

❑ You Can Count on One Hand All the Black Mathematics Professors at the Highest-Ranking American Universities

Some of our highest-ranked universities such as Harvard, MIT, Stanford, the University of Chicago, and the University of Michigan have as many as 50 professors of mathematics. Yet none of these institutions has a black professor in its mathematics department.

Longstanding and tenaciously held academic beliefs in the inability of the Negro mind to do abstract thinking — beliefs that to some extent survive today — appear to play a role in the almost total absence of African Americans from this important field of scholarship and inquiry.



Thomas Jefferson was the author of a famous document that proclaimed that “all men are created equal.” But at the same time he also believed that the black astronomer Benjamin Banneker was incapable of arriving at his mathematical calculations without the help of a white man. Jefferson wrote a friend, “I have not yet found one of them [Negroes] who could solve the geometrical problems of Euclid.”

For several centuries the idea of scientific racism prevailed in the United States. This dogma held that Negroes were essentially members of a different and lower biological species than whites. Negroes, it was believed, were ordained by God or nature to have both different and inferior intellects. As to mathematics, this concept took a special twist. Under traditional beliefs in the academic world, it was conceded that blacks were indeed creatures who were self-aware and capable of learning limited tasks. But academic orthodoxy in the United States said that they were not capable of the abstract thinking that was necessary to do important work involving mathematics.

After the Civil War and well into the twentieth century, the universal image of the Negro was one of an untutored savage gradually evolving into that of a grinning Sambo. White men in the street regaled one another with jokes that Negroes were simply smart apes with a mind best adapted to shaking coconuts out of trees. These views were totally supported by the most distinguished American intellectuals. In 1913 the noted psychologist H.H. Goddard, who tested blacks and other immigrant groups, declared, “These people cannot deal with abstractions.” So, too, L.M. Terman, the creator of the Stanford-Binet IQ

test, concluded that the low-scoring racial minorities “cannot master abstractions.”

Given these firm beliefs in the inherent incapacity of Negroes, it followed that in the view of the academic world there was no use in expending serious scholarly effort in preparing blacks for research or teaching in the most oner-

Almost a Zero-Sum Game

*Black Mathematics Faculty at the Nation’s Highest-Ranked*Universities, 1998*

Institution	Total Math Faculty	Black Math Faculty	Percent Black
Harvard University	30	0	0.0%
Princeton University	43	0	0.0
Yale University	23	0	0.0
Mass. Inst. of Technology	48	0	0.0
Stanford University	26	0	0.0
Cornell University	41	0	0.0
Duke University	27	1	3.8
Univ. of Pennsylvania	40	0	0.0
Calif. Inst. of Technology	25	0	0.0
Brown University	20	0	0.0
Columbia University	33	0	0.0
Dartmouth College	21	1	4.7
Northwestern University	38	0	0.0
Johns Hopkins University	22	0	0.0
University of Chicago	37	0	0.0
Emory University	15	0	0.0
Washington University	27	0	0.0
Rice University	09	0	0.0
University of Notre Dame	41	0	0.0
Georgetown University	09	0	0.0
Vanderbilt University	29	1	3.5
Univ of Calif.-Berkeley	57	0	0.0
University of Virginia	36	0	0.0
University of North Carolina	35	1	2.9
Carnegie Mellon University	25	0	0.0
Tufts University	19	0	0.0
Univ. of Calif.-Los Angeles	55	0	0.0
University of Michigan	86	0	0.0
Total	930	4	0.4%

*As ranked by *U.S. News & World Report*. Universities are listed in rank order.

Notes: (1) Yale, Columbia, the University of Chicago, the University of California at Los Angeles, and the University of Michigan did not respond to the JBHE survey. Therefore, our information on total mathematics faculty at these institutions was obtained from the university’s Web site.

In our 1994 survey there were no black mathematics faculty at the foregoing five universities. Because we have seen no announcement of the hiring of a black mathematics faculty member at any of these schools, we conclude that there are no black mathematics faculty members at these institutions today.

(2) The University of California at Berkeley has one black mathematics faculty member. But he holds emeritus status.

(3) Donald St. P. Richards, who was identified as a professor of mathematics at the University of Virginia in our 1994 survey, now holds a position as a professor of statistics at the university.

