in 1959. His academic journey began at St. Peter’s School in Johannesburg, where he excelled alongside luminaries such as Oliver Tambo, achieving historic first-class passes in the Junior Certificate examinations of 1936. His brilliance in Mathematics, Physics, and Latin set the stage for a distinguished career that challenged the prevailing racial prejudices of his time.

Dr. Mokoena’s academic achievements include a B.Sc. degree with distinction in Mathematics from the University of Fort Hare (1942), an M.Sc. with distinction from the University of South Africa (1948), and his groundbreaking Ph.D. thesis, “An Inversion of a General Class Lambert-Type Integral Transforms”. These integral transforms have been found, through the Saleem correspondence, to have deep connections with the Riemann Hypothesis, one of the most famous problems in mathematics which has remained unsolved for more than a century. His scholarship thus reflects a profound intellect and a commitment to pushing the boundaries of mathematical inquiry.

As an educator, Dr. Mokoena’s impact was profound. He served as a lecturer at the University of Fort Hare (1945–1957), shaping generations of students under challenging conditions. His international career included teaching at institutions such as the Kwame Nkrumah University of Science and Technology in Ghana, Ahmadu Bello University in Nigeria, Aston University in the United Kingdom, and the Universities of Rhodesia and Zambia, where he played a pivotal role in developing mathematics curricula as a UNESCO lecturer. His dedication to education transcended borders, fostering academic excellence and inspiring students across the African continent.

Dr. Mokoena's life was tragically cut short in a car accident in Lusaka, Zambia, on February 4, 1969, at the age of 49. His legacy has remained hidden from and unrecognized within national conversations around mathematics. It ought to endure through his intellectual contributions, his role as a beacon of possibility for Black South Africans during apartheid and now, and his unwavering commitment to scholarship and social progress. In the words of the late E'skia Mphahlele

"Mathematics was a consuming passion with Joe Mokoena. He seemed to dedicate all his energies to it and as a result sacrificed much of that part of human being that yearns to keep its feet on the ground in the rough and tumble of common social discourse"

In recognition of his pioneering achievements, the South African government posthumously awarded him the Order of Ikhamanga in Gold in 2004. By conferring an honorary degree on Dr. Joseph Albert Mashite Mokoena, the University of the Witwatersrand will celebrate his extraordinary contributions to mathematics, education, and the pursuit of equity in knowledge production. It will also burnish its credentials in not being cowered by the Apartheid regime and tow the line in its legalization of racial segregation in education. In the area of advanced mathematics, Dr. Mokoena was practically self-taught, an extraordinary achievement associated with geniuses like Srinivasa Ramanujan. His life stands as a testament to the power of intellect, resilience, and dedication to transforming societies through learning and discovery.

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