Professor Kate Okikiolu came from a mathematical family: her father George was an eminent mathematician, who came to Britain from Nigeria in 1959 as a young student, to study mathematics at Sir John Cass College, where he met Kate’s mother, Patricia, who later became a high school maths teacher. Kate’s elder sister, Jeannie, is also a mathematician, who studied at Cambridge (King’s College) and later worked as a forensic scientist. After graduating with a PhD from UCSD, Kate Okikiolu went on to a brilliant mathematical career, peppered by milestones in the history of black mathematicians: she was the first black recipient of a Sloan Research Fellowship, and later worked as a forensic scientist. Kate Okikiolu’s research focus is harmonic analysis, spectral theory, and geometry, particularly the determinant of the Laplacian under smooth perturbations. Her characterization of subsets of rectifiable curves in $\mathbb{R}^n$ solved the Analyst’s Traveling Salesman problem for any $n \geq 3$. She has made a major contribution to the field of elliptical differential operators.

Kate Okikiolu has worked for mathematical outreach to disadvantaged minorities since early in her career. In 1997 she was awarded a Presidential Early Career Award for Scientists and Engineers for both her mathematical research and her development of mathematics curricula for inner-city school children. In 2002 she delivered the Claytor-Woodward lecture at NAM, which was founded to promote the mathematical development of all under-represented minorities.