(4) Kate Okikiolu, who was an assistant professor of mathematics at Princeton University at the time of our last survey, is now on the mathematics faculty at the University of California at San Diego.

Source: *JBHE research department*.

ous and complex field of academic mathematics. Even today, many white scholars in the natural sciences hold deep-seated beliefs in the incapacity of the black intelligence to deal with the complexities of advanced mathematics. Most scholars in the natural sciences do not openly express their views that black people are not qualified to teach, or do serious research in, mathematics. Nevertheless, these covertly held opinions tend, to some extent, to govern the academic selection process.

In this setting, what happened to the behavior of black people was predictable under accepted economic theory. Standard theory forecasts shortages of a product when there is no demand for it. Black people with intellectual potential in the field of mathematics behaved rationally. They quite sensibly did not seek out Ph.D.s in mathematics. And each time they failed to do so they reinforced the standard beliefs of most whites that blacks were not capable of high-level abstract thinking.

Let us now consider the number of young blacks who might aspire to be professors of mathematics. They look around at the university where they are doing undergraduate work and they see that blacks in mathematics are just about as scarce as Labrador Retrievers that fly airplanes.

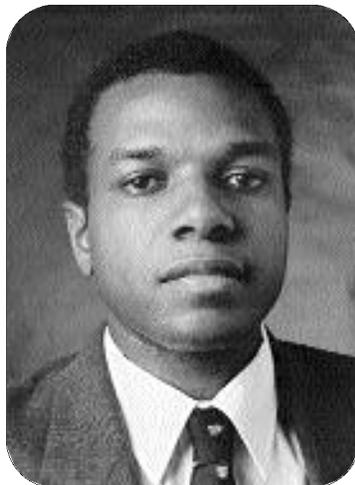
Blacks in Academic Mathematics Today

In most academic fields of higher education, blacks are few in number. In some disciplines they have a significant cadre of representatives. But we will presently see that they have virtually no presence whatsoever in academic mathematics.

A 1992 study by the National Research Council found that there were only 175 black mathematicians employed at colleges and universities in the United States out of a national total mathematics faculty of 13,588. The report documented that in 1989, nationwide, only 98 blacks held tenured positions in mathematics. In contrast, there were 1,277 Asian mathematics faculty, 639 of whom held tenure.

As expected, there are very few blacks in the academic pipeline. No African American earned a Ph.D. in mathematics in the United States until 1925, and until 1949 there was not one black woman who had earned a doctorate in

mathematics. In 1996 (the latest year for which figures are available), only eight blacks earned Ph.D.s in mathematics out of 1,122 doctorates awarded in mathematics in the United States. More than 300 doctorates were awarded in the fields of functional analysis, geometry, logic, number theory, topology, and computing theory. Not one these doctorates went to an African American.



Jonathan David Farley
Assistant Professor of Mathematics
Vanderbilt University

As an undergraduate student majoring in mathematics at Harvard, Dr. Farley earned 29 grades of A. The only lesser grades on his academic record were three A minuses. Dr. Farley had the second highest grade point average in his Harvard graduating class of 1,600 students

Domain of the White Male

In 1994 *The Journal of Blacks in Higher Education* surveyed the mathematics departments of the nation's 25 top-ranked universities. That year only five blacks held faculty posts in the mathematics departments of these most prestigious universities.* Two black professors taught in the highly regarded mathematics department at Princeton and there was one black faculty member each on the mathematics faculties at Dartmouth, the University of California at Berkeley, and the University of Virginia. However, most of the nation's highly regarded mathematics departments at universities such as Harvard, MIT, Stanford, the University of Chicago, Yale, Columbia, Cornell, the University of Michigan, UCLA, and CalTech had no blacks at any level on their faculties.

We recently updated our survey of mathematics faculty at the nation's highest-ranked universities. At

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the present time we count 930 people teaching mathematics at the nation's 28 highest-ranked universities. Only *four* of these academics are black. Thus, blacks make up only four tenths of one percent of all mathematics faculty at these schools. There was one black mathematics professor each at

*Figures on mathematics professors are for the universities' official mathematics departments. They do not include professors of statistics, operations research, computer theory, and other applied mathematics disciplines unless the scholars are included in the mathematics department of the university. See *Professional Women and Minorities*, Commission on Professionals in Science and Technology, National Research Council, June 1992.

Only Four Black Mathematics Professors at the 28 Highest-Ranked Universities*

The Journal of Blacks in Higher Education surveyed the mathematics department at the nation's 28 highest-ranked universities. We found that most of these highly rated institutions including Harvard, Princeton, CalTech, MIT, Stanford, Yale, and the University of Chicago had no black mathematicians on their faculties. Although these 28 highly ranked universities have a total of 930 mathematicians on their faculties, only four black mathematics professors were identified at these 28 institutions.

• **Idris Assani** is professor of mathematics at the University of North Carolina at Chapel Hill. A graduate of the University of Paris, Dr. Assani earned his doctorate there in 1986. His research interests include ergodic theory, harmonic analysis, and Wiener Wintner-type problems. He recently completed work on a technical report entitled *Teaching Linear Algebra Using the Computer*.

• **Jonathan David Farley** is an assistant professor of mathematics at Vanderbilt University. A native of Rochester, New York, Farley graduated *summa cum laude* and Phi Beta Kappa from Harvard College in 1991. He had the second highest grade point average in his graduating class of 1,600 students. While at Harvard, he received 29 grades of A. The only lower marks on his academic record were three A minuses. In 1995 he earned a Ph.D. in mathematics at Oxford. There he received the Johnson Prize for his research, considered to be the mathematics department's highest honor. His current research deals with the theory of ordered sets and lattice theory.

• **C. Dwight Lahr** is professor of mathematics and computer science at Dartmouth College. A native of Phila-

delphia, Lahr attended Philadelphia Central High School and graduated *magna cum laude* from Temple University. He then went on to earn a master's and Ph.D. in mathematics at Syracuse University. After graduation, Lahr worked at Bell Laboratories solving telephone traffic network problems using queuing theory and numerical analysis. While on leave from Bell Labs, Professor Lahr taught as a visiting professor at Savannah State College and then at Amherst College. He joined the Dartmouth faculty in 1975 and became a full professor in 1984. Lahr also served as dean of the faculty at Dartmouth from 1984 to 1989. Professor Lahr specializes in harmonic analysis, Banach algebras, functional analysis, and educational computing.

• **Arlie O. Petters** is the William and Sue Gross Associate Professor of Mathematics at Duke University. A native of Belize, Petters earned his bachelor's and master's degree at Hunter College in New York City. He was awarded his doctorate at MIT with a dissertation entitled "Singularities in Gravitational Microlensing." Professor Petters specializes in mathematical physics. He is completing a book on gravitational lensing, the theory that gravitational fields around stars will bend light.

*As ranked by *U.S. News & World Report* (1998).

Note: Our statistics on mathematics professors relate solely to the universities' official mathematics department. They do not include professors of statistics, operations research, computer theory, and other applied mathematics disciplines unless the scholars are included in the mathematics department of the university.

Source: *JBHE* research department.

Duke, Vanderbilt, Dartmouth, and the University of North Carolina. The two black mathematicians who were at Princeton four years ago have since left for other institutions. Arlie O. Petters, formerly of Princeton, went to Duke to accept a tenured associate professorship and endowed chair, and Kate Okikiolu, also formerly of Princeton, is now at the University of California at San Diego. Today there are no blacks on the 43-member Princeton mathematics faculty. Another African-American scholar who was on our list in 1994 — Professor Donald St. P. Richards of the University of Virginia — is now affiliated with the department of statistics at UVA.

Two new members have been added to the rosters of

black mathematics professorships at high-ranking universities. Idris Assani, a professor of mathematics at the University of North Carolina at Chapel Hill, is new to our list because the university was not listed among the 25 highest-ranked universities in 1994 when we last compiled this data. In addition, Jonathan D. Farley was hired as an assistant professor of mathematics at Vanderbilt in 1996.

Once again, in 1998, as was the case four years ago, most of the nation's highly regarded mathematics departments at universities such as Harvard, Princeton, MIT, Stanford, the University of Chicago, Yale, Columbia, Cornell, the University of Michigan, UCLA, and CalTech have no black mathematicians at any level on their faculties.